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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

Accompanying the document

**Proposals for a
REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

- **establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy**
- **establishing a common organisation of the markets in agricultural products (Single CMO Regulation)**
 - **on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)**
 - **on the financing, management and monitoring of the common agricultural policy and the**

**Proposal for a
COUNCIL REGULATION
determining measures on fixing certain aids and refunds related to the common organisation of the markets in agricultural products**

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Common Agricultural Policy towards 2020

Assessment of Alternative Policy Options

This report commits only the Commission services involved in its preparation and does not prejudge the final form of any decision to be taken by the Commission.

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LIST OF ABBREVIATIONS

AKIS – Agriculture Knowledge and Innovation System
AEM – Agri-Environmental Measures
AWU – Annual Working Unit
CAP – Common Agricultural Policy
CMEF – Common Monitoring and Evaluation Framework
CMO – Common Market Organisation
CSF – Common Strategic Framework
DDA – Doha Development Agenda
DG – Directorate General
EIP – European Innovation Partnership
ENRD – European Network for Rural Development
ESD – Effort Sharing Decision
ETS – Emission Trading Scheme
EU – European Union
EU-12 – Members States of the European Union that have joined the EU since 1st of May 2004
EU-15 – Member States of the European Union before 1st of May 2004
FAS – Farm Advisory System
FNVA – Farm Net Value Added
GAEC – Good Agricultural and Environmental Conditions
GDP – Gross Domestic Product
GHG – Green House Gases
HNV – High Nature Value
IACS - Integrated Administration and Control System
IBO – Interbranch Organisation
LAGs – Local Action Groups
LFA – Less Favoured Areas
MMF – Multiannual Financial Framework
NHA – Natural Handicap Areas
NREAP - National Renewable Energy Action Plan
OECD - Organisation for Economic Co-operation and Development
PEA – Potentially Eligible Area
PG – Producer Group
PO – Producer Organisation
PSE – Producer Support Estimate
SPS – Single Payment Scheme
SWOT – Strengths, Weaknesses, Opportunities, Threats
UAA – Utilised Agricultural Area
WTO – World Trade Organisation

1. THE CAP IMPACT ASSESSMENT PROCESS

Agriculture is at a crossroads and in the headlines: EU agriculture and its Common Agricultural Policy (CAP) are no exception.

Challenges, impacts and solutions worldwide vary, but a common theme is also emerging: sustainability is at the core of any solution. This is why the overarching objective for the future CAP should be sustainable competitiveness to achieve an economically viable food production sector, in tandem with sustainable management of the EU's natural land-based resources.

Previous reforms of the CAP were mainly driven by the need to respond to challenges that were primarily endogenous to agriculture, from huge surpluses to trade agreements or food safety crises. They have served the EU well both on the domestic and the international front. But many of the challenges EU agriculture face today are driven by factors beyond the control of EU agriculture, and require much broader policy responses.

The future CAP should no longer be a policy that addresses the activity of a small, albeit essential, segment of the EU economy, but one that impacts on more than half of the EU territory and all EU consumers, and is of strategic importance for food security and safety, the environment, climate change and territorial balance. This would also enable the CAP to enhance its contribution to the Europe 2020 strategy. What such a policy direction would imply is the focus of this report.

1.1. Organisation of the process

Discussions and preliminary analyses of the possible paths for the future of the CAP were initiated by the Directorate General for Agriculture and Rural Development (DG AGRI) of the European Commission in April 2010 in the context of the preparation of the EU Multiannual Financial Framework 2014-2020. These were steered by an Inter-Service Steering Group (ISSG) working on the basis of a commonly agreed mandate. The ISSG met fifteen times with participants from twenty-one DGs, and incorporated in its work contributions from stakeholders in the consultation process.

The report provides an overview of the effects of reforming the CAP taking into account the orientations of the Multiannual Financial Framework (MFF) for 2014-2020. This would translate into changes in the legal framework in three main areas, namely market measures (Council Regulation (EC) No 1234/2007), direct payments (Council Regulation (EC) No 73/2009) and rural development policy (Council Regulation (EC) No 1698/2005), as well as legal changes in horizontal provisions of the CAP.

The underlying problems of EU agriculture which these policies aim to address are usually complex, linking biophysical and socioeconomic factors. To provide consistent and coherent solutions, particular policy instruments have to be complementary to successfully address these underlying problems. This report identifies these complementarities, synergies and trade-offs, to build a composite picture of the impacts of policy on EU agriculture.

Box 1. The Commission proposal for the MFF for 2014-2020

The Commission proposal for the Multiannual Financial Framework for 2014-2020 (the MFF proposal)¹ sets the budgetary framework and the main orientations for the Common Agricultural Policy. The basic two pillar structure of the Common Agricultural Policy will be maintained; 30 % of direct support will be made conditional on "greening", i.e. environmentally supportive practices defined in legislation; the levels of direct support will be progressively adjusted and capping will apply; the allocation of rural development funds will be revised on the basis of more objective criteria and better targeted to the objectives of the policy. The Commission proposes to allocate 281.8 billion EUR for Pillar I of the Common Agricultural Policy and 89.9 billion EUR for rural development for the 2014-2020 period. This funding will be complemented by additional sums committed for research and innovation on food security, the bio-economy and sustainable agriculture (4.5 billion EUR), food safety (2.2 billion EUR), food support for most deprived persons (2.5 billion EUR), a new reserve for crises in the agriculture sector (3.5 billion EUR) and the opening of the European Globalisation Fund to farmers (up to 2.5 billion EUR) (all figures above in constant 2011 prices).

Individual analysis of policy issues and policy tools is available in the Annexes of the report. Annex (1) provides a detailed account of the current economic and social situation in EU agriculture and rural areas together with prospects for agricultural markets and farm income (the economic baseline). Annex (2) focuses on the environmental situation and options for reforming the direct payments and rural development policy to maximise the provision of environmental public goods. Annexes 2-5 analyse various options of specific policy instruments within the three broad intervention areas (direct payments, rural development and market measures) and their impacts. Annexes 6-8 focus on cross-cutting approaches (risk management, research and innovation, simplification) which influence a whole range of policy tools and are crucial for the success of reforms. Annex (9) provides an overview of contributions of stakeholders in the public consultation. Annex (10) gives detailed background information on the income impact of various options at farm and regional level. Annex (11) provides background on the methodology and lists and summarises supporting evidence in selected studies and evaluations. Finally, Annex (12) analyses the reform from a development perspective.

Following the Impact Assessment Board opinion and advice, considerable changes have been made to the report in order to provide ample evidence base and facilitate its use to support decision making. Namely, the lessons of evaluations were better integrated in the report, the elements of analysis of sub-options in the integration scenario were brought forward from the annex to sections 5 and 6, the analysis of simplification effects was expanded, the implementation issues were better spelled out and the revised monitoring and evaluation framework with regard to indicators was linked to all stages of the policy cycle. In order to provide a full picture of the challenges for the EU agriculture, the report, together with annexes, analyses the implications of the main broad policy orientations which underpin the choices proposed by the Commission in the Multiannual

¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions *A budget for Europe 2020*, COM(2011)500 final, 29.6.2011.

Financial Framework for 2014-2020 and of the further detailed policy choices to be made in terms of the functioning of the CAP.

1.2. Consultation of the Stakeholders

Interested parties were invited to submit their contributions and additional analysis between the 23rd of November 2010 and the 25th of January 2011 and an advisory committee with stakeholders was organised on the 12th of January 2011.² Altogether, 517 contributions were received by the Commission (of which 72 from private persons). Of the contributions from organisations, 44% came from the farming and processing sector and 40% from national, regional and local authorities, environmental organisations, think-tanks and research institutes as well as development organisations, the trade sector, and consumer organisations. Other organisations (12%) participating in the consultation included health protection organisations, water management bodies or civil society representatives.

The main elements of the opinions received in the stakeholder consultation can be summarised as follows:³

- There is broad agreement among stakeholders on the need for a strong Common Agricultural Policy, based on its two-pillar-structure, in order to address the challenges ahead.
- Stakeholders have diverse opinions concerning the targeting of support (especially the redistribution of direct aid and the capping of payments).
- There is agreement that both pillars can play an important role in stepping up climate action and increasing environmental performance for the benefit of EU society. Whereas many farmers believe that this already takes place today, the broader public argues that Pillar I payments can be used more efficiently.
- Most respondents find that the CAP should play a role in stabilizing markets and prices.
- The respondents want all parts of the EU, including less favoured areas, to be part of future growth and development.
- The need to better integrate the CAP with other EU policies, such as environmental, health, trade, development, was emphasised by many respondents.
- Innovation, development of competitive businesses and provision of public goods to the EU citizens are seen as ways to align the CAP with the Europe 2020 strategy.

² http://ec.europa.eu/agriculture/events/cap-towards-2020_en.htm

³ The stakeholders' views have been integrated in the report on key issues. A review of the replies to each consultation question is provided in Annex 9.

1.3. Methodological approach

Analysis of the potential impacts of the different policy options for the future CAP has been carried out on the basis of two complementary approaches: the Impact Assessment made extensive use of quantitative analysis which was then complemented with quantitative and qualitative information from the literature and public consultations (mostly on the social and environmental impacts). In the context of the Steering Group, thematic clusters were created on selected issues.⁴

The core quantitative analysis of the economic situation of EU agriculture until 2020 and the impacts of alternative policy scenarios have been conducted on the basis of DG AGRI analytical tools in close collaboration with the Institute for Prospective Technological Studies (IPTS) of the European Commission's Joint Research Centre.⁵

The medium-term projections for agricultural markets until 2020 were established under a set of status quo assumptions on agricultural and trade policies (taking into account all currently foreseen CAP provisions) with macroeconomic projections based on market statistics and other information available at the end of September 2010 and validated in expert discussions.⁶

The results formed the baseline scenario which was then used to simulate the effects of changing the level of direct payments as a result of the redistribution of payment and the alternative possibilities for the components of the direct payment (for small farmers, natural constraint areas, greening, coupled component as well as capping) on farm income and profitability.⁷ This simulation allowed the calculation of farm income based on the Farm Net Value Added (FNVA) per Annual Work Unit (AWU), an indicator which represents the amount available to remunerate the factors of production (labour, land and capital).⁸

In order to address the limits of the analysis with regard to volatility on agricultural markets, sensitivity analysis was conducted with alternative assumptions, including higher crop yield growth, faster technological prospects, higher variable costs, higher GDP growth in emerging economies, faster or slower economic growth and higher or lower crude oil price and an alternative biofuel scenario (higher oil prices with lower transport fuel demand). To address the limits of the farm-level modelling which does not take into account changes in the structure of the sector, trends in labour productivity

⁴ A list of issues considered by the groups is provided in chapter 9.

⁵ A detailed account of the modelling tools and data used are provided in Annex 11a: Methodology for the market and income effect of the CAP reform.

⁶ An external review of the baseline and uncertainty scenarios was conducted in a seminar organised by the JRC IPTS on 5-6 October 2010 in Brussels, gathering high-level policy makers, modelling and market experts from the EU, the United States, the Organisation for Economic Co-operation and Development, the United Nation's Food and Agriculture Organisation and the World Bank. See: <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4199>.

⁷ For results and detailed description of the farm level analysis see Annex (10) "Impact of Scenarios on the Distribution of Direct Payments and Farm Income" and Annex 2d: "Partial analysis of greening measures".

⁸ $FNVA/AWU = (\text{output} - \text{intermediate consumption} + \text{subsidies} - \text{taxes} - \text{depreciation}) / \text{Annual Work Units}$.

were introduced exogenously, with three assumptions: i) fixed labour productivity, ii) growth reflecting recent trends and iii) growth following long-term trends.

Against the baseline scenario, the economic, environmental and social impacts of three alternative paths of CAP reform have been assessed based on how their responses compare to the status-quo with respect to the challenges that EU agriculture is facing in terms of competitiveness and productivity growth, viability of farms, rural growth, environmental sustainability, climate change objectives and territorial cohesion.

The analysis of the economic impact assesses their effect on competitiveness and growth, the viability of farming and its vulnerability to crisis situations. The analysis of social impacts considers the potential effects on employment and income. Finally, the analysis of environmental impacts assesses the role of particular policy choices in adopting environmentally-friendly agricultural practices and supporting agricultural areas which are particularly beneficial for the environment and climate action.

Budgetary ceilings for Pillar I and II in the various scenarios reflect the Commission proposal for the Multiannual Financial Framework 2014-2020 (unless otherwise stated in section 4), compared to the baseline where current budget trends are maintained until 2020.

2. POLICY CONTEXT, PROBLEM DEFINITION AND EU VALUE ADDED

The EU primary sector - agriculture, hunting and forestry - provides food, feed and renewable energy, and accounts for 1.6% of the total GDP and 5.4% of the total employment. These figures, both exhibiting decreasing trends, mask wide variations in farm structures between Member States. At the same time agriculture, together with forestry, covers 84% of the total EU territory, thus playing an important role in land management and the preservation of natural resources. Finally, agriculture accounts for 10.3% of EU27 greenhouse gas emissions, a decrease of 22% as compared with 1990 (as compared to a 17.4% drop for all emissions).⁹

Over the last two decades, the CAP has undergone a substantial reform process, which reflects changing societal concerns related notably to environment, food quality and safety, territorial balance, as well as the evolving needs of the EU economy. This chapter presents the evaluation of current policy and the emerging policy issues related to concerns about productivity, competitiveness, environmental and climate change and territorial impacts of agricultural production.

2.1. The CAP reform path

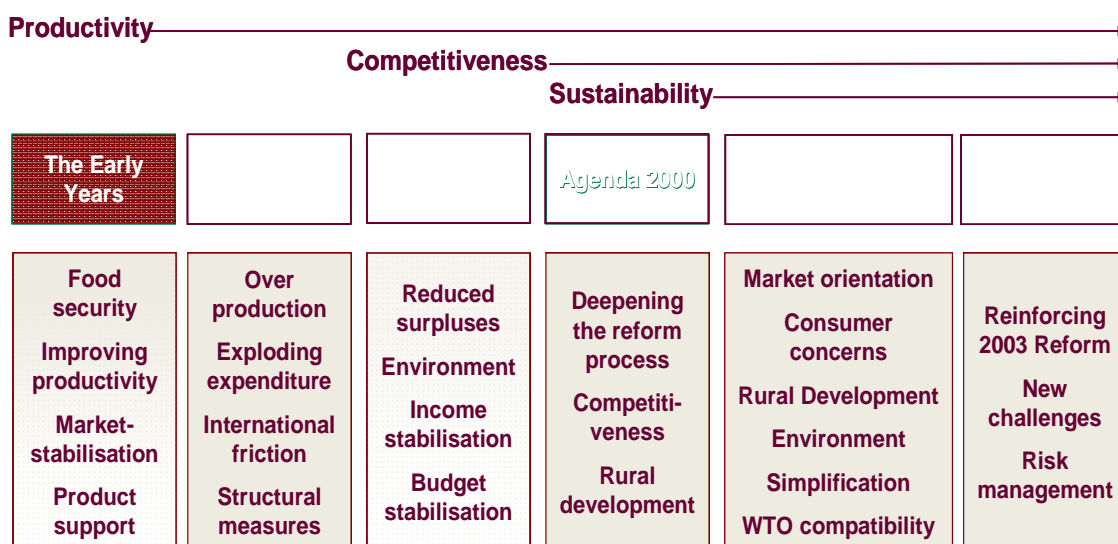
The CAP has its roots in the post-World War II situation, where agriculture had been crippled and food supplies could not be guaranteed. Incentives to produce were provided through a system of high support prices to farmers, combined with border protection and export support with financial assistance for the restructuring of the sector.

⁹ This share, which excludes Land Use, Land Use Change and Forestry (LULUCF), is above emissions from industrial processes (7%) and residential (9.3%) and below manufacturing industries and construction (11.5%), transport (20.2%) and public electricity and heat production (26.6%).

Although the CAP was very successful in moving the EU towards self-sufficiency, by the 1980s the EU had to contend with almost permanent surpluses of the major farm commodities, some of which were exported (with the help of subsidies), while others had to be stored or disposed of within the EU. These measures had a high budgetary cost, distorted some world markets, did not always serve the best interests of farmers and became unpopular with consumers and taxpayers. At the same time society became increasingly concerned about the environmental sustainability of agriculture.

This led to a fundamental reform process of the CAP which started in 1992 and was later deepened and extended in 1999 with Agenda 2000 (in summery form, this path is outlined in Figure 1). This reform started the shift from product support (through prices of commodities) to producer support (through income support to farmers). This also meant that transfers to producers from consumers (through higher prices) were replaced by transfers from taxpayers, reducing the impact on consumers and the processing industry.

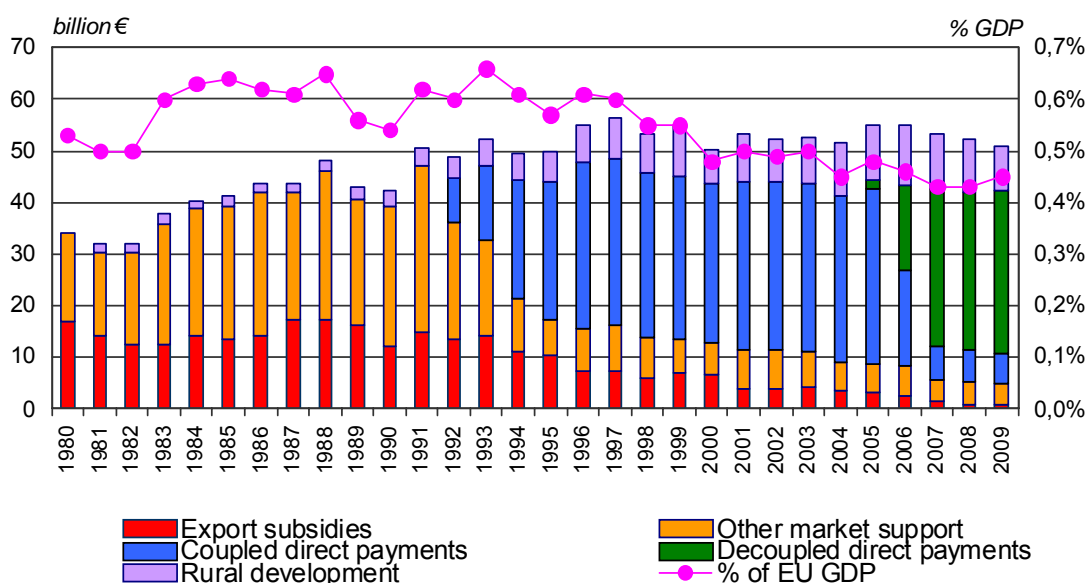
Figure 1: Historical development of the CAP



The 1992 reform started the process of reduction in support prices and the introduction of direct payments for a few key agricultural sectors. A new set of reforms initiated in 2003 and continued in 2008 with the Health Check, aimed at enhancing the competitiveness of the farm sector, promoting a market-oriented, sustainable agriculture and strengthening rural development policy. A central element of the latter reforms was to ‘decouple’ the majority of direct payments from production. That is, farmers were no longer to receive payments related to a specific type of production. Instead, payments were linked to entitlements based on the value of historical subsidy receipts, conditioned to the provision of environmental public goods. In parallel, a comprehensive rural development policy was introduced as Pillar II of the CAP; this policy encouraged many rural initiatives while also helping farmers to diversify, to improve their product marketing and to otherwise restructure their businesses.

Figure 2 depicts this evolution of the CAP in terms of the shift in expenditure on various measures. The graph reflects both the decline of the most trade-distorting elements of the CAP and their replacement with minimally or non trade distorting measures, as well as the declining share of the CAP in the EU GDP (and thus in the EU budget).

Figure 2: The path of CAP expenditure 1980 – 2009 (in 2007 constant prices)



Source: DG Agriculture and Rural Development.

The recent OECD evaluation of CAP reform confirmed that this reform process led to a significant decrease in the distortion of production and trade and an increase of income transfer efficiency (see Figure 3).¹⁰

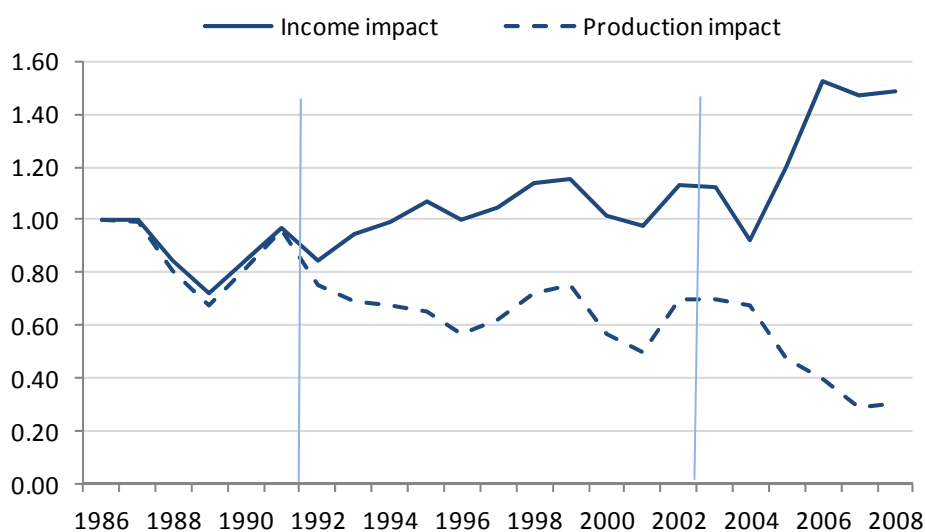
Measuring the amount and type of support to producers using the OECD Producer Support Estimate (PSE) indicator, the share of potentially most distorting support in PSE decreased from 92% to 34% between 1986-88 and 2007-09; it is projected to further decrease to 27% when the Health Check reform is completed. The share of gross farm receipts derived from support to producers decreased from 39% to 23% between 1986-88 and 2007-09, close to the OECD average of 22% in 2007-09.¹¹

The effects of the policy on the restructuring of the sector are difficult to separate from other factors, but while there may be cases of disincentives to exit, the overall decline in farm numbers has been steady since the mid-90s and is projected to continue. At the same time the report pointed to the need to better target income support, improve policy coherence between Pillars I and II and with other policies to improve competitiveness, the environmental performance and strengthen the regional approach for rural development.

¹⁰ Evaluation of Agricultural Policy Reforms in the European Union, OECD, TAD/CA/APM/WP(2010)26/FINAL.

¹¹ *ibid.*

Figure 3: Effect of the CAP on production and income, 1986-2008 (1986=100)



Note: Income is defined as producer surplus accruing to farm owned inputs, which include the farmer's own labour, quota rents, the livestock herd, and land (which for this figure is assumed owned by farmers).
Source: OECD PEM Model

The external evaluations of the rural development policy framework for 2007-13 show the positive impact of the strategic approach.¹² Member States have made considerable efforts to develop strategies on the basis of an analysis of strengths, weaknesses, opportunities and threats (SWOT) so as to best tailor their intervention to policy objectives. Still, there has been some evidence of path dependency in programming and of difficulties experienced by certain areas and groups in using funding.

2.2. Current policy framework

Currently two complementary pillars of the CAP provide the general framework that allows the policy to address competitiveness and sustainability challenges of agriculture and rural areas across the EU territory.¹³

Pillar I includes instruments related to the functioning of agricultural markets and the food supply chain (Council Regulation (EC) No 1234/2007) and to direct payments (Council Regulation (EC) No 73/2009) conditional upon statutory management requirements and good agricultural and environmental conditions.¹⁴ Combined, these measures provide a fundamental layer of support that allows keeping sustainable farming in place throughout the EU.

¹² See the evaluation *Synthesis of ex-ante evaluations of rural development programmes 2007–2013 (2008)*; the study *Defining EU Priorities: A Review of Rural Development Instruments (2008)*; and the final report of the Thematic Working Group 1 of the ENRD *Targeting rural territorial specificities and needs in rural development programmes 2007-2013*.

¹³ For detailed characteristics of CAP instruments and their evolution see a series of Policy briefs of DG AGRI http://ec.europa.eu/agriculture/analysis/perspec/app-briefs/index_en.htm.

¹⁴ As defined in Annexes II and III of the Regulation (EC) No 73/2009.

Pillar I measures are mandatory for Member States and, with very few exceptions, there is no co-financing. This ensures the application of a common policy within the Single Market, monitored by an integrated administration and control system (IACS).

Pillar II – rural development policy (Council Regulation (EC) No 1698/2005) - includes measures that aim at improving the competitiveness of the agriculture sector, delivering specific environmental public goods and promoting the diversification of economic activity and quality of life in rural areas. These measures are largely voluntary, contractual, co-financed and delivered within a strategic framework which links policy action to European, national, regional and local needs.

The appropriate combination of Pillar I basic annual payments at EU-wide level and Pillar II measures adapted to local specificities in a strategic approach creates a policy-mix that combines direct support with targeted actions and assures that the policy acquires a critical mass to make a difference at an EU-scale.¹⁵

As agriculture returns to the spotlight with the boom, bust, and then again boom in commodity prices, the policy framework requires re-examination. The recent developments exposed the sensitivity of our society to the issue of food provision, urban-rural relations, the role of the agricultural sector in the discussions on climate change adaptation and mitigation, and reinforced concerns about sustainability and the legacy of present policies for future generations. While EU consumers are spending on average only 16% of their household expenditure on food, concerns are refocusing on access to food by low-income households,¹⁶ availability of safe and high quality nutritious food and the social and environmental "footprint" of agricultural products.¹⁷

2.3. Agriculture under growing economic pressure...

In recent years, trends in agricultural markets reversed, and three new developments altered previously held beliefs. First, agricultural prices seem to have reversed, at least for the foreseeable future, their previous long-term downward trend, and have significantly increased both their level and their volatility. This development parallels the movement of prices in other commodity markets (Figure 4). The causes are multiple, linked, among other things, to macroeconomic developments, structural characteristics of the sector and the steady increase in demand, and exacerbated by short-term economic and policy issues (weather events, export restrictions) which contribute to high volatility of agricultural prices.¹⁸

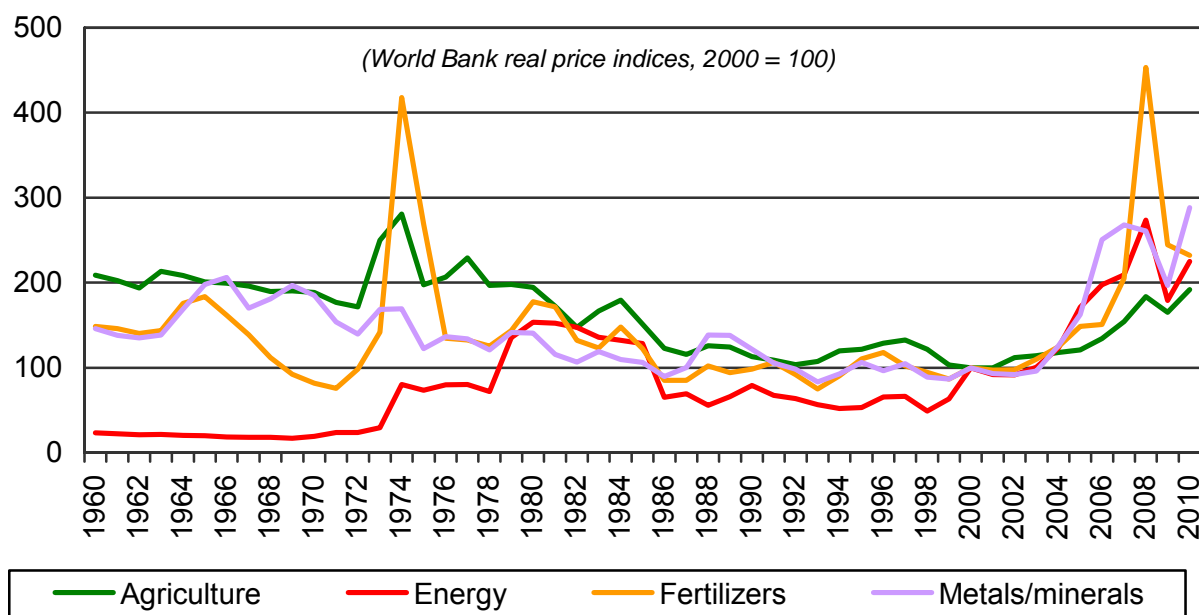
¹⁵ Targeting and critical mass are two key elements for effective policies identified in the evaluation prepared for the European Commission "Meta-study on lessons from existing evaluations as an input to the Review of EU spending", Euréval – Ramboll Management, January 2008.

¹⁶ An analysis of the food security for low income households is provided in the Impact Assessment accompanying the Commission proposal on the food distribution for the most deprived, SEC(2008) 2436/2.

¹⁷ The challenges faced by agriculture are highlighted in the 3rd Foresight Exercise by this Standing Group on Agricultural Research "Sustainable food consumption and production in a resource-constrained world"

¹⁸ See issues paper on high food prices, DG AGRI, May 2008, http://ec.europa.eu/agriculture/analysis/tradepol/foodprices_en.pdf and "High commodity prices and

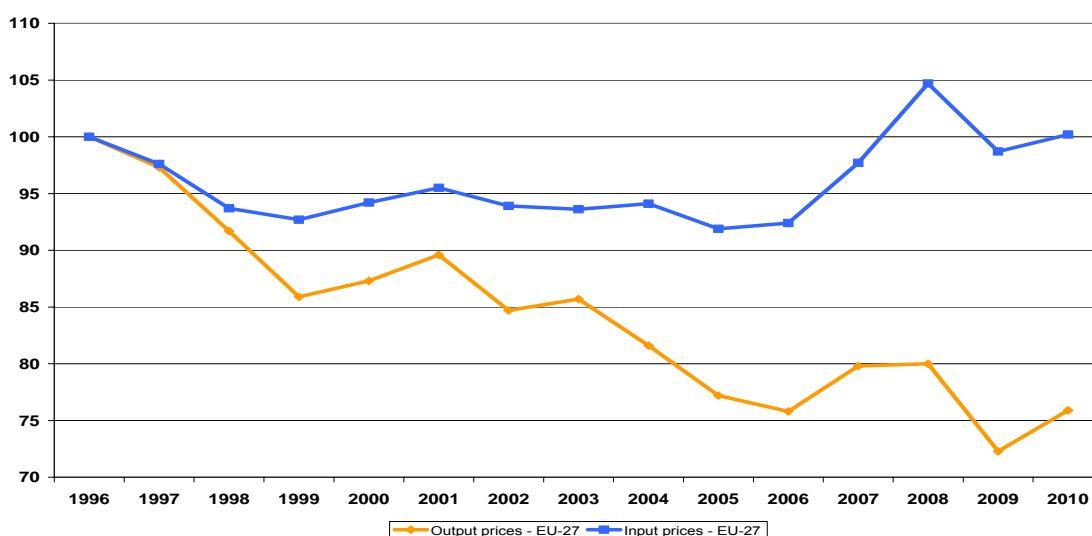
Figure 4: Price developments for energy, agriculture and fertilisers, 1960-2010



Source: World Bank

Secondly, prices for inputs used in agriculture have increased even further, resulting in the global deterioration of the terms of trade agriculture faces today worldwide. In recent years in particular, this has become more pronounced. During the 2004-2010 period, the average level of world agricultural prices increased by 50% from its corresponding level in 1986-2003; by comparison, energy prices jumped by 220% and fertiliser prices by 150%. EU agriculture was no exception, as Figure 5 indicates. While EU agricultural output prices are almost a quarter below their levels of fifteen years ago in real terms, input prices have climbed back to where they were in 1996.

Figure 5: EU-27 developments in agricultural input and output prices in real terms (1996=100)



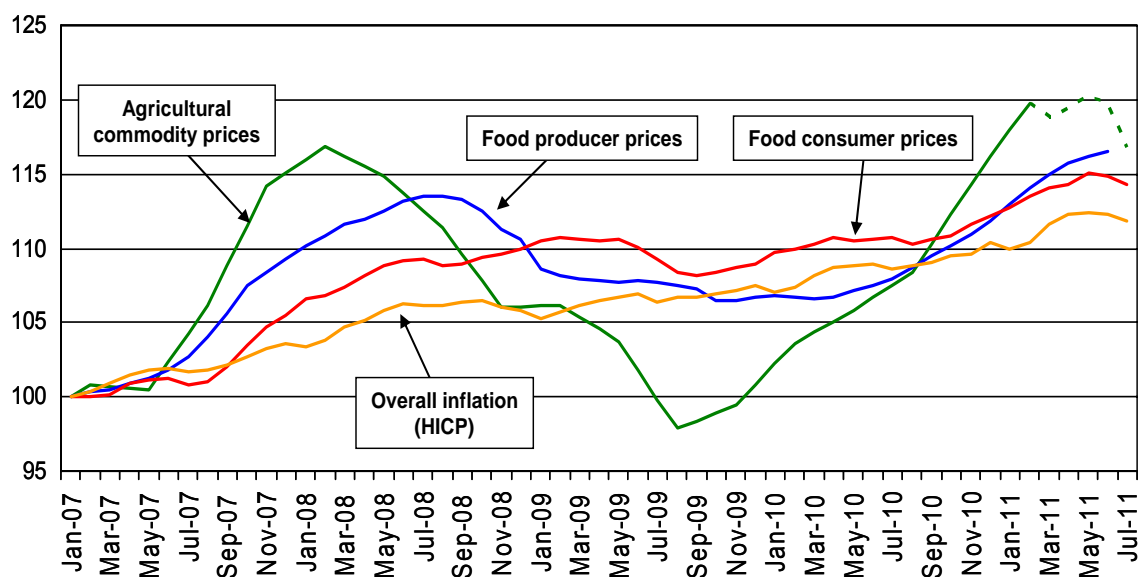
Source: Eurostat

Thirdly, as a result of the combined effects of these two developments, this 'margin squeeze' for producers has had an impact on the added value of the EU agricultural sector which fell by 13% in real terms since 2000 (and by 30% since the mid-90s).¹⁹ And while higher prices were expected to provide a clear market signal to the sector, the slowdown in factor productivity growth (land, energy, fertiliser, labour), the uneven and asymmetric transmission of price changes in the food supply chain (Figure 6) and the declining share of agriculture in the value added of the chain put additional pressure on farm profitability in the EU, implying that substantial investment in more productive methods is required to survive on the market.²⁰

¹⁹ For a detailed description of the recent trends and projections of agricultural income see Annex 1.

²⁰ The situation differs by product. Individual developments can be traced using the European Food Prices Monitoring Tool created by Eurostat.
http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/methodology/prices_data_for_market_monitoring

Figure 6: Price developments in the EU food supply chain, 2007-2011



Source: Eurostat

Moreover, today farmers experience increased exposure to income risks due to factors that are mainly external to the farm sector, such as increased price volatility, trade liberalisation, and climate change.²¹

About 20% EU farms show a drop in farm income by over 30% each year, compared to their average income of the previous three years. While EU farm income per person in real terms has been increasing by 1.5% per year on average between 2000 and 2010, this hides large differences between the evolution in EU-15, where it stagnated at 2000 level and in the EU-12, where it doubled since 2000.

Income disparity in absolute terms between EU farms is still very large.²² Even if the average agricultural income per worker is estimated to have increased by 12% in 2010, this increase followed two years of sharp decline so that the recovery of 2010 has not been sufficient to bring it back to the 2007 level.²³

The income per worker in the agricultural sector is significantly below the income in the rest of the economy. For the period 2008-2010, the average agricultural income in the

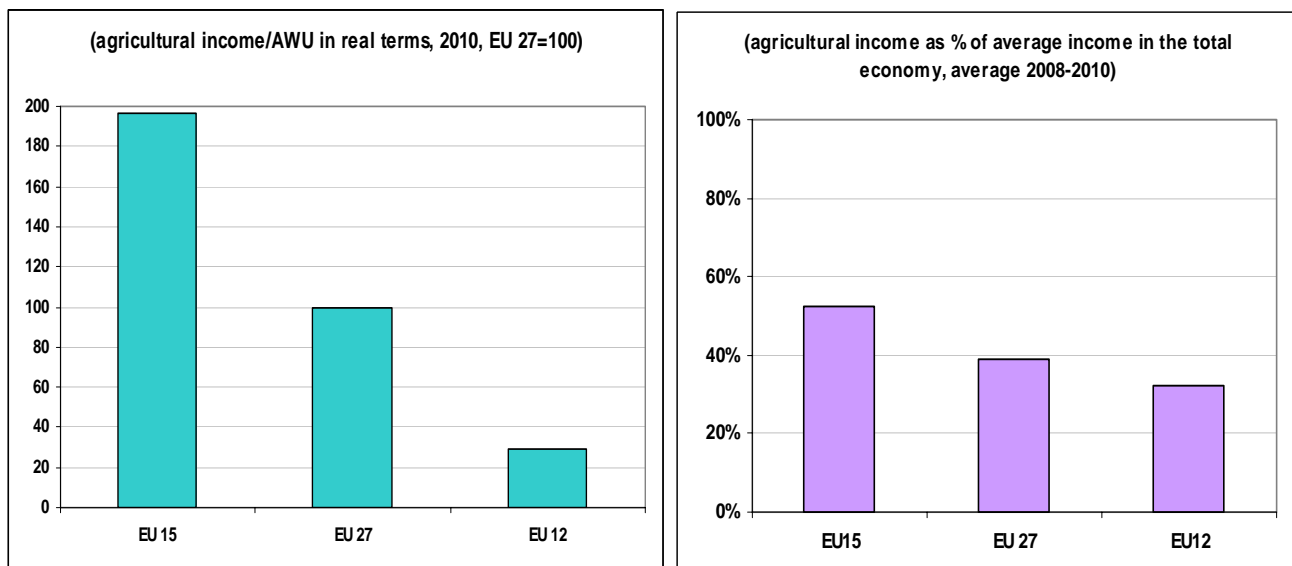
²¹ Key climatic concerns to agriculture and food production include carbon dioxide concentration and temperature changes, climate variability and climate-related hazards, precipitation patterns and water resources, incidence of pests and diseases and impacts on soils (see "Adapting to climate change: the challenge for European agriculture and rural areas" SEC(2009) 417).

²² In 2007 the average annual income per worker in the EU15 was around 26 000 EUR (for comparison value added per occupied person in Small and Medium Enterprise (SMEs) is 39 000 EUR), with about 10% of farms above 53 000 EUR, and over 50% below 17 500 EUR. In the EU10 average annual income was around 7 900 EUR, while over 50% of the farms were below 4 000 EUR. In the EU2, half the farms had an annual income below € 1 300 per worker.

²³ A more detailed analysis of income is provided in the report "Developments in the income situation of the EU agricultural sector", DG AGRI, December 2010. http://ec.europa.eu/agriculture/rca/pdf/hc0301_income.pdf

EU-27 was slightly less than 40% of the average wage in the total economy.²⁴ In the EU-15 the income gap has widened over time. It decreased from 70% in the year 2000 to 53% during the 2008-2010 period. In the EU-12 the gap is even more pronounced but has declined over time. The ratio increased from less than 20% in 2000 to more than 30% over the 2008-2010 period.

Figure 7: Relative situation of agricultural income in the EU, 2008-2010



Source: European Commission - DG Agriculture and Rural Development, based on Eurostat data

Farmers' capacity to respond to competitive pressures is affected by structural issues. One aspect relates to the size of farms: out of the 13.7 million farm holdings, 47% are very small, accounting for 23% of labour force and 7% of agricultural area. At the other end of the spectrum, 11% of farms above 20 ha account for 77% of agricultural area. While the trends show a steady decrease in the number of farms and increase of farm size, the existence of small holdings will remain an important feature in the EU agriculture, especially in EU-12²⁵. The other is the unbalanced demographic structure: the share of farm holders below 35 years stood at 6.1% in 2007 (6.7 in 2005), while it reached 34.1% for those over 65 (33.2% in 2005).

In order to stay competitive, large farms have a better potential to mobilise resources to focus on increasing efficiency and improving marketing²⁶. For the smaller farms, the fragmented structure and relatively low profitability, combined with insufficient human capital in the sector has limited the possibility of many individual farmers to optimise

²⁴ The figures above reflect the agricultural entrepreneurial income/AWU as % of wages and salaries/AWU in the total economy. Note that these figures should be interpreted with care owing to conceptual differences between the measurement of farmers' income from agricultural activities and average wages in the economy, and to the lack of reliable data on full-time equivalent labour statistics for the total economy for some Member States.

²⁵ An analysis of characteristics that could define a small farm are discussed in: *What is a small farm*, EU Agricultural Economic Briefs, No 2, July 2011.

²⁶ The characteristics of large farms are presented in Eurostat publication: *Large Farms in Europe*, C. Martins, G. Tosstorff, Eurostat Statistics in Focus 18/2011.

their production and marketing decisions, as well as their degree of cooperation to strengthen their bargaining power in their relations vis-à-vis a more concentrated upstream and downstream industry.²⁷

A number of factors determine the degree of cooperation, such as historical and cultural attitudes toward cooperation, farm structure (it is more difficult to encourage cooperation of small holdings), the importance of a large scale retail sector, unwillingness to jeopardize existing marketing channels, perceived benefit and the credibility with respect to payments and the purchase of production and product specific factors.

The creation of associations of producer organisations has been very limited overall because it requires a change of the business approach: producer organisations must replace the competition approach by a co-operation approach. This occurs mainly when producer organisations need to improve their competitiveness in order to comply with the requirements of large retail chains.

Policy role

There are various policy instruments which impact the economic situation of farmers. While the existing market measures provide for a safety-net in time of crises, the experience of the 2008-09 dairy crisis demonstrated not only the need to maintain an effective safety-net mechanism and to further reflect on the availability of risk management instruments, but also to streamline these tools across sectors.

Moreover, subsequent reflections of the High Level Expert Group on Milk²⁸ pointed to the renewed need for improvement in the functioning of the food supply chain and creating the right conditions for the farm sector to become more competitive and innovative, also through encouraging collaborative actions whilst at the same time ensuring competition in the sector.²⁹

The widening gap between input and output prices reveals the important role of continuing decoupled income support, which act as a cushion against income volatility. This was also indicated in the evaluation of the effects of the direct support schemes on the income of farmers.³⁰

The share of total operating subsidies in agricultural factor income (defined as receipts plus net subsidies less intermediate consumption and depreciation) has been rather stable since 2004 and amounts to around 40%, with significant variations between Member States. Direct payments amount to around 30% in EU-15 and 20% in EU-12 (Figure 8).

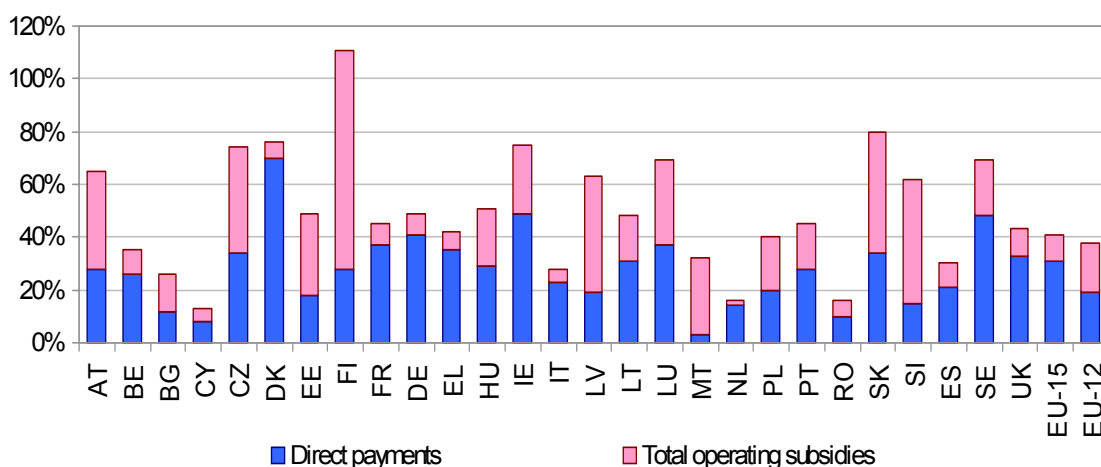
²⁷ These issues have been explored in the Commission Communication on the better functioning of the food chain COM(2009) 591.

²⁸ http://ec.europa.eu/agriculture/markets/milk/hlg/report_150610_en.pdf

²⁹ With regard to broader food supply chain, the European Commission set up a High Level Forum for a Better Functioning Food Supply Chain which follows the implementation of initiatives outlined in the Communication "A better functioning food supply chain in Europe." Moreover, the additional actions are taken in the fields of resilience of food supply chain, especially with regard to animal and plant health as well as animal welfare and food safety.

³⁰ Evaluation of income effects of direct support, AGROSYNERGIE, May 2011, http://ec.europa.eu/agriculture/eval/reports/income/index_en.htm.

Figure 8: Level of direct payments and total operating subsidies as a percentage of agricultural factor income (avg. 2007-2009)³¹



Source: DG AGRI

Future trends – status quo

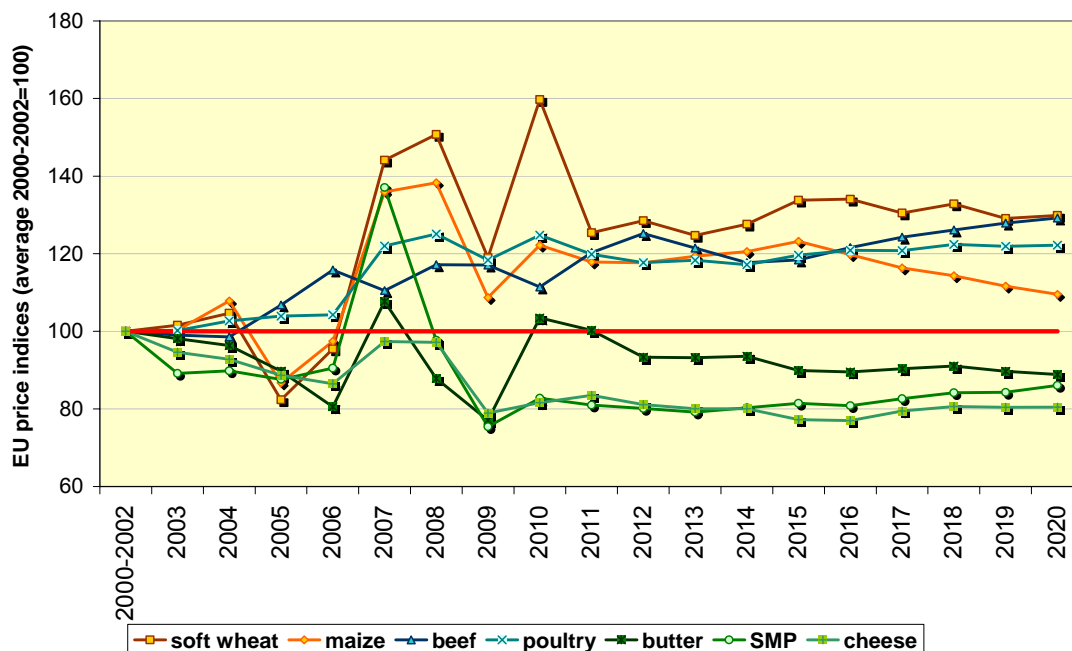
Baseline price projections for the main agricultural commodities indicate that the strong volatility observed recently on EU agricultural markets is expected to persist over the medium term due to the gradual alignment of EU and world prices as well as the growing uncertainty linked to climatic conditions, the macroeconomic situation and the increasingly close links between energy, financial markets and agricultural commodity markets.³² In addition, although agricultural prices are set to remain high, this is partly linked to demand growth (which is projected to increase, but at lower rates than in previous decades), but also to increasing costs of production.³³

³¹ Total operating subsidies includes state aids granted by Member States.

³² For a detailed analysis of the agricultural commodity markets projections see Annex 1.

³³ For details on market projections for different sectors and the impact of cost factors see Annex 1.

Figure 9: Medium-term projections for EU agricultural commodity prices (2000-2002=100)³⁴



Source: DG AGRI

In such an environment as the one described above, there is little scope for systematic public market intervention to support income, which instead is best supported by direct payments which mitigate the effect of income volatility stemming from market developments.

Agricultural income per farmer is expected to recover from the significantly low level of 2009 with an outlook for a gradual, albeit modest growth in aggregate EU income over the coming decade that would exceed the 2005-2009 average (base) level by around 20% in 2020. Again, this overall gain would mask uneven developments for the EU-15 and EU-12: whereas agricultural income in the EU-15 would show a more moderate increase to almost 10% above the base level, income in the EU-12 is forecast to rise 45% above the base level by 2020 converging towards the EU average.

2.4. ... while having to meet EU ambitions on environment and biodiversity protection, climate action and energy efficiency...

The CAP plays an important role in maintaining sustainable agriculture across the EU territory and in promoting environmentally and climate friendly practices. This is particularly important as modern farming puts many pressures on the environment and animal and plant health. For example, the recent tendency towards arable monoculture or short crop rotations increases the risk of depleting soil fertility, releasing greenhouse gases from lost soil carbon, and increasing inputs of fertilisers and plant protection products, which can pollute water and harm biodiversity; uncovered soils on arable and

³⁴ Note that the medium-term developments in dairy price are strongly influenced by the drop in support price at the beginning of the period.

permanent crop farms can lead to soil erosion, and the pollution of water by nitrates, phosphorus and pesticides. The removal of farmland features such as hedges, trees and ponds reduces the habitats available for wildlife on farmland, so threatening biodiversity on and beyond the farm.

The ploughing up of grasslands, in particular, has a major impact on climate change (soil carbon), as well as leading to the loss of grassland habitats, and other ecosystem functions of grassland such as flood prevention. These, in turn, risk further damaging the long term perspectives of farming, reliant as it is on soil, water, pollination for its survival.

By contrast, certain farming systems and practices are particularly favourable for the environment and climate objectives as well as public health³⁵. These include extensive livestock and mixed systems, traditional permanent crop systems or organic farming. Many valuable habitats and the related biodiversity developed over centuries in interaction with farming systems. Whilst these environmental features depend on appropriate management practices, those practices have been subject to changes, driven by competitive pressures. At the same time, new approaches to agricultural management are gaining ground: organic farming and the use of integrated crop management techniques (including integrated pest management) are developing in many pesticide-intensive farming systems. Much of EU farming provides culturally valued landscapes.

Biodiversity

The EU biodiversity strategy to 2020 requires further integration of biodiversity in key sectors such as agriculture and forestry in order to meet the ambitious EU headline target³⁶. For agriculture the strategy includes the following target: maximising areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP. The aim is to ensure the conservation of biodiversity and to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by agriculture and to provide ecosystem services as compared to the EU 2010 Baseline, thus contributing to enhance sustainable management.

Climate and energy

The Europe 2020 Strategy establishes the reduction of greenhouse gases as one of the EU's five headline targets.³⁷ In terms of reduction of greenhouse gases, non-CO2 emissions from agriculture fell by some 20% in the period 1990-2005, thus

³⁵ In addition, forest ecosystems provide wood and a wide range of non-wood products, regulate watersheds, purify air and drinking water, protect against soil erosion and support soil fertility.

³⁶ Our life insurance, our natural capital: an EU biodiversity strategy to 2020, COM(2011)244 final.

³⁷ In the Climate and Energy Package of 2008, the EU committed unilaterally to reduce its overall greenhouse gas emissions (GHG) by 20% below 1990 levels by 2020, and by 30% if other parties to the United Nations Framework Convention on Climate Change would commit to comparable efforts. The 20% reduction commitment is mainly implemented through Directive 2009/29/EC and Decision 406/2009/EC which require sectors participating in the EU Emissions Trading System (EU ETS) to jointly reduce emissions by 21% below 2005 levels and non-trading sectors (including agriculture) under the Effort Sharing Decision (ESD) to reduce emissions by 10% below 2005 levels.

outperforming other economic sectors with regard to their contribution to the reduction in GHG emissions.³⁸

Being dependent on natural resources and favourable climatic conditions in order to function, the EU agricultural sector would largely benefit from a stabilised climate. Additionally, agriculture is both an emitter and a sink of greenhouse gases and further effort is required to not only mitigate but to adapt to climate change also.

With on average 100 and 150 tonnes of carbon per hectare on arable and grass land respectively in the EU in 1990³⁹, agricultural soils contain a large stock of terrestrial carbon in the form of soil organic matter.⁴⁰ Agricultural practices can have a positive or a negative effect in terms of soil organic matter levels. The drainage of peatlands and their conversion to arable land, grassland or forestry gives rise to large losses of carbon.

In the Climate and Energy Package, the EU also committed to increase renewable energy uses in order to reach a 20% share in total EU final energy consumption in 2020. This will contribute to reducing GHG emissions as well as increasing the security of supply. This commitment is implemented through the Renewable Energy Directive⁴¹. Agriculture can play a very important role but priorities must be set and trade off addressed. On the one hand, agriculture can provide biofuels that can substitute fossil fuels helping both energy security and GHG mitigation. However this production must take care of avoiding undue land competition.

This is one of the purposes of the sustainable criteria, established by the Renewable Energy Directive, to be respected when producing biofuels. On the other hand, agriculture can provide solid and gaseous biomass for energy in heating, cooling and electricity. Together with biomass from forestry and organic waste, agricultural biomass currently contributes around 7% of final energy consumption in the EU-27 in the three energy sectors (transport, heating and electricity).

According to the National Renewable Energy Action Plans (NREAPs)⁴², submitted in 2010 by Member States to the European Commission under the Renewable Energy Directive, biomass would contribute to more than 10% of EU final energy consumption by 2020 and the contribution of EU domestic biomass from the agricultural sector is

³⁸ More information about the challenges of climate change adaptation and mitigation for agriculture can be found in the Commission reports "Adapting to climate change: the challenge for European agriculture and rural areas" SEC(2009) 417 and "The role of European agriculture in climate change mitigation" SEC(2009) 1093 final.

³⁹ To a depth of 30 cm. Elaboration on the basis of data from the European Soil Database of the Joint Research Centre (EU-27, except Cyprus; the average for grassland doesn't include Finland and Sweden as well).

⁴⁰ Soil organic matter is a major contributor to soil fertility, as it binds nutrients to the soil; it is the home for soil organisms; and it also maintains soil structure.

⁴¹ Directive 2009/28/EC on the promotion of the use of energy from renewable sources

⁴² http://ec.europa.eu/energy/renewables/transparency_platform/action_plan_en.htm.

expected to significantly increase.⁴³ Also, the agricultural sector is an important actor in developing other renewable energy sources on farms (wind energy, solar energy).

In the longer term, the impact assessment of the EU low carbon economy roadmap identifies agriculture as an important supplier of bioenergy, increasing its contribution to 85 and 183 Mt oil equivalent by 2030 and 2050 respectively (compared to estimated 22 Mtoe in 2005) thereby overtaking forestry as the current main source.⁴⁴ Biomass from agriculture for bio-based products also plays an important role in gradually substituting fossil hydrocarbons as a feedstock. The EU is currently developing its Strategy towards a sustainable bioeconomy by 2020 which will be accompanied by an action plan where agriculture will play a prominent role.

Policy role

The environmental sustainability of farming is related to farmers' decisions regarding whether, what and how to produce, while market prices do not reflect the externalities linked to agricultural production and in many cases the supply of environmental public goods is insufficient. The main drivers affecting the environmental sustainability of agriculture relate to intensification of production in some areas with abandonment and under management of land in others, as well as changing land use patterns and agricultural and forestry practices.

The CAP, notably through its rural development policy, is the major provider of EU financial support for land management measures to protect and benefit the environment, reflecting the fact that farmers and forest managers are the main managers of land. Of the current EU contribution to rural development funds (which is doubled by Member States' match funding, state aids, farmers' and other private contributions) about one half goes to measures which protect or enhance the environment.

Although direct payments support both basic income and provision of public goods, through cross-compliance, their current amount and distribution is based on historic production criteria. As a result they are concentrated in the most productive regions (to a lesser extent in the regional model) without being explicitly adjusted to environmental objectives beyond the link to basic standards under cross compliance. The level of aid is also generally lower in natural handicap areas (NHA), while income needs and the provision of public goods in these areas are important.

The link of direct payments to cross compliance (together with farm advisory services) has increased the awareness of farmers of existing environmental standards and of good environmental and agricultural practices, but there is still an information gap which needs to be addressed.

Rural development agri-environment measures (AEMs) support the provision of a wide range of environmental public goods and services going beyond legal obligations - from the preservation of biodiversity and landscapes to care for water and soil, mitigation and

⁴³ According to article 2 of the Renewable Energy Directive, biomass means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste.

⁴⁴ SEC(2011) 288 final.

adaptation to climate change and the conservation of genetic resources. These measures often address a number of environmental and climate objectives simultaneously. For example, improvements in the use of chemical inputs can have a positive impact on water quality while also preserving biodiversity and helping farmers to mitigate climate change and adapt to it.

Agri-environmental measures overall have unquestionably delivered strong environmental benefits over an area which covers approximately 25 % of the utilised agricultural area in the EU⁴⁵. However, in limited cases the commitments proposed were only marginally above the baseline of legal obligations, or demanding commitments were not matched by an appropriate payment rate (discouraging take-up). Finally, linking more complex agri-environment measures to support for relevant training for farmers and land managers was at times found to be difficult.

Future trends – status quo

Despite the progress that has been made in integrating environmental concerns into the CAP and in introducing environmental legislation at farm level, water quality and quantity, soil quality and land availability are still areas of major concern, together with the question of how to protect, maintain and further enhance farmland habitats and biodiversity and to enhance the role of agriculture in preserving ecologically valuable landscapes.

The assessment of the conservation status of Europe's most vulnerable habitat types and species protected under the Habitats Directive shows that nearly 65 % of all habitat assessments are unfavourable, and generally habitat types associated with agriculture have an inferior conservation status than other types.

Longer term projections on climate change show that emissions in agriculture are predicted not to decrease at the same rate as the other sectors unless further action is taken. The modelling assessment made in the EU low carbon economy roadmap, based on the current CAP, concluded that the EU agricultural sector could decrease its GHG emissions by between 36 and 37% by 2030 and 42 and 49% by 2050 depending on the decarbonisation scenarios used.⁴⁶

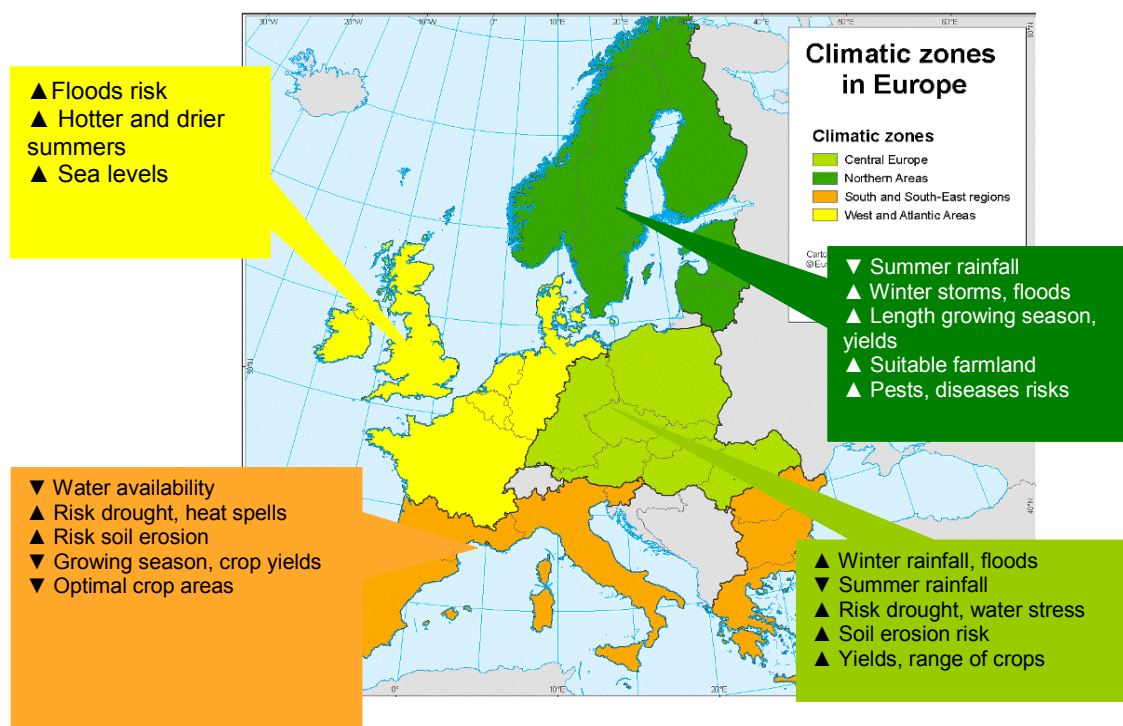
Mitigation will play a role in preventing these extreme events from being as severe as often projected. However adaptation must be managed in a strongly coordinated fashion in order to allow farmers and foresters to be prepared and equipped with the knowledge and infrastructure necessary to develop resilient agricultural systems.

Figure 10 clearly outlines the future climate change challenges that may be faced by different regions across Europe.

⁴⁵ An assessment of agri-environment payments is made in Annex 4.

⁴⁶ A Roadmap for moving to a competitive low carbon economy in 2050, COM(2011) 112 final.

Figure 10: Climate change – Possible impacts on EU agriculture



Source: DG Agriculture and Rural Development, based on EEA reports, JRC and academic studies

2.5. ... and to contribute to inclusive growth in rural areas

There are large disparities between rural areas themselves, with the picture becoming increasingly diverse with the successive enlargements. In some cases this depends on their proximity to urban areas: from peri-urban areas, which are well integrated in the metropolitan systems to remote rural areas, which suffer from poor access to services of general interest and population decline. In the EU-27, 54% of the territory is classified as predominantly rural (NUTS3)⁴⁷ areas and represent 19% of the EU population. The income per inhabitant in these regions represents only 68% of the EU-27 average, whereas in intermediate and predominantly urban regions it reached 84% and 126% respectively of the EU-27 average.

In predominantly rural areas the primary sector still represents 4.9% of value added (and more, if related (food) industry is considered) and 15.7% of employment. This is where the role of agriculture can be particularly important, not only directly but also indirectly - through the generation of additional economic activities. It is estimated that an increase in agricultural output produces an additional 150% increase in output among local purchasers and consumers of that output. Especially strong forward linkages exist with food processing, hotels and catering and trade, all sectors that, in turn, have further high

⁴⁷ NUTS (Nomenclature of territorial units for statistics) is a geographical nomenclature subdividing the territory of the European Union (EU) into regions at three different levels (NUTS 1, 2 and 3, respectively, moving from larger to smaller territorial units).

links with the rest of the rural economy⁴⁸. Moreover, remote rural areas have the most limited access to general services, such as schools, primary health care and banking.⁴⁹

The important role of small and medium towns as centres of key services and social life for the surrounding rural communities and as provider of territorial cohesion has to be recognised. These towns also provide access to a large number of mobile consumers which represent an opportunity for small-scale producers of “niche” and high quality agri-food products (developing short and local supply chains); in the most accessible areas, this process creates positive migration trends (counter-urbanisation).

However, many rural areas are now driven by urban economies as in-migration has occurred around metropolitan centres, and most economic activity in rural areas depends on the service sector. The average annual increases of both employment and added value in the non-agricultural sector for all regions stood at around 1.3% and 2.5% per year respectively between 2002 and 2007: as a result, in 2007, 85% of employment and 95% of value added in predominantly rural areas of the EU-27 came from the non-agricultural sectors.

A stronger linkage between urban and rural areas, especially peri-urban rural areas, is leading to interesting counter-urbanisation developments and new forms of rural growth. At the same time urban sprawl is expanding, generating strong pressure on peri-urban natural resources. The increasing value placed by society upon rural environment and heritage creates important diversification opportunities in areas with a high level of recreational amenities attracting urban populations.

The key sectors in terms of potential growth for rural areas include tourism (nearly three quarters of bed places in the EU-27 are located in rural areas) and the renewable energy sector (in 2005 it generated gross value added of over 9 billion € in the primary sector and sustained 210,000 jobs)⁵⁰.

Policy role

In the rural development policy, there is a comprehensive toolkit of measures to assist with the sustainable development of rural areas throughout the EU; lessons learned from the current period have however shown the need to make adjustments in some cases. For example, business creation and diversification measures are particularly important in areas where there is a high share of part-time farmers or where significant restructuring of the agricultural sector is still under way. However, the limitation of the measure to micro-enterprises has been criticised and it is judged that supporting small enterprises would also lead to considerable benefits.

⁴⁸ For more information see ENRD Thematic Working Group 2: Linkages between Agriculture and the wider rural economy, Final report, December 2010, http://enrd.ec.europa.eu/thematic-initiatives/twg2/en/twg2_home_en.cfm.

⁴⁹ Investing in Europe’s future, Fifth report on economic, social and territorial cohesion, European Commission, November 2010

⁵⁰ http://ec.europa.eu/energy/renewables/studies/doc/renewables/2009_employ_res_report.pdf.

Leader has successfully brought local actors together and allowed for the development of local governance capacities. However, its mainstreaming in the current period has in some cases meant that the specificities of this innovative bottom-up approach were compromised, due to the narrowing of the scope to pre-defined measures and to the lack of clear distinction of roles between managing authorities, paying agencies and LAGs.⁵¹ In response to feedback from various sources – including Special Report No. 5/2010 from the European Court of Auditors - the Commission assured its more flexible implementation.

In terms of coherence with other EU policies and source of funding, Member States have generally been successful in setting demarcation lines and ensuring coordination between rural development and other policies. On the other hand, less attention was paid to moving beyond simple demarcation to a better complementarity between policies – i.e. there were less initiatives to find synergies between policies and avoid funding gaps.⁵²

Future trends – status quo

A recent study on employment and growth in rural areas identified the following important drivers for rural economies: natural resources and environmental quality, the sectoral structure of the economy, quality of life and cultural capital, infrastructure and accessibility.⁵³ The analysis also identified the following key barriers to growth: demographic developments, infrastructure and accessibility and the sectoral nature of the economy.

2.6. Implementation issues across Member States

The reform of the CAP allows addressing a series of issues related to the implementation of Pillar I and Pillar II instruments and the process of removing administrative burden.

The distribution of direct payments

The efficiency of direct payments is rather high at macro level, yet very uneven at farm level.⁵⁴ Thus the main challenge stemming from the evaluation of Pillar I is the need to redistribute support in a more effective and equitable manner, both among and within Member States.

This finding is also present in the European Court of Auditors Special report published in 2011, which found that the introduction of the decoupled payment scheme positively contributed to the objectives of the CAP, notably by encouraging farmers to respond

⁵¹ See also Ex-post evaluation of Leader+ (2010) and the work of the ENRD focus group 1 on 'Implementation of the bottom-up approach of Leader'.

⁵² Report on Policy Delivery Systems and their relations with types of governance models, F. Mantino, M. Bolli, P. Fagiani, S. Tarangioli, RUDI - Assessing the impact of rural development policies, http://www.rudi-europe.net/uploads/media/RuDI_WP3_D_3_3.pdf

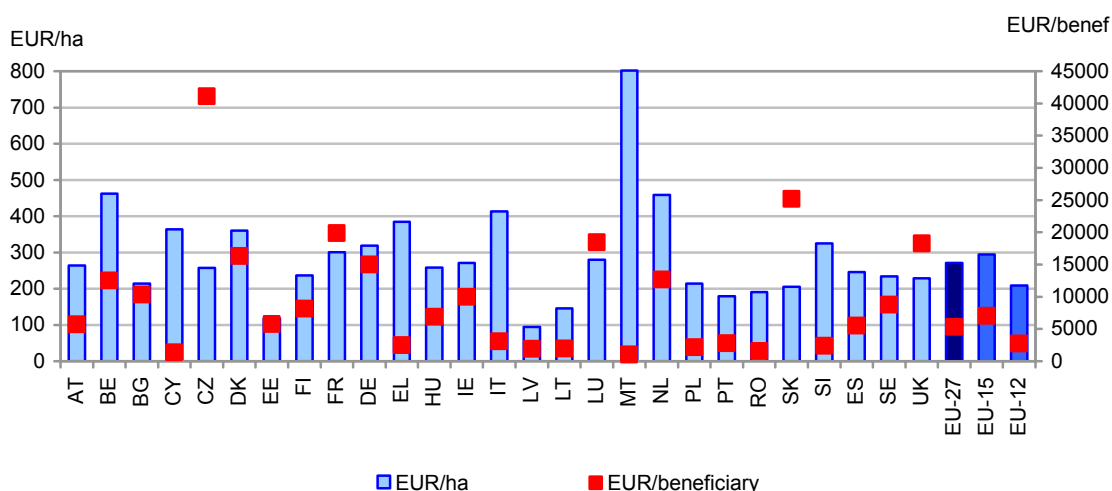
⁵³ See *Study on employment, growth and innovation in rural areas (SEGIRA)*, and the report of the thematic group on rural development and territorial cohesion.

⁵⁴ Evaluation of income effects of direct support, AGROSYNERGIE, May 2011, http://ec.europa.eu/agriculture/eval/reports/income/index_en.htm

better to market demand and by supporting the income of the agricultural sector as a whole, but better targeting is needed.⁵⁵

This criticism is not new. The current distribution of direct payments is based on historic parameters that reflect the production and support of farms in a reference period, which in most cases is already a decade old. The flexibility left to Member States in their choice of direct payment model (historic, regional, hybrid) led to large variations in the level of aid per hectare received by farmers, depending on the region they are located in. The same distribution has a different impact owing to the economic situation of Member States (see Figure 11 below).

Figure 11: Average payments per beneficiary and per hectare⁵⁶



Source: DG AGRI

While the volume of support reflects, at least partly, objective criteria, it does not reflect the fact that farm structures and production patterns have changed since the reference periods. Furthermore, the large number of small beneficiaries (i.e. farms with small size) adds considerably to the administrative burden and require support that is better targeted to their needs.⁵⁷

The historical basis helped the introduction and acceptance of decoupling from 2005, not just in political terms but also in economic terms by limiting the potential impact of significant changes in the level of support on land, and thus asset values.

However, this reference to past production is difficult to justify with the new policy targeting priorities. In the case of EU-12 the level of direct payments was established on the basis of production in a pre-accession period which was strongly influenced by national policies and budget considerations. After the enlargement structural changes in

⁵⁵ European Court of Auditors, Special Report No 5/2011: "Single payment scheme (SPS): issues to be addressed to improve its sound financial management"

⁵⁶ This figure is based on the national envelopes of Member States after full phasing-in of direct payments in the EU-12 and the number of potentially eligible hectares in IACS for 2008.

⁵⁷ The CAP impact on small farms is one of the issues discussed in the FP6 Research project Structural Change in Agriculture and Rural Livelihoods (SCARLED) www.scarled.eu

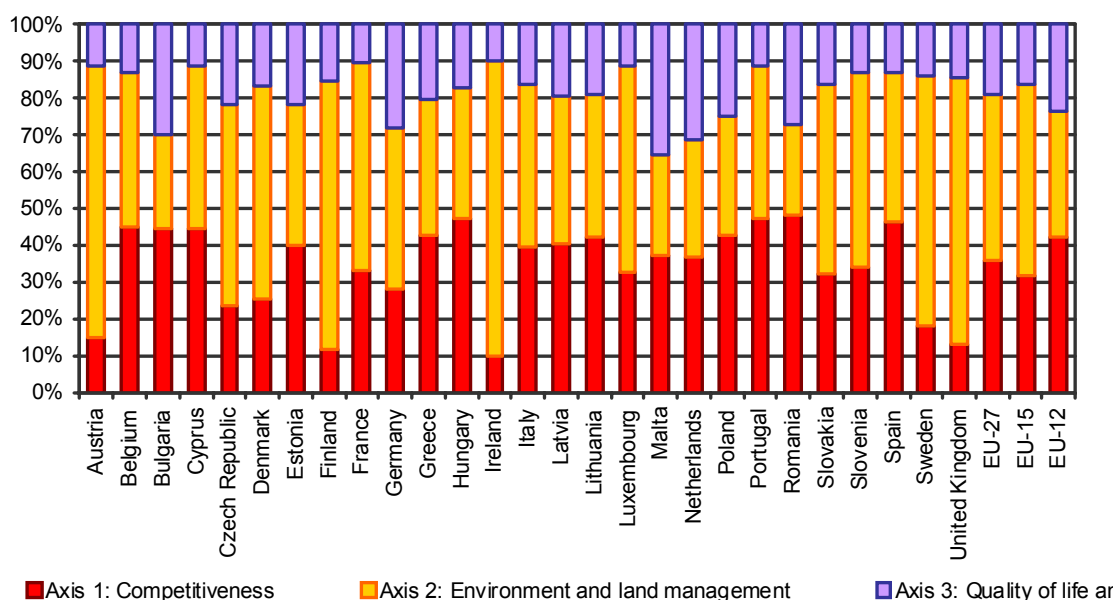
agriculture and the trend toward gradual alignment of the cost of production among Member States makes it difficult to justify continuation of this historical distribution in the future.

Management of rural development policy

Member States draw and co-finance rural development programs by drawing from a common toolkit of measures to address their particular needs as identified on the basis of a SWOT analysis. The measures of rural development policy are divided up according to "axes". There is one axis for each of the three objectives of the policy: improving the competitiveness of agriculture and forestry, improving the environment and the countryside and promoting economic diversification and quality of life in rural areas (a cross-cutting axis 4 is related to the Leader approach).

A given measure is assumed to contribute to the objective attached to the axis to which it "belongs" – and only to this objective. Within its Rural Development Program, a Member State or region must spend a minimum proportion of its EU rural development funding on each axis, for the sake of balance between objectives (see Figure 12).

Figure 12: Relative importance of the three axes by Member State (2007-2013 period)



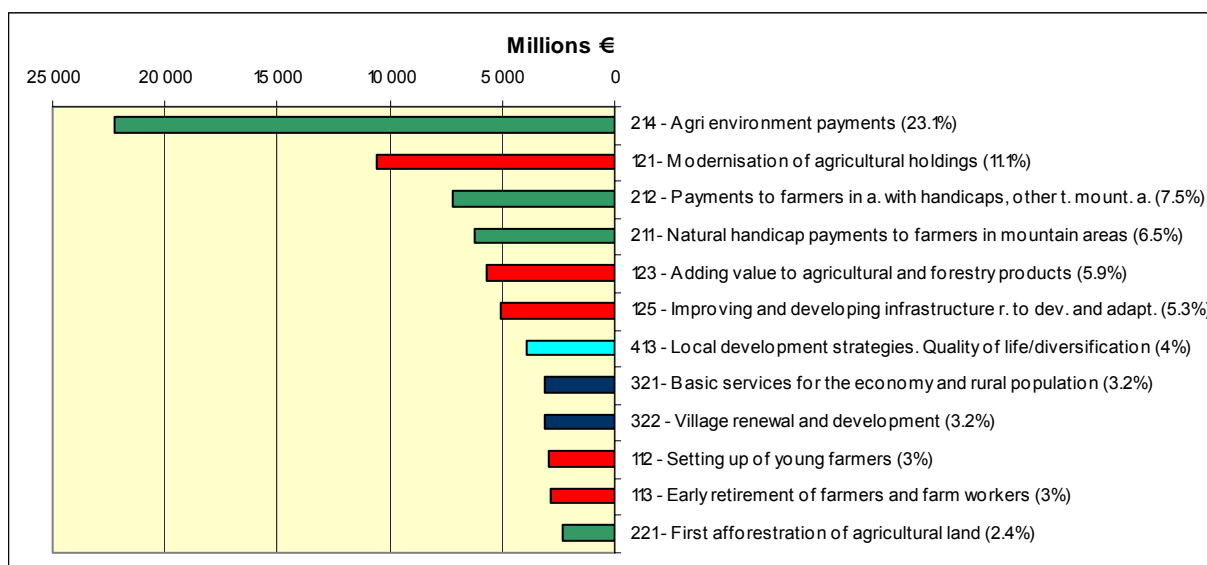
Source: DG AGRI

The axis system provides only a crude guarantee for the allocation of resources to objectives, which relies on a simplified intervention rationale and may thus at times mislead since a single measure often serves more than one objective. In addition, the ring fencing introduced in the Health Check of the CAP to match the additional funds made available with the new priorities has considerably increased the administrative burden of the system.

That being said, the current approach of strategic targeting marks a considerable advance from the previous period (2000-2006) – in which Member States or regions simply selected whichever measures they wished from the preset menu and allocated funding with little formal justification. The challenge now is how to ensure the best fit with the

EU priorities, notably the Europe 2020 strategy for smart, sustainable and inclusive growth.

Figure 13: Main rural development measures in the EU-27 (2007-2013 period)



Source: DG AGRI

Simplification

Since its introduction the CAP has established a comprehensive political and legal framework for European agriculture which requires a significant level of management. Reducing red tape in the farm sector by making rules more transparent, easier to understand and less burdensome is thus of great importance to reduce costs for businesses and ensure that European citizens receive value for money.

In 2009 it was assessed that for the agricultural sector the level of administrative burden for farmers and companies concerned had been reduced by 36%, so well above the target of 25% by 2012 established after the 2007 Action Programme to eliminate unnecessary administrative burdens on businesses in the EU⁵⁸.

The "rolling" Simplification Action Plan includes initiatives that will lead to further simplification. It is regularly updated with inputs from expert groups and Member States. The challenge for the future CAP is to keep the tools of the reformed CAP as simple as possible while fulfilling all its assigned objectives in the most efficient way. In this context and as a follow up to the Communication on the CAP towards 2020, a simplification conference has been organised with authorities and farmer representatives to discuss the administrative burden concerns.⁵⁹

⁵⁸ Communication COM (2009) 544 of 22 October 2009, Actions programme for reducing administrative burdens in the EU. Sectoral reduction plans and 2009 actions.

⁵⁹ The results of the conference are summarised in Annex 8. Simplification of the CAP pp.34-57

2.7. The global dimension

Food security is one of the major challenges of the future given the current outlook of increasing global demand faced with considerable uncertainties of supply linked to unpredictable economic and political, but also climatic and biological (e.g. new crop and animal diseases) developments. The first G20 Agriculture Ministers' meeting on 22-23 June 2011 in Paris confirmed the need to bring agriculture, food security and nutrition higher up the international agenda, focusing attention on market information and transparency, international policy coordination, agricultural production, research and risk management.⁶⁰

A strong EU agricultural sector is vital for the highly competitive European food industry to remain an important supplier of high quality and safe agricultural and food products and to contribute to global food security, alongside the efforts to support a sustainable agricultural sector and industry in developing countries. The CAP should promote and support a sustainable agricultural sector participating in the efforts to assure food security in line with overall EU priorities.⁶¹

The EU is a major trading block and holds a significant weight in international agriculture and food trade. With average annual imports of €83 billion in 2008-2010, the EU is by far the largest importer, although its share in world imports has decreased from 21% in 2007 to 19% in 2009. Exports have reached an annual average of about €82 billion in 2008-2010, placing the EU at a par with the USA with a share of around 18% of world exports.⁶² EU agri-food trade has experienced a sustained growth in the last ten years, with the exception of the contraction recorded in 2009 due to the economic recession. In 2010 the value of EU exports reached €91 billion (increasing by 21% compared to 2009) while imports grew by 9% reaching €84 billion, resulting in a positive trade balance for the first time since 2006 (the only other time in the last decade with a trade surplus).

The positive EU trade performance in the last decade took place while respecting the WTO disciplines introduced by the Uruguay Agreement on Agriculture in terms of domestic support, export subsidies and market access. The EU often went further with its reduction commitments as a result of CAP reforms and trade policy changes:

- Domestic support: past CAP reforms have moved support away from price support towards decoupled income support. Today more than 90% of direct payments are decoupled and qualify for WTO green box (with no or limited trade distorting effects).

⁶⁰ Action Plan On Food Price Volatility And Agriculture, Meeting of G20 Agriculture Ministers, Paris, 22 and 23 June 2011, http://agriculture.gouv.fr/IMG/pdf/2011-06-23_-_Action_Plan_-_VFinale.pdf

⁶¹ These are stated in the EU Food Security Policy Framework in 2010, adopted by the Commission and complemented by Council Conclusions.

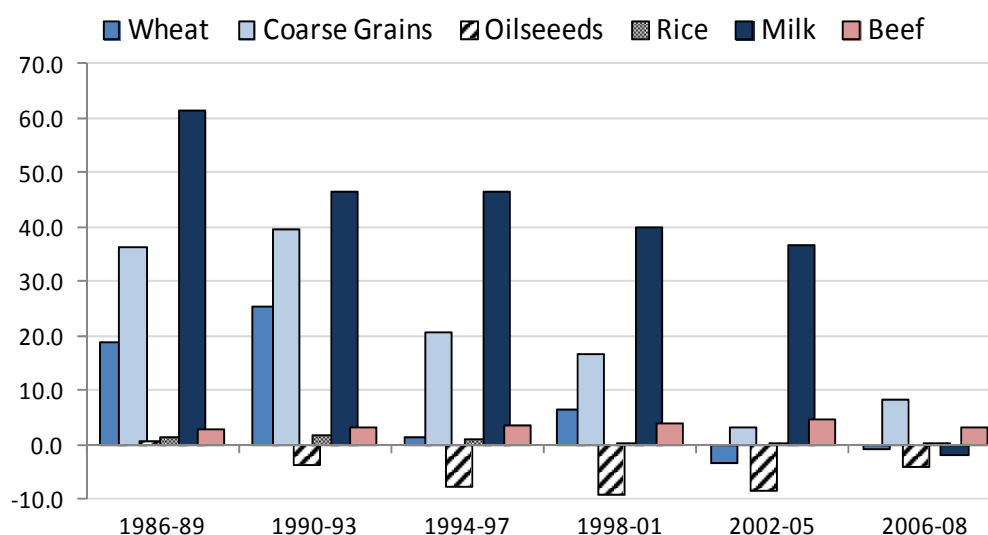
http://ec.europa.eu/development/icenter/repository/COMM_PDF_COM_2010_0127_EN.PDF
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/114357.pdf

⁶² *Global and EU agricultural exports rebound*, MAP Newsletter, May 2011, <http://ec.europa.eu/agriculture/publi/map/brief3.pdf>

- Export refunds: as a result of domestic reform towards more market orientation the use of export refunds has been strongly declining. In 2010, expenditure for export refunds for agricultural products from the European Union was 166 million EUR as compared to 5.6 billion EUR in 2000. This level is well below 1% of CAP expenditure.
- Market access: the EU has been pursuing increased market access especially for least developing countries, and thanks to the Everything But Arms and European Partnership Agreements the EU is by far the largest importer of agricultural products from developing countries: the EU alone imports more from developing countries than the following top 5 importers (US, Japan, Canada, Australia and New Zealand all together).

The role of CAP reforms in diminishing substantially its distortive impact on international markets has been acknowledged by the OECD. Figure 14 below gives an OECD estimate of additional exports which can be attributed to policies in place at the time (cf. Annex (12)).⁶³

Figure 14: CAP impacts on EU exports, 1986-2008 (million tonnes)



Source: OECD PEM model

The EU continues its efforts to seek the conclusion of an ambitious, balanced and comprehensive agreement in the Doha Development Round. As part of an overall package deal, the EU has indicated its readiness to accept a steep reduction in the ceiling on its trade-distorting subsidies, the elimination of its export subsidies and a significant reduction of its border protection.

On the other hand, the ongoing trade liberalisation process is expected to exert additional pressure on the economic perspectives of the European farm sector and on agricultural employment. Analysis of the implementation of a possible DDA Agreement under the

⁶³ Evaluation of Agricultural Policy Reforms in the European Union, OECD, TAD/CA/APM/WP(2010)26/FINAL

WTO⁶⁴ indicates that this could lead to a considerable increase in projected EU imports for many products compared to the baseline at the horizon 2020.⁶⁵

EU producer prices could drop for most of the products, with the volume of production expected to fall accordingly. The sharpest price fall (more than 10%) is expected for sugar and beef. Price drops could in most cases trigger an increase in consumption, somewhat mitigating the fall in domestic production. As a whole, the DDA could generate a drop of about 8% in agricultural income in 2020 compared to the baseline.

Average effects mask more pronounced potential impacts at the level of single Member States and regions, especially those specialised in livestock production. Pressure on the extensive livestock sector would have a negative effect on biodiversity in these areas, much of which is a by-product of traditional farming systems there. Additional challenges for EU agriculture stem from further trade liberalisation achieved under bilateral agreements between the EU and various third countries.

In this respect, the possible Free Trade Agreement with the Mercosur could also generate the most significant impacts for EU agriculture potentially leading to a decline in EU farm income and agricultural employment. The precise magnitude would depend on the extent of the liberalisation agreed under the trade deal. As in the case of the DDA, average effects are likely to be unevenly distributed by agricultural sector and at national/regional level. Again, the EU meat sector (in particular beef) is expected to bear the highest losses, as well as Member States and regions dependent on this production.

2.8. EU value added

The basis for the Common Agricultural Policy is formulated in the Treaty on the Functioning of the European Union, where article 38 stipulates that “The Union shall define and implement a common agriculture and fisheries policy” with objectives set out in article 39 and detailed provisions in articles 40-44. The Lisbon Treaty has confirmed the relevance of CAP objectives of increasing agricultural productivity, ensuring a fair standard of living for the agricultural community, stabilising markets, assuring the availability of supplies and ensuring that supplies reach consumers at reasonable prices.

The added value of the CAP is in its ability to⁶⁶:

- respond effectively to transnational goals and cross-border challenges such as mitigating climate change, enhancing biodiversity (agri-environmental measures) and contributing to economic and social cohesion (direct payments), ensuring food safety, increasing consumer confidence and welfare, the development of the Single Market

⁶⁴ Along the broad lines of the Draft Modalities for Agriculture laid down in the Falconer paper rev. 4 of December 2008

⁶⁵ The effect of a possible DDA agreement was analysed using the AGLINK-COSIMO model, as compared to the baseline prospects for agricultural markets by 2020 (of December 2010). In this simulation exercise, DDA provisions were implemented for the EU only. Thus, the positive impacts for the EU stemming from the new market access opportunities on third countries' markets are not taken into account.

⁶⁶ Examples of EU value added of particular CAP instruments are provided in the Commission Staff Working Paper "The added value of the EU budget" SEC(2011) 867 final (29.6.2011)

and the EU trade policy (common market measures), through a common set of rules, principles and objectives;

- ensure a more efficient use of the budgetary resources of the Member States vis-à-vis the coexistence of national policies (e.g. compared to a single common policy, 27 different policies would have been more costly and certainly less effective inducing different levels of intervention, a major risk for distortion of competition) also by fostering farmers' compliance and Member States enforcement of EU rules;
- help to develop a competitive and balanced European agriculture from an environmental and territorial point of view, which would contribute positively to the competitiveness of the EU food supply chain and trade, and enhance the cohesion of rural areas by encouraging initiatives favouring their economic and social growth.

The added value of the CAP comes partly from the fact that it provides one common legal reference and policy framework. This places a vast reserve of experience and tested policy approaches at the disposal of all Member States and regions. It also helps to ensure that, to a large extent, Member States follow common aims with regard to farming and rural areas, instead of implementing separate national policies which could compete with and partially nullify each other. This also allows for a stronger and more consistent trade policy vis-à-vis our global trading partners, most notably by enhancing its bargaining power. Moreover, an EU approach allows the application of common rules in the single market and therefore provides fair conditions and a level playing field for all Member States.

The added value of the CAP also lies in financial solidarity. A common policy provides the funding necessary to implement valuable policy measures across the EU. If Member States were thrown back on their own financial resources, many of them would not be in a position to help their farm sectors and rural economies along the path of sustainable development. The major role rural development funds play in protecting and enhancing the environment would be particularly under threat. This problem would have been especially acute after EU enlargement, and there would have been a significant danger of rapid and poorly managed restructuring (e.g. with a rural exodus and serious damage to the environment).

At the same time, for the policy to be effective a certain degree of flexibility is necessary in its implementation to allow Member States to adjust the policy to local needs. Direct payments already provide certain parameters of the Single Payment Scheme and the Good Agricultural and Environmental Conditions that reflect such flexibility.

Rural development policy is based on national strategies and programmes drawing on analyses of strengths, weaknesses, opportunities and threats. Within these programmes, appropriate measures are selected from a list agreed at EU level, responding to the needs of Member States and regions, as well as helping them achieve common EU objectives.

3. OBJECTIVES

Today's challenges to EU agriculture have become broader and more complex in particular due to economic pressures such as the deterioration in agricultural terms of trade, the erosion of the sector's competitive potential and the challenge of further liberalisation of agricultural markets; increased environmental threats such as climate

change and the loss of biodiversity; and territorial needs such as keeping the great diversity of rural areas in the EU-27 vital and attractive. In the context of the contribution of agricultural policy to the Europe 2020 strategy the three broad policy objectives for the future CAP are:

- Contributing to a viable, market oriented production of safe and secure food throughout the EU by acting on drivers related to income derived from the market (improving farmers' capacity to add value to their production, improving the functioning of the food supply chain in a pro-competitive way, providing a safety-net in case of excessive price drops), promoting sustainable consumption, enhancing the competitiveness of agricultural holdings (innovation, modernisation, resource efficiency, addressing production difficulties in areas with natural constraints) and helping farmers to deal with income volatility and the below average income and productivity of the sector (income support, risk management for economic and public health risks). This is related to the smart growth objective of the Europe 2020 strategy;
- Ensuring the sustainable management of natural resources, such as water and soil, and the provision of environmental public goods such as preservation of the countryside and biodiversity, integrating and promoting climate change mitigation and enhancing farmers' resilience to the threats posed by a changing climate, fostering green growth through innovation and reducing environmental damage by agriculture. This contributes to the sustainable growth objective of Europe 2020 with the aim of contributing to a low carbon economy, an expanding bioeconomy and protecting the environment;
- Contributing to the balanced territorial development and thriving rural areas throughout the EU by responding to the structural diversity in farming systems and assuring positive spill-over effects from agriculture to other sectors of the rural economy and vice-versa, improving their attractiveness and economic diversification. This is related to the inclusive growth objective of Europe 2020 considering the relatively lower level of development of rural areas and the aims of social and territorial cohesion within and also between Member States.

At an operational level, this implies the need to reform the current CAP framework along the following lines:

Gearing the CAP measures towards increasing the productivity and competitiveness of the agricultural sector by:

- improving the functioning of the advisory system and creating networks (of farmers, advisors, researchers, food operators, consumers etc.) for knowledge creation and transfer and favouring innovative approaches in granting funding for projects for rural development measures
- encouraging pro-competitive joint action among farmers and across the food supply chain in order to foster efficient use of resources, product development and marketing
- providing incentives to use risk management instruments and active prevention strategies

Improving the environmental and climate change performance of the CAP by:

- increasing the number of agricultural areas which are under agricultural practices providing environmental and climate action benefits and encouraging the take-up of more advanced agri-environmental measures by Member States and farmers;

Enhancing the effectiveness and efficiency of the policy by:

- rebalancing the direct payment support to better reflect the objectives of income support and improved environmental performance
- reducing the disparities in direct payment support levels between Member States and farmers
- reducing administrative burden for farmers and managing authorities of existing tools without watering down their efficiency and effectiveness and increasing the risk of errors.

The progress towards achieving these objectives would be steered using quantified impact and output indicators in the context of reforming the monitoring and evaluation framework described in section 7 of the report.

4. POLICY SCENARIOS

For each of the three CAP objectives described in section 3, there is a multitude of possible policy approaches and instruments to address them. All of these instruments can be aligned along a continuum ranging from a free market approach (i.e. no policy intervention) through an incentive-based approach (i.e. through voluntary actions with financial rewards) to a regulatory approach (i.e. through laws and regulations).

To illustrate this for the environmental sustainability objective, voluntary incentive schemes for the supply of environmental public goods would offer a bonus or compensation to farmers for engaging in environmentally beneficial practices while a regulatory approach would enforce a desired level of environmental outcome through prescriptions, bans and sanctions. In this area, a market based approach that would leave the supply of environmental public goods to the play of private demand and supply alone would clearly demonstrate the problem of market failure by leading to a sub-optimal level of environmental outcome.

4.1. Building scenarios on policy options

Following a wide public debate and a series of own initiative positions from EU institutions and particular Member States, the above described continuum of possible approaches to address the policy objectives has been assembled into three coherent policy scenarios, namely the adjustment, integration and re-focus scenarios.

- The adjustment scenario focuses on adjusting the CAP in a limited way by emphasizing those elements that work well in today's CAP and addressing the major shortcomings of the current policy framework without making any fundamental changes to the policy.

- The integration scenario has the purpose of improving the targeting of CAP support to the objectives of the policy, especially by better integrating the contributions of different policy elements, which includes the introduction of new elements into the policy framework as well as substantial changes to structure of the policy.
- The re-focus scenario narrows down the focus of policy intervention of the CAP to environmental and climate change aspects while it is assumed that production capacity can be maintained without support through reliance on market signals and the objective of contributing to the vitality of rural areas and territorial balance would be met by other Community policies.

These scenarios are cross-cutting approaches that each address the three broad policy objectives of the future CAP described in the previous section. They do, however, place different weights on the three objectives and are based, to a certain extent, on different approaches with respect to the necessity of policy intervention. With respect to the analysis of the effects of these scenarios, the reference is the status quo, which does not address the policy shortcomings identified in problem definition and the counterfactual scenario of having no policy at all, which is expected to lead to significant income and environmental problems⁶⁷. The scenarios are presented on the basis of the three main lines of policy intervention, namely market measures (Council Regulation (EC) No 1234/2007), direct payments (Council Regulation (EC) No 73/2009) and rural development policy (Council Regulation (EC) No 1698/2005).

In the adjustment scenario, the moderate increase in the rural development fund through a shift of means from Pillar I that is foreseen under the current policy architecture will continue in line with the orientation of making no major changes to the policy as defined today. The integration scenario does not contain this shift towards Pillar II as in this scenario the contribution to the different objectives of the policy is more balanced between the pillars with increased environmental targeting in Pillar I ("greening") which also requires an appropriate budget.

In the re-focus scenario, a substantial overall decrease of the budget is foreseen due to the end of market support and direct payments. However, the remaining funds for rural development would be substantially more than current Pillar II funding as, in the absence of the contribution that direct payments are currently making to the provision of public goods, substantially higher demands would need to be fulfilled by rural development policy.

While the presented scenarios are consistent and credible in their design they do not, of course, represent the only possibilities of combining measures to address the CAP objectives. Different options and alternative combinations of instruments are possible and through the analysis of particular scenarios in this Impact Assessment alternative policy designs are legitimate.

The reason for applying this broad scenario approach even though a final policy design could combine elements from different scenarios is that this approach is considered as

⁶⁷ Scenar 2020 – Scenario study on agriculture and the rural world, LEI, January 2007 and Scenar 2020-II – Update of scenario study on agriculture and the rural world, LEI, December 2009 http://ec.europa.eu/agriculture/analysis/external/scenar2020ii/index_en.htm

more appropriate to feed the decision-making process because it allows an exploration of the continuum of possible policy evolutions. It makes it possible to present a holistic analysis that also looks at the potential interactions and synergies between the main lines of policy intervention. At the same time, all measures and sub-options are also analysed separately in the Annexes which would make it possible to assess the impact of a final policy design even if it is composed of different elements than the scenarios outlined.

Furthermore, the scenarios described in this Impact Assessment contain only those elements that provide *genuine* development possibilities for the CAP. This means that certain policy instruments that were discussed and suggested in the public debate and in the public consultation are *not* included in the options analysed and reported here. The reason for this is that they were judged to be less relevant to the objectives of the CAP, not complying with the general direction of CAP reform or politically unfeasible.

The most important of these rejected elements are:

- The suggestions to link intervention prices for main commodities to the development of production costs in Europe. The situation relating to operating costs and receipts varies widely across sectors and Member States, and production cost developments are available with a time lag.⁶⁸ Therefore, such a proposal would face practical difficulties in its implementation. But its main inconsistency lies in that it could lead to reintroduction of distortions on EU markets, putting the effective functioning of the Single Market in the agri-food sector at risk. It would also prevent productivity gains and decrease the competitiveness of agricultural holdings, generating the risks of sub-optimal allocation of resources and overproduction in some regions.
- The introduction of a counter-cyclical payment that would link direct support back to agricultural prices. Proponents of this idea argue that high prices for agricultural products would make direct support less necessary and should therefore result in its reduction. However, this line of argumentation ignores the fact that recently input prices increased to a much greater extent than agricultural prices, and are expected to remain at high level over the medium term so that high agricultural prices do not necessarily mean high income as the gradual deterioration of the term of trade of the agricultural sector has significantly squeezed farmers' income margins.⁶⁹

More fundamentally still, the proposal would reverse the market orientation of EU agriculture put in place over the last two decades as it would distort farmers' production decisions by blurring the transmission of market signals. Finally, direct payments linked to price developments could not be classified in the 'green box' of the WTO, thus undermining the EU's trade negotiating position at the WTO. The example of US counter-cyclical payments illustrates their impact on markets, budgetary spending, developing countries and WTO compatibility.

The three scenarios which present the different paths of CAP reform are presented below detailing the options included from each of the three main policy areas market measures, direct payments and rural development policy. A detailed analysis of all of the options

⁶⁸ A discussion of the differences in competitiveness across the EU can be found in Annex II of Annex 5.

⁶⁹ The implications of linking support to agricultural prices are also discussed in Annex 6.

(and sometimes sub-options) presented can be found in the Annexes 2-7 on specific policy instruments. A summary of the main elements of the scenarios is given in table 1.

4.2. Adjustment

In the adjustment scenario, the aim of strengthening the CAP's strong achievements and addressing major shortcomings of the current structure would be achieved by improving the functioning of existing market instruments, by addressing the problem of distribution of direct payments between Member States without compromising their role as income support and contribution to the delivery of basic public goods, and by moderately increasing the funding in rural development to be used for particular actions. Many respondents to the public consultation found that the adjustment scenario does not bring much change or that it will lead to a strengthening of the current trends. While for some policy continuity was a positive factor, for others this implied the continuation of unsustainable agriculture and territorial inequalities.

Existing **market instruments** would be simplified and streamlined through the adjustment of the current system without changing support levels. The general architecture of the market management tools, including border measures, would not change (see Annex (5) for details). The main adjustments would consist of:

- Rearranging and streamlining special intervention measures and disturbance clauses, through a horizontal instrument;
- Sugar and isoglucose quota elimination in 2015/2016 or in 2017/2018;
- Intervention: removal of automatic purchases up to the quantitative ceilings for common wheat, butter and SMP. The system will open automatically via tendering procedure;
- Private storage aid: the aid would be foreseen for butter, beef, pig meat, sheep and goat meat, sugar, and olive oil, with optional private storage aid for SMP and flax fibre. As an alternative, private storage would be foreseen as an optional tool only.

In addition, the possibility of a more efficient use of measures currently available is considered, such as the better use of the wide range of cooperation possibilities that farmers have under the current competition rules.

With respect to **direct payments**, the Single Payment Scheme (SPS) would remain a basic policy instrument to address income support and the provision of basic environmental public goods but there would be a focus on the redistribution of direct payments towards greater effectiveness and more equity between Member States and farmers (see Annex (3) for details).

This could be done through various approaches:

- move to the same level of direct aid per hectare for all farmers in the EU ("flat rate");
- a pragmatic approach that ensures that all Member States get at least a share of the EU average (e.g. 80% or 85%);

- use objective criteria both of economic and environmental nature to determine the distribution between Member States (thus reflecting the jointness between the supply of private agricultural products and environmental public goods);
- combining a pragmatic approach towards convergence with objective criteria for the distribution of direct payments between Member States.

Furthermore, cross compliance would be streamlined and its contribution to the climate change objective increased and some coupled payments would remain for those countries which apply them (suckler cow, sheep and goat).

Rural development policy would follow the Health Check model of a moderate increase in the rural development budget within a constant CAP budget while the distribution of funds between Member States would remain the same as in the current period (see Annex (4) for details). Two options for using the additional resources would be:

- either towards the environment ('new challenges' of climate change, water, biodiversity, renewable energy and innovation, as in the Health Check),
- or towards competitiveness / innovation.

With respect to the management system of rural development, the status quo would be maintained.

4.3. Integration

In the integration scenario, the aim of improving the targeting of the CAP to its objectives would be achieved by strengthening the role of producers through appropriate market instruments, by improving the targeting of direct payments to the income needs of farms and environmental and climate change objectives, and by improving the coherence of rural development policy within the CAP as well as with other Community policies. This would also allow a better balance across policy instruments in addressing CAP objectives, e.g. in the way direct payments and market instruments are combined in addressing income issues of farmers or how rural development policy and direct payments interact in supporting environmental needs. This scenario was considered as the most balanced by the stakeholders. Their replies focused on the direct payments redistribution and the impacts on the bargaining power in the food supply chain. Greening was mentioned by many as an appropriate way to reach better environmental quality, increasing the delivery of public goods and creating opportunities for sustainable and climate friendly agriculture. At the same time, there were also many who found that greening Pillar I would have a negative effect on farm income and competitiveness.

In the area of **market instruments**, in addition to the simplification and streamlining of market measures described in the adjustment scenario, this would translate into the improvement of the bargaining power of farmers, their contractual relations and transparency along the food supply chain in order to enhance the share of value added for agriculture and the development of farm incomes (see Annex (5) for details).

While for farmers, participation in horizontal organisations would continue to be on a voluntary basis, three possible options for strengthening farmers' collective action are:

- Flexible cooperation approach: this would encourage and facilitate joint production and marketing that entail efficiency gains, including a consolidation of production assets (in co-operatives), a rationalisation of marketing activities and/or vertical integration into the downstream collection and processing stages within EU competition rules. This would include providing more resources to raising farmers' awareness of these possibilities and supporting farmers wishing to take advantage of the rules and promoting fair business practice.
- Enhanced cooperation approach: this would enhance horizontal and inter-branch organisations through the recognition by Member States of *producer organisations* (POs) and *associations of producer organisations* (APOs) in all sectors covered by the single Common Market Organisation (CMO). The rules for APOs would be based on the existing legislation for the fruit and vegetables, wine and olive sectors, and the recognition by Member States of *interbranch organisations* (IBOs). Support for setting up *producer groups* (PGs) would be provided as a single measure under rural development policy for all sectors covered by the single CMO, in all Member States.
- Regulated cooperation approach: it would extend the measures suggested under the enhanced cooperation approach, to include for example the obligation to use written contracts, and the permission for collective bargaining by POs, with in particular derogation from the prohibition on "price fixing" for all or particular sectors. The latter would suppose additional derogations from EU competition law.

With respect to **direct payments**, there would be a focus on better targeting of payments to achieve a more effective balance of both economic and environmental concerns within Pillar I through redistribution and the introduction of a new architecture for the provision of payments in the context of a small decline in real terms of the overall direct payment budget (see Annex (3) for details). This would consist of:

- The redistribution of the direct payment envelopes so that Member States with direct payments below the level of 90% of the EU average will close one third of the gap between their current level and this level;
- The introduction of different components of direct payments. In each Member State, farmers would receive:
 - a compulsory basic income support distributed in the form of a national/regional flat rate based on entitlements;
 - an optional area-based payment for naturally handicapped areas;
 - a compulsory green payment across the whole EU territory, composed of simple, generalized, annual and non-contractual environmental measures going beyond baseline standards of cross compliance (concerning permanent grassland, green cover, ecological focus areas, crop diversification and a Natura 2000 specific support – with sub-options

regarding the parameters of these measures) in order to enhance the environmental and climate action performance of the Pillar I⁷⁰;

- a voluntary coupled support component for specific sectors;
- The progressive capping of all direct payment components except for "greening", with salaried labour, the level of threshold and the degree of progressivity as additional elements for consideration;
- Better targeting of support to active farmers in order to focus CAP income support to those genuinely engaged in agriculture including part-time farmers (with alternative options examined with respect to the definition of active farmer);
- Streamlined cross-compliance by increasing its contribution to the climate change objective and ensuring consistency with the "greening" component;
- A specific regime for small farmers who would replace all components of direct payments with a fixed lump sum was examined, with criteria linked to small beneficiaries, the physical size of farms and the level of support.
- A support scheme for young farmers (defined as farmers starting-up an agricultural activity) based on farm size/number of entitlements and average direct payments in a Member State.

With respect to **rural development policy**, funding would be kept at current levels in real terms while support would be distributed between Member States on the basis of policy objectives (see Annex (4) for details).

The policy would be better aligned with Europe 2020 strategy concerning priorities and related targets by explicitly recognizing innovation, climate change, including the sustainable production of renewable energy, and the environment in general as cross-cutting guiding themes. Moreover, six priorities would be set, with corresponding indicators linked to the transfer of knowledge; competitiveness and farm viability; food chain organisation and risk management; preserving and enhancing ecosystems dependant on agriculture and forestry; low carbon economy and resource efficiency; job potential and development of rural areas. The current toolkit of around 40 measures would be streamlined into approximately 20 measures. With respect to the management system, the strategic approach would be reinforced by improving coordination with other funds, as well as by strengthening strategic programming. Member States and Regions would be expected to draw explicit links between measures and priorities.

Rural development measures fostering innovation in agriculture would be adapted and strengthened in view of supporting innovative approaches in EU agriculture. A European Innovation Partnership (EIP) "Agricultural Productivity and Sustainability" will be set up aiming at an EU agricultural sector that 'achieves more with less'. The EIP will facilitate the application and uptake of innovation-related rural development measures through an innovation network. Within a strengthened system of strategic programming / targeting

⁷⁰ Organic farming would qualify automatically for this component due to its environmental benefits.

for rural development policy, in line with the Europe 2020 strategy there would be new "priorities" relevant to competitiveness – e.g. "transfer of knowledge" and "innovation".

Contractual and more complex environmental services and climate actions would continue to be supported by rural development policy, especially the more advanced agri-environment measures, and the agri-environmental measures would continue to play the central role in all rural development programmes. Possibilities for co-operative environmental action would be developed.

The objective of territorial cohesion would be tackled in particular by improving the coordination of certain EU funds that have an impact on rural areas - the European Agricultural Fund for Rural Development (EAFRD), the European Regional Development Fund (ERDF), the Cohesion Fund, the European Social Fund (ESF) and the European Maritime and Fisheries Fund (EMFF) - under a Common Strategic Framework.

Furthermore, the availability of **risk management** instruments to help farmers deal with increased exposure to more volatile agricultural markets would be improved (see Annex (6) for details)⁷¹. Possible actions in this area would include the extension of the current framework for insurance and mutual funds, the introduction of an Income stabilisation tool (IST) and the creation of a new "Global Agricultural Risk Management Fund" similar to the existing EU Solidarity Fund.

4.4. Re-focus

In the re-focus scenario, the aim of narrowing down the scope of CAP interventions to environmental aspects is achieved by maintaining, in the longer run, only a strengthened rural development policy.⁷² This position is based on an assumption that since output prices are projected to stay at a higher level, it will translate into higher incomes for farmers and render income support unnecessary for most of them. In the public consultation, this scenario was criticized by some because of the negative effects on farmers' income and competitiveness, while others thought that it would spur innovation and restructuring of the sector.

All existing **market instruments**, with the exception of disturbance clauses that could be activated in times of severe crises, would be abolished. **Direct payments** would be progressively phased out between 2013 and 2020 to allow a smoother adjustment of the sector towards a situation without direct support. **Rural development policy** would focus on climate change and environment with certain temporary measures to support the phasing-out of direct payments. Funding would be increased significantly and redistributed between Member States while the management system would be simplified.

⁷¹ Public support for risk management instruments is not included in the re-focus scenario because the larger commercial farms which it favours generally have the capacity to create their risk management strategies based on instruments offered by the private sector.

⁷² Such scenarios are presented for example in the papers *Achieving a Transition Away from CAP Direct Payments*, K. Hart, M. Rayment, H. Lee, prepared by the Institute for European Environmental Policy for the Land Use Policy Group or *CAP Reform and Public Services or Agriculture*, Social and Economic Council, Netherlands, July 2008.

Table 1: Outline of main policy options by scenario and policy instrument

	Market instruments (Council Regulation (EC) No 1234/2007)	Direct Payments (Council Regulation (EC) No 73/2009)	Rural Development (Council Regulation (EC) No 1698/2005)
Adjustment: Emphasizing the CAP's achievements and addressing major shortcomings	Streamlining and simplification of existing instruments Improving farmers' cooperation within competition rules.	Redistribution; enhanced cross compliance	Moderate increase in budget; used for competitiveness/innovation or environment
Integration: Improving the targeting of the CAP to its objectives	Streamlining and simplification of existing instruments + Focus on food supply chain and improved bargaining power of farmers (3 sub-options)	Redistribution; new direct payment architecture; "greening"; enhanced cross compliance; capping; small farmer scheme, young farmer scheme	Redistribution between Member States; innovation, climate change and environment as guiding principles; reinforced strategic targeting and common strategic framework with other funds
Re-focus: Limiting the scope of CAP interventions to environmental aspects	Abolished	Phased-out	Substantially increased funding; focus on climate change and environment

5. ANALYSIS OF IMPACTS

5.1. Adjustment

Under this scenario, which assumes the continuation of the principles of the current policy framework based on market-orientation, farmers, prompted by market signals, are expected to make better use of available policy instruments to increase their competitiveness. At the same time, the redistributed direct payments will shield them from excessive income fluctuations in a more effective and equitable manner throughout the EU. Redistribution would allow higher support for more environmentally beneficial agricultural areas and limit land abandonment, but increased economic pressures would likely drive towards intensification of production in the most fertile regions. Rural development measures would continue to address wider rural issues, but the role of agriculture in the economy, employment and growth or rural areas would diminish.

5.1.1. Economic impacts

The impact of this scenario on competitiveness and growth is expected to come mainly through increased funding for investment and advisory services for farmers and encouragement of increased cooperation/collaborative ventures. The redistribution of direct payments will impact on the economic viability of farms. The end of the sugar quota regime will have important implications for the sugar sector. Safety-net market mechanisms should be adapted to allow a flexible response in time of crisis.

Competitiveness and growth

A moderate increase in the rural development budget should lead to a small overall positive impact on competitiveness owing to investments in human and physical capital that increase productivity. There is evidence of a positive contribution of investment aids to accelerating innovation, reducing production costs and improving quality thus having a positive impact on income.⁷³ Investment in physical and human capital may also accelerate existing trends towards fewer, larger farms. Increased agri-environment payments and support for LFAs/NHA may help maintain the economic viability of farms that might otherwise disappear.

Innovation and productivity growth is also likely to be boosted by the Farm Advisory Service (FAS). Given that the obligation to establish national FAS is recent and the related advisory bodies have only been certified in the past few years, its outreach should increase, though most likely to modest levels. This would be complemented by rural development support for the use of advisory services by farmers. However, the results in terms of knowledge dissemination and innovation adoption would most certainly fall far short of the challenges, in particular owing to the lack of a coherent framework for the use of available measures. Support under rural development for the use of advisory services by farmers and for the delivery of agricultural knowledge and innovation systems (AKIS) across Member States would be maintained.⁷⁴

The effect of this scenario on consumers is expected to be limited, as agricultural prices and the transmission of price changes along the food supply chain will not change significantly when compared to the status quo.

Sector output and viability

The ability of farms to respond to economic challenges will be affected by the changes to the current policy framework – the redistribution of direct payments and, in the specific case of sugar, the end of the quota system.

A recent study shows that the production and price impacts of redistribution of income support are relatively small.⁷⁵ However, substantial changes in payments per hectare will have an impact on farms' asset values (especially land), due to the fact that direct payments are to a certain extent capitalised in land values.⁷⁶ This will in turn influence farmers' access to credit and ability to address existing liabilities.

The removal of sugar quotas is expected to lead to higher production and lower prices. Specifically the abolition would result in an increased EU sugar beet area, though offset

⁷³ Viaggi D., Bartolini F., Raggi M., Sardonini L., Sammeth F. and Gomez y Paloma S., Farm Investment Behaviour under the CAP Reform Process, *JRC Scientific and Technical Report*, 2011 (Forthcoming); Bartolini F., Viaggi D., Floridi D. (2010) Assessment of present, trends, mechanism and impact of the CAP on structural change and innovation. *CAP-IRE*, Deliverable D4.2. (www.cap-ire.eu).

⁷⁴ For analysis of the role of the Farm Advisory System see Annex 7.

⁷⁵ Farm level policy scenario analysis, Final report, 15 March 2011 (IPTS contract no 151582-2009 A08-DE).

⁷⁶ The move to a regional model throughout the EU is likely to increase the rate of capitalisation of support in land prices as compared to the historic model as the flexibility for activating entitlements with eligible land is reduced due to the existence of only a very limited amount of “naked” land in the regional model.

by lower yields, leading to a limited increase in EU sugar beet production by 2020 by 2.3% under the 2015/16 quota abolition scenario and 3.9% in the phasing out scenario (abolition in 2017/18). The higher level of sugar production would result in lower prices for sugar beet (and white sugar) when compared to the reference scenario, by -8.2% (and -3.5%) under the 2015/16 abolition scenario and -10% (and -5.7%) under the phasing out scenario (abolition in 2017/18). The effects on world prices are expected to be very limited as price transmission between the EU market and the world market is rather low due to the existing trade regime. While remaining a net importer under each scenario, the net trade balance of the EU would improve with quota abolition compared to the status quo.

The effects on the isoglucose market are projected to be limited. Both production and domestic demand for isoglucose would increase relative to the status quo scenario, although the higher rise in production would result in greater exports.⁷⁷ Nevertheless, the elimination of the isoglucose production quotas would allow an increase in economies of scale in the starch industry. This would support the uptake of other bio-based products derived from the same raw materials by encouraging investment and innovation in plant chemistry.

Overall, the abolition of sugar quotas increases competitiveness as production would move to the economically most efficient areas and enables the sector to adapt to limitations in EU exports, with increased market orientation, including the abolition of private storage aid for sugar, but may lead to increased co-movement with world market prices (and hence higher volatility). Comparison of the two quota abolition scenarios shows that the phasing out scenario produces a larger impact on the EU sugar market, in terms of production increase (through higher areas) and consequent price decline. Furthermore, extending the life of the quota system through the transition period prolongs the inefficiencies of the industry.

Crisis and risk responses

The operation of safety net support and risk management tools will continue to play a role if prices decline abruptly. Lessons from recent experience in the dairy sector show that current market instruments proved their worth as a safety-net mechanism in exceptional circumstances. However ad-hoc adaptation of policy instruments was necessary to stabilise the market (i.e. private storage aid for butter was prolonged and intervention continued above quantitative ceilings and beyond the usual buying-in period), illustrating the need to be able to tailor existing measures to the specific needs of each sector. The impacts would be minor under normal market conditions, however in the times of crisis it will allow the EU to act faster and more efficiently.

Opening public purchases via tendering from the very first tonne without fixed price / fixed initial quantities may create some initial uncertainty about the actual level of the safety net. On the other hand, removing the fixed price allows intervention to operate only when necessary in the market place, thus avoiding unnecessary expenditure. The tendering system allows participants to make offers at prices which they themselves consider to be at safety-net level.

⁷⁷ A more detailed overview of the analysis, including methodology and results is provided in Annex 5c – Sugar options with AGLINK-COSIMO.

Subsidies for insurance premia and mutual funds as risk management tools for producers have been limited to a few Member States up until now, but with growing experience and increasing demands from producers, there is scope for better use of the available tools.

5.1.2. Social impacts

The impact of the scenario on agricultural employment will be influenced mostly by the redistribution of direct payments between and within Member States. A moderate increase in investment aids will have some positive impact in terms of securing employment, as this measure has a high leverage effect. In addition, a small positive effect on agricultural employment may result from supporting more extensive production systems, which are generally more labour intensive.

Redistribution between Member States

Both the options of granting a uniform flat rate direct payment across the whole EU and of basing the distribution of support on purely objective criteria reflecting the dual role of the instrument (income support and environmental public goods) would lead to a significant redistribution of funds between Member States, the extent of which would depend on choice of criteria. The resulting impacts on incomes are also substantial. Table 2 below shows the general effect of each criterion on the Member State envelope (compared to a flat rate).

Table 2: Impact of the different criteria compared to the flat rate

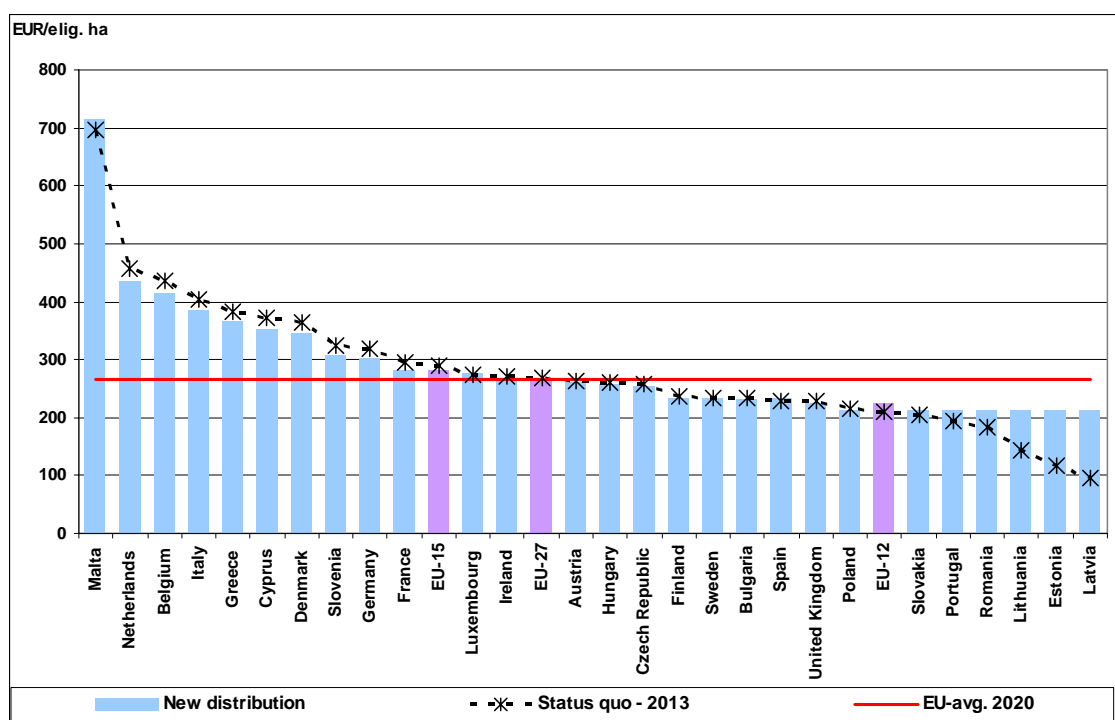
	PPS	GDP/cap	GVA/ha	AWU/ha	LFA / UAA	Natura 2000 / UAA	Permanent grassland / UAA
BE	++	++	++	-	--	-	+
BG	--	--	-	++	--	++	--
CZ	--	-	--	--	-	-	-
DK	++	++	--	--	--	--	--
DE	+	++	-	--	-	-	-
EE	-	--	--	--	-	++	-
IE	+	++	--	--	++	--	++
EL	-	-	+	+	++	++	--
ES	-	+	+	--	++	+	+
FR	+	+	-	--	-	-	-
IT	+	+	++	+	-	+	-
CY	-	-	++	++	+	++	--
LV	--	--	--	+/-	++	+/-	+
LT	--	--	--	-	+	-	-
LU	++	++	-	--	++	+	++
HU	--	--	-	+/-	--	++	--
MT	-	--	++	+/-	++	--	--
NL	+	++	++	+/-	--	--	+
AT	++	++	-	+/-	+	-	++
PL	--	--	-	++	+	+	--
PT	-	--	-	+	++	+	++
RO	--	--	+	++	--	-	+/-
SI	-	-	+	++	++	++	++
SK	--	--	--	--	+	++	--
FI	++	++	--	--	++	++	--
SE	+	++	--	--	-	++	--
UK	-	++	--	--	-	--	--

Annex (3) provides full details of several scenarios that base redistribution of direct payments among Member States on economic or environmental criteria, or a combination of both. The total amount redistributed with the formula based on the objective criteria comes close to € 4.5 billion as compared to the status quo (however the effect depends on the exact implementation, e.g. the weighting of the different objective criteria taken into account)⁷⁸. Although results differ, the conclusion is the same.

The use of solely objective criteria would fail to bridge the gap between EU15 and EU12 (with the exception of the Baltic States) thus failing to bring about more equity between Member States. Using a minimum level of convergence (e.g. that all Member States get at least a certain percentage of the EU average) as a criterion for redistribution would allow this gap to be bridged and the pace of transition would then depend on the convergence criteria used.

Figure 15 presents the results of redistribution in 2020, if a minimum level of convergence of 80% of the EU average is guaranteed. In Figure 16, the minimum level of convergence is set at 90% of the average while objective criteria are used to define the level of Member States currently above the EU average. The total amount redistributed among Member States would be € 0.85 billion (in the case of 80% minimum) and € 2.16 billion (in the case of 90% minimum and objective criteria).

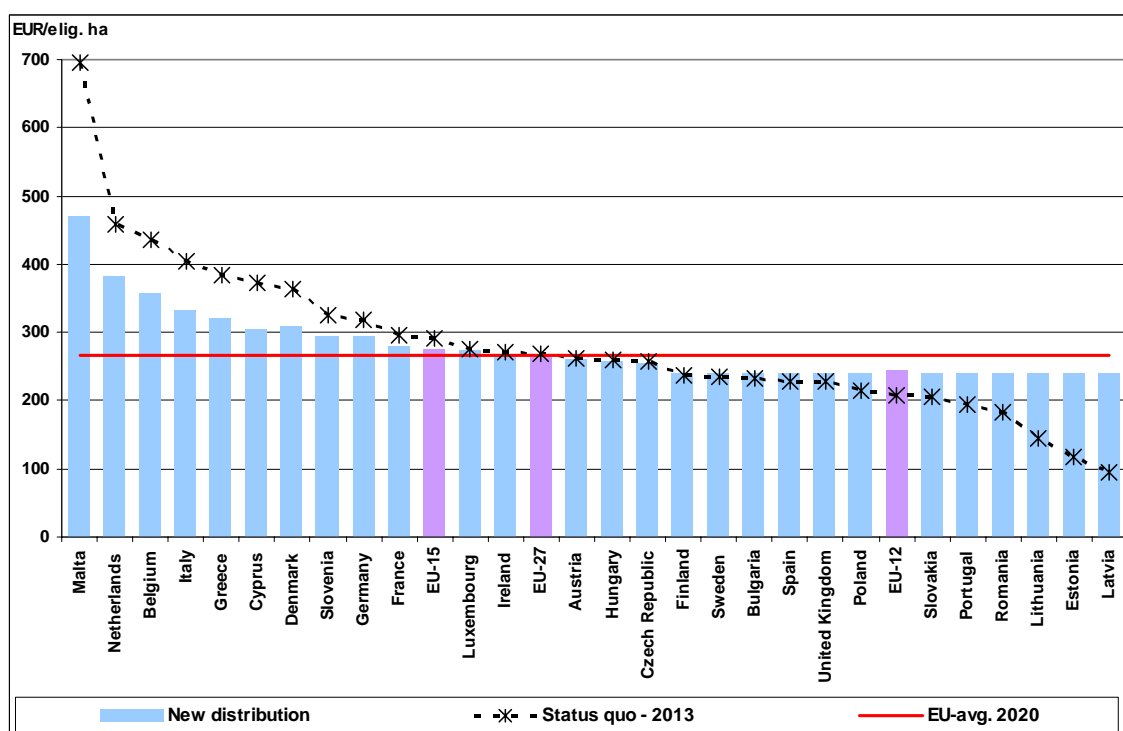
Figure 15: Redistribution of direct payments between Member States - minimum 80%



Source: DG AGRI

⁷⁸ In the whole document, the total amount redistributed is calculated by comparing the situation resulting from the existing legislation to the situation after redistribution in the sole year 2020.

Figure 16: Redistribution of direct payments between Member States - minimum 90% with objective criteria



Source: DG AGRI

Effects of moving towards a uniform regional rate– redistribution among producers

Regardless of the option chosen for redistributing the envelopes between Member States, there will be considerable redistribution of support between farms, at least in those Member States currently applying a historic model, since all options imply a move towards a regional model for direct payments.

Within a region, entitlements would then be spread over all eligible hectares declared in a reference year. This would bring currently eligible agricultural lands that are not covered by entitlements (so-called "naked land") into the system. As a result, all eligible land would be granted the same level of payment per hectare, whatever the activity and type of production.

Field crops, mixed and milk farms would lose payments compared to the status quo situation while payments would increase for grazing livestock, wine and horticulture farms. As a general rule, a more uniform direct payment would reduce support in more productive regions and sectors in favour of more marginal and less favoured regions. The impacts of this reduction may be mitigated by a transitional period to allow the adjustment of farm structures.

Territorial balance

The redistribution of direct payments, depending on the criteria used, should have a positive territorial impact by rebalancing support across the EU territory in favour more of EU12 as well as more marginal areas and farming systems and thus contributing to a sustainable agriculture across the EU. The additional funds made available under rural development should also contribute to growth and jobs in rural areas, for example through the development of renewable energy projects.

5.1.3. Environmental impacts

The main environmental benefit is expected to come from the enhancement of GAEC, increased RD funding for environmental measures and redistribution of support to more extensive farming.

Encouraging environmental and climate friendly practices

Cross compliance links receipt of full direct payments to respect of regulatory standards related to environment, plant, animal and public health and animal welfare and to GAEC (Good Agricultural and Environmental Conditions). For instance, GAEC obligations are related to preserving landscape features, soil conservation, permanent grassland conservation and watercourses protection.

The environmental performance of Direct Payments would be improved by a reinforcement of GAEC with climate-friendly measures⁷⁹ and the inclusion of the Water Framework Directive in the future, once it is implemented and obligations related to agricultural producers are clearly identified (and control and sanction mechanisms are fully set up).

The impact of such measures could be enhanced with a moderate increase in available rural development funds. However their effects are difficult to quantify since it depends on how Member States use the available funds. Where an increased focus is put on competitiveness and innovation, positive effects would mainly come through increased resource efficiency and through modernisation in implementing more environment and climate-friendly systems.

An increased focus on the environment ('new challenges'), would most likely translate into more funds being used for agri-environment measures with positive effects for biodiversity, water, soil, climate change and renewable energy. However, regarding biodiversity, after the experience of the missed 2010 target, it remains doubtful whether this scenario would be sufficient to ensure the achievement of the Europe 2020 headline target of halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible. This target calls for the maintenance of sustainable agriculture with a CAP that covers a considerable area with biodiversity-related measures.

As far as climate change is concerned, positive impacts on GHG emissions reduction would take place through the contribution of the agricultural sector to renewable energy development and fossil fuel substitution. However, regarding GHG from the agricultural sector itself, even if those measures aimed at promoting mitigation could help to increase agriculture sector's contribution to sharing the burden in the short term (targets to be respected by the non-ETS sector under the Effort Sharing Decision (ESD)), in the longer term this would not set the right trajectory to reduce GHG emissions from agriculture by between 36 and 37 % by 2030 and 42 and 49 % by 2050, as estimated in the EU low carbon economy roadmap 2050 modelling exercise.

⁷⁹ Such as better protection of valuable grassland, wetlands or carbon rich soils, a general minimum cover obligation and measures aiming at maintaining the soil organic matter level or the management of stubble and vegetation residues.

Redistribution of support

The redistribution of direct payments between farms would in itself also have an important effect in shifting support towards more environmentally sustainable and climate friendly farming. Grazing livestock farms and those in least favoured areas would benefit from the redistribution, which would to a certain extent favour the maintenance of permanent grassland with its environmental and climate action benefits, while more intensive crop production would be supported to a lesser degree. Although the extent to which this happens will depend on the level of commitment to the environment in Member States if they are given flexibility to regionalize payment levels, the other elements of the reform, especially greening requirements, are likely to work in favour of more environmentally friendly farming.

At the same time, including the natural handicap area criteria as part of the formula for distribution of support between Member States, which should potentially favour the allocation of payments to these areas (associated with better delivery of public goods), has a smaller impact on them than the redistribution of payments itself. Moreover, its precise effects would depend strongly on the implementation, e.g. the distribution of direct payments between regions in Member States.

Regardless of the criteria used, if no additional environmental performance indicators were linked to direct payments (or at least to a part of the direct payments), the targeting of additional amounts to environmentally sensitive regions could be suboptimal.

5.1.4. International dimension

The redistribution of direct payments between Member States and farmers should not affect the classification of EU support under WTO provided that direct payments redistribution at Member State level remains in line with WTO rules (in a manner that ensures that farmer anticipation and effect on production level is avoided).

5.1.5. Administrative issues

In the first year of implementation of the new system, there would be an administrative burden associated with the redistribution (distribution of new entitlements and/or recalculation of the value of entitlements) and possibly transition (defining steps for progressive modifications in subsequent years).

In spite of its many advantages, the implementation of the current intervention system remains complex with numerous different trigger mechanisms, ceilings, and time constraints across sectors. Harmonisation and streamlining of existing parameters could bring about greater efficiency, decreasing administrative costs and easing controls, although the specificity of each sector may imply differing arrangements.

5.2. Integration

This scenario assumes that the enhanced policy framework is geared towards support for competitiveness, development and innovation in the sector and fostering conditions under which farmers, either individually or collectively, would be better able to face upcoming economic, environmental and climate change challenges ahead. Direct payments would provide a stable income, leading not only to more balanced, effective and equitable redistribution but actively targeting certain beneficiaries (small-scale holders, farmers in regions with natural constraints, sectors at risk, etc.). At the same

time the modalities of implementation of the new direct payment scheme (such as regionalisation of the payment) could have significant impact on the quantitative assessment of the various policy measures.

A greening component would also promote certain basic environmental and climate action practices throughout the EU, focusing principally on those farms, often the most competitive, which have moved away from such practices as well as those which are considering abandoning them in the light of current economic pressures.

5.2.1. Economic impacts

The impact of this scenario on competitiveness and growth will be mainly through increased funding for innovative actions and encouragement of increased cooperation and collective action among farmers in tandem with improvements in the functioning of the food supply chain. Better coordination of EU funding sources will also contribute to rural growth. Greening costs will impact on the short-term competitiveness of farms, although this will vary considerably between Member States and type of farm.

Competitiveness and growth

Enhanced productivity and better use of scarce resources can be expected as a result of the increased focus on innovation in the design of rural development programmes. In addition, the setting up of the European Innovation Partnership increases the involvement of stakeholders (researchers, advisors, farmers) in innovation processes.

These developments contribute to achieving EU goals of sustainable agricultural production thereby leading to an agricultural sector with enhanced productivity and a more efficient, and sustainable use of scarce resources. The Agriculture EIP and the creation of an innovation network ensure better flows of information between the stakeholders. This not only increases the use of research results by producers but also allows research programmes to address the needs of stakeholders.

Productivity could be further improved by encouraging cooperation among producers, which could lead to increased efficiencies, such as improved economies of scale in selling and purchasing, the opportunity to increase added value by entering other stages of the food supply chain and easier access to information, thereby helping them to face the environmental and climate change challenges ahead and to assume a stronger position in the food supply chain.

EU competition rules provide farmers with a solid legal framework for developing sustainable forms of cooperation and a stimulus to becoming more efficient, innovative and better equipped to face competition both within and outside EU. This relates in particular to joint production and marketing that entail efficiency gains, including a consolidation of production assets (in co-operatives), a rationalisation of marketing activities and/or vertical integration into the downstream collection and processing stages.⁸⁰

⁸⁰ See DG COMP's Working Paper of February 2010 on "*The interface between EU competition policy and the CAP*" and its explanatory Brochure on "*How EU competition policy helps dairy farmers in Europe*", which are published in DG COMP webpage. Although these documents refer explicitly to the dairy sector, it should be noted they establish *general* principles on the application of competition rules to *all* agricultural sectors.

Apart from cooperatives, which were a traditional response of farmers to the developments in the food supply chain, producer organisations and inter-branch organisations can potentially play useful roles in research, improvement of quality, promotion and diffusion of best practices relating to production, processing and marketing.

An approach of "flexible cooperation" which raises farmers' awareness of the cooperation possibilities, which informs them of their contractual rights and notifies them of best practices should encourage farmers to take up this course of action. While this approach supports pro-competitive cooperation between farmers without recourse to regulatory measures and exemptions from competition rules, nevertheless the scale and scope of cooperation may remain unsatisfactory due to low social capital in many regions where such cooperation would be the most beneficial and financial barriers to the setting up of such initiatives.

Enhanced cooperation between farmers would act as a corrective to the generally small-scale structure of agricultural production without necessarily having to consolidate production by increasing the size of individual farms, providing a stimulus for market operators to improve their performance; better enabling them to face increasing domestic and international competition. The pro-competitive cooperation between farmers without recurrence to regulatory measures and exemptions from competition rules remains at the core of this option.

In the "regulated cooperation" approach, the possibility for farmers to stipulate written contracts may have a positive impact on price stability, diminishing uncertainties regarding quantities and expected revenue. The impact of contract schemes would depend, among others, on the characteristic of the product, processing and marketing, how the food supply chain is organised (vertical integration), market power of the different actors, the share of the internal market on global demand, net trade balance, and even the different application of rules among the Member States.

Although price-fixing agreements may display positive impacts for some farmers in the short run, they would prove self-defeating for farmers in those cases where food processors have the possibility to switch between different supply sources and/or relocate their processing activities within or outside the EU. The effect on EU farmers would become negative in the longer run due to the reduced sales volumes caused by this switch. In regions with limited alternative sources, small and medium processing facilities would also be negatively affected.

The longer-term impacts could also include (depending on the structure of the particular sectors and supply chains): potential risk of excessive producer bargaining power or even producer monopoly, which would be as negative as any other monopoly, potential impact on small and medium enterprises and their capacity to compete and develop; potential slow down in the modernisation path of the industry, as a by-product of the reduced competition; potential loss of long term competitiveness and innovation capacities, as a by-product of reduced competition; potential increase in consumer prices (negative impact in particular on low-income consumers) provided that the rest of the food supply chain operates under competitive conditions.

The impact on consumers is expected to arise from the aggregate effect of policy changes on price transmission, product quality and safety. Agricultural prices in Europe may increase slightly due to the additional costs of greening. However, since they constitute a limited share of food prices, this should only have a limited effect on consumer prices.

The improvement in the functioning of the food supply chain and collaborative actions could be expected to increase choice and quality of products. These developments would be strengthened by the focus on innovation while the support to small farmers could reinforce the local, short supply chains. On the other hand the regulated cooperation option could in many cases stall improvements in quality and innovation, with negative effect on consumers.

Sector output and viability

The effect of greening on the economic viability of farming will depend on striking the right balance between imposing reasonable costs in the short term while enhancing the long-term sustainability of farming. Greening measures may impact farm incomes in several different ways:

- by increasing costs, for instance due to the requirement to seed cover crops during winter time,
- by decreasing the level of production and revenue, for instance in the case of ecological focus areas,
- by impeding the shift to a more profitable production system, for example due to the "opportunity cost" of maintaining permanent pastures,
- by affecting individual production patterns in a way that leads to changes in the level of production which may have an impact on market prices, for instance in the case of ecological focus areas and crop diversification.

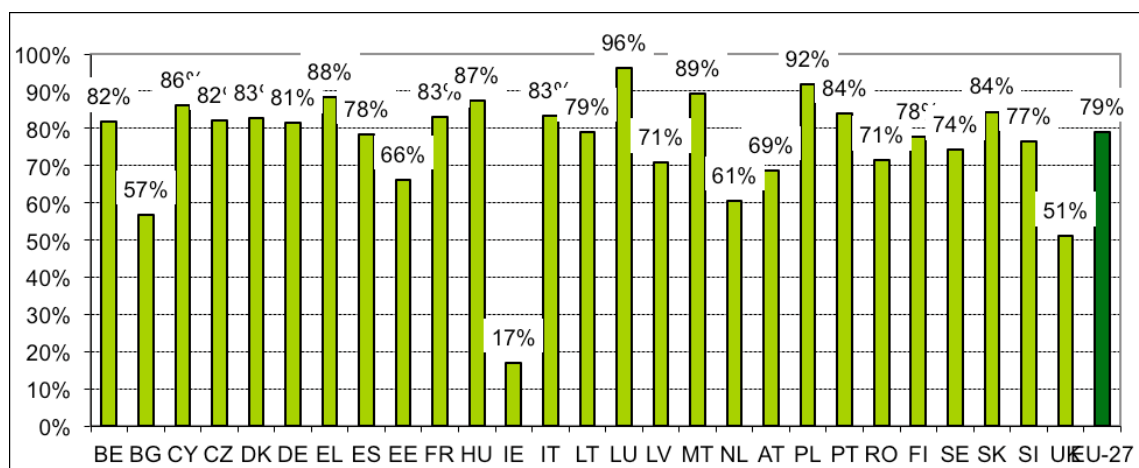
The microeconomic analysis looked at the effects on gross margins of cultivating other crops, setting-aside agricultural area for ecological reasons, introducing a green cover on agricultural land, and on the opportunity costs of maintaining permanent grassland. This analysis was limited by two factors.

- It was not possible to analyse the opportunity costs of reverting to production methods less favourable for the environment by those agricultural producers who already fulfil the green measures, and so this is not taken into account (except for permanent grassland).⁸¹
- It was not possible to precisely quantify the economic benefits of greening, due to the lack of data on the impact on yields. Moreover, the benefits (such as improved soil quality and fertility, a reduced risk of desertification, better pollination services, a reduced need for fertiliser and plant protection product inputs, improved resilience to climate change, better water retention etc.) would have in most cases a medium- to long-term time horizon and would vary significantly across regions and farming systems.

As a consequence of the above limitations, the results tend to underestimate the potentially positive impact of greening, as the analysis concentrates on the 79% of EU farms for which greening comes with a cost (Figure 17). The present and expected future pressure on farm costs implies that retaining present practices by those farms that are presently not affected by greening would still have an important, albeit not measurable, impact on sustainability.

⁸¹ The role of different instruments in encouraging environmental actions is explained in Chapter 4 of Annex 2: Greening the CAP.

Figure 17: Share of farms bearing the costs of greening measures

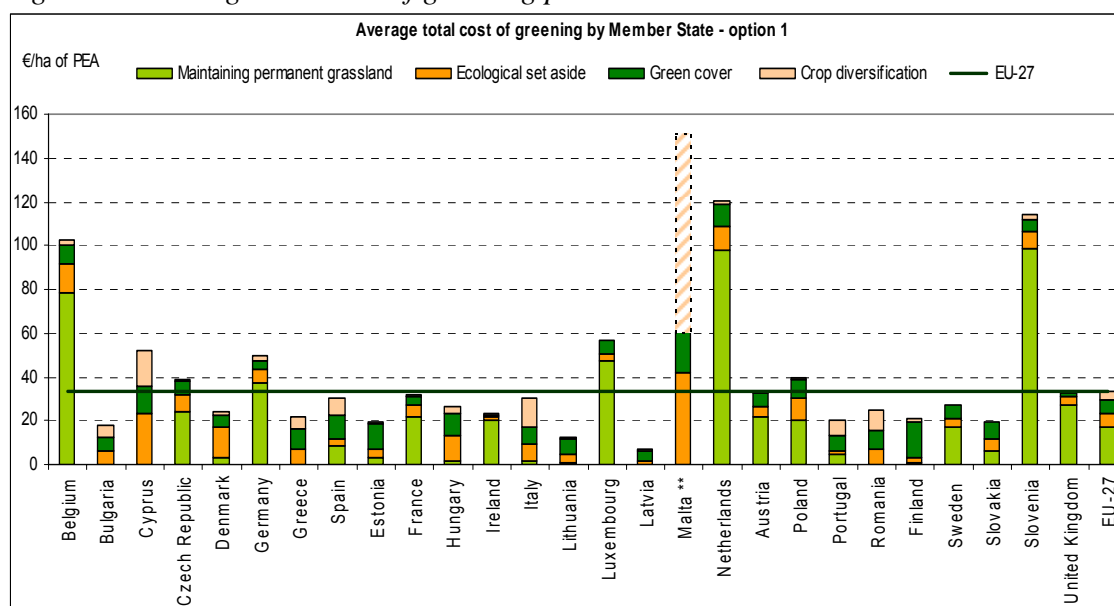


Source: DG AGRI L3

The resulting average costs per ha of all the greening measures together across the EU27 range from € 33 to € 41/ha, depending on the implementation option of greening, with up to half coming from the cost of maintaining permanent grassland (average € 17/ha). Per farm, average costs range from €1041 to €1280. These figures represent average costs spread out over all agricultural area, including area not affected by greening. The relevant costs for the land affected are considerably higher (it is estimated that 25-30% of the agricultural area would see its land use and production methods modified or would face an opportunity cost) (Figure18). For instance, the cost of the permanent grassland measure would reach € 216 per ha of permanent grassland where there are alternative opportunities, while the cost of ecological focus areas would stand at € 261 per ha of land that needs to be set aside.

An ambitious crop diversification (the main crop cannot exceed 50% of the area, instead of 70%) would bring average cost up from € 4 to € 9 per ha. Similarly, a more ambitious regulation for ecological focus areas (10%, instead of 5%, is set aside) would bring average cost up from € 6 to € 14 per ha of agricultural land.

Figure 18: Average total cost of greening per Member State

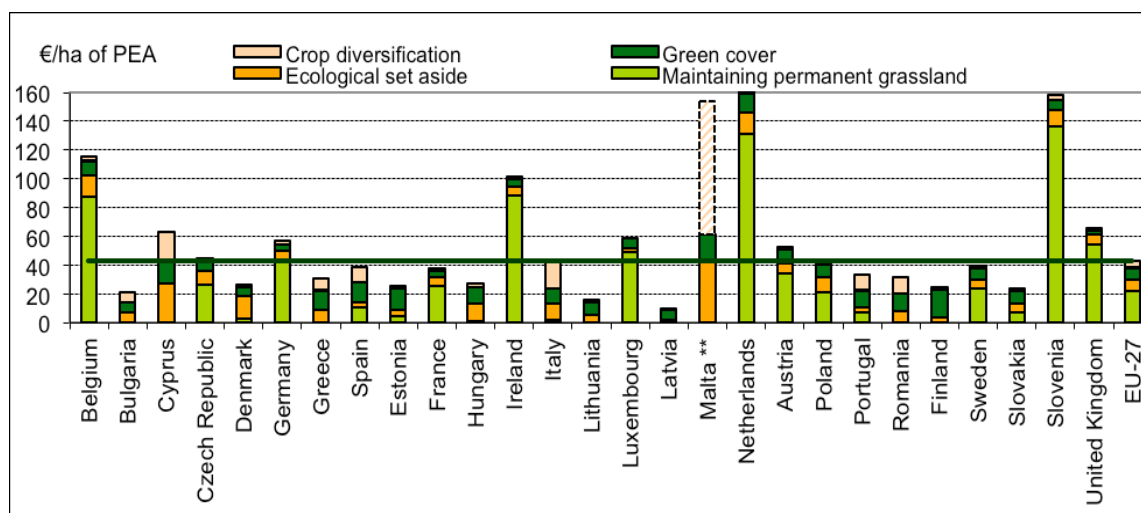


Source: DG AGRI L3

Moreover, these average figures hide wide variations across Member States / regions and farming systems, reflecting differences in land use and profitability as well as in current environmental practices (the extent to which the areas already provide significant environmental services, or put substantial pressure on the environment). The Member States that would be facing the highest overall costs are Netherlands, Slovenia, and Belgium, largely due to the opportunity cost of not ploughing permanent grassland. However, the CAP already sets a limit on the reduction of permanent grassland per Member State, so these opportunity costs could be expected to be somewhat lower than the figures suggest.

In general, higher costs are associated with crop diversification in southern Member States, set aside in Member States with high area productivity, for instance due to the importance of horticulture, green cover in some southern Member States or the Baltic countries, or permanent pastures in Member States where milk and beef production are important and based on both intensive and extensive systems (see Figure 19).

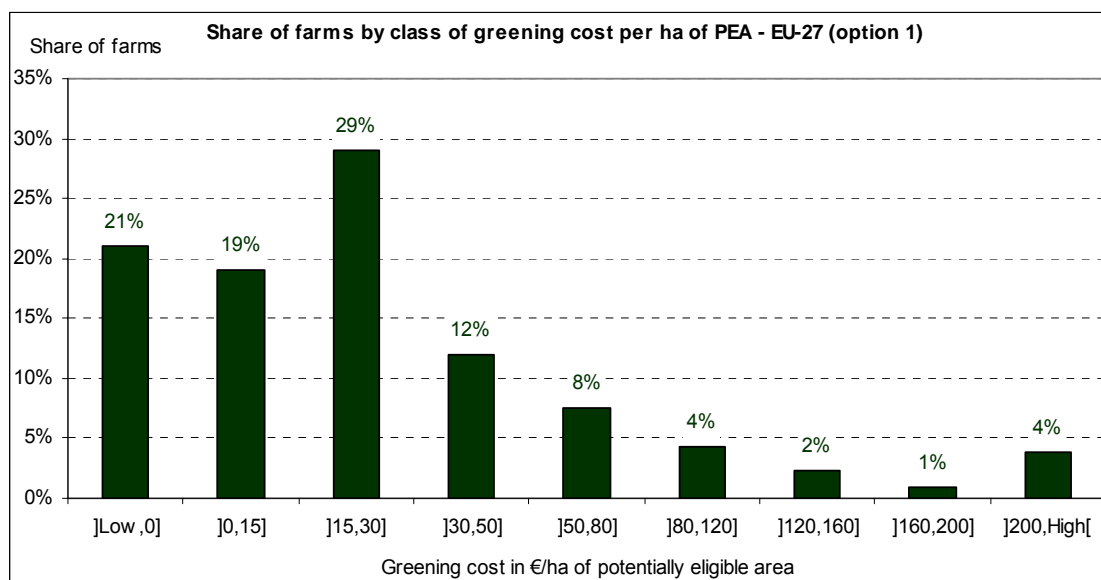
Figure 19: Average total cost of greening – only for farms which bear a cost



Source: DG AGRI L3

Greening costs also vary according to the type of farm and its specific situation. The largest negative impacts are observed for pig and poultry and milk farms due to the increase in feed prices. Field crop farms may benefit from significant crop prices increases induced by some greening measures. Altogether the costs of greening between farms would vary strongly (Figure 20).

Figure 20: The distribution of farms according to greening costs



Source: DG AGRI L3

When estimating the impact on farm income, it is assumed that farmers fully comply with greening and receive their full direct payment amounts; hence, the impact on income is solely driven by the costs of greening. In the EU-27, the various options of greening would result in a decrease in the average income ranging from -3.2% and -1.4%. It is interesting to note that, although the increased costs of more ambitious crop diversification result in a further decrease of farm income, a more ambitious set aside requirement has a positive effect on income. This is due to a higher increase in market margins (in particular for field crops, such as cereals and rice) which offset the cost of greening. As with costs, the impact on income per worker varies significantly across Member States, regions and farming systems.

The market effects of greening measures are expected to be pronounced as a result of the limitation in available arable land and grassland linked to the set-aside requirements and the limited choice in cropping patterns of the crop diversification requirements. The option presented here is an ecological set-aside of 5% and the limitation that no single crop in a farm exceeds 70% of the arable area. Under such conditions, cereal production would decrease by between 0% and -5%, while oilseeds production would show changes ranging between -1% and +5%. The range of impact is linked to the degree of crop specialisation. The reduction in domestic cereal and oilseed production would generate some price increase (+2% for cereals and unchanged for oilseeds), with production in the animal sector expected to decline slightly (from 0% and -1.5%) whereas producer prices would increase by about +1%.

Crisis and risk responses

This scenario provides for the possibility of subsidising insurance, support to mutual funds and introducing an income stabilisation tool through a risk management toolkit in the rural development policy⁸². Offering insurance subsidies and helping mutual funds

⁸² For a description of the three tools, CAP role in risk management and analysis of the income stabilisation tool see Annex 6.

will help to embed it better in a strategic framework for a given region and to coordinate with other actions supporting farmers' risk management (prevention actions, advisory and training possibilities etc.). The possibility of financing an income stabilisation tool in areas where private-based instruments (e.g. insurance) are not available gives farmers access to aid in the case of a severe income crisis⁸³. At the same time, a European Globalisation Adjustment Fund could provide ad-hoc targeted support for the farmers affected by changing global trade patterns. The effectiveness of such a tool is closely linked to its design and implementing modalities, most notably with regards to its financial procedure and triggering mechanisms as well as its articulation with other CAP measures.

Rural growth

Rural development programmes can make a significant contribution to growth in rural areas. The combination of measures and integrated projects allows Member States to develop an adequate strategy to make the best use of the funds available in line with EU priorities.

The reinforcing of the strategic framework of rural development policy should ensure that rural development responds in a more targeted and complementary manner to the needs of rural areas, while the placing of all EU funds under a common framework reflects a truly territorial approach to development. This, together with other improvements promoting cooperation between actors, has the potential to revitalize rural territories. However, these are ambitious changes to put in place that may strain the administrative capacity of certain rural areas in the EU.

Furthermore, a Common Strategic Framework (CSF) would help the EU funds to complement each other better – at EU level. This would mark a step forward from the current period, in which efforts to ensure complementarity are made essentially at national and regional level. The CSF also has a role to play in helping the funds to work together at sub-regional level (i.e. in Leader-type roles).

At national level, the CSF could translate into Partnership Contracts (PC) concerning the use of the EU funds concerned, including the relevant coordination mechanisms. Within the PCs, Member States would have to explain how they would use the policies covered to serve the thematic objectives of the CSF – in ways which would be in line with their National Reform Programmes set out in the framework of Europe 2020. Other key features of the PCs would include: the specification of indicators for assessing progress on the objectives chosen and a description of national and regional mechanisms for co-ordinating the use of EU funds. This would be reinforced by ex-ante "conditionalities" (i.e. preconditions for the approval of programmes and / or the disbursement of payments through programmes) and a performance reserve, in order to encourage better programme performance.

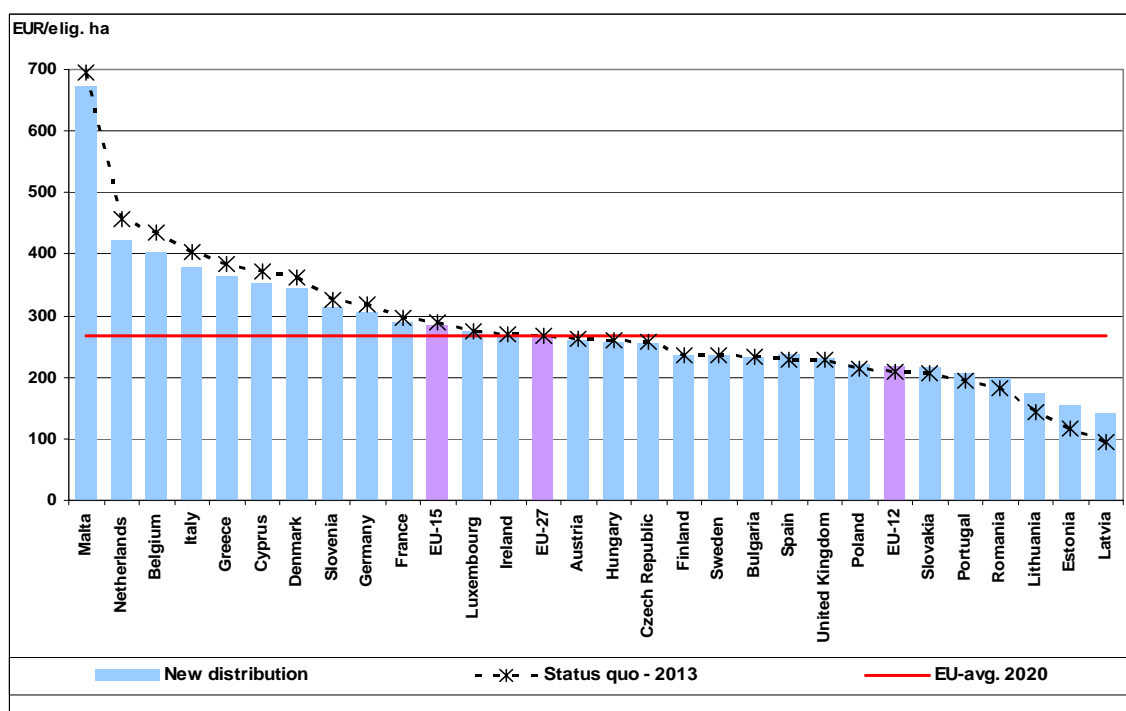
5.2.2. *Social impacts*

Redistribution between Member States

⁸³ The effectiveness and efficiency of a complementary emergency mechanism to react to crisis situation would critically hinge on its articulation and coordination with market measures as well as other private and public risk management tools.

This option would provide less convergence for the Member States below 90% of the EU average. Consequently, the cost of convergence to be borne by Member States above the EU average would also be more limited. In absolute terms, the biggest beneficiaries would be Romania, Poland and Spain, while the biggest contributors would be Italy, Germany and France. The total amount redistributed would come to EUR 738 million.

Figure 21: Closing one third of the gap between current level and 90% of average



Source: DG AGRI

This scenario also proposes a redistribution of rural development support aimed at improving the allocation of funds between Member States in relation to its objectives.

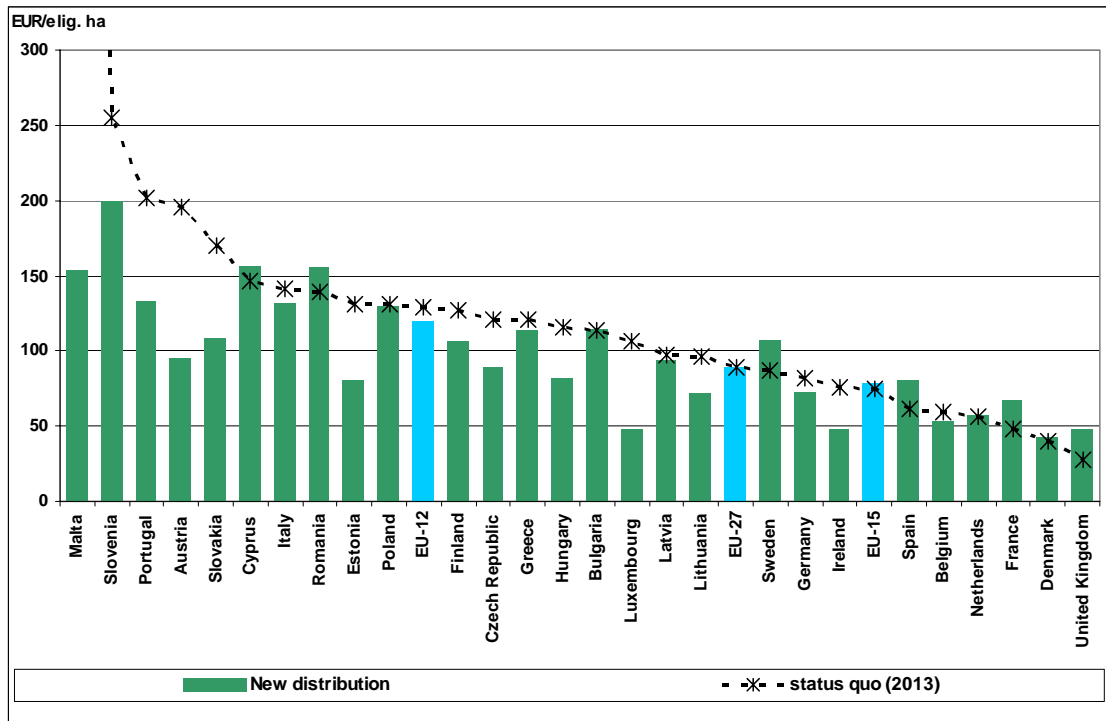
A distribution based on a formula that takes into account the competitiveness of the agricultural sector (e.g. agricultural area, labour force and labour productivity), climate change and the environment (e.g. agricultural area, Natura 2000, LFA, forest and permanent pasture areas), and balanced territorial development (e.g. rural population) would improve the effective support by enhancing its fit to the declared objectives of the policy. It would then be calibrated by a cohesion factor GDP/capita in PPS (the lower the GDP in the Member States, the higher the Member State envelope).⁸⁴

The results of redistribution would differ considerably from the current distribution as shown in Figure 22. Regardless of the redistribution key, some Member States (such as Austria) would lose significantly, while others (such as United Kingdom and Sweden), would gain substantially. It may thus be advisable to rely on the current distribution so as to ensure better policy continuity in administering programs from the current period (Figure 23). Rural development support within a range (e.g. 90%-110%) would reflect

⁸⁴ A possible formula taking into account the three elements equally would be: $[1/3 [(1/2 \text{ Area} + 1/2 \text{ Labour}) \times \text{labour productivity inverse index}] + 1/3 (1/3 \text{ Area} + 1/3 \text{ Natura 2000} + 1/6 \text{ Forest} + 1/6 \text{ Permanent pasture}) + 1/3 \text{ Rural population}] \times \text{GDP inverse index}$

both "an objective element" of contribution to the future policy as well as the distribution in the current period, (which depends mostly on the shares of Member States in the three funds that were brought together to form the EAFRD).

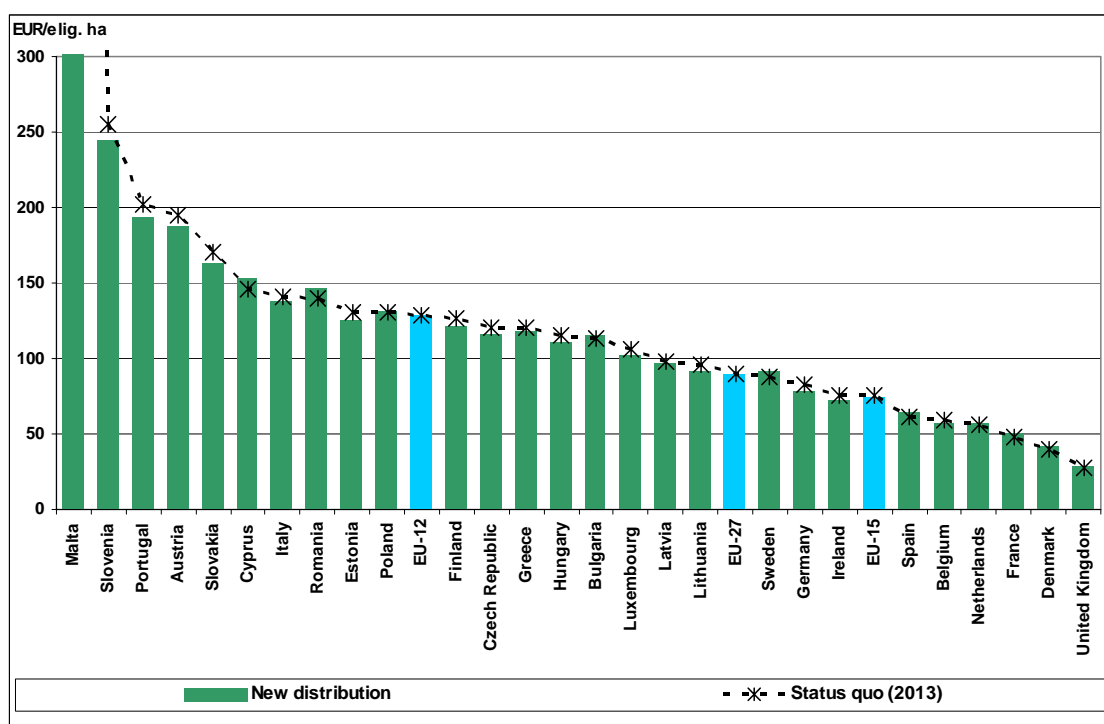
Figure 22: Distribution of RD according to objective criteria⁸⁵



Source: DG AGRI

⁸⁵ This distribution key doesn't take into account the transfers made through the market reforms in the tobacco, cotton and wine sectors.

Figure 23: Distribution of RD – pragmatic approach (use of objective criteria within a 90-110% range)



Source: DG AGRI

Targeting of direct payments/redistribution among farmers

The new design of the direct payment scheme divided into components allows a better targeting towards certain types of holdings or geographical areas. Since the basic rate of support which would be calculated on the basis of a share of the total national envelope is the only component of the direct payment system to which all farmers are entitled (subject of course to having entitlements), some farmers may see their basic income support substantially reduced in particular in the Member States whose budget envelopes decrease.

However, farmers who can benefit from many components of the system, such as those located in areas with specific natural constraints and thus eligible for this component of the direct payments and efficiently carrying out the environmental measures of the greening component, can benefit from the new design. The micro-economic analysis shows that grazing livestock farms (beef and sheep) and farms located in LFA would gain the most.

The introduction of capping of direct payments also enables further targeting of payments. Depending on the option chosen with regard to implementation, capping would release between € 278 million and € 835 million for the EU27. This represents between 0.6% and 1.9% of the total amount of direct payments at EU level which is relatively low when compared to the current amount resulting from modulation (around € 3 billions for budget year 2013).⁸⁶ However, since reducing the element of the payment

⁸⁶ The FADN is a sample survey. As the capping concerns only a very limited number of very large farms it cannot be always guaranteed that this type of large farms is well represented in all Member States. Thus, the figures provided should be considered as indicative.

related to the provision of environmental public goods could have an adverse effect, its exclusion from capping thresholds would be advisable. In this case, the amounts saved would be considerably smaller.

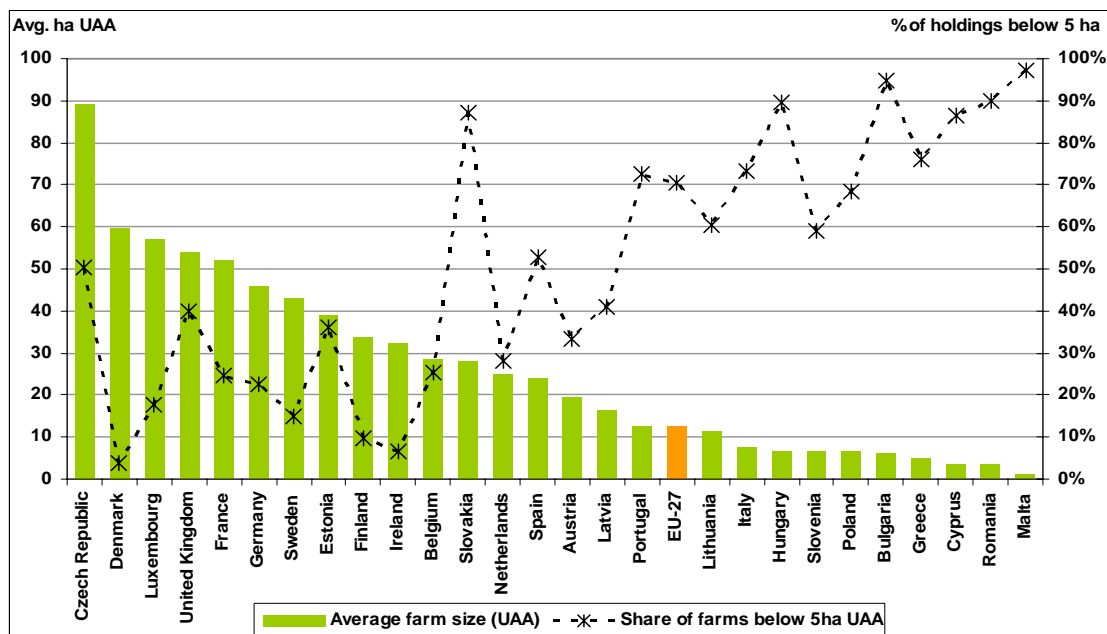
This is due to the thresholds of capping, the rates applied and the possibility for farms to benefit from an "employment" mitigation factor (e.g. by increasing the threshold for capping by wages actually paid or by a lump sum of e.g. EUR 15 000/AWU), which affect only a limited number of farms in comparison to the modulation mechanism. Few countries are affected - mainly Bulgaria and United Kingdom and to a lesser extent Hungary, Slovakia and Romania while some Member States would not be affected at all: Belgium, Cyprus, Ireland, Luxembourg, Malta, Austria, Finland, Slovenia, France or only marginally affected i.e. Poland, Sweden and Portugal. In addition, the average income per unit of labour in EU27 would hardly be affected (between 0 and -0.5%), but there are important variations for some Member States depending on the formula chosen for the mitigation of labour effect. Where the mitigation by labour is the lowest (50% wages), countries most affected would be Slovakia and Bulgaria but also Czech Republic, Hungary and Romania, as they have a high number of large farms, cooperatives, etc.

As regards small farms, a specific scheme would acknowledge the contribution such farms make to rural employment, viable rural areas and cultural heritage in many regions while cutting red tape in the application process. It could allow small farms to restructure, diversify and increase their competitiveness, e.g. by exploring new local market opportunities and providing specific regional products.

To achieve this, the scheme would have to be designed either in a way that encourages development and structural change or allows small farmers to choose the development path they wish (maintaining local small-scale production) by narrowing the income gap with bigger structures. This could be done by introducing a lump sum payment at farm level that replaces all other elements of the direct payment, i.e. the basic rate, the payment for natural constraints, coupled payments and the greening component.

However, a support scheme for small farmers within direct payments would offer only limited possibilities for targeting and therefore needs to be combined with targeted support through rural development policy, focusing on the competitiveness of farms. By contrast, it would cut red tape by simplifying administrative procedures and controls for farmers and national administrations.

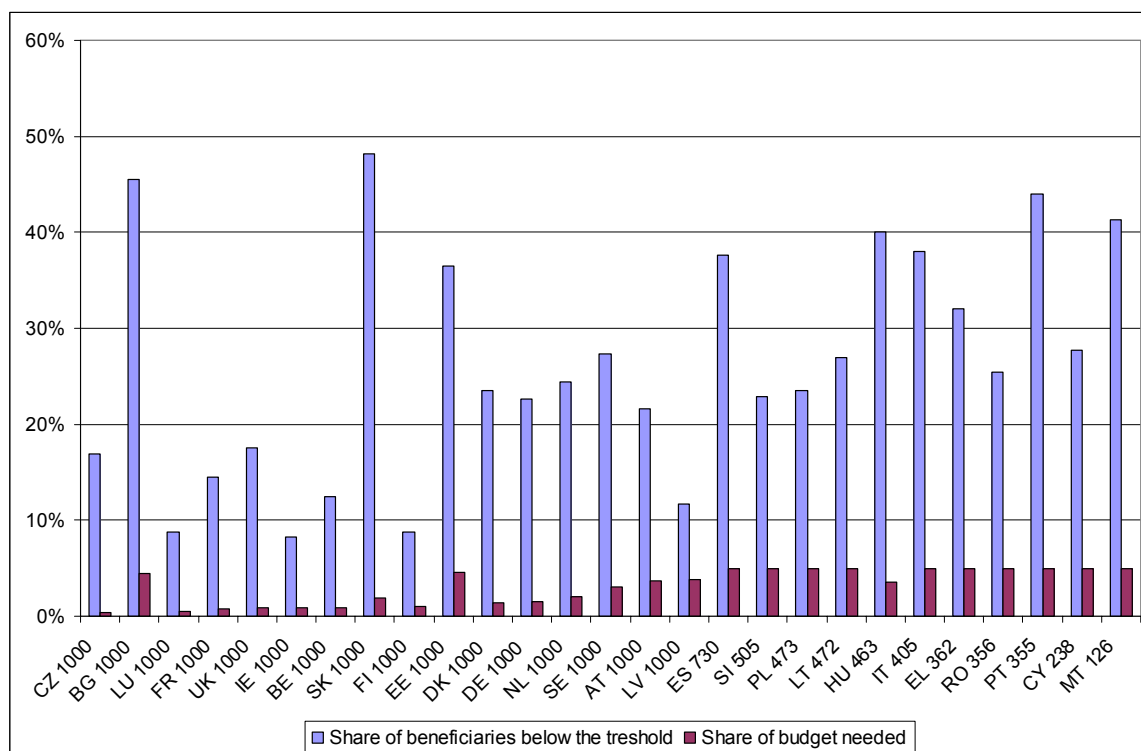
Figure 24: Average farm size and farms below 5 ha UAA



Source: Eurostat Farm Structure Survey 2007

Different options for the design of such a scheme would result in quite different numbers of concerned beneficiaries and budget shares needed for running the scheme. Figure 25 shows the impact if each Member State would try to reach the maximum threshold of €1000/beneficiary or the maximum share of its national direct payment envelope (e.g. 5%). This limitation to 5% of the national envelopes would reduce the threshold of €1000/beneficiary in eleven Member States, but the number of beneficiaries concerned still differs widely between Member States. This is due to the form of the direct payment distribution curves in each Member State, which differs significantly (see for instance Romania and Bulgaria) reflecting different structural characteristics of agriculture.

Figure 25: Budget and number of beneficiaries in the scheme for small farmers⁸⁷



Source: CATS data for financial year 2009, DG AGRI calculation

A specific support scheme for young farmers could encourage the entry of young farmers into the sector and thus improve the age structure in the farming community. A setting-up aid is likely to prove most efficient because it is targeted only at new entrants, not to those young farmers already in the sector. Furthermore, a scheme that would generally target all farmers under a certain age could be challenged as being discriminatory.

In order to avoid double funding and an overlap with similar measures under Pillar II, the young farmer scheme should be designed in such a way as to bring additional income and lower the cost of capital, which would make it complementary to rural development support.

A support scheme for young farmers would offer them an additional payment at the level of 25 % of the average direct payment per hectare in the Member State in which they are located multiplied by the farm size in hectare with a limit of 25 ha in Member States with average holding size below 25 ha and up to the average holding size in other Member States. Such a scheme would not require substantial budgetary resources (estimated at around 0.2% of the direct payment budget at EU-27 level- see Table 3) but could provide an important incentive for young farmers to establish their businesses (cf. Annex 3 on direct payments).

⁸⁷ Those figures do not taken account of structural adjustments and of redistribution of direct payment at farm level. For those Member States in which a threshold of 1000€ per beneficiary will absorb more than 5% of the direct payment envelope for small farmers, the threshold has been reduced accordingly and its level appears after the initials of the Member State on the axis.

Table 3: Impact of Young Farmer Scheme (YFS) with a lump-sum support

	number of farmers concerned by YFS*	average farm size of young farmers	average farm size in MS	YFS payment per farmer**	YFS in share of total DP budget
	N°	ha	ha	€	%
BE	369	37,8	28,6	2.887	0,20%
BG	1.890	17,8	6,2	1.039	0,24%
CZ	337	77,7	89,3	4.950	0,19%
DK	365	74,1	59,7	5.135	0,21%
DE	4.001	43,9	45,7	3.375	0,26%
EE	142	70,6	38,9	1.521	0,16%
IE	1.011	44,8	32,3	2.161	0,18%
GR	6.233	10,1	4,7	918	0,28%
ES	5.513	35,0	23,8	1.485	0,16%
FR	3.977	90,3	52,1	3.763	0,20%
IT	6.721	12,3	7,6	1.158	0,20%
CY	173	5,4	3,6	472	0,16%
LV	873	20,1	16,5	711	0,28%
LT	1.438	17,7	11,5	772	0,24%
LU	18	82,4	56,9	3.922	0,21%
HU	4.592	8,9	6,8	575	0,20%
MT	50	0,9	0,9	156	0,16%
NL	564	27,9	24,9	2.638	0,19%
AT	1.939	19,0	19,3	1.234	0,34%
PL	27.489	7,5	6,5	414	0,36%
PT	768	27,0	12,6	1.298	0,16%
RO	19.720	2,9	3,5	147	0,15%
SI	394	9,2	6,5	716	0,20%
SK	315	45,3	28,1	1.512	0,12%
FI	688	42,2	33,6	1.983	0,25%
SE	474	56,4	42,9	2.522	0,17%
UK	1.241	91,5	53,8	3.106	0,10%
EU-27	91.292	17,8	12,6	986	0,21%
EU-15	33.880	35,3	22,0	1.967	0,20%
EU-12	57.412	7,5	6,0	407	0,25%

* based on figures of young farmers assisted in RD programmes and Eurostat

** 25% of average DP/ha x average farm size of young farmers (with limit of 25 ha in MS whose average size of holding is below 25 ha and limit of average size of holdings in the MS where average holding size is more than 25 ha)

Source: Eurostat data, DG AGRI calculation

Better targeting of support to active farmers only would increase the acceptance of direct payments by society at large. However, the definition poses substantial practical difficulties as it needs to exclude non-active farmers while at the same time not affecting the access of genuine farmers to support. This is particularly demanding as the number of beneficiaries potentially affected and the information available at Member State level to define an "active farmer" differs strongly between Member States.

Many of the criteria that could be used to define who is an "active farmer" could be problematic from a WTO point of view or due to the fact that they could lead to unequal treatment of farmers. For example:

- The criteria that the turnover (or income, or receipts) derived from an agricultural activity represents or represented a certain percentage of the total turnover (income, receipts) of a natural or legal person or that farm animals or agricultural crops or farm machinery are present on the agricultural holding could be used. However, these criteria could result in problems with the green box classification of support if they were not linked to a date in the past – which, in turn, would make them questionable for determining who is an active farmer today.
- It could be stipulated that payments should be granted only to those natural or legal persons for whom agriculture forms a significant part of overall economic activities or whose principal business involves exercising an agricultural activity. However, such a criterion could cause problems of unequal treatment or discrimination if applied differently by different Member States.

Decoupling has generally led to improved competitiveness and market-orientation in most sectors. But there remain cases where targeting support to specific types of production which generate benefits for the environment and the social fabric of rural areas, and which may be in danger of disappearing without coupled support, is pertinent.

Farm-level analysis of the beef, sheep and goat sectors shows that the impact on farmers' margins of withdrawing coupled payments varies substantially across those Member States and the different production systems and regions that were analysed. For example, specialist breeders especially in mountainous LFAs are the most sensitive to potential production losses due to decoupling of headage payments, especially in France, Austria and Portugal, where 18% to 44% of the suckler cow population could be affected (see Table 4).

Table 4: Output, margins and Coupled Direct Payments, specialist beef breeders

	AT	AT	ES	ES	FR	FR	PT	PT
	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms
Farms represented	720	1 840	1 690	43 870	16 020	70 870	2 210	8 410
Farms represented % of total	39%	100%	4%	100%	23%	100%	26%	100%
Beef specialisation - % output	67%	65%	80%	85%	82%	84%	79%	75%
Heard affected - total LU	26 371	67 393	120 495		1 178 545	5 213 700	86 049	327 452
Share of herd affected	44%		6%		18%		31%	
in €/COW								
TOTAL BEEF OUTPUT	729	763	538	797	790	965	388	441
TOTAL BEEF COUPLED DP	265	267	220	160	251	233	226	210
Share of CP in output value	36%	35%	41%	20%	32%	24%	58%	48%
Gross margin	-118	-33	-94	279	-101	142	-95	68
Gross margin with CP	147	234	126	438	150	375	131	278
in €/AWU								
Total output	18 553	18 908	33 110	28 135	35 813	48 220	9 840	12 297
Balance subsidies and taxes	22 132	21 725	18 180	9 772	24 755	26 463	10 894	9 658
of which LFA/AWU	4 598	4 660	693	655	3 070	2 783	1 103	1 023
of which environmental/AWU	8 387	7 934	814	166	2 504	2 621	865	854
Share of all subsidies in total receipts	54%	53%	35%	26%	41%	35%	53%	44%

Source: DG AGRI – EU-FADN

Headage payments represent a lower share of the margin of the specialist breeders and fatteners; therefore the impact of a total decoupling would be limited for these systems except in France and Portugal where respectively 15% and 36% of cows could be affected. To illustrate the fact that coupled support is of particular importance in

disadvantaged regions, it should be underlined that 84% of the EU-27 beef breeders are located in less favoured areas.

In general, it can be concluded that in rural areas where little other agricultural or general economic activity takes place, beef, sheep and goat production can contribute to providing employment and keeping up the vitality and attractiveness of rural areas. As these types of farming are often located in disadvantaged regions, the continuation of production can be judged favourably from a social and environmental point of view.

Territorial balance

This option best promotes territorial balance by directly addressing the long-term sustainability of agriculture and rural areas in line with Europe 2020. The new model of direct payments, in addition to the redistribution, should allow for a more balanced and better targeted support, including to marginal areas and farming systems.

5.2.3. *Environmental impacts*

This scenario introduces greening measures into the Pillar I. This frees up funds for more ambitious agri-environmental measures under RD. Farms located in LFAs would see the largest income gains.

Encouraging environmental and climate friendly practices

The expected environmental and climate action benefits of introducing greening measures in the Pillar I are set out in the table below, along with the main costs for farmers, as described above.

<p><i>Green cover - a temporary plant cover of arable land that would otherwise remain bare at certain times in the year</i></p>	<ul style="list-style-type: none"> • <u>Benefits</u> for water quality (esp. reduction of nitrate leaching); soil quality and reduction of erosion; climate change mitigation (increase in soil organic matter and reduction in chemical fertilizers) and adaptation; flood prevention • <u>Costs</u> for seeds, machinery, energy and labour during sowing in autumn and mechanical destruction and ploughing in spring; in the case of winter stubble, income foregone (no selling or grazing of the straw); possible cost savings on fertilizer and impact on yields for the next crop • <u>Opportunity costs</u> for farmers already using green cover but who may be tempted to revert to bare soils <p><i>Note: in Nitrate Vulnerable Zones, green cover may already be compulsory</i></p>
<p><i>Crop rotation/diversification - planned and ordered succession of different crops on the same field (usually lasting 3-5 years)</i></p>	<ul style="list-style-type: none"> • <u>Benefits</u> for soil organic matter and structure; reduction of soil erosion and nitrate leaching; nutrients management and input reduction; benefits for disease control; water quality and quantity; climate change mitigation and adaptation; improved habitats and landscape diversity • <u>Costs</u> include significant short term implementation costs (may require new equipment and skills, different marketing outlets); income foregone for the main crop, esp. in case of monoculture; short-term negative impact on yields in intensive farming • <u>Long-term benefits</u> (improved yields and profitability over time, improved disease and pest control, less need for plant protection products) require clear quantitative assessment, in addition to qualitative assessment – "fallacy of composition" risk (what is

	<p>good in smaller scale could be bad in larger scale if global price impact too strong)</p> <ul style="list-style-type: none"> • <u>Opportunity costs</u> for farmers already practicing crop rotation and who may be tempted to revert to monoculture
<p><i>Permanent grassland - that has not been in arable rotation for at least 5 years, thus ranging from High Nature Value to semi-natural to cultivated grassland</i></p>	<ul style="list-style-type: none"> • <u>Benefits</u> for climate change mitigation (esp. organic soils and peatlands⁸⁸) and adaptation, biodiversity, soil, water management, flood prevention and landscape amenities • <u>Opportunity costs</u> of not converting into arable land may be high, given the increased demand for arable land that can be put to a more profitable use; hence the need to support grassland-based livestock systems on environmental grounds • Relatively low cost of maintenance (mowing, grazing, avoiding inappropriate shrubs and bushes) <p><i>Note: that there are important differences in the amount of permanent grassland in the different Member States</i></p>
<p><i>Ecological Focus Areas - land left fallow (not in production) for environmental purposes</i></p>	<ul style="list-style-type: none"> • <u>Benefits</u> for biodiversity; soil and water quality; climate change mitigation and adaptation; pest control; landscapes • Impacts vary depending on whether set aside is rotational, on how land is maintained and on its location (e.g. buffer strips along water courses) • Opportunity cost of income foregone due to lower production, but this could be balanced with possible increase in prices
<p><i>Natura 2000 - the EU wide network of Special Areas of Conservation under the Habitats Directive and Special Protection Areas under the Birds Directive</i></p>	<ul style="list-style-type: none"> • <u>Benefits</u> for biodiversity, water quality and climate change mitigation largely depend on conservation measures put in place in each Member State • No additional cost since relevant requirements are already mandatory

The greening component of Pillar I foreseen in the integration scenario and environmental schemes under rural development should be developed in a complementary manner aimed particularly at fostering High Nature Value (HNV) farming.⁸⁹

The widespread reach of greening measures will contribute strongly to the EU biodiversity strategy to 2020. The latter points to the need to further improve the integration of biodiversity in key sectors such as agriculture and forestry in order to meet

⁸⁸ The most important way in which peatlands can be beneficial in terms of mitigation is either leaving them water-logged (i.e. no drainage and no conversion to arable, grass, forestry) or bringing them back to water-logged conditions.

⁸⁹ For a more detailed discussion of the High Nature Farming in the CAP see Annex 2.

the ambitious EU headline target for 2020.⁹⁰ The integration scenario is best shaped to achieve this target and is in line with the actions called for in the biodiversity strategy, with the greening component of the Pillar I as a major feature.

The exact implementation of these measures and articulation with cross compliance and agri-environmental measures of rural development play a crucial role for the extent to which environmental benefits can be achieved. For example, the farms (or part thereof) with organic certification (around 7.6 million ha, of which half is permanent grassland) could be exempt from the greening conditions due to their uncontested environmental benefits and possible climate benefits.

The greening component could be complemented by rural development measures on the same issues which add value by being more ambitious and/or better tailored to the local situation, as part of a package of measures, or by encouraging connectivity of environmental features between farms. In such cases, the RD payment would clearly have to go beyond the 'greening' component to avoid double funding for the same measure.

Bottom-up approaches and efforts to enhance collaboration of farmers in terms of implementation of agri-environmental actions will yield higher benefits. In view of this, measures enhancing connectivity for environmental and climate change reasons could be given a higher rate of co-financing and/or farmers should receive transaction cost payments to encourage uptake by Member States and farmers.

The shift of some agri-environmental actions to the green component of the direct payment scheme, would free up some funds that might be used for more targeted and ambitious agri-environment measures, thus producing a further reinforcement of the environmental outcome of the policy. The policy objectives would be fully aligned with Europe 2020 priorities, including the objectives of "Resource Efficient Europe" which refers to biodiversity and climate change targets, including the sustainable production of renewable energy.

The system of setting quantitative targets within rural development programmes would be strengthened. This should provide an incentive for Member States to improve the framing of their policy and to programme and target those measures that have the most beneficial effects. The focus on innovation should improve resource efficiency.

In addition, there would be more guidance in terms of how to best use packages of measures in order to maximise positive outcomes, e.g. advice and training offered alongside demanding agri-environment measures. In this context, the Farm Advisory System has an important role to play in relaying the technical know how necessary to allow for a smooth transition to the adoption of the greening elements of the pillar I, and in encouraging farmers to adopt more advanced measures under rural development.

Concerning climate change the combined positive mitigation effects of greening measures (e.g. permanent pasture, crop diversification offering both reduced emissions and increased carbon sequestration in soils) covering the whole EU territory, complemented with more ambitious rural development targeted measures (investments in

⁹⁰ COM(2011)244 final.

bioenergy, afforestation, agri-environment measures) and by requirements for sustainable agriculture practices promoted by cross compliance applicable to both pillars will enable the agriculture sector not only to fully share the burden of meeting the short-term targets (set under the Effort Sharing Decision (ESD)) but will also help set agriculture on the right path to achieve the required level of reduction in the longer term as estimated in the EU low carbon economy roadmap 2050 modelling exercise⁹¹.

In addition, many of those financial supports to be provided or requirements would have strong win win effects in terms of adaption to climate change. Adaptation will be a necessary component of the success of the EIP, which focuses on increased productivity since without climate adaptation productivity increases will not be possible. This is particularly the case for several greening and agri-environment measures as well as GAECs that will, taken together, strengthen resilience by improving soil quality and water management by promoting more efficient water use.

Redistribution of support

Farms located in LFA/NHA would gain most under the integration scenario. They would benefit both from the additional income support to areas with specific natural constraints in the Pillar I and from the redistribution of direct payments within each Member State (whatever the redistribution option). This would be favourable for the continuation of farming in areas with a high risk of land abandonment, which is in turn positive for biodiversity. In addition, farms in LFA/NHA have generally a high share of permanent pasture. Enhanced support to small farms could further help addressing the risk of land abandonment in marginal areas.

Depending on the detailed measures of and budget allocation to the green component and the specific natural constraints payment of the scheme, the redistribution effect of the integration option towards areas where the maintenance of agriculture is essential for the provision of public goods would be important, in particular areas in Natura 2000 and areas with natural constraints. For instance, if all current less favoured areas are used for the specific natural constraint payment, the direct payment granted to farms located in those areas would increase by 38% at EU level in mountainous areas and by 15% in other LFA compared to the status quo in 2020.

In addition, the possibility to mobilise support from different sources (Pillar I and Pillar II) together with the maintenance of land in Good Agricultural and Environmental Conditions would allow Member States to better calibrate the support needed against risk of land abandonment.

5.2.4. International impacts

The implementation of the targeting of direct payment will have to ensure that all components of the payment are in line with WTO rules. This means in particular that the extent of coupled support would need to remain within clearly defined limits and the

⁹¹ As the impacts of climate mitigation measures vary widely between regions depending on climatic and soil conditions as well as production systems, it is difficult to provide an aggregate value for the overall EU effects. An overview of the effects of greening measures and selected other actions is provided in Annex 2b: Assessment of selected measures under the CAP for their impact on greenhouse gas emissions and removals, on resilience and on environmental status of ecosystems.

elements used to define an "active farmer" would need to respect WTO green box criteria (in particular they cannot imply an obligation to produce). To retain the WTO green box nature of Pillar I payments, the 'greening' component will need to be a decoupled, fixed payment applying to all farmers in a specific area (Member State or region); in this respect, care should be exercised in rewarding specific types of production e.g. through a grassland premium, and certainly not production *per se*.

5.2.5. *Administrative impacts*

In this option, the changes having a major impact on the administrative burden of farmers would come from the new architecture for direct payments. For instance capping, the new eligibility criteria of "active farmers" and the "greening" of direct payments could potentially be burdensome as additional documentation would have to be provided to Member State authorities. On the other hand, the small farmer scheme would substantially reduce the number of information obligations of the concerned farmers and the controls of such beneficiaries by Member State authorities.

For controls, the current system as regards decoupled payments relies on two layers: 100% IT cross checks (Land Parcel Identification System) and 5% on-the-spot checks. With the introduction of the greening component, the system will rely essentially on on-the-spot checks, thus higher costs for controls. However, where possible, the use of remote sensing for on-the-spot checks could help keep costs down compared to field visits.⁹²

The overall administrative cost of the future direct payment system has been quantified (see details of assumptions taken in annex 8) and would approximately represent a 15% increase in the administrative cost compared to the current situation⁹³.

5.3. **Re-focus**

A phasing out of direct payments would lead to strong restructuring in the sector and much larger and more capital intensive farms. Production intensification in the most fertile regions and land abandonment in less advantageous areas would have negative environmental consequences. Focusing policy on rural development-type environmental measures would alleviate these problems, but would not contribute to enhancing the sustainability of agriculture. Phasing out of direct payments would lead to failure of many agricultural holdings and would put additional pressure on the viability of rural areas with higher unemployment and migration.

5.3.1. *Economic impacts*

The phasing out of direct payments would lead to strong restructuring in the sector, leading to a more competitive and less diverse sector. Growth in rural areas in less productive regions could be negatively affected.

Competitiveness and growth

⁹² For more detailed analysis about the controls for different measures see Annex 2.

⁹³ The detailed calculations using the Administrative Burden Calculator are provided in Annex 8. Simplification of the CAP.

This option will imply more reliance on the markets for income in a situation of increasing input prices. Those farms which will continue to be economically viable in the new environment will be larger, more open to innovation leading to cost optimisation and productivity growth and less labour-intensive. The decrease in land values should also attract new entrants. The incentives to use available risk management tools will be higher.

A different agricultural structure would also lead to a change in research and advisory services. While there will be demand for certain type of research and innovation relating to productivity, without FAS obligation at the EU level farmers are not guaranteed advice even on the basic requirements covered by cross-compliance rules. The capacity of producers to improve their environmental standards and to adapt to climate change is likely to be reduced as the initiatives and supply of AKIS services from the private sector will most likely fall short of the farm sector demand for the provision of public goods. In particular, the farming sector of Member States where the development of the AKIS is not a priority, or is strictly resource-constrained, is at a strong disadvantage in comparison with other Member States.

The concentration of production and processing in most productive region and the intensification of production, could impact negatively consumer choices, lead to an increased reliance on long supply chains, and address the ecological concerns of consumers with regard to food production in a more limited fashion.

Sector output and viability

While the decoupled payments do not have a direct influence on farmer's production choice, they nevertheless allow some who would otherwise have been forced out to remain in the sector. In addition, a safety-net intervention system provides support to those farmers who are viable in normal conditions but cannot survive a period of excessively low prices. Therefore, the elimination of those tools would lead to strong restructuring in the agricultural sector.

The end of direct support would result in strong structural changes by accelerating the move towards larger farms. The main impacts would likely be not so much on the overall quantity of agricultural production in the EU as on the way this production is distributed over the EU territory. The lack of regional production in many areas could have negative consequences for local markets and products, and could negatively affect certain up- and downstream enterprises with possible repercussions on territorial cohesion. Since the phasing out would take place gradually, these changes would be mitigated over time.

Rural growth

The socio-economic development of rural areas would be hindered as a result of the loss of valuable social capital formation and the undermining of micro- and family business development, which is currently an essential element of rural economies. This would be especially felt in regions where agriculture is the main driver, as well as in regions most dependent on rural development funding.

The impact of shifting rural development priorities will depend on the region. There will be instances where replacing axis 3 measures by axis 2-type measures would have a positive impact especially in regions with a high share of agriculture (provided that they are not too affected by land abandonment). Repealing current support to diversification measures would also affect already diversified rural economies and in the longer term

would hamper the diversification of agricultural rural region, thus impeding development of the necessary base for rural growth.

5.3.2. Social impacts

Structural changes in agriculture could lead to loss of employment in the farm sector and possibly also in related sectors. Rural development funds would be redistributed across Member States based on environmental criteria.

Phasing out of direct payments

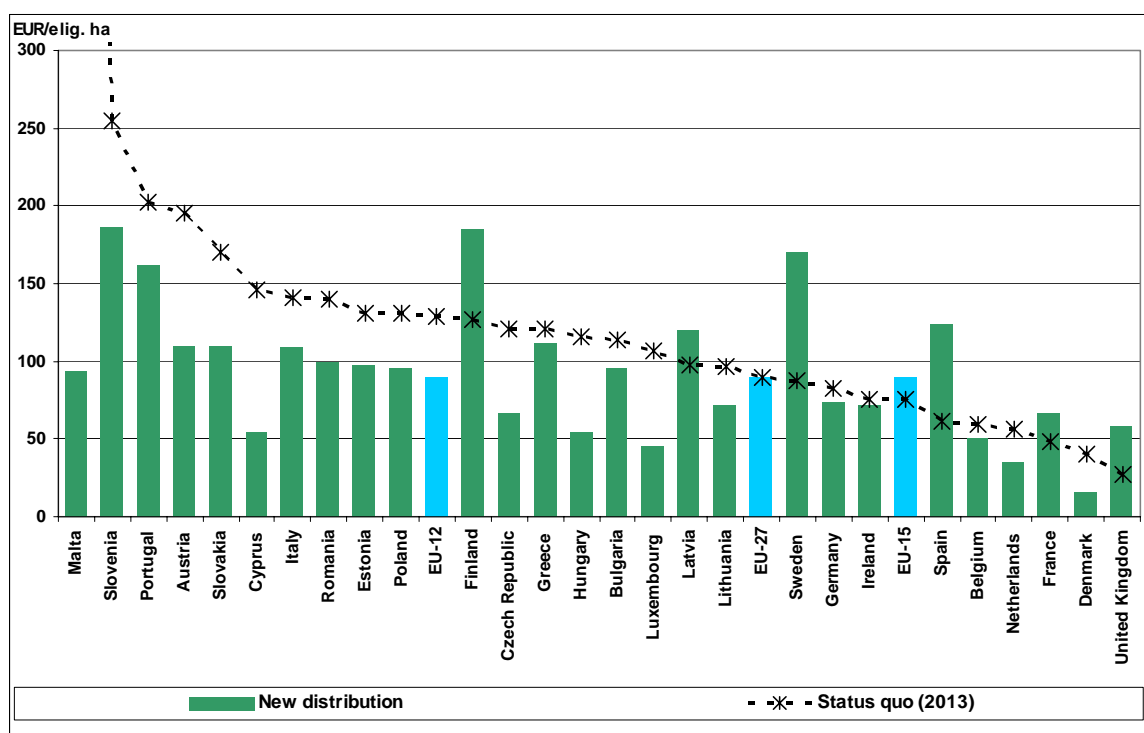
The phasing out of direct support would lead to substantial reductions in farm incomes, forcing many producers out of business. Structural changes are likely to result in loss of employment in the farm sector and possibly also in up- and downstream sectors.

The income of large field crop, grazing livestock and mixed farms would be particularly affected due to their high dependence on direct support. The additional employment and income opportunities for farmers as land managers under Pillar II will not compensate for the significant impact of the phasing out of direct payments.

Redistribution of support between Member States

The scenario would also imply a major redistribution of rural development funds based on the environmental criteria (agricultural area, Natura 2000 area, forest and permanent pasture)⁹⁴.

Figure 26: Distribution of RD budget (environmental criteria)



Source: DG AGRI

⁹⁴ (1/3 Area + 1/3 Natura 2000 + 1/6 Forest + 1/6 Permanent pasture) x GDP inverse index

Territorial balance

The absence of direct payments risks undermining a balanced territorial development across the EU, with agriculture concentrating in the most profitable regions with the risk of land abandonment in more marginal areas, consequently hampering the socio-economic development of the areas that are most dependent on agriculture. With predominantly rural areas most likely to be affected, this in turn risks exacerbating existing income disparities. Moreover, despite the doubling of rural development support, the absence of axis 3 measures would also be an issue for those rural areas most dependent on such support.

5.3.3. Environmental impacts

The likely intensification of production in fertile areas and the abandonment of production and land in more marginal regions would have far reaching environmental consequences.

Encouraging environmental and climate friendly practices

The main environmental impacts of ending direct support would be due to the changing territorial distribution of agricultural activity. Both the concentration of production in particularly productive areas and the abandonment of production and land in more marginal regions would have far reaching consequences for the environmental balance in these areas with, e.g. loss of biodiversity and loss of possibilities to contribute to the mitigation of climate change, reduced adaptation or even increased vulnerability (e.g. fires). While there might be benefits from the establishment of ‘wilderness’ areas in certain situations, the overall result would be increased environmental pressures and the deterioration of valuable agricultural habitats with serious economic and social consequences including an irreversible deterioration of the European agricultural production capacity. The enforcement and sanctioning mechanism of cross compliance would depend on the amount transferred to rural development measures for which cross compliance currently constitutes the baseline.

The extent of many of these impacts also depends strongly on whether and how Pillar II would be adapted to mitigate the consequences. The doubling of funds under this scenario and the clear focus on measures for the improvement of the environment and climate change actions, should normally result in significant positive impacts on these aspects but alone would undoubtedly fall short of addressing all the risks mentioned above. This scenario would seriously undermine the achievement of the recently adopted EU biodiversity strategy to 2020.

Concerning climate change, a large part of the mitigation potential in agriculture will not be unleashed because neither support for climate friendly practices nor requirements will apply on a large part of the territory. So even more ambitious rural development measures will not enable agriculture to achieve the right reduction in emissions estimated in the EU low carbon economy roadmap 2050 modelling exercise. In addition, many win win effects in terms of adaptation to climate change will be lost in those areas not covered by rural development measures.

Redistribution of support

Phasing out direct payments could severely compromise positive environmental outcomes. Without basic income support, the less competitive farmers who very often manage marginal land and land in remote areas in an extensive manner may cease their

agricultural activity because they no longer make a sustainable income. On the other hand, agriculture activity may be concentrated and intensified in the most competitive areas. It is thus questionable to what extent the increased budget that can be made available can make up for the loss of direct payments. While GAEC rules would still apply for the beneficiaries of the rural development aid, they would not cover the entire agricultural sector.

5.3.4. International impacts

The Amber box value related to market support will diminish.

5.3.5. Administrative impacts

In the long run, the phasing out of direct payments would reduce the administrative burden for farmers and authorities, provided Member States would not replace the direct payment system by national policies. The suppression of the control and sanction system of cross compliance would reduce the irritant factor for farmers. As regards rural development, having only one objective for the measures would ease the work of national authorities.

6. COMPARING THE SCENARIOS WITH RESPECT TO OBJECTIVES AND IMPACTS

This section compares the impacts of each of the three broad policy scenarios under consideration on the basis of the analysis in section 5 and assesses the potential of each option in meeting the objectives set in section 3 in the most cost-effective manner. This comparison needs to be put in the broader context of the economic crisis and pressures on public finances to which the EU has responded with Europe 2020.

All three scenarios aim at a more competitive, sustainable and resilient agriculture in vibrant rural areas, and thus seek to better align the CAP to Europe 2020, notably in terms of resource efficiency. They differ in the combination of means to achieve these aims. Their expected economic, social and environmental impacts are summarised in Table 5 below.

Table 5: Comparison of scenarios by impact

		Adjustment	Integration	Re-focus
Economic	Sector output	+++	++	+
	Competitiveness (short/ long term)	++/+	+ /+++	+++
	Response to crisis	++	+++	+
Social	Employment	+++	++	+
	Income	+++	++	+
	Territorial cohesion	++	+++	+
Environmental	Territorial coverage	++	+++	+
	Targeted measures	+	++	+++
	Long term sustainability	++	+++	+

Simplification	++	+	+++
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In terms of economic impacts, the adjustment scenario will result in the continuation of current trends. In the short term, these will preserve the size of the sector, but will not protect it in the longer term from productivity losses due to environmental constraints and lack of investment in productivity and human capital. Streamlining of market measures would provide a more effective safety-net in emergencies, but will not address the underlying issues that contribute to crises in the sector.

The integration scenario provides instruments that will mobilise the necessary resources to increase productivity through innovation and to pool knowledge and resources through collaborative actions among the farmers and in the food supply chain. To improve the bargaining power of farmers, the sub-option of increasing efficiency and creating higher value added at farm level was favoured over that which focused on affecting price negotiations only.

The refocus scenario leads to an acceleration of structural adjustment in the sector towards greater profitability of farm holdings. However, it also exposes the sector to a significant reduction in size, greater risks in terms of market stability in the absence of appropriate safety nets and risk management tools, as well as the risk of decreased spending on innovation due to the pressure on farm income.

From the perspective of consumers, all scenarios would have a limited impact on food prices, although the integration option is more likely to improve quality and choice of products and assure sustainable production. The effects on world markets (including on developing countries) would also be very limited in all cases. This is the combined result of previous CAP reforms and the present and expected future level of world prices that have turned the EU into a price-taker in agricultural markets.

In terms of social impacts (cf. Table 6), a significant income effect will result from the redistribution of direct payments. The adjustment scenario presents four sub-options of distribution between Member States based on criteria linked to convergence and to the objectives of the scheme. The challenge is how to ensure a more equitable distribution and a better targeted support in line with the policy objectives while avoiding major disturbances. The convergence towards a flatter rate would particularly benefit those Member States that are currently significantly below the EU average. At the same time, the move towards a regional model (together with the inclusion of naked land) would rebalance support between farm types, especially in Member States currently using a historical model, mostly towards more extensive production systems.

The integration scenario provides the tools to fine-tune the redistribution of support by allowing better targeting of support by means of the different components of direct payments (in particular capping, the small farmer scheme, young farmer scheme and the better definition of "active farmers"). In the case of each payment component, different sub-options were analysed to find the right balance between the redistributive and budget impact and to provide the right incentive that is best aligned with the objective of the component.

At the upper extreme of the distribution of direct payments, analysis shows that capping at the level of 150 000 EUR represents the threshold where the number of beneficiaries

and the impact on the sector's income becomes very limited. The introduction of a progressive scale reduces the danger of splitting farms to circumvent limits and a labour mitigation allows to account for the role large farms may play for employment in rural areas. At the lower extreme, a separate lump-sum payment for small farmers leads to a simpler system which, combined with an EU-wide ceiling of 1000 EUR with limit based on the Member State envelope is most cost-efficient with regard to the number of beneficiaries and its impact on income. For the young farmer scheme to provide an appropriate incentive, the premium should be linked to average payment and average size of holding in a Member State. The analysis of options on targeting towards active farmers shows that there is a high risk of discrimination in such an exercise, so an approach based on elimination of those entities which derive most profits from other activities than farming without preventing small part-time farmers from receiving payments appears to be the most practical. Such an option would set a minimum of receipts from agriculture and an exemption for beneficiaries with small amounts of direct payments.

All in all, the adjustment scenario is most likely to remain closest to the current situation with respect to impacts on employment, sector income and farm structure. The integration scenario entails higher short-term costs due to the strengthening of more environmentally friendly farming practices and more funding for productivity. However, the longer term impact would be better conditions for farmers and more balanced rural development, securing employment and income opportunities in rural areas. Structural adjustment under the terms of the refocus scenario would come at a significant social cost with considerable decrease of sector income and employment which is not globally compensated by its more targeted environmental gains.

Table 6: Impact on agricultural income in 2020 compared to status quo⁹⁵

	Adjustment	Integration	Re-focus
Change in Farm Net Value Added	-2.0 %	- 3.0 %	-23.0 %
Additional % of farms with no remuneration of farm labour	+0.3 %	+1.2 %	+9.6 %

Source: DG AGRI L3

While EU average figures relating to change in sector income hide considerable differences between different Member States and types of farms, they highlight the need to integrate a strong pro-growth element to the policy to balance the effects on FNVA and the number of farms with no remuneration of labour. To this end, it will be essential to improve agricultural productivity and sustainability through research, knowledge transfer and generally promoting collaborative approaches. Hence the importance of the enhanced funding in EU research and innovation, in the new Multiannual Financial Framework, for food security, bio-economy and sustainable agriculture and the

⁹⁵ For the detailed calculations of the impact of direct payments redistribution on Member States and different farm types see Annex (10).

upcoming European Innovation Partnership on agricultural productivity and sustainability as a basic pre-condition that cuts across policy options.

In terms of environmental impacts, the adjustment scenario introduces some improvements in the environmental performance of the policy through the redistribution of direct payments towards more environmentally beneficial practices, enhanced cross compliance and the channelling of additional resources into new challenges under rural development. There are however serious doubts as to whether these can adequately address the important climate and environmental challenges in the future, thereby also undermining the sustainability of agriculture itself in the longer term.

The integration option takes the need to further improve the climate and environmental performance of the CAP a step further with the "greening" component of direct payments. The challenge is how to design such greening so as to reap considerable environmental and climate change benefits and assure the sustainable use of natural resources without undermining territorial balance throughout the EU as well as the long-term competitiveness of the farming sector and unduly complicating the management of direct payments.

In this context several sub-options were examined by varying the parameters of concerned measures (permanent grassland, green cover, ecological focus areas, crop diversification and a Natura 2000 specific support). The analysis shows that this is possible although some administrative burden cannot be avoided. The resulting negative impact on income remains moderate on average (but varies significantly between Member States, regions and farming systems); this negative impact would be exacerbated with a more ambitious crop diversification measure, but alleviated in the case of more ambitious provisions for ecological focus areas, due to the market impact. The greening component would also free up funds in rural development to be deployed towards more sophisticated agri-environment and climate focused measures. The combined effect of environmental and LFA measures in both pillars would thus have the potential to significantly enhance the contribution of the policy to the provision of public goods, though it could entail additional administrative efforts to manage a more complex structure and avoid duplication of measures. Provided that the right balance is struck in the design of measures and their implementation by Member States, this scenario best safeguards territorial balance by addressing the long-term sustainability of agriculture and rural areas.

The effects of doubling the spending in the refocus scenario on better targeted environmental measures would not lead to sustainable land management across the EU territory, as the policy would lose the leverage of direct payments coupled with the cross compliance requirements. In addition, the negative social consequences particularly in areas and sectors that are most dependent on direct payments (e.g. large field crops and dairy farms, extensive beef and sheep and goat farms) would be such that the temporary use of measures to support restructuring would not be able to make up for losses from the phasing out of direct payments. The absence of measures for diversification and improving the quality of life in rural areas could threaten the rural fabric, especially in

diversified rural economies, which would be a risk to territorial balance. These results are not new, but echo similar results in the two Scenar 2020 studies.⁹⁶

Finally, there is no doubt that the refocus scenario outperforms the other two scenarios as regards simplification, while the improved targeting in the integration option introduces some complexity with the new model of direct payments and the new reinforced strategic targeting in rural development, as well as the greater needs to define the interface between the two pillars. As a result, simplification has been an important consideration in the design of all options, for instance in the streamlining of cross compliance and market instruments.

At the same time, the effects of the policy will also depend on the modalities of the implementation of some elements of the policy,

- The redistribution effects of the regionalisation of payments and subsequent environmental, social and economic benefits will critically hinge on the choices made by Member States with regard to eligibility criteria and delimitation of regions.
- The effectiveness of rural development policy in achieving Europe 2020 objectives will also depend on the right programming by Member States and regions and that the closer coordination with the other funds does not remove the synergies with Pillar I.
- Budgetary effects will depend on the redistribution of support, notably the pace of convergence for direct payments with Latvia, Estonia and Lithuania mostly increasing the average payment per hectare and Belgium, Netherlands and Italy mostly losing out.

Comparing the scenarios with respect to the objectives of food provision, sustainability and territorial balance (cf. Table 7), it should be kept in mind that the means by which they are achieved can either create synergies or require trade-offs. The adjustment scenario focuses mainly on Pillar I income support measures for viable food production and Pillar II for sustainable management of natural resources in a logic that prevented benefiting fully from synergies between productivity and protection of environment. The integration scenario shifts the balance towards achieving viable food production through sustainability in a more balanced territorial development context. The refocus scenario restrains the policy to environmental sustainability, but ignores the interaction with economic and territorial factors.

The integration scenario would maximize the EU value added by concentrating on the elements of the policy which provide the most benefits from common action of Member States. It links the instruments covering the whole of EU territory to EU-wide goals with respect to environment, climate change, ensuring food security and increasing consumer confidence. It reinforces the common framework with tools and networks for sharing expertise, enhancing cooperation and encouraging transfer of know-how and innovative

⁹⁶ Scenar 2020 – Scenario study on agriculture and the rural world, LEI, January 2007 and Scenar 2020-II – Update of scenario study on agriculture and the rural world, LEI, December 2009 http://ec.europa.eu/agriculture/analysis/external/scenar2020ii/index_en.htm

solutions. At the same time, it leaves many decisions related to practical implementation of measures to Member States and regions, where they can be better tailored to local needs. The adjustment scenario continues to derive EU value added of the CAP from having a single common policy, which was especially important in the context of international trade negotiations (especially WTO) and for the reforms of the past two decades to increase its efficiency and effectiveness. The refocus scenario refers to EU-wide goals but focuses on the availability throughout the EU of targeted local measures.

In terms of cost-effectiveness, the integration option would make the best use of the budget by maximizing EU value added. On the other hand, the adjustment option would place equally important demands on the EU budget without the same ambition in terms of results, while the refocus option would produce budget savings but at the same time significantly reduce the scope and added value of EU action.

Table 7: Comparison of scenarios by objective, EU value added and cost effectiveness

	Adjustment	Integration	Re-focus
Viable food production	++	+++	+
Sustainable management of natural resources and climate action	+	+++	++
Balanced territorial development	++	+++	+
EU value added	++	+++	+
Cost effectiveness	+	++	+

On the basis of the above comparison, the preferred scenario is the integration scenario, followed by the adjustment option and finally the refocus scenario.

While the adjustment option may not be sufficiently targeted and the refocus option too risky, the integration option appears to strike the right balance in progressively steering the CAP towards the EU objectives, and this balance will also need to be found in the implementation of the different elements. The integration scenario received more comments than the other two in the consultation process. This was also the most appreciated option, although several stakeholders pointed towards opportunities coming from combining elements from more than one scenario.

7. MONITORING AND EVALUATION

Irrespective of the option to be chosen, it will be important to work on the monitoring and evaluation framework to reflect the changes in the policy, to improve its effectiveness in measuring policy performance and to align with similar work under Europe 2020.

Such work should build on the considerable experience accumulated to date. At present, DG AGRI monitors developments in agricultural markets and rural areas and the use made of CAP funding as reported by Member States. In addition:

- For Pillar I, evaluations are conducted according to a multi-annual evaluation plan, which includes evaluations addressing specific aspects of the policy and markets as well as increasingly broader evaluations, such as the evaluation of market effects of partial decoupling (completed in 2010) and the evaluation of income effects of direct support (to be completed in 2011). An evaluation of the structural effects of direct support will be launched this year.
- For Pillar II, a Common Monitoring and Evaluation Framework (CMEF) was introduced in the current programming period that includes common indicators. Programs are subject to ex ante, mid term and ex post evaluations, and capacity building is supported including the European Evaluation Network.

Finally, the coherence of EU agricultural policy with development objectives is assessed in the context of the Policy Coherence for Development process with biennial reports presented by the Commission.

In the future, it will be important to reinforce monitoring and evaluation for the CAP, including new elements of the design of the policy introduced in Pillar I, such as greening. The future monitoring and evaluation system for rural development should also better reflect the reinforced strategic approach with common indicators based on objectives and priorities and facilitate the use of evaluation as a management tool throughout the programming period (see Annex (4)).

The EU intention of climate mainstreaming, i.e. increasing the proportion of climate related expenditure across the EU budget to at least 20%, (for the CAP this relates particularly to the Pillar I "greening components", cross compliance and Pillar II measures) should be accompanied by a clear cross-cutting obligation to identify where programmes promote climate action or energy efficiency so that the EU is able to set out clearly how much of its spending relates to this goal.

In addition, monitoring and evaluation for both pillars should be brought together into a common framework to measure the performance of the CAP as a whole within Europe 2020. To this end, a process is under way for the development of a common set of indicators linked to the policy objectives, which would consist of:

- impact indicators linked to general objectives;
- result indicators linked to specific objectives;
- output indicators linked to expenditure under different instruments.

A possible structure for impact indicators for the CAP under the integration scenario could be:

Europe 2020: SMART – SUSTAINABLE (resource Efficiency) – INCLUSIVE			
CAP: Maintain sustainable agriculture throughout the EU			
General objectives	Viable food production	Sustainable management of natural resources and climate action	Balanced territorial development
Impact indicators	Agricultural income 1/ development 2/ compared to rest of the	Greenhouse gas emissions (including carbon sequestration)	Employment in rural areas

	economy Agricultural productivity 1/development 2/ compared to rest of the world Price stability (agri and food) Terms of trade Growth in food sector Trade balance; share of high value added products in exports	Soil organic matter and erosion Biodiversity 1/ farmland birds index 2/ HNV farmland areas Water quantity and quality	Poverty in rural areas GDP per capita in rural areas (compared to rest of the economy)
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As regards targets, it would not be meaningful to set targets for impact indicators; this is because the policy can only give incentives steering in a certain direction, while the broad economic, environmental and social outcomes measured by such indicators would ultimately also depend on a range of external factors.

As regards result and output indicators, these could be framed in relation to the specific objectives / focus areas of the different instruments, for example:

Instrument	Direct payments	Rural development (incl. EIP)	Market measures
Focus areas	1. income support 2. compensation for production difficulties 3. environment and climate 4. safety, health, animal welfare	5. knowledge transfer 6. competitiveness of agriculture and farm viability 7. food supply chain organization and risk management 8. ecosystems 9. resource efficiency and transition to low carbon economy 10. employment potential and development of rural areas	11. price and market stability 12. cooperation between producers 13. agri part in the food supply chain

The process is being kicked off by a conference aimed at building consensus among stakeholders on monitoring and evaluation for the future policy planned for September 2011, to be followed by further technical meetings.

In addition, to address data gaps relating to indicators at farm level, for instance on sustainability, a pilot project is envisaged that would create a process which would allow better monitoring and evaluation of implemented reforms. The aim would be to make operational across a sample of farms, representative in terms of economic activity and land use, a set of indicators at farm level, for instance on production methods, soil and water use. The exercise would make the best use of existing indicators and ongoing initiatives, such as the Agri-Environment Indicators (joint work of AGRI, Eurostat, DG ENV, JRC and the European Environmental Agency), and in the framework of the CMEF and the FADN, as well as entail new research activity.

Moreover, in collaboration with Eurostat, a particular attention will to be drawn to the identification of administrative data and other information sources maintained under EU legislation, and assessment of their suitability for the production of statistics in order to establish agreements for their stability, accessibility and eventual adaptation to better fit statistical requirements.

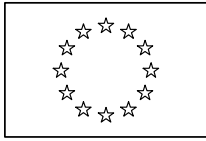
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- (1) Situation and Prospects for EU Agriculture and Rural Areas
- (2) Greening the CAP
- (3) Direct payments
- (4) Rural Development
- (5) Market Measures
- (6) Risk Management
- (7) Research and Innovation
- (8) Simplification
- (9) Report on the Public Consultation
- (10) Impact of Scenarios on the Distribution of Direct Payments and Farm Income
- (11) Methodology; evaluations and research projects relating to CAP
- (12) Developing countries

9. THEMATIC GROUPS OF THE IMPACT ASSESSMENT STEERING GROUP

- (1) The benefits for biodiversity and climate change of protecting permanent grassland.
- (2) Climate-related priorities (mitigation and adaptation) linked to agriculture in EU-27 - How could different CAP instruments in post-2013 address them and what is the cost-effectiveness of such measures?
- (3) Relative merits and budgetary costs of paying for certain basic environmental and climate mitigation measures (e.g. through agri-environment) versus having them as requirements in the environmental baseline (cross compliance).
- (4) Consistency and trade-offs between the agricultural sector's contribution to the sustainable management of natural resources, to climate change mitigation and adaptation efforts, and to bioenergy production objectives.
- (5) Rural-urban relationships, drivers and conditions of a better attractiveness of rural territories.
- (6) Capacity and limits of mechanisms to ensure fair distribution of income across the value chain.
- (7) Standards and competitiveness.
- (8) Assessing the impacts of EU rules in the area of animal health and welfare, plant health, consumer choice, food and feed safety and public health on agriculture and the food sector⁹⁷.

⁹⁷ See http://ec.europa.eu/food/cap_toward_2020/index_en.htm



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ANNEX 1

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Annex 1: Situation and prospects for EU agriculture and rural areas

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List of acronyms and abbreviations

AWU	Annual working units
CAP	Common Agricultural Policy
cwe	Carcass weight equivalent
DG AGRI	Directorate-General for Agriculture and Rural Development
EEA	European Environmental Agency
ESU	European Size Unit
EU	European Union
EU-27	European Union after the enlargement on January, 1 st 2007
EU-25	European Union after the enlargement on May, 1 st 2004
EU-10	Member States that joined the European Union on May, 1 st 2004
EU-2	Bulgaria and Romania
EU-12	All Member States that have joined the EU since May, 1 st 2004
EU-15	Member States of the European Union before May, 1 st 2004
Eurostat	Statistical Office of the European Communities
FADN	Farm Accountancy Data Network
FNVA	Farm Net Value Added
FSS	Farm Structure Survey
GDP	Gross Domestic Product
GVA	Gross Value Added
ha	Hectare
IR	Intermediate region
kg	Kilogram
mio	Million
NACE	Statistical Classification of Economic Activities in the European Community
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
PR	Predominantly rural region
SME	Small and medium sized enterprises
SMP	Skimmed Milk Powder
t	Metric tonne
UAA	Utilised Agricultural Area
US	United States of America
USD	US Dollar

1. OVERVIEW OF THE COMMON AGRICULTURAL POLICY (CAP)

The CAP has undergone fundamental reforms over time to respond to changing economic conditions as well as to evolving societal expectations and demands. Policy drivers and challenges of today are not only related to agriculture *per se*, but also extend to the wider institutional and economic setting within which the policy evolves.

EU agriculture is facing an ever wider range of challenges that the CAP has to address, including:

- Increased globalisation with greater integration of national economies into the world economy and thus greater inter-dependencies and more competitive pressure on agriculture. The impact of the economic crisis on agriculture is a notable example.
- Increased price volatility for agricultural products, which is strongly linked to developments in other commodity and energy markets.
- Increasing environmental pressures on agriculture and rural areas, in particular relating to the effects of climate change, water availability and quality, and the need to halt biodiversity loss.
- Food security issues. A growing world population and changing consumption patterns put a strain on global resources to supply adequate amounts of food. Recent developments have raised concerns related to food security, particularly concerning the impact of climate change on supply variation, and thereby on the availability of food.

1.1. Historical development of the CAP

The CAP has its roots in Western Europe of the 1950s, where societies had suffered from years of war, and where agriculture had been crippled and food supplies could not be guaranteed. The CAP aimed at improving productivity in the food chain, ensuring a fair standard of living for the agricultural community, stabilising markets and ensuring the availability of food supplies to EU consumers at reasonable prices. Incentives to produce were provided through a system of high support prices to farmers, combined with border protection and export support. Financial assistance was also granted for the restructuring of farming, for example by aiding farm investment, aiming to ensure that farms developed in size and in management and technological skills so that they could adapt to the economic and social climate of the day.

Although the CAP was very successful in moving the EU towards self-sufficiency, by the 1980s the EU had to contend with almost permanent surpluses of the major farm commodities, some of which were exported (with the help of subsidies), others of which had to be stored or disposed of within the EU. These measures had a high budgetary cost, distorted some world markets, did not always serve the best interests of farmers and became unpopular with consumers and taxpayers. At the same time society became increasingly concerned about the environmental sustainability of agriculture.

This led to a fundamental reform process of the CAP which started in 1992 and was later deepened and extended in 1999 with Agenda 2000, which started the shift from product support (through prices) to producer support (through income support). In substance this reform process was the starting point for the reduction in support prices and the

introduction of direct payments for a few key agricultural sectors. It also introduced a comprehensive rural development policy as a second pillar of the CAP which encouraged many rural initiatives while also helping farmers to diversify, to improve their product marketing and to otherwise restructure their businesses.

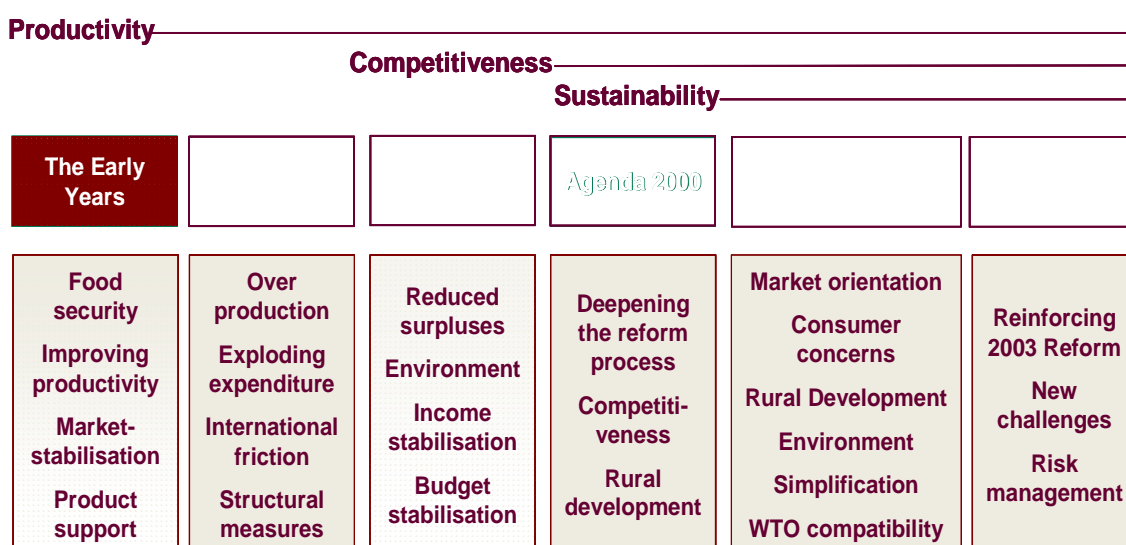
Agenda 2000 explicitly established economic, social, and environmental goals within a reformulated set of objectives for the CAP consistent with the requirements of the Amsterdam Treaty. This had the aim of giving concrete form to a European Model of Agriculture and preserving the diversity of farming systems spread throughout Europe, including in regions with specific problems, in the years ahead. These objectives involved better market orientation and increased competitiveness, food safety and quality, stabilisation of agricultural incomes, integration of environmental concerns into agricultural policy, developing the vitality of rural areas, simplification and strengthened decentralisation.

The regular and consistent adjustment of the CAP to pressures from European society and its evolving economy was again illustrated by the new set of reforms initiated in 2003 and continued in 2008/09 with the Health Check, which aimed at enhancing the competitiveness of the farm sector, promoting a market-oriented, sustainable agriculture and strengthening rural development policy.

Income support has now become almost fully decoupled from production activity, thus allowing EU farmers to make their economic decisions on the basis of market signals. In addition, income support is linked to the respect of standards on environment, food safety and quality and animal welfare that society requests and that EU Member States have implemented through cross-compliance.

The rural development policy for the 2007-2013 programming period focuses on three core objectives, namely improving the competitiveness of the farming and forestry sectors, improving the environment and the countryside through support for land management, and improving the quality of life in rural areas and encouraging the diversification of the rural economy.

Figure 1 Historical development of the CAP



1.2. Effectiveness and efficiency of policy instruments

The most recent wave of policy reform has considerably improved the performance of the EU's agricultural policy. It now provides better value for money by supporting and targeting more accurately what taxpayers, citizens and consumers have demanded:

- More market orientation, and thus increased competitiveness;
- Direct support to producers which helps to keep farming in place and to deliver public goods concerning the environment, food safety, food quality and animal welfare which are not compensated for by market mechanisms;
- More incentives to improve standards and promote sustainability in our rural areas.

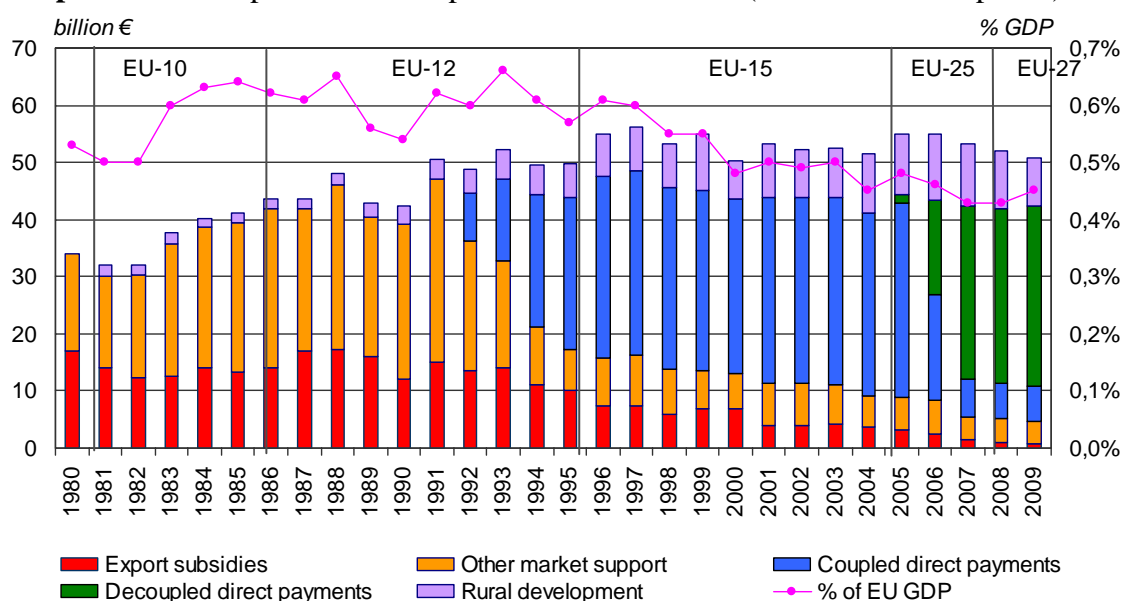
The fundamental shift in emphasis from price support to income support, and from product to producer support (together with a broader range of rural development policy instruments) has allowed market forces to play a greater role in guiding the allocation of resources, resulting in lower market and trade distortions.

The implementation of the single payment scheme constitutes a major improvement in terms of the degree of decoupling. OECD research¹ has shown that such measures have considerably smaller potential production impacts than the price support measures or area payments they have replaced. This has significantly improved the effectiveness and efficiency of the CAP in providing income support.

1.3. Level and composition of budgetary support

These changes in the policy mix together with the introduction of the mechanisms of modulation and financial discipline (in order to keep agricultural expenditure under the financial ceilings set in the financial perspectives for 2007-2013) have significantly changed the level and composition of the financial support to the agricultural sector and rural areas. They have also made the CAP expenditure more stable and predictable.

Graph 1 The path of CAP expenditure 1980 – 2009 (in 2007 constant prices)



Source: European Commission, DG AGRI

¹ OECD (2006), Decoupling: policy implications, Paris

Most of the CAP budget is now spent on decoupled payments and direct aids, while market and export support (that used to constitute the bulk of the CAP expenditure) captured only 9% of the CAP budget in the period 2007-2009. Support under rural development has also steadily increased, representing 19% of the total CAP budget in 2007-2009.

Whereas the CAP used to represent a very significant proportion of EU budget expenditure in its early years of existence, its share of the total EU budget has dramatically fallen in line with the growth of EU activities in other policy areas, stricter budgetary discipline and a series of reforms.

The CAP currently absorbs around 41% of the EU budget (as compared to over 60% in 1989). Whereas 0.5% of the EU GDP was spent in the beginning of the 2000s on supporting EU farmers and rural areas, that figure stands at 0.45% in 2009 and is expected to fall further by 2013.

2. SITUATION FOR EU AGRICULTURE AND RURAL AREAS

2.1. Role of agriculture in the economy and in the environment

2.1.1. Role of agriculture and food industry in the economy

The combined agricultural and food sector accounted for 16.8 mio jobs (7.6% of total employment) and for 3.5% of total gross value added (GVA) in the EU-27 in 2009 (most of the food sector activity depends upon the production of the primary sector).²

There are, however, significant variations across Member States. The agri-food sector is relatively more important in the EU-12, in particular for employment in the primary sector in rural areas.

The primary sector

With 12.1 mio persons employed in 2009 in the EU-27, the primary sector (agriculture, hunting and forestry) represents 5.4% of the total employment for the EU-27, ranging from 1% in the United Kingdom to around 28% in Romania, 20% in Bulgaria and 13% in Poland.³

In terms of value-added, the EU-27 primary sector reached €168 billion in 2009 and accounted for 1.6% of the total GVA, ranging from less than 0.5% in Luxemburg to around 8% in Bulgaria and 7% in Romania (see graph 2).

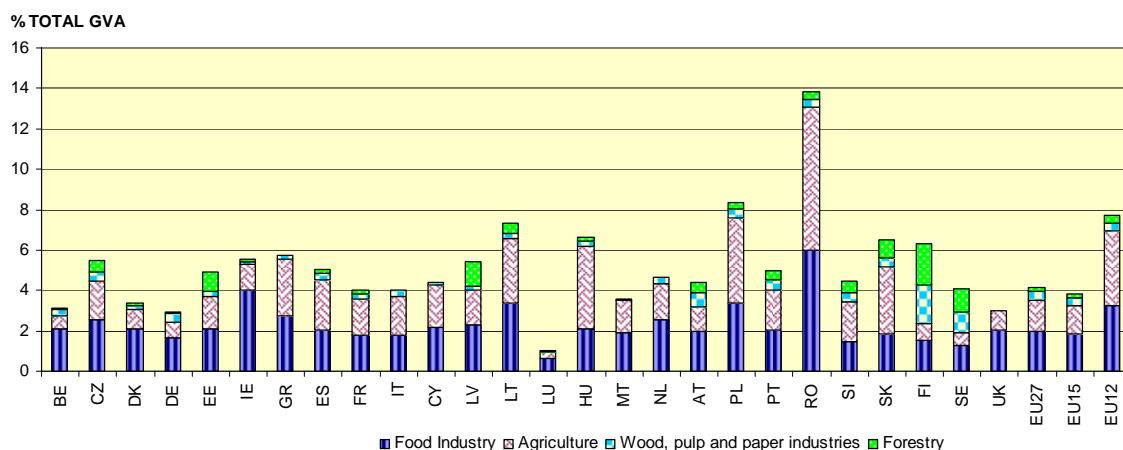
The importance of the primary sector in the economy of the EU-27 is declining, supported by the significant productivity gains of labour and capital and the sharp decline in real prices. Between 2000 and 2009, its share in the overall economy diminished by 1.4 percentage points in terms of employment and by 0.7 percentage points in terms of

² Due to the restricted availability of regional statistical data for the agri-food sector, it is defined here as the combination of the primary sector (branch A: agriculture, hunting, fishing and forestry) and the food industry (branch DA: Manufacture of food products; beverages and tobacco).

³ In the Economic Accounts, the classification of persons by branch is on the basis of their main activity. The data presented therefore cover only persons working mainly in the primary sector, and not all the persons that are directly involved in agriculture or forestry, which are much more numerous.

value-added. In the period 2001-2009, the number of jobs decreased by 2.8 mio (or -2.3% per year), with the highest rates observed in Lithuania (-7% per year), Poland and Romania (both -6%). The value added decreased by €20 billion between 2000 and 2009. The relative volume increase during the period 2000-2009 was +0.7% per year, ranging from -4.6% in Denmark to +12% in Slovakia.

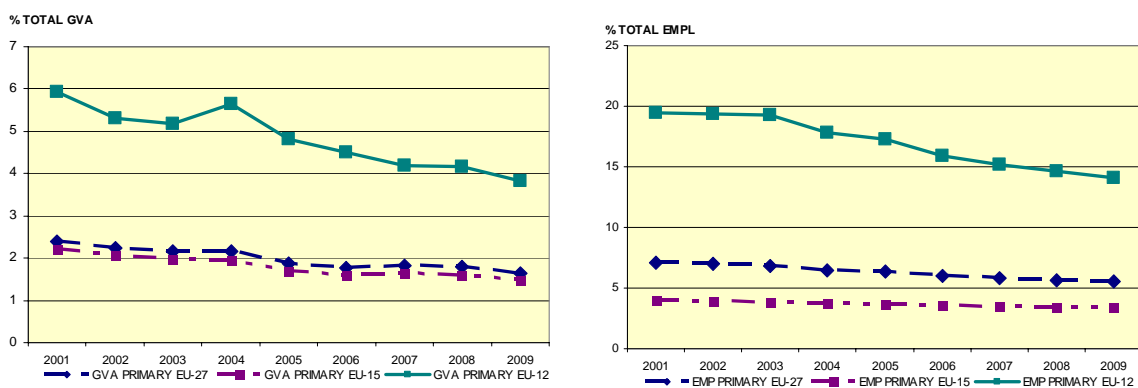
Graph 2 Contribution of the agri-food and forest sectors to the economy: share in total GVA, 2008 (*)



Source: EUROSTAT, Economic Accounts

- (*) - No data available for BG
- The data of IE and ES refer to 2006; AT refer to 2007; UK and PL refer to 2005
- The data of wood, pulp and paper industries and forestry in UK are not available.

Graph 3 Importance of the primary sector in the total GVA and employment 2001-2009.



Source: Eurostat, Economic Accounts

Nonetheless, the primary sector still plays a major role in some regions. For example, in 2008 its contribution to the total GVA was higher than 25% in Kardzhaly and Silistra in Bulgaria and at around 20% in Ileia and Pella in Greece.⁴ Likewise, its share of employment stood above 50% in the regions Ialomita, Vaslui, Calarasi and Teleorman in Romania and the regions of Yambol and Silistra in Bulgaria.

⁴ Regions are defined here at NUTS level 3 and primary sector also covers fishing (Branches A_B of the NACE classification)

At EU-27 level, agriculture and forestry occupy 47% and 30% of the territory, respectively. These levels differ greatly among Member States, forest being the dominant land cover in Nordic (Estonia, Finland, Sweden) and mountainous (Slovenia, Austria) Member States. At EU-27 level, the share of agricultural area in the territory is proportionally lower in rural areas (40%) than in urban areas (53%) due to the importance of forests in many rural regions. Between 1990 and 2000, urbanization has led to the loss of agricultural land especially in the major centres of population. This shift is partly offset by a conversion of forest and semi-natural land to agriculture.

At Member State level, conversion of forest and semi-natural marginal land to agriculture appears to be taking place in Spain and Greece, while there are clear patterns of land abandonment or withdrawal of farming in marginal areas elsewhere in the EU.⁵ Such trends can be observed in many of the mountainous regions of the EU, and in Hungary, Slovakia, Portugal and Italy, as well as in some parts of Germany, where arable land has been transformed to forest through the process of natural regeneration.

Forests play a major role not only for the environment but also for the economy of some Member States and rural areas. With around 129 mio ha, the forest available for wood supply represents 72% of the total forest area for the EU-27 (this share of productive forest is much lower in Mediterranean Member States).

In 2009 forestry and logging represented only 0.2% of the total GVA at EU-27 level, though the contribution of the forest sector as a whole (i.e. including wood, pulp and paper industries) represented 0.6% of total GVA. It can be quite important at Member State level.⁶ This is the case in Finland and Sweden (3.9% and 2.1% of total GVA respectively) and to a lesser extent in Estonia, Austria, Czech Republic and Slovakia (around 1% of total GVA). However, the GVA share of the forest sector as a whole decreased between 2000 and 2009 in most Member States, especially in Sweden and Finland, whereas this ratio remained stable in the Czech Republic, Estonia, Latvia, Lithuania and Romania, following a shift of production and investments from Western to Central and Eastern Europe. The number of employees of the forestry sector decreased over the period 2000-2009 except in Latvia, Sweden and Finland.

Food industry

In 2009 the food industry accounted for 4.8 mio jobs (2.1% of total employment) and 1.9% of total GVA for the EU-27. It is relatively more important in the EU-12 than in the EU-15 and especially in the following Member States: Romania, Ireland, Lithuania, Greece and Bulgaria. Between 2000 and 2009 the food industry has experienced a decrease in employment and an increase in the GVA at EU-27 level.

The EU is the world's largest producer of food and beverages, with a turnover estimated at €65 billion in 2008. The food industry sector remains highly polarised and fragmented in terms of size (SMEs account for 99% of firms, 62.5% of the work force and about 45.5% of total value added).⁷

⁵ This is due in part to the limited area of good agricultural land and the loss of the best areas through urbanisation, and in part to the expansion of more intensive agricultural practices which include the expansion of irrigated crops in the Mediterranean region. European Environment Agency, Land Accounts for Europe 1990-2000.

⁶ The forest sector excludes furniture industry.

⁷ CIAA Annual Report 2009.

In terms of value added, the largest activity is the manufacture of bread, sugar, confectionary and other food products (36% of the total sectoral value added), followed by beverages and meat processing (17.3% and 15.3% respectively) and by dairy products (around 9%).⁸

A number of EU regions are highly specialised in the food industry in terms of employment with at least 5% of total employment: La Rioja and Navarra in Spain, Bretagne and Pays de la Loire in France, Dél-Alföld and Észak-Alföld in Hungary, Açores in Portugal or Wielkopolskie in Poland.

Whereas the employment *on farms* decreased significantly over the last few years, the average annual decrease in the food industry was 0.8% over the period 2000-2009. Employment in the food industry even grew in some Member States (Greece, Spain and Poland) with annual increase over 5% in several regions.⁹

2.1.2. *Role of agriculture and forestry for the environment*

As highlighted above, in 2006 agriculture and forestry represent together 77% of land cover in the EU-27, ranging from 55% in Malta to 93% in Poland.¹⁰ Agriculture and forestry therefore continue to have a significant impact on the environment and to play a major role in maintaining natural resources and cultural landscapes as a precondition for other human activities in rural areas. Different types of agricultural practices and land use have an effect on natural resources, notably biodiversity, water and soil, and climate change.

Biodiversity

The link between certain types of farming and 'natural values' is widely acknowledged and complex at the same time. In some cases, agriculture is associated with valuable habitats with an high level of biodiversity. It is estimated that high nature value farmland covers more than 20% of the agricultural area in most Member States (even more than 30% in some of them).¹¹ More generally, 16% of the utilised agricultural area (UAA) in the EU-27 is located in mountainous areas, where agriculture contributes to maintaining biodiversity.¹² Appropriate methods of production, such as extensive farming, may also support biodiversity. Extensive arable crops and extensive grazing represent on average 15.8% and 22.8% respectively of the total utilized agricultural area in the EU-27.¹³

⁸ For EU-27 in 2006 – Eurostat - European business – facts and figures 2009 edition

⁹ e.g. Sardegna (IT), Dolnoslaskie, Warmisnko-Mazurskie and Lubuskie (PL), Kent (UK), West-Vlaanderen (BE), Brandenburg (DE)

¹⁰ Source: Rural Development in the EU, Statistical and Economic Information Report 2010 (DG Agriculture and Rural Development). Estimation from the CORINE land cover 2006 database (CLC2006). Data for UK and EL come from CLC2000.

¹¹ Source: JRC/EEA 2007. The concept of High Nature Value Farmland is still under development. The current methodology does not seem fully satisfactory in some Member States (e.g. Finland and Slovakia) which therefore often use national definitions. Malta is not included in the calculations

¹² Source: DG AGRI - MS specific communication and CAP-IDIM, 2005.

¹³ Source: FSS, crop production and land use, 2007. Extensive agriculture for arable crops is defined as area under production (except forage crops) when the regional yield is less than 60% of EU27 average. Extensive agriculture for grazing livestock production is considered when the density is less than 1 Livestock Unit per hectare of forage area.

The implementation of Natura 2000¹⁴ represents a significant contribution to the preservation of biodiversity. It is estimated that the designated sites approximately cover 10% of the agricultural area of the EU-27 and more than 15% in six Member States (Bulgaria, Greece, Spain, Portugal, Slovenia, Slovakia).¹⁵ 24% of the total forest area belongs to Natura 2000 sites, this share being higher than 40% in several Member States.

However, a decline in the population of farmland birds, largely attributed to intensive farming, can be observed in many Member States, although the situation seems to go towards a stabilisation at EU level from 1996 onwards..¹⁶

Water Quality

Water quality is influenced by several human activities, yet agriculture plays an important role and can have significant impacts for some of its features. Although the concentration of nitrates in surface water has decreased over the last years in most Member States, significant surpluses of nutrients (+83 kg/ha for Nitrogen and +10 kg/ha for Phosphorus at EU-15 level and higher for example in Belgium, Denmark, Germany, Luxembourg, Netherlands for both Nitrogen and Phosphorus and Italy, Portugal, United Kingdom for Phosphorus)¹⁷ reveal that farming practices still remain too intensive in some parts of the EU. The pressure from agriculture on water use is also critical in some regions as the share of irrigated area is higher than 20% of the agricultural area in several Member States.¹⁸

Forests can contribute to the protection of water: at EU-27 level, 11% of the forests and other wooded land area is managed so as to protect water and soil, this figure reaching 20% or more in four Member States (Belgium, Germany, Poland, Romania).¹⁹ However, this management does not cover all the EU-27.

Soil erosion

Soil erosion is increasing in Europe. As precise estimates are not available at EU-level, owing to the lack of comparable data, it is difficult to assess the total area of the EU affected by erosion. The EEA estimated in 1995 that 115 million ha, or 12% of Europe's total land area, were affected by water erosion and that 42 million ha were affected by wind erosion, of which 2% were severely affected.²⁰

¹⁴ http://ec.europa.eu/environment/nature/natura2000/index_en.htm

¹⁵ Source: Natura 2000 spatial database (mid 2010) and Corine Land Cover 2006 (EEA)

¹⁶ Attention should be given to long-term trends as short-term variations are mainly influenced by weather conditions. However interpretation of the results should be given with caution since some changes in the methodology during the nineties can limit the validity of long-term trends. Pan-European Common Bird Monitoring Scheme, The state of Europe's common birds 2008, p. 6.

¹⁷ These figures refer to average 2002-2004. Source: OECD, Environmental indicators for agriculture, Vol.4, 2006.

¹⁸ Source: Eurostat, FSS 2007.

¹⁹ Source: Ministerial Conference on the Protection of Forests in Europe (MCPFE), 2007. The figures refer to 2005.

²⁰ As quoted in the Commission Communication (COM(2006) 231). Source: EEA, Chapter 7: Soil in Europe's Environment: the Dobbris Assessment, 1995.

It is also estimated that water erosion in the Mediterranean region, which is particularly prone to this phenomenon, could result in the loss of 20-40 t/ha of soil after a single cloudburst, and in extreme cases the soil loss could be over 100 t/ha.²¹

Moreover, according to the PESERA model which provides the only Europe-wide estimates of water erosion that are based on a harmonised approach and standard data sets, soil loss by running water can amount to more than 2 tons/ha/year in some Member States, especially in the Mediterranean countries.²²

Organic Agriculture

An increasing part of agricultural area is now devoted to organic production, with an estimated 7.6 mio ha in 2008, i.e. 4.3% of UAA in the EU-27. In the period 2000-2008, the average annual rate of growth was 6.7% in the EU-15 and 20.0% in the EU-12. Even if in some Member States the agricultural area under organic farming is still much lower than the EU average, it is close to or higher than 9% of the total UAA in the following five Member States: Austria (15.5%), Sweden (10.9%), Estonia (10.9%), the Czech Republic (9.0%) and Latvia (8.9%).

In 2008, it is estimated that there were about 197 000 holdings involved in organic agriculture in the EU-27, i.e. 1.4% of all EU-27 holdings (0.6% in the EU-12 and 2.9% in the EU-15).

Consumer demand for organic food grows at a fast pace in the largest EU markets, yet the organic sector did not represent more than 2% of total food expenses in the EU-15 in 2007. In the EU-12 organic food consumption stands at lower levels.²³

Climate change

With 471 mio tonnes of CO₂ equivalents, agriculture produced 9.6% of the EU emissions of greenhouse gases in 2008. However, with an average annual decrease of 0.7% between 2000 and 2008 - linked to improved production methods and diminishing cattle numbers - greenhouse gas emissions from agriculture have been decreasing at a quicker pace than those from other sectors of the economy.²⁴ The production of renewable resources from agriculture amounted to 11.8 mio t of oil equivalent in 2008 and the area devoted to this purpose in 2008 is estimated at around 5.5 mio ha.²⁵ The production of renewable resources from forestry reached 69 mio t of oil equivalent at EU-27 level in 2008 and grew at an average annual rate of 3.7% over the period 2000-2008.²⁶

²¹ Source: Joint Research Centre, European Commission, Project on Sustainable Agriculture and Soil Conservation (SoCo), Final Report "Addressing soil degradation in EU agriculture: relevant processes, practices and policies", 2009.

²² Joint Research Centre, PESERA project, 2004.

²³ Source: An analysis of the EU organic sector, DG AGRI. June 2010

²⁴ Source: Eurostat.

²⁵ Source: Rural Development in the EU, Statistical and Economic Information Report 2010 (DG Agriculture and Rural Development). EurObserver, 2008 for production of renewable energy and DG AGRI, 2007 for the area devoted to renewable energy.

²⁶ Source: Eurostat, Energy Statistics.

2.2. Structural changes

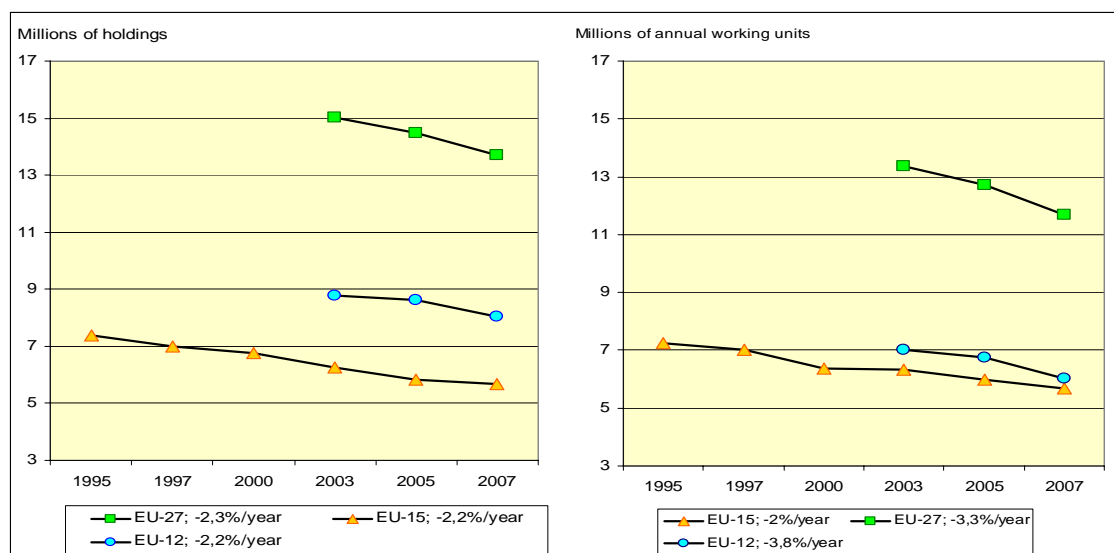
The structure of the agricultural sector shows a wide diversity across Member States/regions and sub-sectors, owing to the national specificities regarding agricultural history, climatic and natural conditions and the institutional framework (notably for the land, labour and capital markets). This diversity, which is reflected in the size, type and socio-economic performance of agricultural holdings, has been further reinforced by the successive enlargements of the EU. Bringing together more than 8 mio farmers, the patterns and drivers of structural change in the EU-12 differ in nature and intensity from those of the EU-15.

Productivity gains largely supported by technological progress (e.g. mechanisation, development in crop and animal genetics) as well as the overall economic pressures have driven a considerable structural adjustment over the last decades. Yet, the CAP has certainly contributed to cushion this long-term process, thus allowing the maintenance of structural diversity in the agricultural sector of the EU and the slowdown of labour outflow from the farm sector.

2.2.1. Agricultural holdings and labour force

In 2007 in the EU-27 there were 13.7 million agricultural holdings (5.6 in the EU-15, more than 8 in the EU-12). The number of agricultural holdings is decreasing at an annual rate of 2.2% both in the EU-15 and in the EU-12. Romania (3.9 million holdings), Poland (2.4 mio) and Italy (1.7 mio) are the Member States with the largest numbers of farms, with Romania alone representing 29% of all holdings in the EU-27. Similarly to the number of holdings, the agricultural labour force fell by around 2.0% per year between 1995 and 2007 in the EU-15. It now stands at 11.7 mio AWU for the EU-27, of which less than 1 mio correspond to non-regular workers.

Graph 4 Evolution of the number of agricultural holdings and of the labour force (AWU) in the EU - 1995-2007

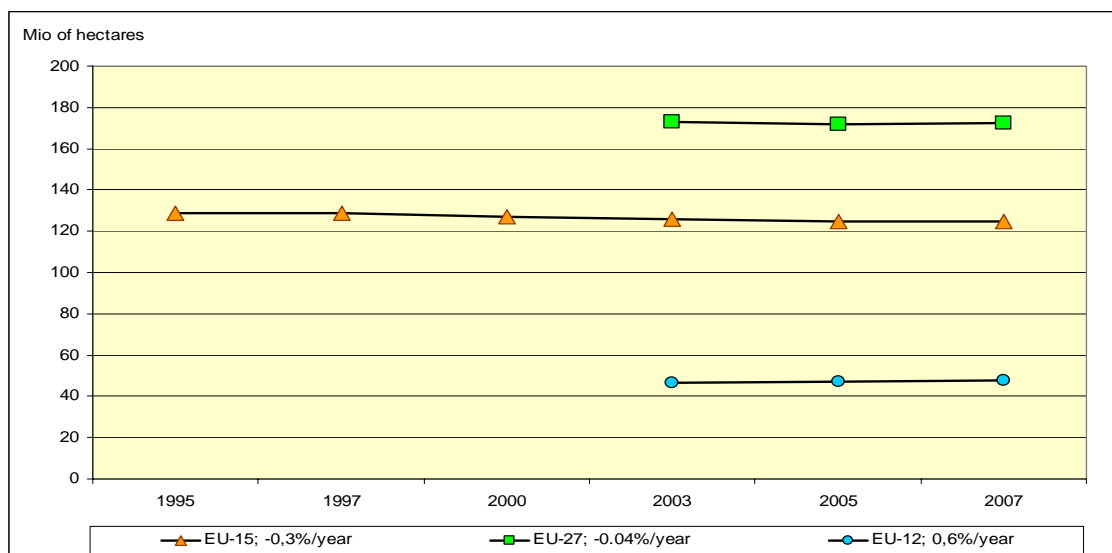


Source: Eurostat, Farm Structure Survey, 1995-2007

2.2.2. Agricultural area

By contrast, the UAA, which amounted to 172 mio ha for the EU-27 in 2007, has remained relatively stable over the last decade, with only a slight decline (-0.3% per year between 1995 and 2007) in the EU-15. However, although the majority of farms are located in the EU-12, more than 70% of the UAA is located in the EU-15.

Graph 5 Evolution of UAA in the EU - 1995-2007



Source: Eurostat, Farm Structure Survey, 1995-2007

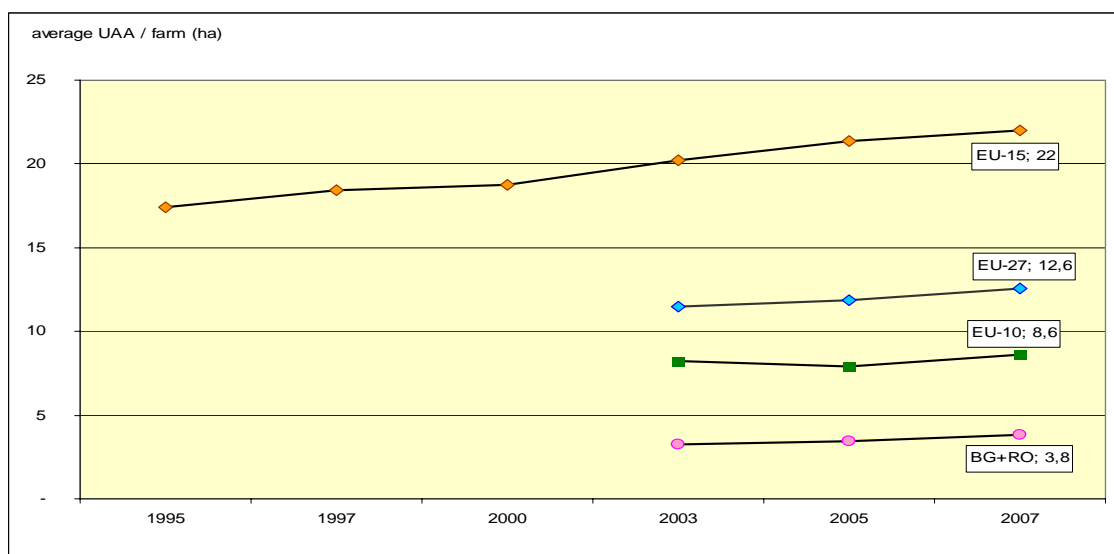
In terms of activities, the area devoted to arable crops and olive plantations increased over the years while permanent grassland and vineyards decreased, but changes in land use composition were globally limited. In 2007, 68% of the agricultural area of the EU-27 was used for arable crops, 25% for permanent grassland and 7% for permanent crops, the share of arable crops being significantly higher in the EU-12 than in the EU-15 (76% and 64% respectively).

Farm types also remained rather stable over the last two decades, with 61% of farms specialised in one sector. The most noticeable change was the very significant increase of farms specialised in olive production, mainly to the detriment of mixed farms. The most important types are farms specialised in field crops (20%), farms specialised in permanent crops (18%) and farms specialised in grazing livestock (16%). Fewer farms are specialised in the production of pigs and poultry (5%) or in horticulture (2%).

2.2.3. Size and distribution of farms

With the restructuring of the sector, the average physical farm size increased from 17 ha in 1995 to 22 ha in 2007 for the EU-15. However, due to the high share of small farms in most EU-12 Member States, the average farm size only reaches 6.0 ha for the EU-12 and 12.6 ha for the EU-27 in 2007.

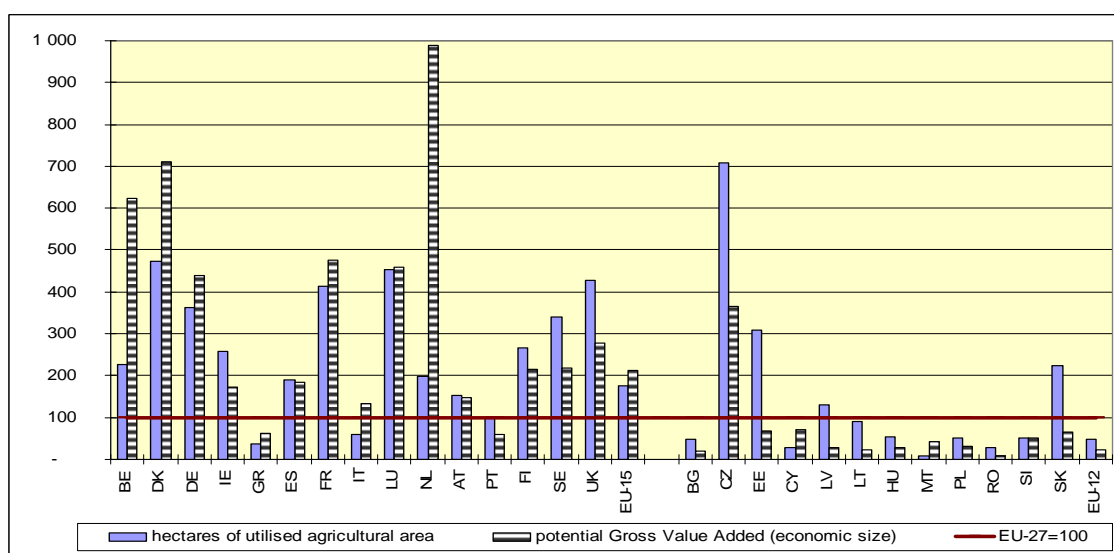
Graph 6 Development of the average physical farm size in the EU - 1995-2007



Source: Eurostat, Farm Structure Survey, 1995-2007

The average farm size varies from more than 50 ha in five Member States (Czech Republic, Denmark, Luxembourg, the United Kingdom and France) to less than 5 ha in four others (Malta, Romania, Cyprus and Greece). Differences are even larger when considering the economic size of the farms (potential GVA), which takes into account the potential economic productivity of the area used.

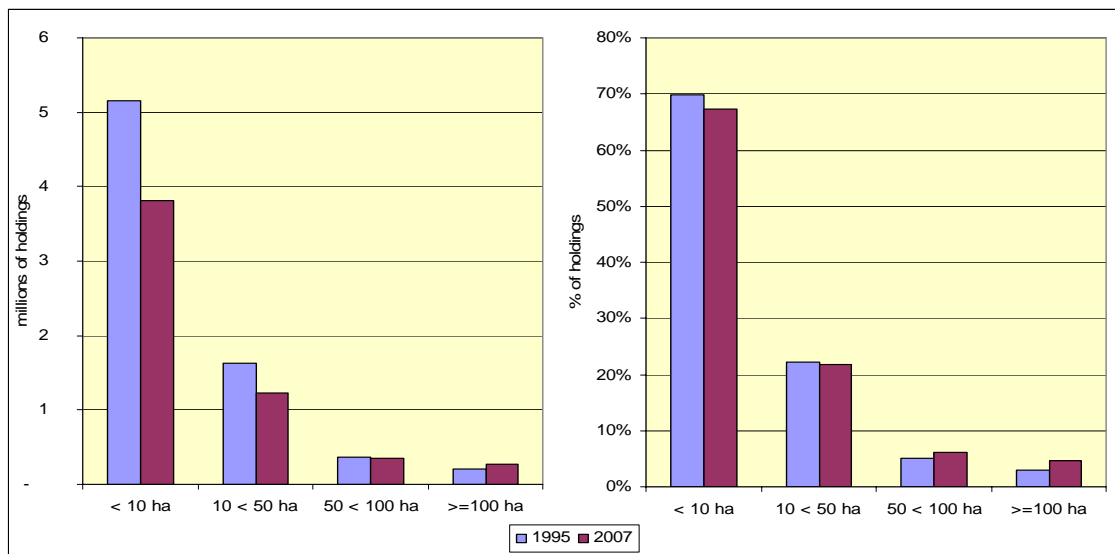
Graph 7 Average physical and economic farm size in Member States - 2007 (EU-27 = 100)



Source: Eurostat, Farm Structure Survey, 2007

Despite the increase in average physical farm size, structural adjustment of the sector occurs at a slow pace. As an example, the number of farms with less than 10 ha decreased by 1.3 mio between 1995 and 2007 in the EU-15, but their share in the total of holdings only decreased from 70% to 67%.

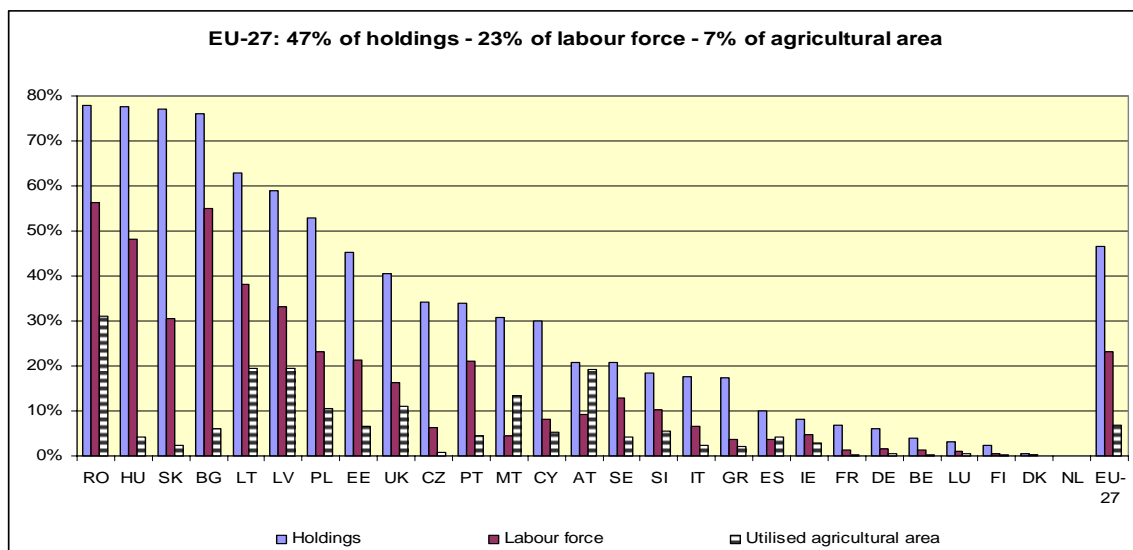
Graph 8 Distribution of holdings by size class in hectares of UAA in the EU-15 – 1995-2007



Source: Eurostat, Farm Structure Survey, 1995 and 2007

In 2007, in 17 Member States 50% of the holdings had less than 10 ha and there were still 6.4 mio farms in the EU with a (potential) GVA of less than €1 200 per year, employing 23% of the total labour force but covering only 7% of the UAA.

Graph 9 Importance of holdings of very small size (less than 1 European Size Unit = €1 200 of potential GVA) in the EU – 2007²⁷

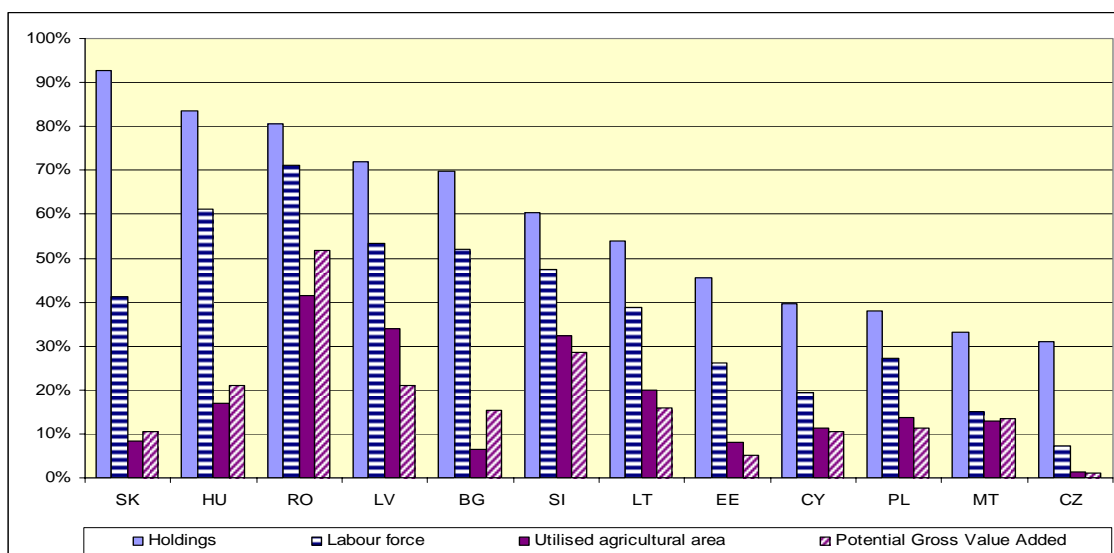


Source: Eurostat, Farm Structure Survey, 2007

²⁷ The economic size of farms is expressed in terms of European Size Units (ESU). The value of one ESU is defined as a fixed number of EUR of Standard Gross Margin. Currently, 1 ESU corresponds to 1200 €farm standard gross margin.

Semi-subsistence farms (where the farm household consumes more than half of the farm production) still exist all over the EU (45% of the EU-27 holdings) but represent a critical challenge in several EU-12 Member States: in nearly half of them they represent at least 70% of the holdings, half of the total agricultural labour force and 20% of the UAA and of the potential GVA.

Graph 10 Importance of semi-subsistence farms (with households consuming more than half of their production) in the EU-12 - 2007

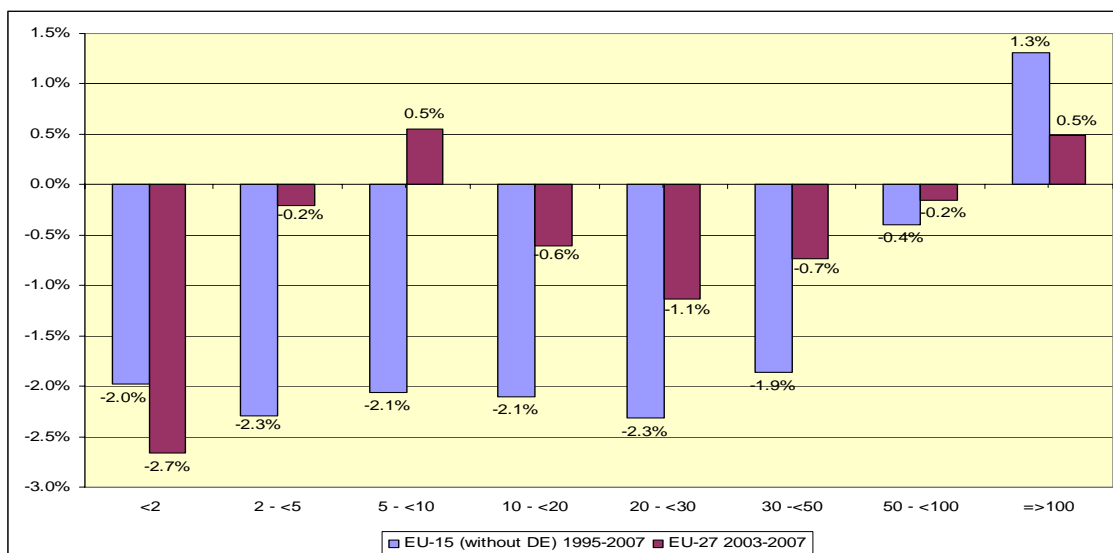


Source: Eurostat, Farm Structure Survey, 2007

2.2.4. Distribution of production factors

The distribution of land and labour input across farms reflects the size structure: in 2007 around 77% of the agricultural area was concentrated in 11% of farms with a size of 20 ha or more. Furthermore, the structural adjustment of the area and the labour force occurs at a very slow pace as the area farmed by the largest farms (with 100 ha or more) increased only by 1.3% per year in the EU-15 between 1995 and 2007.

Graph 11 Annual rate of variation of the UAA by category of area farm size in the EU – 1995-2007

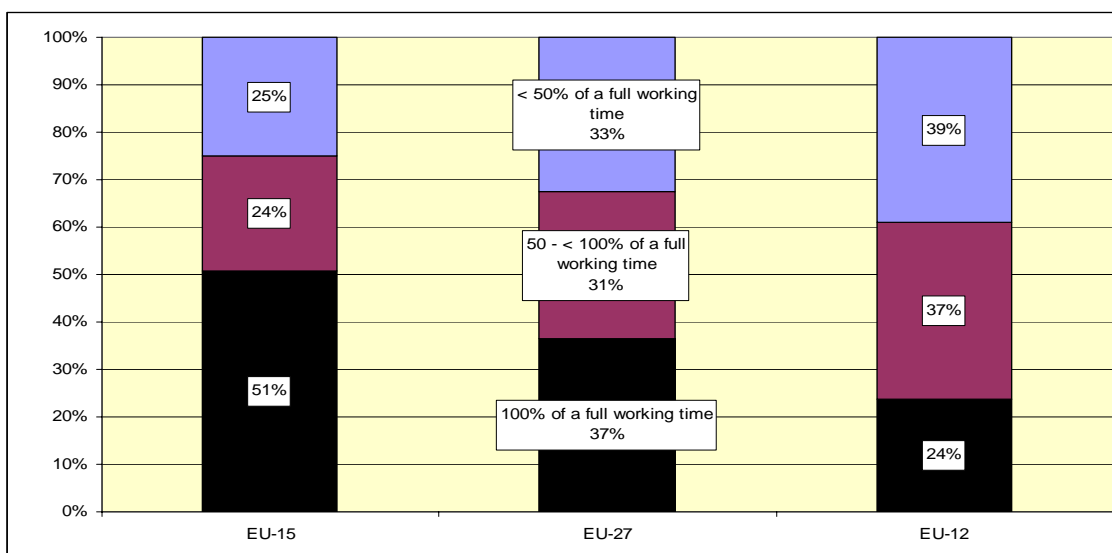


Source: Eurostat, Farm Structure Survey, 1995-2007

2.2.5. Labour force

With more than 80% of the labour force coming from the farm holders' family, EU agriculture is still largely based on family farms. Workers employed regularly make up 12% of the labour force. However, a very large share of the workers is not occupied full-time in agriculture: around 33% of the family and regular workers in the EU-27 are working less than half time in agriculture and only 37% of them have full time jobs.

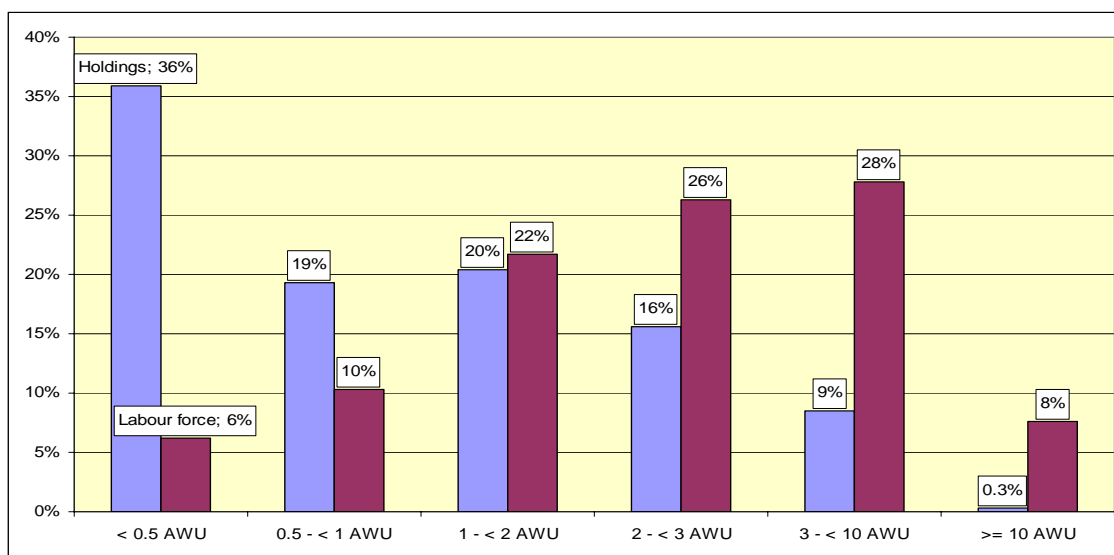
Graph 12 Distribution of family and non-family labour force working regularly in agriculture according to the working time in agriculture in the EU - 2007



Source: Eurostat, Farm Structure Survey, 2007

The importance of part-time farming is also reflected in the labour force used per holding: 55% of EU farms require less than one annual work unit.

Graph 13 Distribution of holdings and of labour force by class of labour force per holding in the EU – 2007

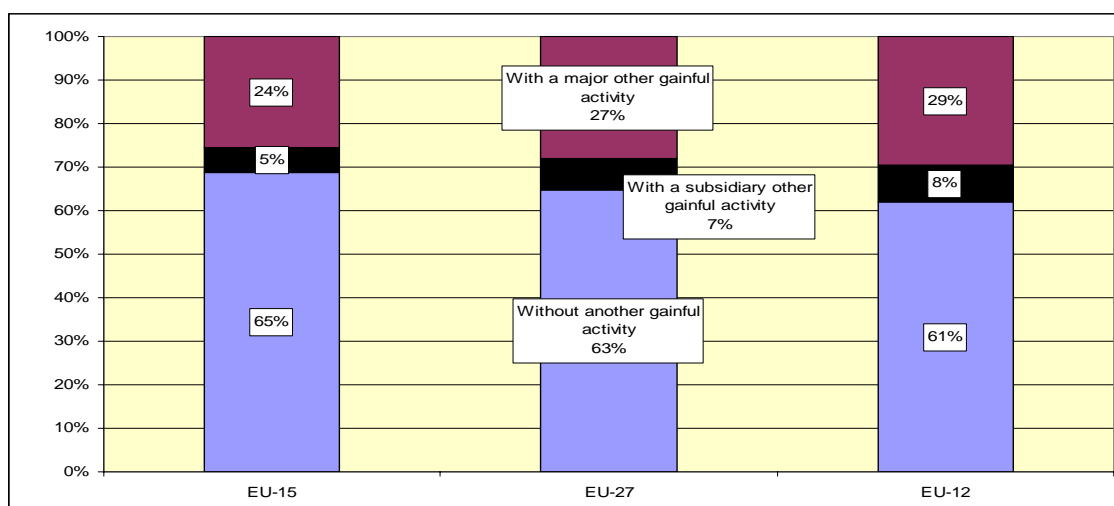


Source: Eurostat, Farm Structure Survey, 2007

On the other hand, due to the increase in labour productivity, the average labour force requirement per farm remains rather stable at around 1 AWU despite the increase of the average farm size, and more labour intensive activities such as horticulture and dairying which exhibited increasing employment per farm in the last years.

In 2007, only 15% of the managers of family farms of the EU-27 had a working time in agriculture equivalent to a full-time job - this proportion being higher when looking at the EU-15 (25%) and lower when looking at the EU-12 (9%) - although 63 % of family farm managers continue to have no other gainful activity than agriculture.

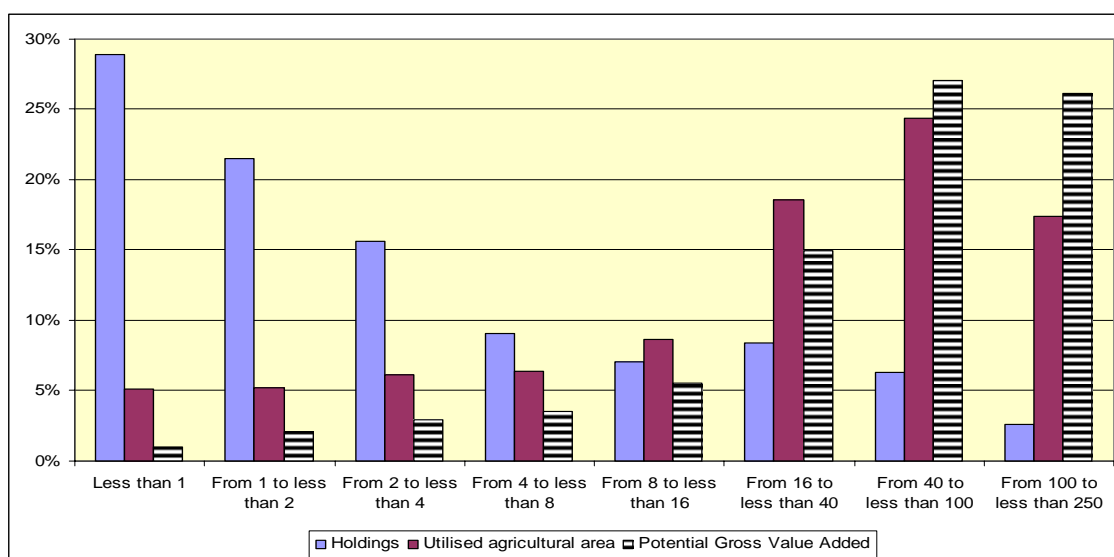
Graph 14 Distribution of managers of family farms according to the existence of gainful activities other than agriculture in the EU - 2007



Source: Eurostat, Farm Structure Survey, 2007

The proportion of managers of family farms having another gainful activity has increased only slightly over time. This may be the result of the increasing size of farms, as the scope for other gainful activities becomes limited when the size of the farm increases.

Graph 15 Distribution of holdings with another gainful activity than agriculture by economic farm size (ESU) in the EU-27 – 2007



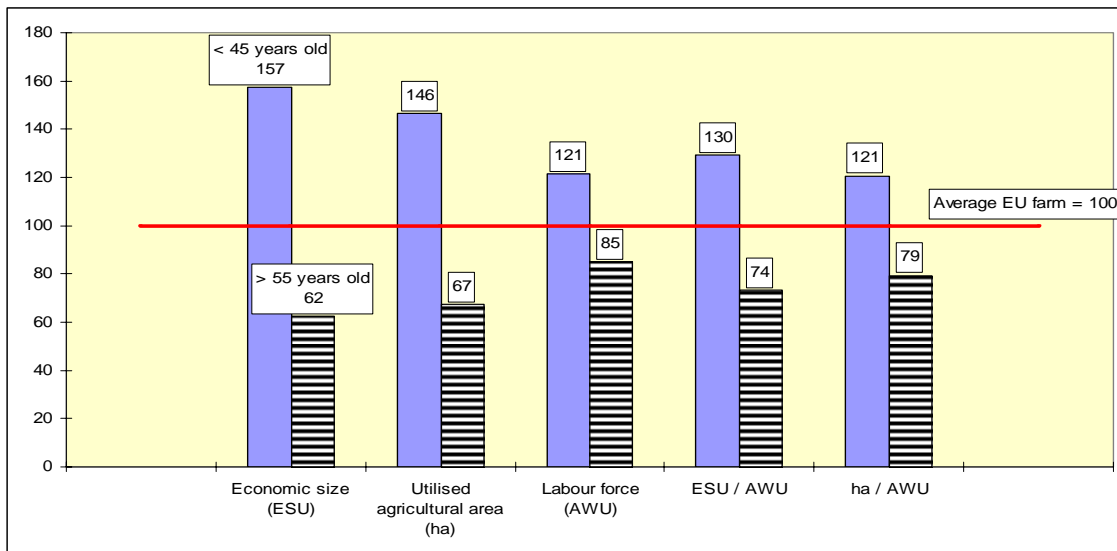
Source: Eurostat, Farm Structure Survey, 2007

Most of the production of family farms is therefore produced by managers with no other gainful activity than agriculture. Those family farm managers who do have another gainful activity tend to farm smaller farms with lower economic potential.

The presence of other gainful activities on family farms is more frequent when looking not only at the farmer but also at his/her spouse (52% of whom had other gainful activities in 2007 in the EU-27) and has grown from 32% to 49% between 1995 and 2007 in the EU-15. This increase reflects the diversification of income sources on European farms and probably also the overall trend observed in the rest of society towards a greater participation of women in the labour market.

The agricultural labour force is relatively aged, with more than 55% of all managers older than 55 years. This is particularly pronounced in Bulgaria and Romania but also in the old Member States where the number of "young" managers has diminished over time. However, younger managers tend to perform better than the EU average, with 46% more area and 57% more economic potential for 21% more labour force.

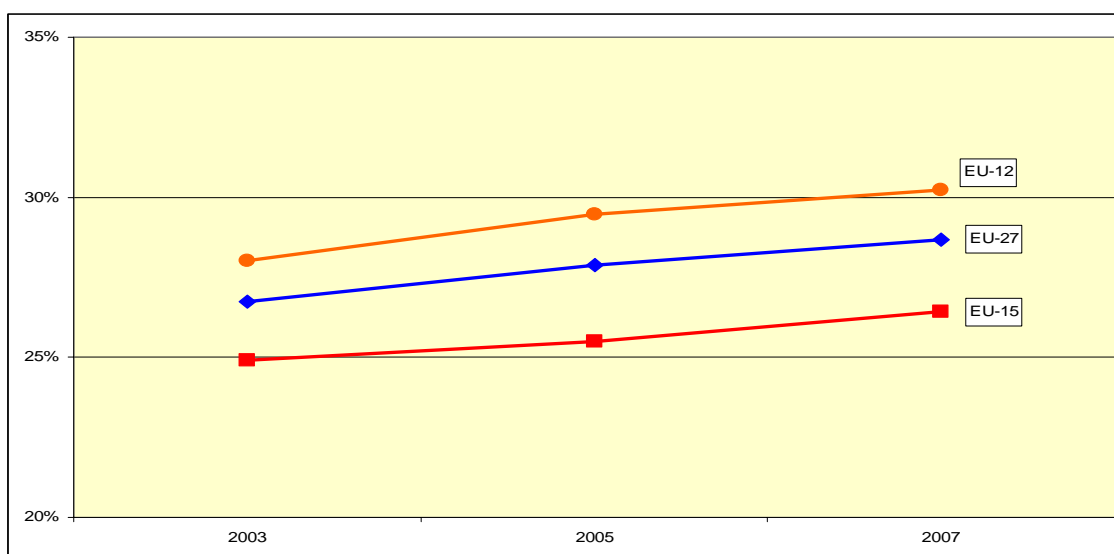
Graph 16 Performance of managers of less than 45 years old and of managers of more than 55 years old in the EU-27 - 2007



Source: Eurostat, Farm Structure Survey, 2007

Women represent 42% of all agricultural workers, their percentage being higher in the EU-12 (47%) compared to the EU-15 (38%). The share of female farm holders increased from 26.8% to 28.7% of total farm holders in the EU-27 between 2003 and 2007 (also this percentage is higher in the EU-12 compared to the EU-15).

Graph 17 Evolution of female farm holders (as % of total farm holders) in the EU - 2003-2007

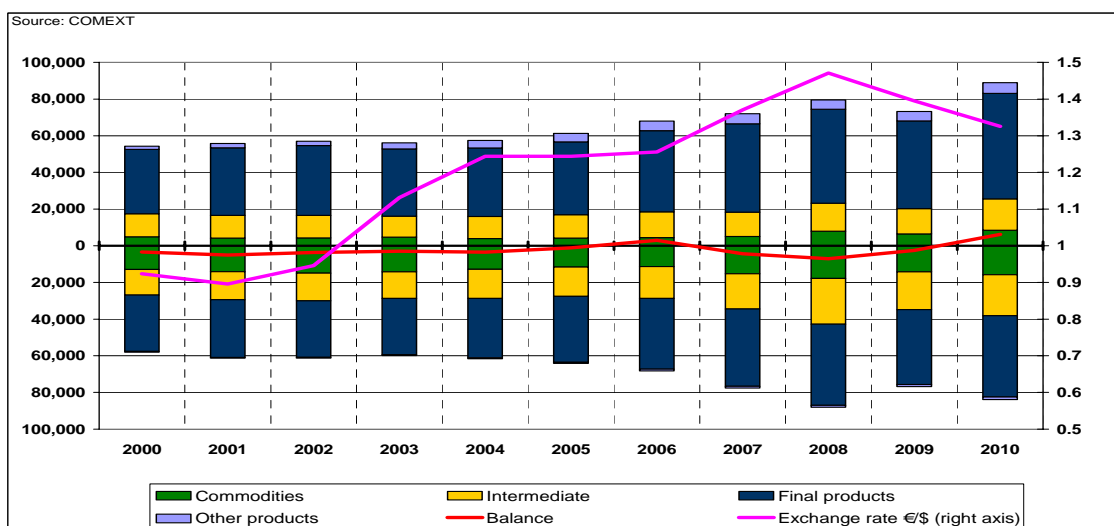


Source: Eurostat, Farm Structure Survey, 2003-2007

2.3. Agriculture and food trade

The EU holds a significant weight in international agriculture and food trade²⁸. With average annual imports of €3 billion in 2008-2010, the EU is by far the largest importer, although its share in world imports has decreased from 21% in 2007 to 19% in 2009. Exports have reached an annual average of about €2 billion in 2008-2010, placing the EU at a par with the USA with a share of around 18% of world exports.

Graph 18 Structure of EU agriculture and food trade



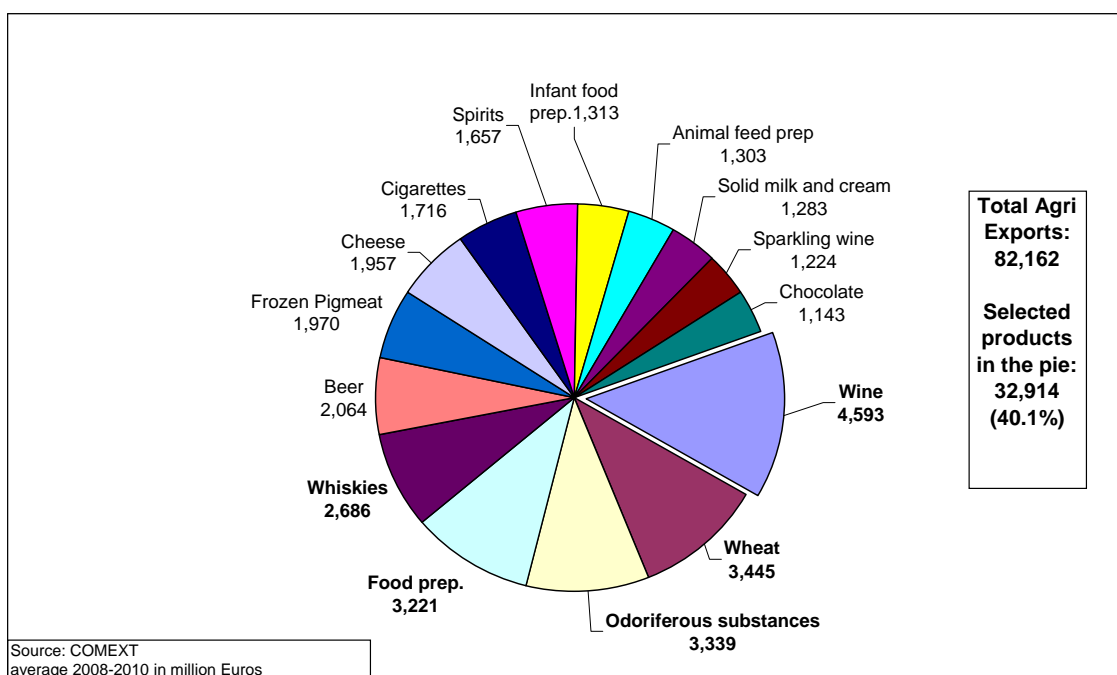
²⁸ Agriculture and food trade covers chapters 1-24 except 03 (fish and fish products) of the combined nomenclature. It is also included in a number of headings in chapters 33, 35, 38, 41, 43 and 51-53.

EU agri-food trade has experienced a sustained growth in the last ten years, with average annual growth rates at 3.7% for imports and 5.1% for exports. Growth was particularly dynamic in the period 2005-2008.

In 2009 trade was profoundly affected by the economic crisis. EU imports contracted faster than exports so that the EU trade deficit decreased substantially from a record €7 billion in 2008 to just €2.5 billion in 2009.

The EU's trade balance continued to improve in 2010 to the extent that it switched from being a net importer with a trade deficit of €2.5 billion in 2009 to a net exporter, for the first time since 2006, with an agricultural trade surplus of over €6 billion. The surplus is largely due to growth in the value of exports after the contraction of trade in 2009 linked to economic crisis and the drop in commodity prices.

Graph 19 EU-27 main agriculture and food exports, average 2008-2010 (€billion)



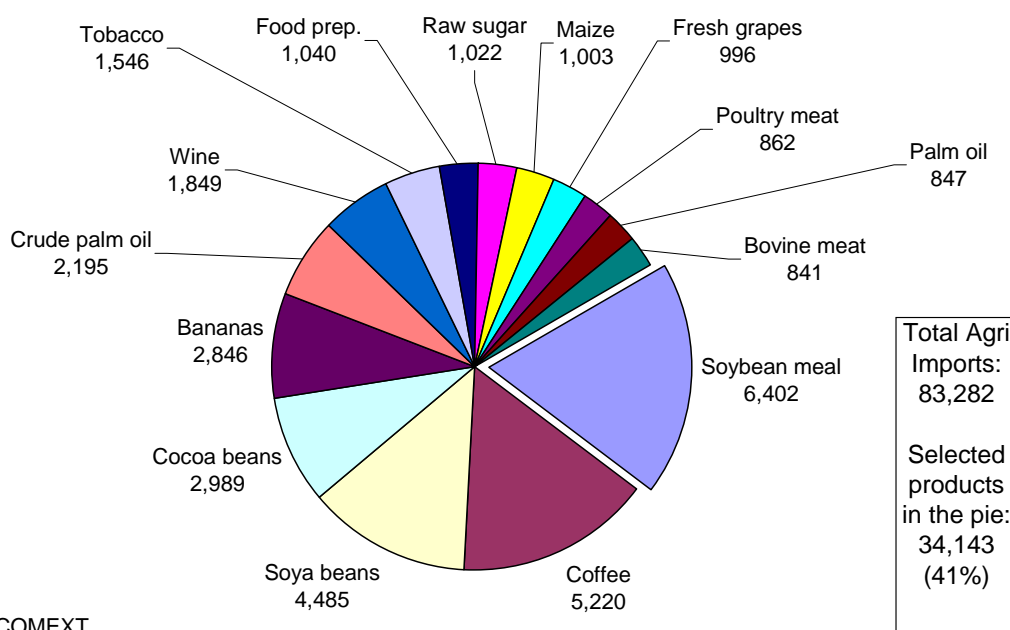
Final products dominate EU agri-food trade. They accounted for 63% of the value of exports in 2008-2010 and 52% of the value of imports in the same period. While the EU overall agri-food trade balance has been constantly negative in the last decade, with the notable exception of 2006 and 2010, in the case of final products it was constantly positive and the surplus reached the average of €9.1 billion in 2008-2010. Intermediary products and commodities represented respectively 20% and 9% of the total value of EU exports. For imports these categories hold higher shares with 27% and 19% respectively.

Graph 19 shows that most of top 15 exports were final goods in 2008-2010. Wine (€4.6 billion) is still the EU's highest value export for 2008-2010, followed by wheat (€3.4 billion), odoriferous substances (€3.3 billion), food preparations (€3.2 billion) and whiskies (€2.7 billion). Combined they account for one fifth of EU exports.

The top 15 import products for 2007-2009 are shown in Graph 20. Soybean meal (€6.4 billion) is the EU's top import, followed by coffee (€5.2 billion). Imports of soya beans are worth €4.5 billion and ranked third, followed by cocoa beans (€3 billion) and bananas

(€2.8 billion). Together, these top five products account for one-fourth of the overall value of EU imports in 2008-2010, the most important ones being shown in graph 20.

Graph 20 EU-27 main agriculture and food imports, average 2008-2010 (€billion)



Source: COMEXT
average 2008-2010 in million Euros

The USA remains a key partner, both on the import and export sides. Despite decreases since 2006, the USA still absorbed 15% of EU exports in 2010. Notwithstanding a steep fall of 21% in 2009, Russia is still the second most important market for the EU with a share of over 10% in 2010. On the import side, Brazil is the most important trade partner with a share of 14% of EU imports in 2010. The EU remains the biggest importer of agricultural products from developing countries, importing €9 billion worth of goods in 2008-2010. This is far ahead of the US, Japan, Canada, Australia and New Zealand put together.

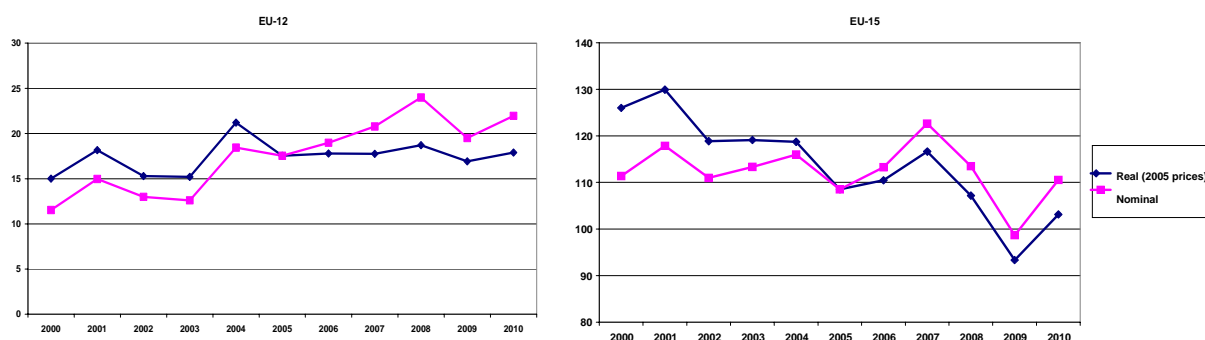
2.4. Income development

The increase in agricultural income recorded in 2010 in the EU-15 does not reverse the long term declining trend in real sector income, which fell by 18% since 2000.

By contrast nominal income has grown significantly in the EU-12 mainly due to the higher market prices prevailing in the single market and the phasing-in of direct payments. Real income however has grown more moderately and is rather stable since accession.

Farm income varies greatly across Member States and sectors. Sectors such as pigs and poultry, milk and horticulture exhibit on average income levels above other sectors such as grazing livestock or field crops.

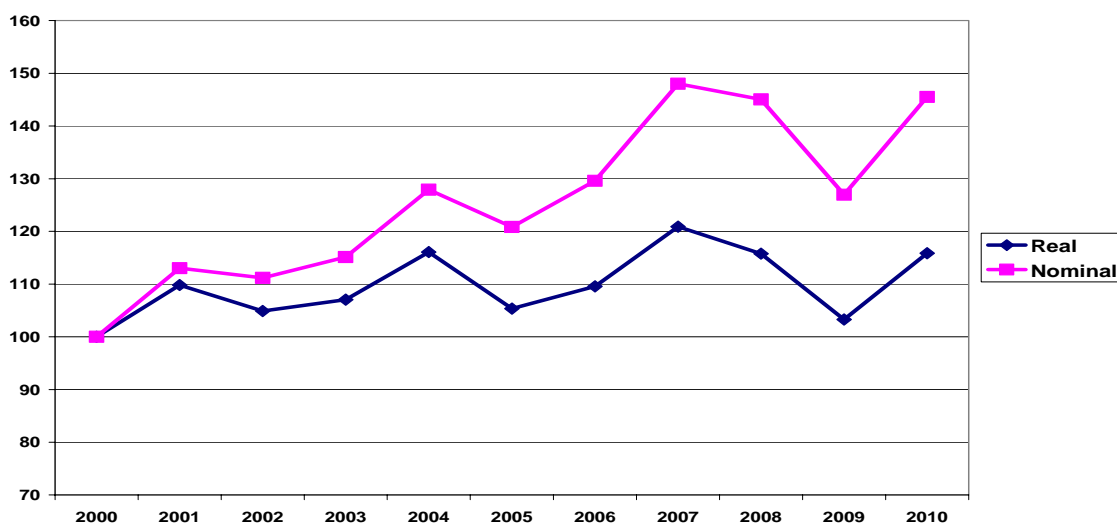
Graph 21 Development of agricultural factor income in the EU-12 and the EU-15, 2000-2010 (billion €)



Source: Eurostat — Economic Accounts for Agriculture — Elaboration DG AGRI

Over the last decade, agricultural income per annual work unit in the EU-27 increased in both nominal and real terms (Graph 21). On average, however, the increase in real terms has been quite modest (1.5% per year) and the development of real income remains volatile. After an increase of 15% between 2000 and 2004, agricultural income dropped by 10% in 2005 as a consequence of a strong contraction in the larger EU-15 Member States. Over 2006 and 2007, income increased by a total of 15%, due to soaring commodity prices, before dropping sharply after 2008 with the end of the price bubble and the beginning of the economic recession. This brought down real income in the EU-27 close to the level of the year 2000. Early estimates indicate a 12.2% increase in real agricultural income per annual work unit for 2010 (still slightly below 2008 levels), as output prices recovered after the very low levels of the previous year.

Graph 22 Development of agricultural factor income per annual work unit (AWU) in the EU-27 (2000=100)

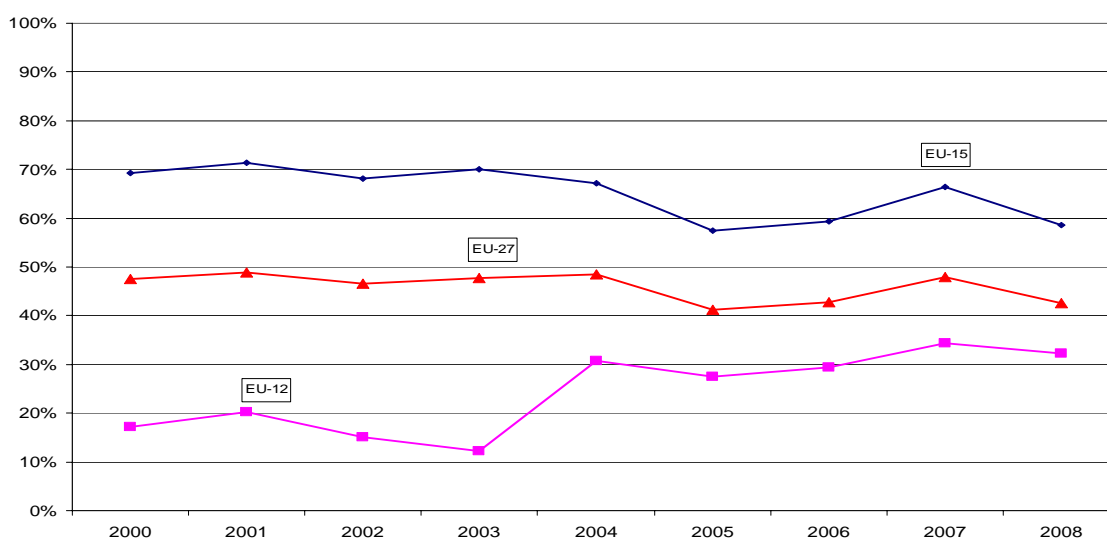


Source: Eurostat — Economic Accounts for Agriculture — Elaboration DG AGRI

As shown in Graph 22, the development of the total agricultural income has not been the same in the EU-12 and the EU-15. Nominal income in the EU-15 oscillated around a stable path until 2006. But its strong increase in 2007 was followed by two successive declines, including a 10.2% drop in 2009 which caused income to plummet to levels last seen in the beginning of the 90s.

Given that the value added generated by the agricultural sector has been decreasing steadily in the EU, the evolution of the agricultural income per annual working unit (AWU) depends heavily on the increase of labour productivity made possible by the sharp decline in the number of farmers. The strong gains in factor productivity of the farm sector that allowed an important expansion of the volume of production outpaced the slow development of an inelastic demand for agricultural and food products, generating a regular and steep decline in real prices until the price increase of 2007/2008. The gradual shift from market price support to direct income support started in 1993 allowed to support and stabilise the agricultural income due to higher income transfer efficiency. Direct payments accounted for 27% of agricultural income in the period 2006-2008 at the EU-27 level, total subsidies amounted to close to 40% of agricultural income.

Graph 23 Entrepreneurial income in agriculture/self-employed AWU as % of wages in the total economy/AWU



Source: Eurostat– Economic Accounts for Agriculture – Elaboration DG AGRI

Yet the income per worker in the agricultural sector is significantly below the income in the rest of the economy. In 2008 the average agricultural income in the EU-27 was equal to 58% of the average wage in the total economy. In the EU-15 the income gap has widened over time. The ratio decreased from 70% in the year 2000 to 60% in 2008. In the EU-12 the gap is even more pronounced but has declined over time. The ratio increased from less than 20% in 2000 to more than 30% in 2008.

2.5. Situation of rural areas

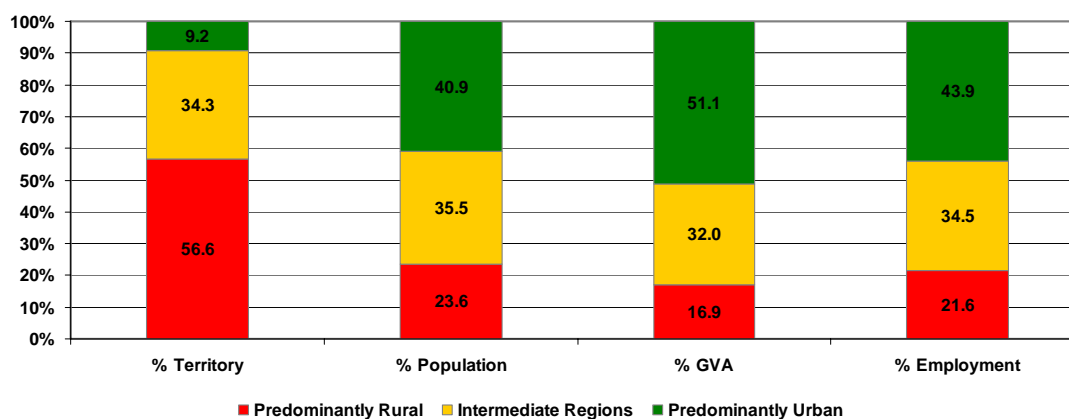
2.5.1. Importance of rural areas

Rural areas (i.e. predominantly rural and intermediate regions following the new definition of rural areas; see Annex A.3) represented 91% of the territory and 59% of the population of the EU-27 in 2008. The corresponding shares for predominantly rural areas alone were 57% of the territory and 24% of the population, making them particularly important in terms of land use.²⁹

²⁹ Source: "Rural Development in the European Union – Statistical and Economic Information – Report 2010"

Though economic activity tends to concentrate in urban areas, rural areas generated 49% of the total GVA and provided 56% of the overall employment in 2008, these shares being higher in the EU-12.³⁰ However, compared to predominantly urban areas, rural areas tend to lag behind for a number of socio-economic indicators: income per capita, employment rate, human capital, activity of women and young people, development of the tertiary sector as well as other aspects linked to the quality of life.

Graph 24 Importance of rural areas (% territory, population, GVA and employment). 2008 (*)



Source: Eurostat, Regional Accounts

(*) New definition of rural areas (see Annex A.3)

2.5.2. Population density and age structure

Most rural areas are characterised by low population densities: at EU-27 level, population density varies from 48 inhabitants per km² in predominantly rural areas to 516 inhabitants per km² in predominantly urban areas. This range is even larger when comparing regions: it ranges from 2 inhabitants per km² in French "Guyane" and Finnish "Lappi" to 21024 inhabitants per km² in Paris. In most Member States, population density in rural areas did not evolve significantly between 2000 and 2008, whereas it was quite dynamic in the urban areas of some Member States.³¹

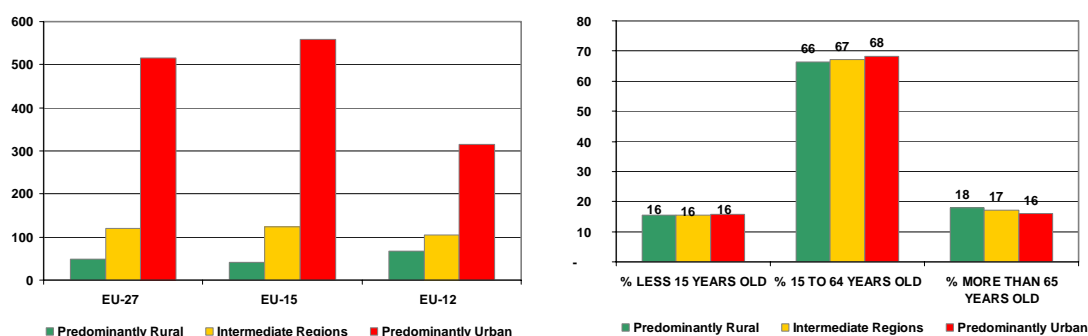
The age structure of the population does not vary significantly between different types of areas, even if the proportion of working age people (from 15 to 64 years old) is slightly higher in urban areas and the proportion of old people (65 years old and more) is slightly higher in predominantly rural areas at EU-27 level. It seems that age structure is more influenced by demographical differences among Member States. For instance, in rural areas of the EU-15 there is generally a larger proportion of old people, whereas there are relatively more working age people in the new Member States. Between 2004 and 2008, the share of young people (less than 15 years old) decreased in almost all Member States and for all types of areas.³²

³⁰ Employment of Predominantly Rural and Intermediate regions at NUTS-3 level save AT. Source: Regional Accounts 2007.

³¹ These changes are of course strongly influenced by the delimitation of NUTS-3 that may be restricted to urban centres.

³² Only 17 countries were available for calculating the change 2004-2008.

Graph 25 Population Density (inhabitants per km²) and Age Structure by type of region. 2008 (*)

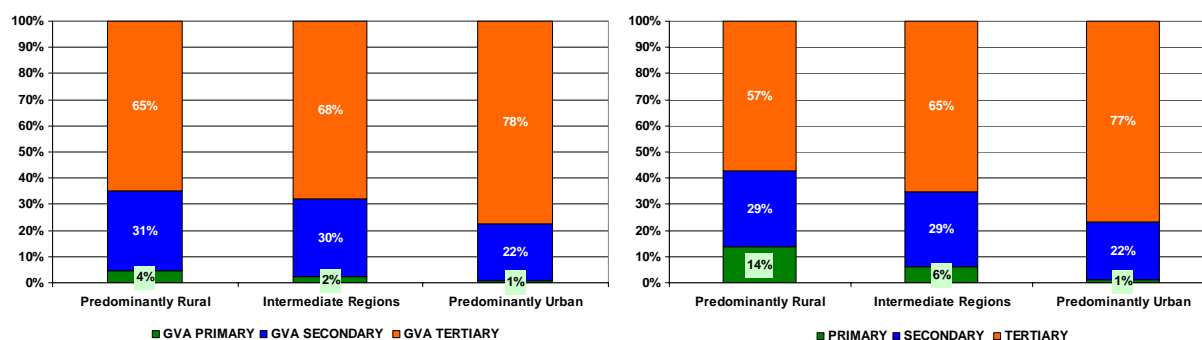


Source: Eurostat, Regional Accounts
 (*) New definition of rural areas (see Annex A.3)

2.5.3. Socio-economic aspects

Although many rural areas are now driven by urban economies as in-migration has occurred around metropolitan centres, the primary sector still represents 9% of the employment and 3% of the value added in the rural areas of the EU-27. This situation is even more marked in the EU-12, with the corresponding shares standing at 19% and 6% respectively, and especially in the EU-12: for 27% of them the contribution of the primary sector to total GVA is higher than 10%, and for almost 40% of them the share in employment of the primary sector is higher than 20%.³³

Nevertheless, most of the economic activity in rural areas depends on the service sector. This trend is likely to increase in the coming years as, between 2002 and 2008, the relative importance of the primary sector in the economy of the rural areas in the EU-27 decreased by 1.9 percentage points in terms of employment and by 0.8 percentage points in terms of value added.



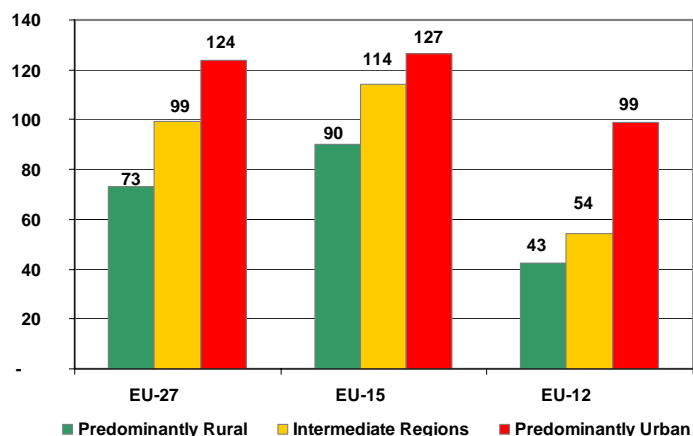
Graph 26 GVA and Employment by branch. 2008 (*)

Source: Eurostat, Regional Accounts
 (*) New definition of rural areas (see Annex A.3)

³³ Primary sector refers to branches A_B of the NACE classification (agriculture, forestry, hunting and fisheries)

This is a consequence of the diversification of the economy of rural areas to sectors other than agriculture. The average annual increases of both employment and added value in the non-agricultural sector for all the rural regions stood at around 1.3% (2002-2008) and 2.6% (2004-2008) per year respectively. As a result, in 2008, 86% of employment and 96% of value added in predominantly rural areas of the EU-27 came from the non-agricultural sectors. Among these, tourism is one of the key opportunities in terms of potential growth for rural areas. With nearly three quarters of bed places in the EU-27 located in rural areas, this sector already plays a major role in the rural economy.

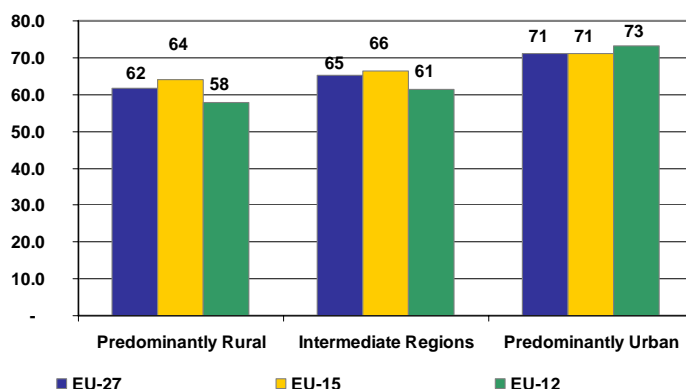
Graph 27 GDP in parity purchasing standard (PPS) per capita by type of region 2008. EU-27 average: 100. (*)



Source: Eurostat, Regional Accounts
 (*) New definition of rural areas (see Annex A.3)

GDP per capita is higher in urban than in rural areas. At EU-27 level, the income per inhabitant in rural areas represents 83% of the EU average, ranging from 97% in the EU-15 to 48% in the EU-12. The gap between predominantly rural and predominantly urban areas is accentuated in the new Member States. However, while the relative income per inhabitant in rural areas of the EU remained globally unchanged between 2001 and 2008, it has improved in rural areas of the new Member States (predominantly rural areas of the EU-12 moved from 35% to 43% of the EU average, while intermediate regions moved from 43% to 54%). Even though rural regions in the EU-12 are growing faster than the EU-27 average, they are growing more slowly than urban areas of the EU-12; consequently, the rural-urban gap in the EU-12 has increased over the last years.

Graph 28 Employment rate (%) by type of region 2008. (*)

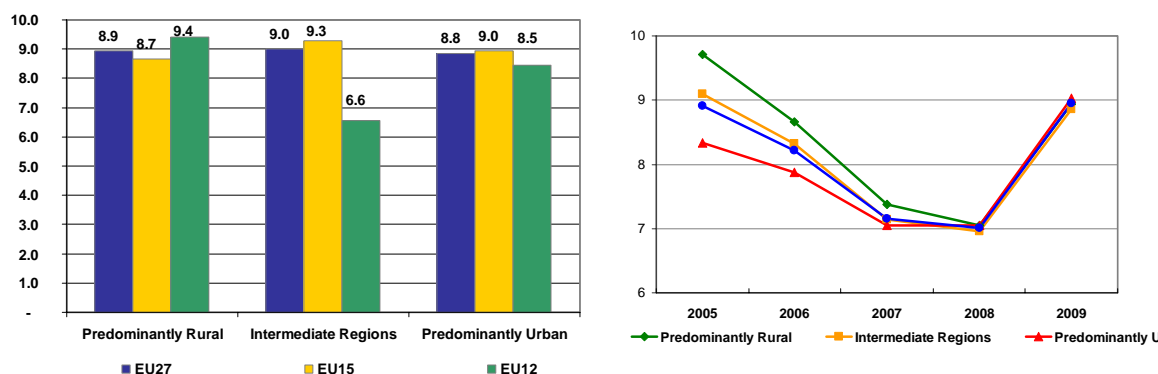


Source: Eurostat, Regional Accounts and Labour Force Survey.
 Excluding Ireland.
 (*) New definition of rural areas (see Annex A.3)

The employment rate in the EU-27, calculated as a share of the population of 15 to 64 years old, is lower in predominantly rural than in other areas (63% in predominantly rural areas against 67% for all areas in 2008). However, while the employment rate in the EU-15 has generally increased at the same pace in rural and urban areas since 2003, it has increased more slowly or even decreased in the rural areas of the EU-12.

The unemployment rate, calculated as a percentage of the active population, is close to 9% for the three types of regions across the EU-27, ranging from 6% in Denmark to 18% in Spain and Latvia. In the EU-12, unemployment is highest in predominantly rural regions, whereas in the EU-15 the differences between different types of regions are very small. What it is common for all types of regions is that after the general decrease over the period 2005-2008, the unemployment rate has now considerably increased again.

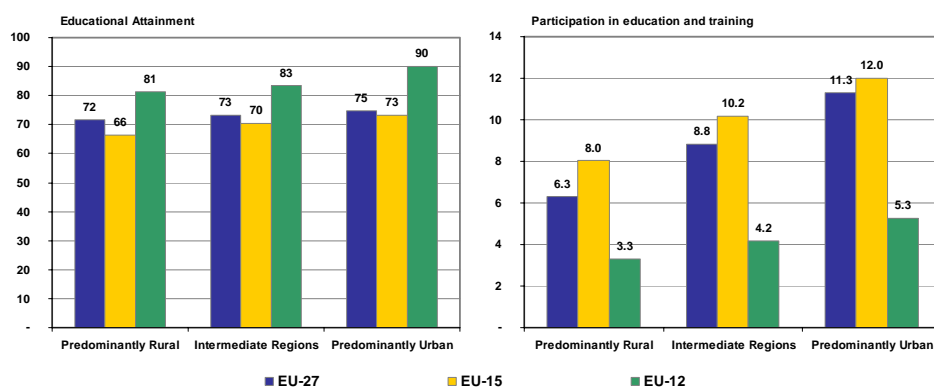
Graph 29 Unemployment rate (%) by type of region (2009) and evolution (2005-2009) (*)



Source: Eurostat, Regional Accounts and Labour Force Survey
 (*) New definition of rural areas (see Annex A.3)

Human potential is a key factor for the development of rural areas. In 2009, 74% of adults in the EU-27 reached a medium or high education level.

Graph 30 Educational Attainment: % of adults (25-64) with medium and high educational attainment and % of adults (25-64) participating in education and training by type of region. 2009(*)



Source: Eurostat, Regional Accounts and Labour Force Survey
 (*) New definition of rural areas (see Annex A.3)

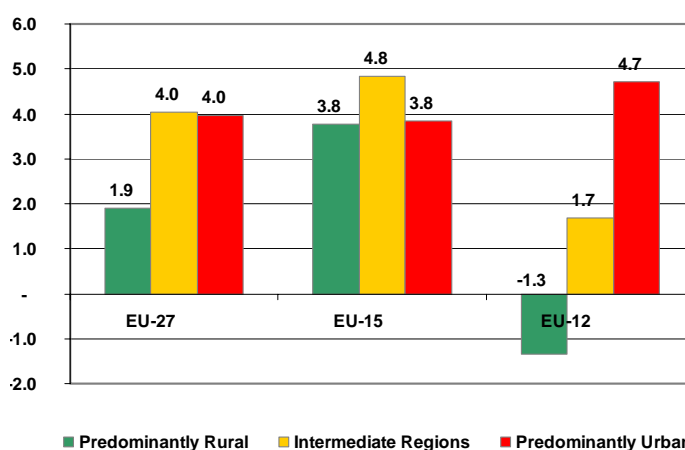
There are however large variations among Member States (from 28% to 91%), with notably a higher level of education in the new Member States than in the EU-15. In most countries the level of education is lower in rural areas than in urban areas.

Life-long learning is a good instrument to improve the skills of workers and favours economic development. It is already largely applied in Denmark and Finland where more than 20% of adults participated in training in 2009. However, it is less used and progressing more slowly in rural areas, particularly in the EU-12.

2.5.4. Quality of life

Rural areas also tend to lag behind in other quality of life indicators. The net migration rate is a good measure of the global attractiveness of an area. It is lower in predominantly rural areas than in predominantly urban areas (+2‰ and +4.0‰ respectively for the EU-27 in 2007) and even negative for the predominantly rural areas of the EU-12.³⁴ This pattern varies among Member States and other factors, such as more favourable climatic conditions, can play a major role in the decision of people to move to another place.

Graph 31 Net Migration by type of region in ‰. 2007 (*)



Source: Eurostat, Regional Accounts and Labour Force Survey
 (*) New definition of rural areas (see Annex A.3)

Even if rural areas may be attractive as a place to live, remoteness remains a major problem and numerous aspects of quality of life need to be improved in many rural areas. The development of services is generally lower in rural areas: at EU-27 level, services represent 64% of the economic activity in predominantly rural areas in comparison with 77% in predominantly urban areas. Broadband internet infrastructure and take-up by the population are also significantly lower in rural than in urban areas: at the end of 2009, the percentage of the population having subscribed to DSL internet in predominantly rural areas of the EU-27 was lower than in urban areas, whereas internet take-up rates were

³⁴ Excluding the United-Kingdom.

13.4% and 20.8% respectively in predominantly rural and predominantly urban regions of the EU-27.³⁵

3. MEDIUM-TERM PERSPECTIVES FOR EU AGRICULTURE AND RURAL AREAS

Future economic viability of EU agriculture depends heavily on future developments in EU and world markets. This section provides an overview of the most recent medium-term prospects for agricultural markets and their impact on agricultural income.³⁶

The outlook for EU agricultural markets remains subject to a number of uncertainties regarding future market developments as well as the macroeconomic and policy settings. They concern in particular the drivers of demand and supply of agricultural commodities, the linkage between agriculture and energy markets and the path of economic recovery. Climate change will continue to influence the market outlook, with unpredictable weather patterns increasing the likelihood of supply fluctuations. Other factors such as future changes in agricultural and trade policies as well as the outcome of the current Doha Development Round of trade negotiations, bilateral/regional trade discussions and the policies on renewable energy could also have far reaching implications for the future pattern of EU agricultural markets.

The medium-term outlook for EU agriculture depicts a mixed picture with regard to commodity market developments. While the expected demand growth resulting from economic recovery and the biofuel mandates should support production expansion, EU output is likely to remain below its full potential as long as the expected increase in input costs limits the profitability of production. In addition, crop yields are expected to grow at a slow pace, continuing the decline in the rate of growth observed during the previous decade.

An appreciation of the EUR could further weaken the competitiveness of EU exports on world markets, leading to a loss in world market share at a time when global demand is growing at a relatively fast pace.

On the other hand, commodity markets are expected to remain balanced during the outlook period, without the need for market intervention, (only the SMP market will remain sensitive to global supply-demand developments in the short term). Prospects for agricultural income remain positive, displaying a modest growth rate at the EU level, mainly driven by the decline in labour input which is expected to continue.

The outlook for EU agricultural markets and income over the period 2010-2020 assumes an unchanged policy environment, stable macroeconomic conditions and relatively favourable world market perspectives. The Common Agricultural Policy is assumed to follow the Health-Check decisions, and global trade policy is expected to respect the Uruguay Round Agreement on Agriculture. Macroeconomic assumptions include a gradual and modest EU GDP growth at around 2% p.a. and a steady appreciation of the EUR to around 1.47 USD/EUR. Commodity prices are expected to stay firm over the

³⁵ For broadband indicators, the definition of rural areas is different from the new typology of rural areas (See Annex A3): rural areas are defined as those areas with less than 100 inhab./km², suburban: 100 to 500 inhab./km², and urban: more than 500 inhab./km².

³⁶ Based on the 'prospects for agricultural markets and income in the EU, 2010-2020', 2010, DG AGRI, http://ec.europa.eu/agriculture/publi/caprep/prospects2010/index_en.htm

medium term, supported by numerous factors such as the growth in global food demand, the development of the biofuel sector and the long-term decline in food crop productivity growth.

3.1. EU agricultural markets

3.1.1. Arable crops

The medium-term prospects for the EU cereal markets depict a relatively positive picture with tight market conditions, low stock levels and prices remaining above long term averages. Supply growth is expected to result mostly from very moderate yield growth (just above 0.5% per year on average) with some reallocation between crops in a stable cereal area. The domestic use of cereals in the EU is expected to increase, most notably due to the growth in the emerging bioethanol and biomass industry in the wake of the initiatives taken by Member States in the framework of the 2008 Renewable Energy Directive (RED).

The medium-term prospects for the EU oilseed markets depict a positive picture with strong demand and high oilseed oil prices. Supply growth is expected to result mostly from moderate yield growth and to a lesser extent from a slightly expanding oilseed area, with some reallocation between crops. The expected increase in domestic use of oilseeds in the EU would also be driven by the growth in the emerging biodiesel and biomass industry following the initiatives taken by Member States in the framework of the RED. The trade balance is not expected to improve over the medium term as additional imports are required to meet the biofuel targets.

3.1.2. Meat

Total meat production is expected to recover in the near term from the decline suffered in the wake of the economic crisis, but longer term growth prospects remain modest at an annual rate of 0.3% on average.

Aggregate meat production is expected to reach 44.4 mio t in 2020, exceeding the 2009 level by 4%. The situation differs between ruminants and non-ruminants, as beef/veal and sheep/goat meat production would drop by 7% and 11%, respectively, while pig and poultry meat production would expand by 7% each. The potential growth in non-ruminant meat production would remain constrained by the expected increase in production costs.

A driving factor for production growth is the increasing poultry and pig meat consumption. On a per capita basis, overall EU meat consumption is likely to reach 85.4 kg in 2020, 2% more than in 2009. The increase will be highest for poultry meat consumption (above 6%), while growth in the consumption of pig meat is expected to remain below 5% on average between 2009 and 2020. Pig meat would remain the most preferred meat in the EU at 43.3 kg/capita in 2020, compared to 24.7 kg for poultry, 15.4 kg for beef and veal and less than 2 kg for sheep and goat meat.

The net trade position of the EU is projected to deteriorate during the outlook period, driven by a steady increase in meat imports (mainly beef and poultry) and a parallel decline in meat exports (beef, pig and poultry). Aggregate meat imports are expected to grow by 14%, while meat exports would decline by almost 23% by 2020, leaving the EU with net exports of around 200 thousand t, with pig meat as the single commodity with a positive net trade balance.

3.1.3. Milk and dairy products

Milk production is expected to return to an increasing path, driven by a fairly optimistic demand outlook based on improved macroeconomic prospects. The rate of increase will be rather moderate, with EU-27 milk production in 2020 projected to exceed the 2009 level by less than 4%. Milk deliveries would increase at a slightly higher rate (of almost 5%), the difference being due to the gradually declining on-farm consumption in the EU-12. The abolition of quotas is expected to lead to a very modest reaction of EU-27 milk deliveries at the end of the quota regime in 2015.

The outlook appears favourable for higher value added dairy commodities, driven by growing demand for cheese and fresh dairy products. Production of fresh dairy products (including drinking milk, cream, yoghurts, etc.) is projected to increase by about 8% (from 2009 to 2020) and cheese output is depicted to grow by about 10%. Prospects for cheese exports are favourable despite the strengthening EUR, with the EU maintaining a steady share of more than 30% in global cheese exports.

Whole milk powder production is expected to fall only marginally below its 2009 level and EU exports are projected to remain firm over the medium term, driven by strong global demand. Nevertheless, the EU is expected to lose market share of global exports, declining to 21% in 2020 (from 24% in 2009).

The outlook depicts continued market stability for butter, conditional on firm domestic demand around the level of 2 million t. The projected increase in production for 2015 (year of quota abolition) would lead to a temporary increase in EU exports.

Skimmed milk powder (SMP) export perspectives are less favourable, given the assumed strengthening of the EUR and strong supply from other exporters. As EU demand prospects are also fairly weak, the outlook for price growth is rather constrained over most of the projection period. However, supply pressure on the market would be mitigated by reduced EU production.

All in all, and despite the relatively favourable outlook and apparent short- and long term market stability for SMP, the nearer-term prospects remain sensitive to global supply-demand developments and the market's ability to absorb the release of intervention stocks.

3.2. Agricultural income

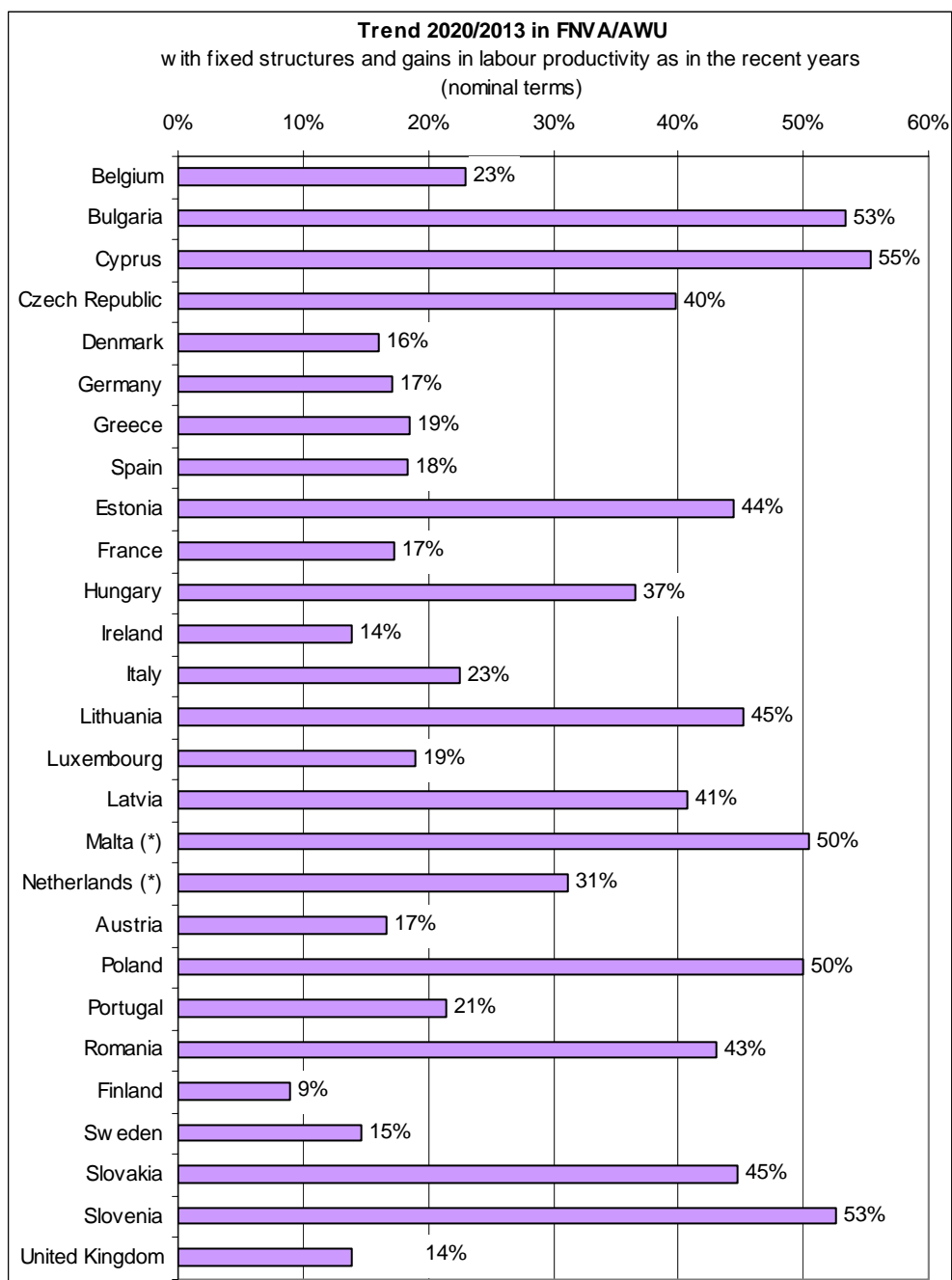
Agricultural income (expressed as real factor income per labour unit) is expected to recover from the significant low level in 2009 with an outlook for a gradual, albeit modest growth in aggregate EU income over most of the projection period that would exceed the 2005-2009 average (base) level by around 20% in 2020.

This overall gain masks uneven developments for the EU-15 and EU-12: whereas agricultural income in the EU-15 shows a moderate increase to almost 10% above the base level, the income growth is much more pronounced in the EU-12, rising 45% above the base level by 2020 and converging towards the EU average.

While the assumed decline in agricultural labour remains an important factor behind the income prospects for both the EU-15 and the EU-12, the increase in the subsidies granted to agricultural producers in the EU-12 over the phasing-in period should remain a key driver of income growth in this group of Member States.

At the level of individual Member States³⁷ income projections differ depending on various elements, namely composition of agricultural production, average cost structure and assumed gains in labour productivity.

Graph 32 Trends in income by Member State*



Source: EU FADN DG AGRI

* Income expressed in Farm net value added (FNVA) per Agricultural working unit (AWU).

Among the EU-12, Cyprus, Malta, Bulgaria, Poland and Slovenia are expected to register the highest income improvements, between +50% and +55% by 2020 in comparison with 2013. This is the result of a favourable price trend in their main agricultural products, e.g.

³⁷ Income projections based on farm data contained in the Farm Accountancy Data Network (FADN) allow going further in detail into trends by member state, size and type of farms.

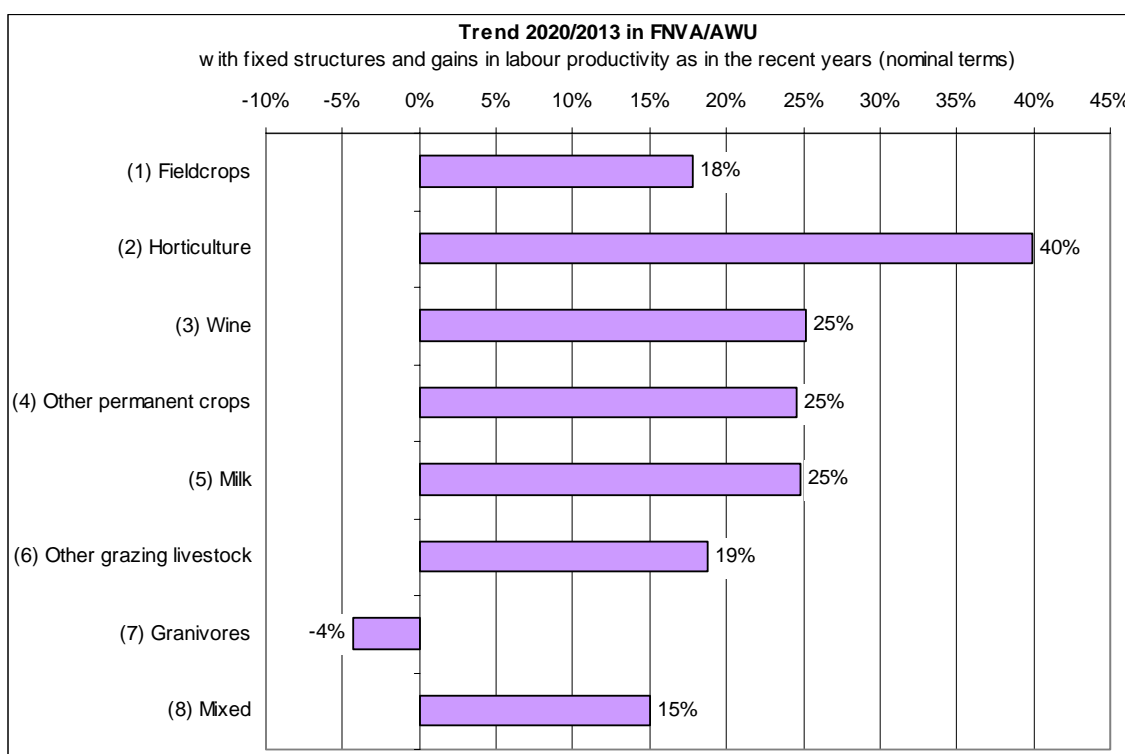
vegetables and flowers in Cyprus and Malta, lower costs and high gains in labour productivity.

Lower levels of improvements are expected in the EU-15 countries. The highest increase (+31%) would be in the Netherlands due to the high share of vegetables and flowers in output. The lowest income increases are observed for Finland, Sweden, Ireland and the United Kingdom, which can be explained by the higher share of products with unfavourable price trends, higher costs, and lower gains in labour productivity.

Farms specialised in horticulture are expected to register an outstanding performance, with an increase in income by 40% between 2013 and 2020 due to the assumed good evolution in prices for vegetables and flowers. Field crop farms³⁸ would also improve their economic performance but at a relatively lower rate (+18%) because of a limited increase in the production of cereals (+2%).

The income trend would also be positive for farms specialised in the production of wine, other permanent crops and milk, but to a lesser extent. They are likely to benefit from higher prices of their main outputs (i.e. quality wine, fruits, and milk products) as well as improved yields (i.e. dairy farms). On the other hand, pig and poultry farms would register a negative trend (-4%), because prices for pig meat and poultry meat are projected to stay stable and even decrease for eggs, whereas costs would increase.

Graph 33 Trend in income by type of farming



Source: EU FADN DG AGRI

³⁸ Specialised in the production of cereals, oilseeds, protein crops, rice, cotton, root crops and field vegetables.

* Income expressed in Farm net value added (FNVA) per Agricultural working unit (AWU).

The economic size of farms does not seem to influence income trends, although projections are slightly more positive for the smallest farms³⁹. This is because almost 90% of the smallest farms are located in the EU-12, where gains in labour productivity are higher. The smallest farms are located in Romania (54%), Poland (20%) and Bulgaria (7%), countries with the highest expected income improvements.

The majority of the biggest farms are located in France (27%), Germany (15%) and Italy (13%), countries where expected income improvements are not very high. However, most of the biggest farms are wine farms. That should explain the slightly higher income increase compared to the intermediate economic size classes (see graph 56 in Annex 4).

4. CONCLUSIONS

Over the last decades, EU agriculture and the agri-food sector as a whole has shown great resilience and adaptability to a rapidly changing technological, economic and social environment. Structural adjustment took place within a supportive policy setting which smoothed the pace of this long-term process. Whereas the agri-food sector still represents an important component of the EU economy, the potential of agriculture for the provision of public goods in the field of the environment is increasingly recognised. Farming has contributed over the centuries to creating and maintaining a variety of valuable semi-natural habitats and continues to shape the majority of the EU's landscapes today.

The present analysis displays a very large variety of farm structures in the EU-27. Two broad types of situations emerge: out of the 13.7 million farm holdings, 47% are of very small size and account for 23% of the labour force and 7% of the agricultural area. On the other side of the spectrum, 11% of the farms with a size of above 20 ha account for 77% of the agricultural area. This is a situation that is likely to persist in the medium term given the current trends of structural adjustment.

The agricultural sector continues to lag behind the rest of the economy in terms of income. The gap between agricultural and non-agricultural income has widened in the EU-15 in the last decade (from about 70% to 60% of average wages). In the EU-12, the gap has narrowed, mainly due to the introduction of the CAP, yet it still stands at about 30% of average wages. The year 2009 has been particularly unfavourable for agricultural income, bringing levels back to 2000 in the EU-27 (and 1994 for the EU-15) due to unfavourable input and output price levels and the economic crisis. The increase in agricultural income recorded in 2010 in the EU-15 does not reverse the long term declining trend in real sector income, which fell by 18% since 2000. The agricultural income in the EU-12 remains considerably lower than in the EU-15 but is increasing.

The EU holds a significant weight in international agriculture and food trade, with a share of around 18% of world exports and 20% of world imports, making it the world largest importer and exporter together with the US. Over the years, the EU managed to increase its export share of high value-added and processed products, which represent more than two thirds of total EU exports.

³⁹ The farm size is expressed in European Size Units (ESU), and is related to the amount of the Farm gross margin expressed in Euros.

The EU agricultural and food sector, which displays a wide diversity across Member States and sectors, has mainly developed in rural areas. Rural areas represent some 91% of the EU territory and 56% of the total EU population. These areas tend to lag behind the predominantly urban areas as regards a number of socio-economic indicators.

Although the development of rural areas is likely to become increasingly driven by factors outside agriculture, they face particular challenges as regards economic and social sustainability. This is particularly true for areas which are remote, depopulated or strongly dependent on farming. However, these areas have significant potential to meet the growing demand for food and for the provision of rural amenities. They serve as a reservoir of natural resources and highly valued landscapes, which make them attractive for tourism and as a place to live and work. The presence of a competitive and dynamic agri-food supply chain will remain a precondition to realising these potentials of rural areas in the EU.

ANNEXES

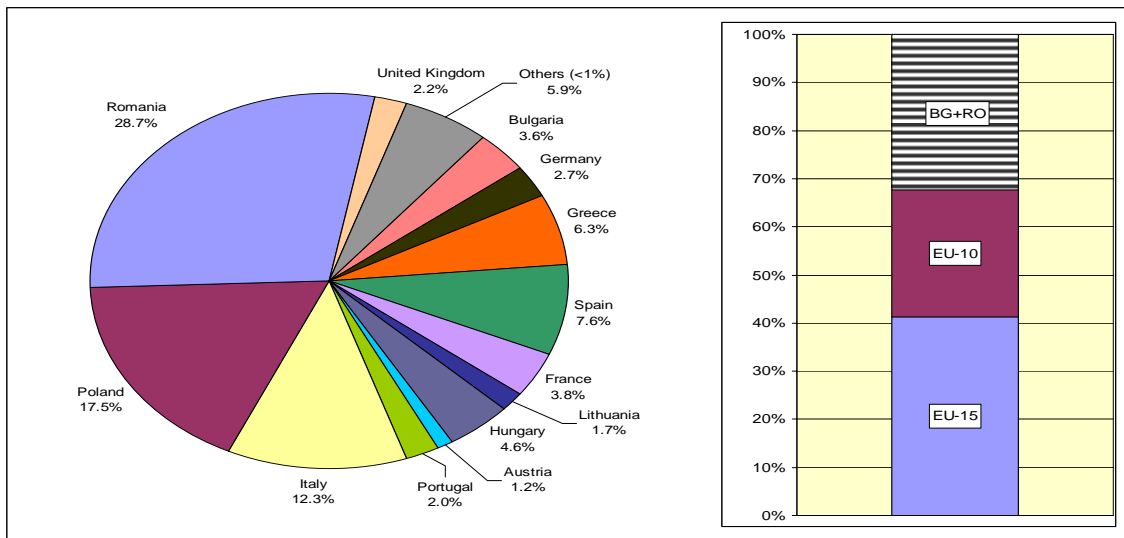
A.1 Economic information on the agricultural sector

Table 1 Importance of Agriculture in total GVA

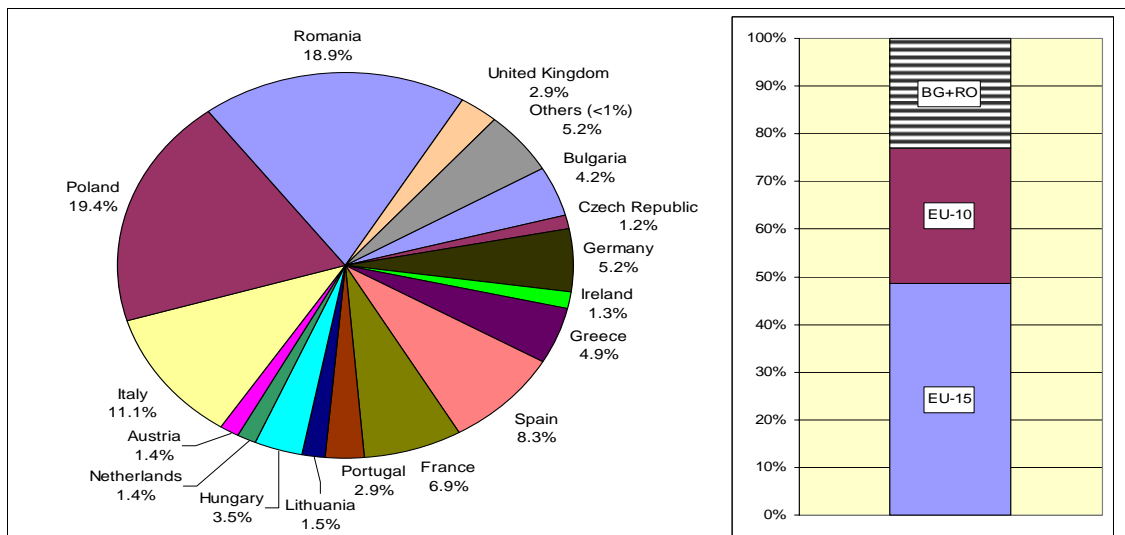
CTRY	2007		2008		2009		2010	
	GVA in agriculture	% of Total GVA	GVA in agriculture	% of Total GVA	GVA in agriculture	% of Total GVA	GVA in agriculture	% of Total GVA
BE	2 638.00	0.88	2 074.00	0.67	2 047.00	0.67	2 205.00	0.70
BG	1 547.50	5.98	2 040.20	6.91	1 450.40	4.83	1 631.30	5.26
CZ	2 819.60	2.46	3 386.90	2.54	2 794.10	2.27	n.a.	n.a.
DK	2 267.70	1.18	1 946.80	0.98	1 753.90	0.92	2 522.50	1.25
DE	20 940.00	0.96	19 960.00	0.90	17 310.00	0.81	19 480.00	0.87
EE	439.40	3.17	396.10	2.77	309.30	2.58	441.40	3.48
IE	2 380.70	1.43	2 083.70	1.30	1 421.20	0.98	1 365.50	0.98
GR	6 877.40	3.44	6 574.50	3.14	6 620.00	3.14	6 626.60	3.26
ES	27 201.00	2.88	26 494.00	2.66	25 955.00	2.65	26 062.00	2.68
FR	37 476.00	2.21	35 738.00	2.04	30 010.50	1.74	n.a.	n.a.
IT	28 480.60	2.06	28 517.10	2.02	25 885.60	1.89	26 369.50	1.90
CY	309.00	2.18	346.10	2.26	346.10	2.27	364.80	2.32
LV	667.90	3.58	629.40	3.05	550.40	3.29	666.10	4.14
LT	1 009.00	3.94	1 075.50	3.72	802.20	3.36	859.20	3.51
LU	134.90	0.40	127.90	0.36	103.30	0.30	113.60	0.30
HU	3 425.30	3.97	3 856.70	4.25	2 605.00	3.31	2 895.30	3.49
MT	112.90	2.39	94.70	1.83	103.90	2.05	102.80	1.89
NL	10 548.00	2.08	9 566.00	1.81	8 798.00	1.73	10 307.00	1.95
AT	4 332.50	1.76	4 386.60	1.71	3 794.10	1.53	3 961.00	1.54
PL	11 775.00	4.33	11 872.70	3.73	10 054.80	3.64	11 035.90	3.54
PT	3 583.30	2.45	3 595.20	2.41	3 625.90	2.44	3 678.10	2.43
RO	7 193.40	6.51	9 266.90	7.44	7 484.80	7.09	7 295.10	6.74
SI	760.70	2.51	823.00	2.51	756.00	2.45	757.40	2.41
SK	2 007.50	4.06	2 466.30	4.21	2 256.30	3.94	2 313.70	3.84
FI	4 723.00	3.01	4 641.00	2.87	4 033.00	2.71	4 531.00	2.89
SE	5 078.50	1.71	5 182.50	1.77	4 486.70	1.77	5 661.90	1.88
UK	12 607.80	0.69	12 755.60	0.78	10 139.90	0.72	11 207.20	0.74
EU27	201 324.30	1.82	199 903.50	1.79	175 492.80	1.66	190 019.40	1.73
EU15	169 257.10	1.65	163 649.10	1.59	145 979.60	1.49	158 526.50	1.56
EU12	32 067.20	4.19	36 254.40	4.16	29 513.20	3.81	31 492.90	3.79

A.2 Structural information (*)

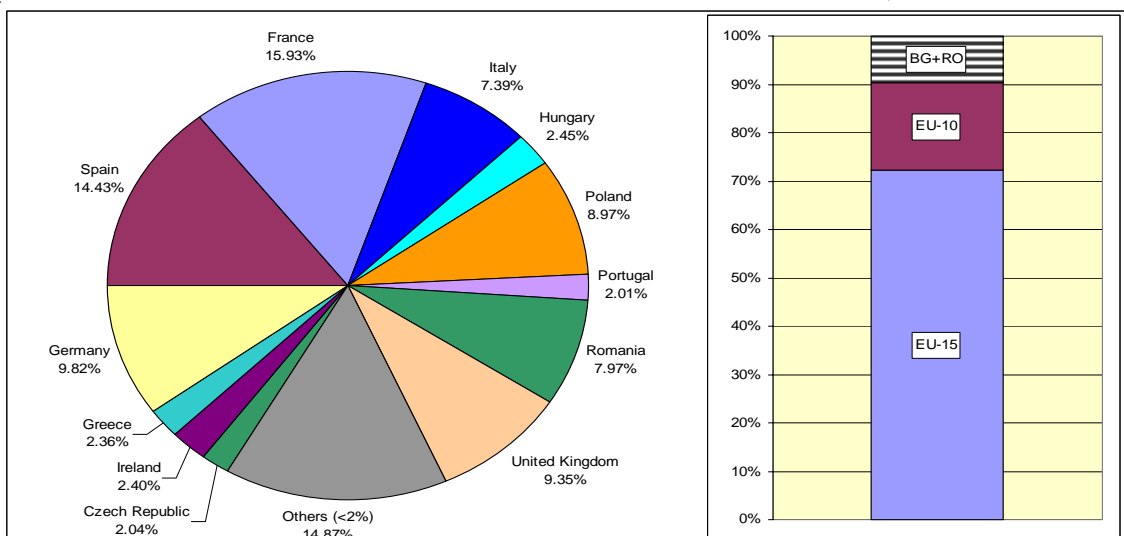
Graph 34 Distribution of farms in the EU between Member States, 2007



Graph 35 Distribution of agricultural workforce in the EU between Member States, 2007

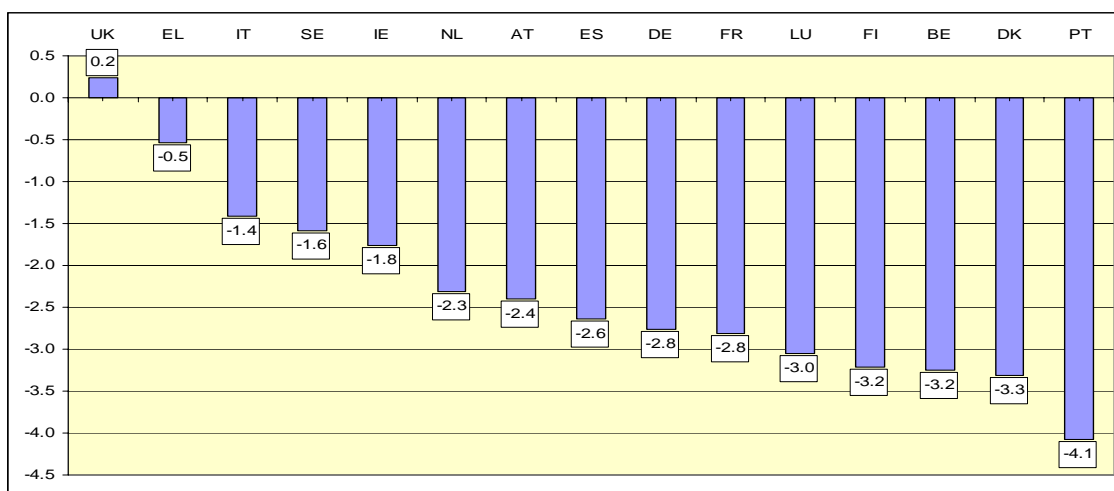


Graph 36 Distribution of the UAA in the EU between Member States, 2007

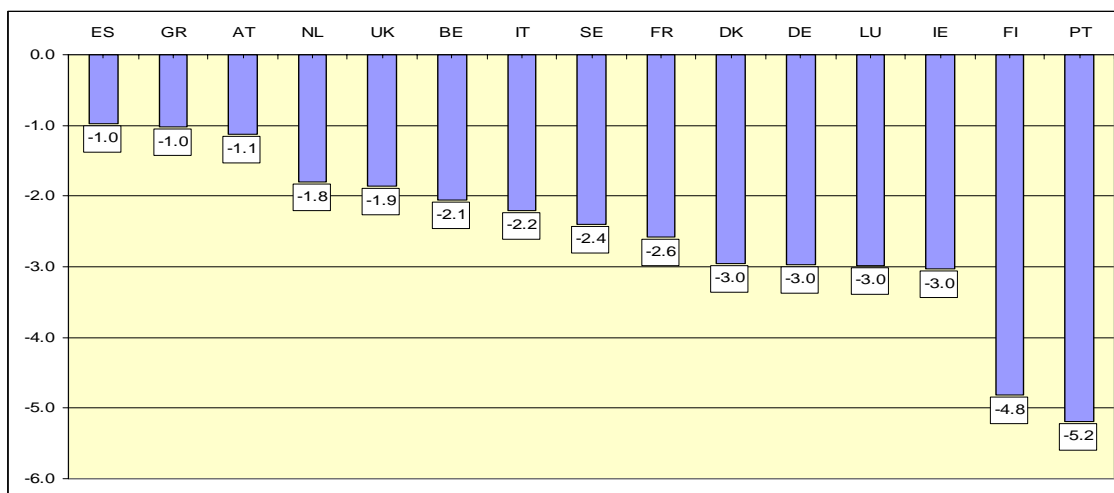


(*) Source: Eurostat, Farm Structure Survey

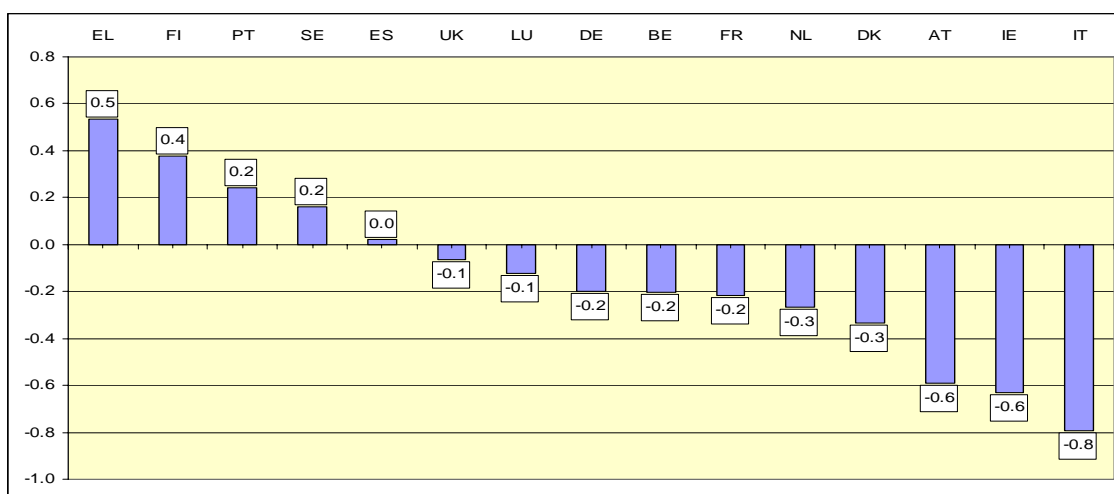
Graph 37 Annual rate of change (%) in the number of farms in the EU-15 (*)



Graph 38 Annual rate of change (%) in the agricultural workforce in the EU-15 (*)

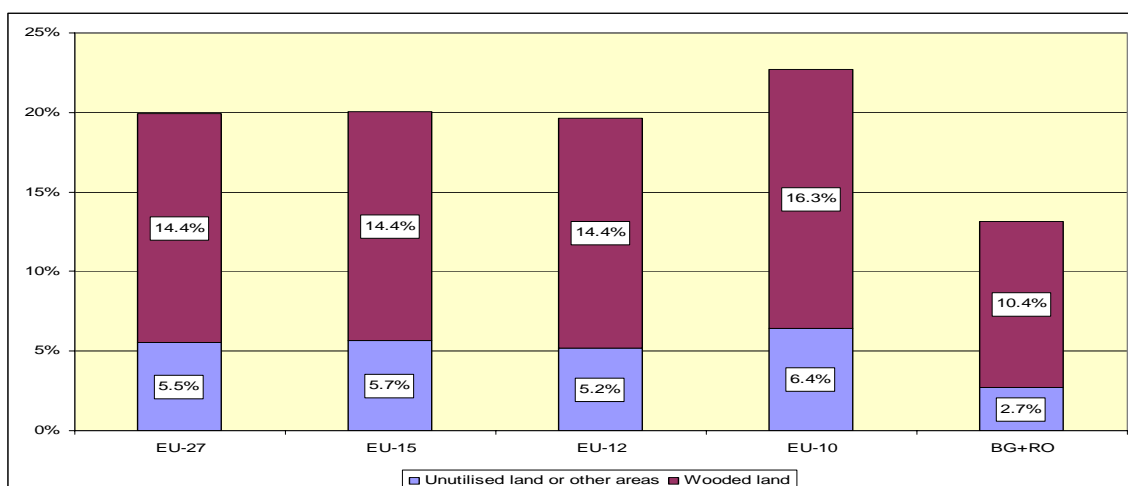


Graph 39 Annual rate of change (%) in the UAA in the EU-15 (*)

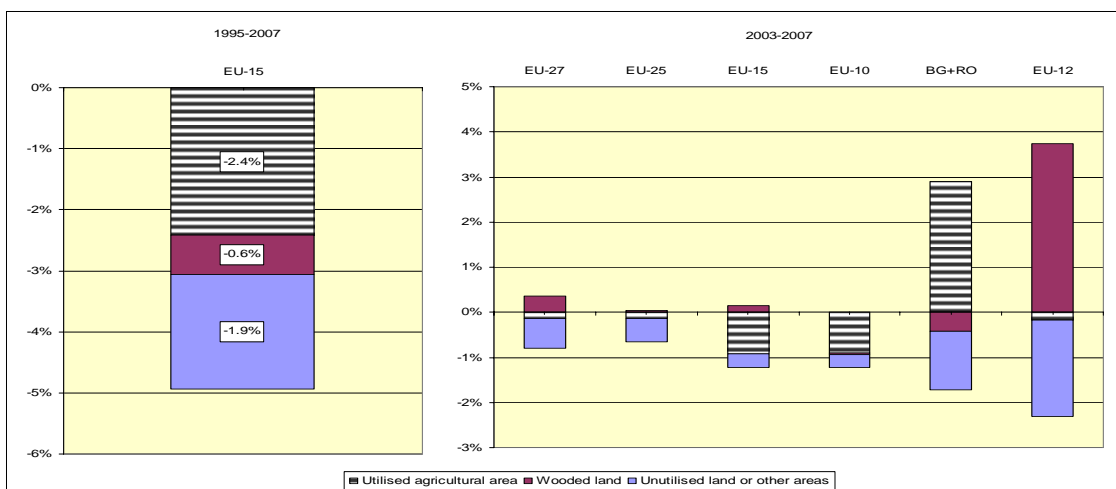


(*): the period covered (over the range 1975 to 2007) varies between Member States according to the availability of data, the year of accession and the processing necessary to circumvent the influence of the changes in coverage of the surveys.

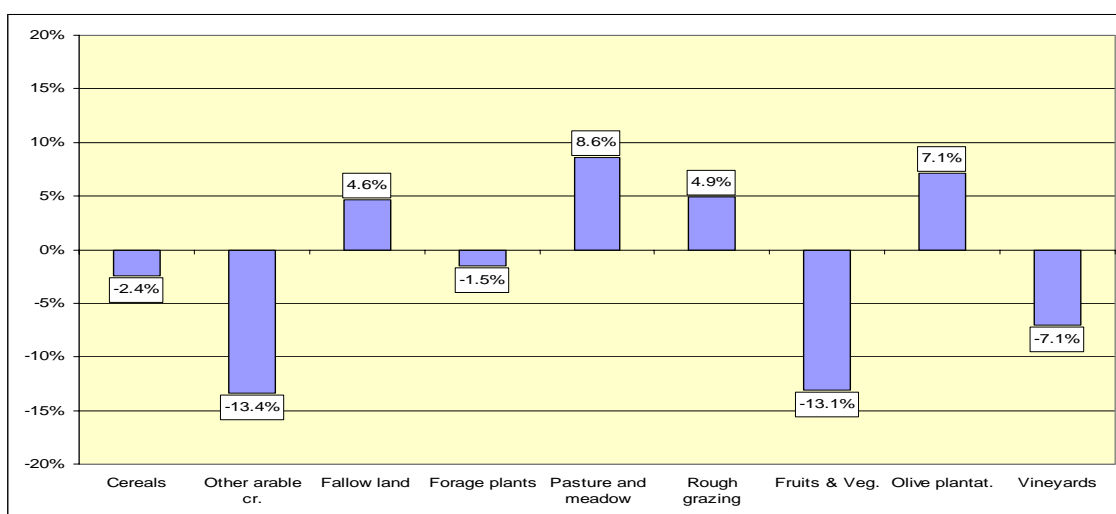
Graph 40 Share of non-used agricultural area in the total area of the farms in EU – 2007



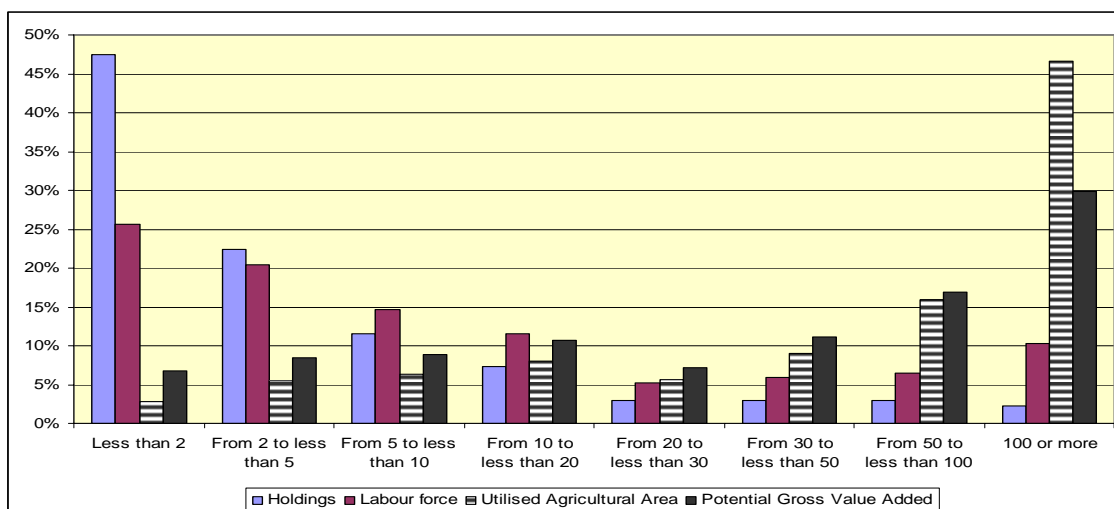
Graph 41 Total variation of area by type of utilisation (as % of total area of the farm) in EU - 1995-2007



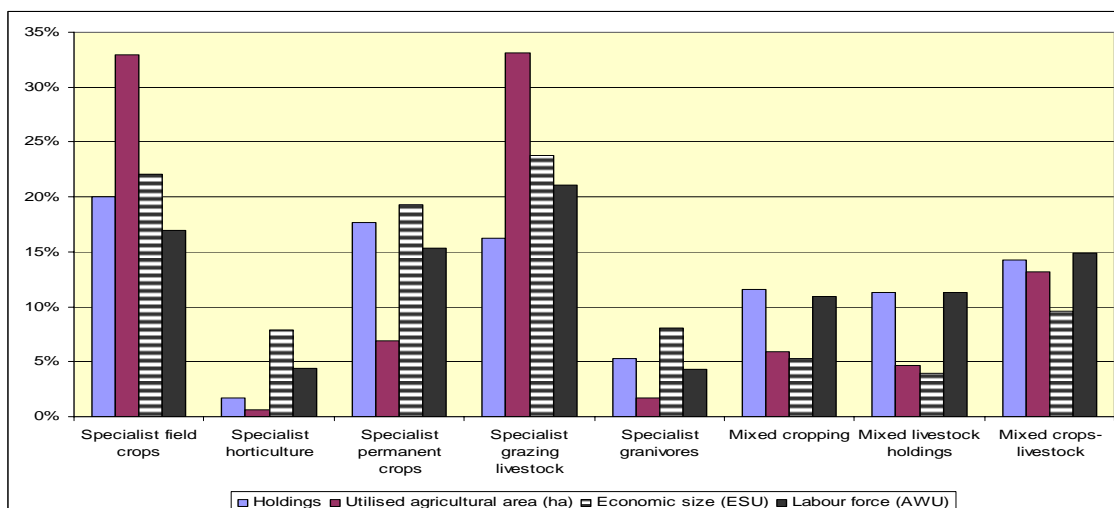
Graph 42 Change (in %) of the area by main groups of production in EU-15 – 1995-2007



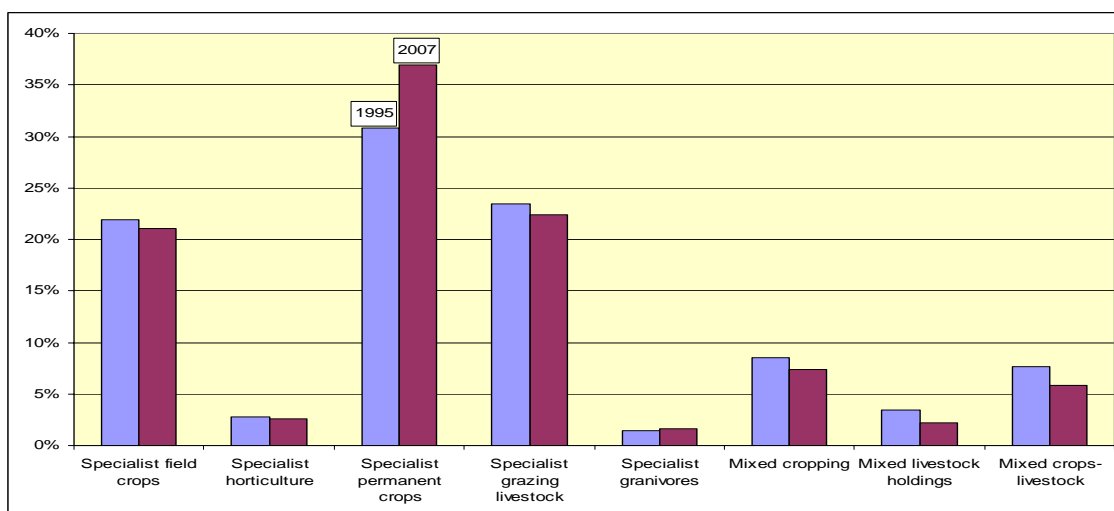
Graph 43 Distribution of the factors of production by farm size in area in EU-27 – 2007



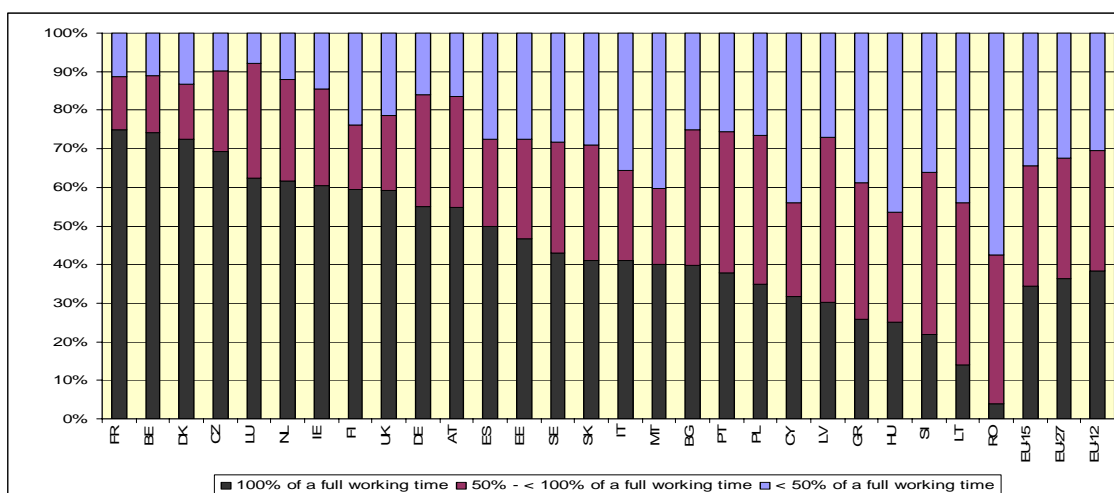
Graph 44 Distribution of the factors of production by type of farm in EU-27 – 2007



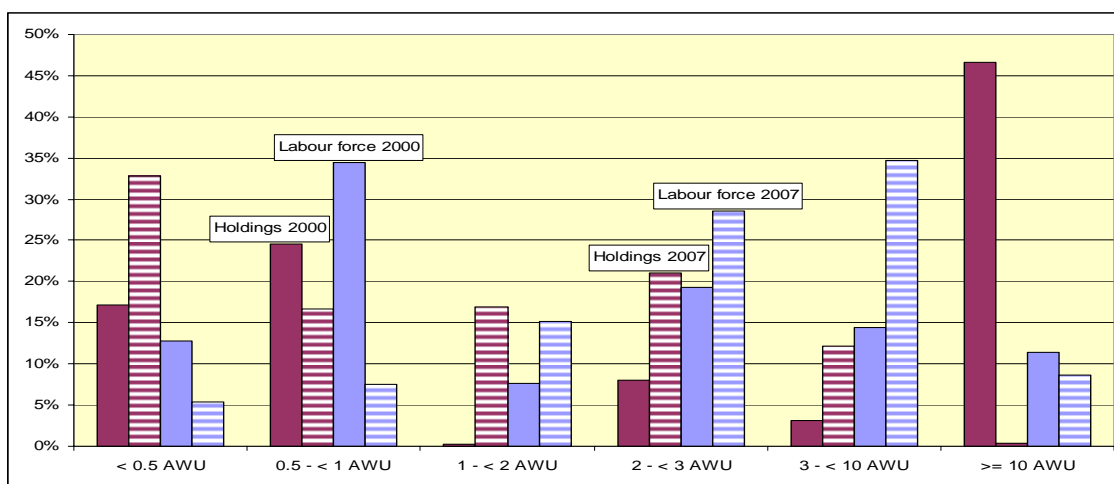
Graph 45 Evolution of distribution of holdings by type of farm in EU-15 1995-2007



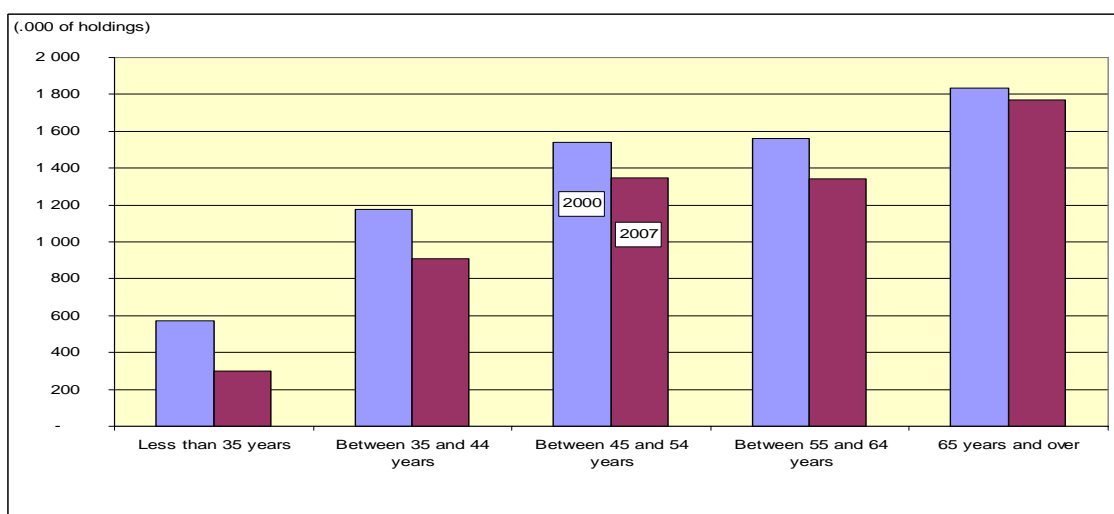
Graph 46 Distribution of the (family and non-family) labour force working regularly in agriculture according to working time in agriculture in the EU – 2007



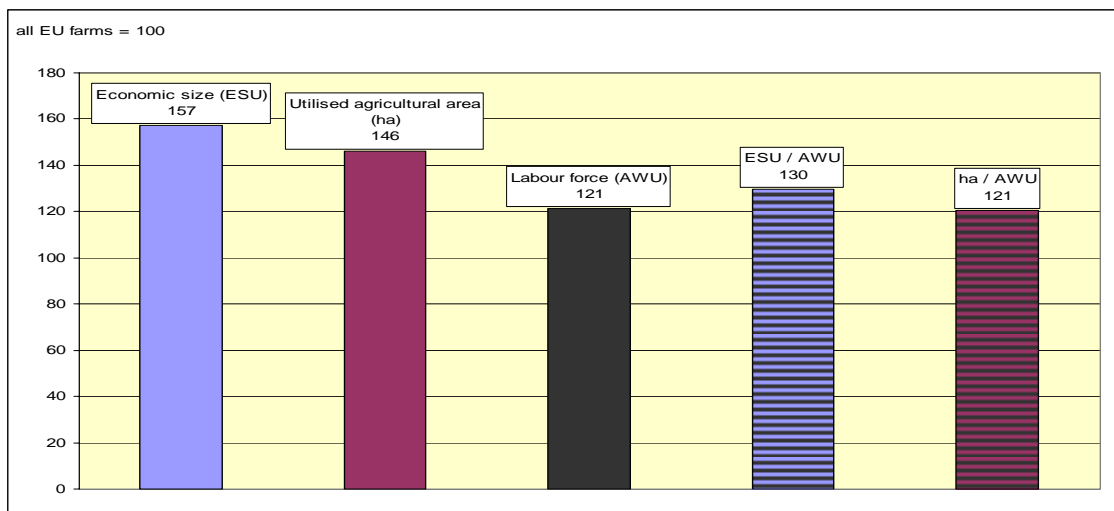
Graph 47 Development of the distributions of holdings and of labour force by category of level of labour force per holding in EU-15 – 2000-2007



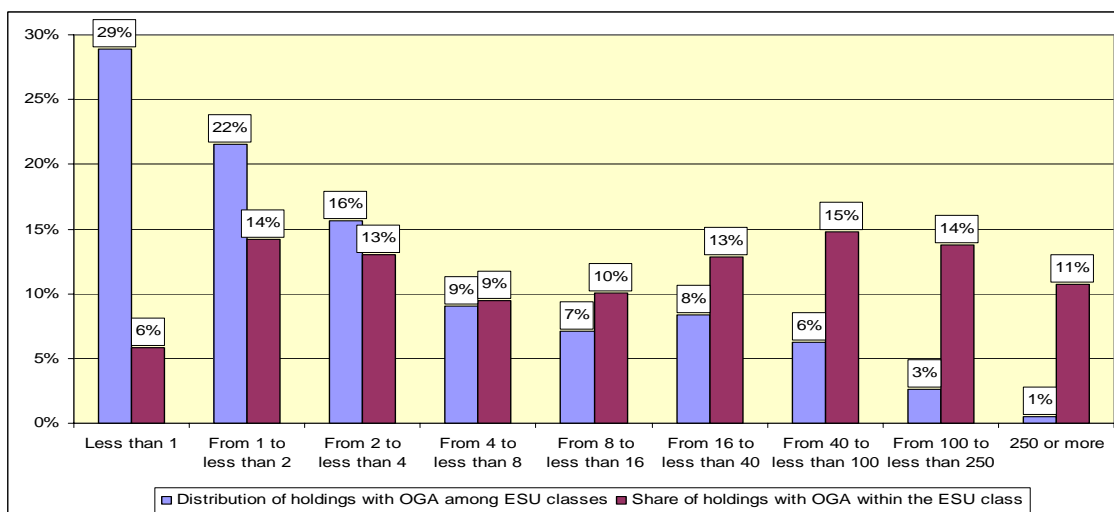
Graph 48 Number of holdings by category of age of the managers in EU-15 – 2000-2007



Graph 49 Average farm of managers younger than 45 years in EU-27 – 2007 (All farms of EU-27 = 100)



Graph 50 Distribution of holdings with non-agricultural gainful activities by category of economic farm size and share of holdings with non-agricultural gainful activities within the categories of economic farm size in EU-27 – 2007



A.3 Information on rural areas

A revised urban-rural typology

The new typology builds on a simple two-step approach to identify population in urban areas:

- a population density threshold (300 inhabitants per km²) applied to grid cells of 1 km²;
- a minimum size threshold (5 000 inhabitants) applied to grouped grid cells above the density threshold

The population living in rural areas is the population living outside the urban areas identified through the method described above.

To determine the population size, the grid cells are grouped based on contiguity (including the diagonals); see below. If the central square is above the density threshold, it will be grouped with each of the other surrounding eight cells that exceed the density threshold.

The approach based on the 1 km² population grid classifies 68% of the EU-27 population as living in urban areas and 32% as living in rural areas. This share is 5 percentage points higher than under the original OECD definition. However, the share of population in rural LAU2s (defined as MAU2s with at least 50% of the residents living in rural areas) is 28%, i.e. very similar to that of the OECD. This classification will be further refined in the future.

See also:

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Urban-rural_typology

Table 2 Share of employment in the primary sector (NACE A_B: agriculture, hunting, forestry and fishing). 2008

CTRY	Predominantly Rural	Intermediate Region	Predominantly Urban	National	Number of Persons (in thousands)
BE	5.6	3.0	1.2	1.9	83.00
BG	28.8	21.5	2.3	19.6	731.60
CZ	5.6	3.2	1.9	3.6	187.60
DK	4.6	2.9	0.3	2.8	83.00
DE	4.6	2.6	0.9	2.1	845.60
EE	9.0	1.4		4.7	30.60
IE	7.9		0.5	5.5	116.90
GR	23.6	13.2	1.1	11.3	545.20
ES	11.9	5.9	1.7	4.5	925.30
FR	6.1	3.3	1.2	3.3	834.30
IT	7.9	4.6	1.3	4.0	1 013.90
CY		4.5		4.5	17.50
LV	16.2	14.4	4.1	9.7	108.40
LT	17.0	7.7	3.3	10.3	157.90
LU		1.7		1.6	5.50
HU	11.2	8.8	0.6	7.6	327.40
MT			2.6	2.4	4.30
NL	5.3	5.3	2.3	3.0	208.30
AT				5.4	2 236.30
PL	27.4	12.0	3.8	14.7	604.20
PT	23.2	13.3	2.7	11.2	2 839.90
RO	38.9	29.6	1.1	30.3	87.00
SI	13.4	6.1		9.0	79.80
SK	5.4	3.0	1.0	3.7	121.80
FI	8.6	4.5	0.6	4.9	100.20
SE	3.8	2.4	0.4	2.1	374.00
UK	7.1	2.4	0.7	1.7	231.30
EU-27	14.2	6.3	1.4	5.8	12 900.80
EU-15	8.8	3.8	1.2	3.4	6 092.50
EU-12	23.7	14.9	2.8	15.2	6 808.30

Source: Eurostat
 Results at national level: Economic Accounts
 Results by "Type of area": Economic Accounts.

Map 1 Importance of primary sector in employment

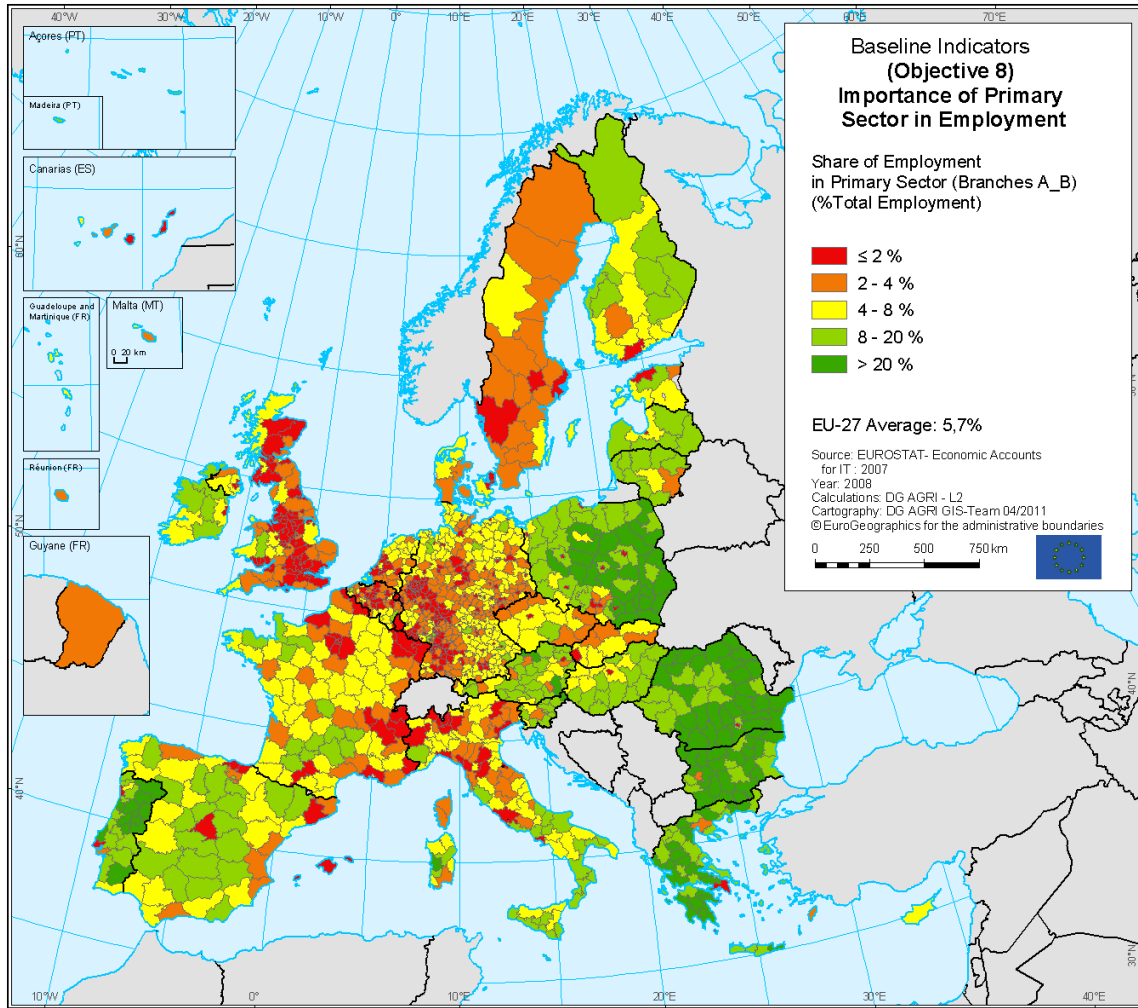


Table 3 Share of the GVA in the primary sector (NACE A_B: agriculture, hunting, forestry and fishing). 2008

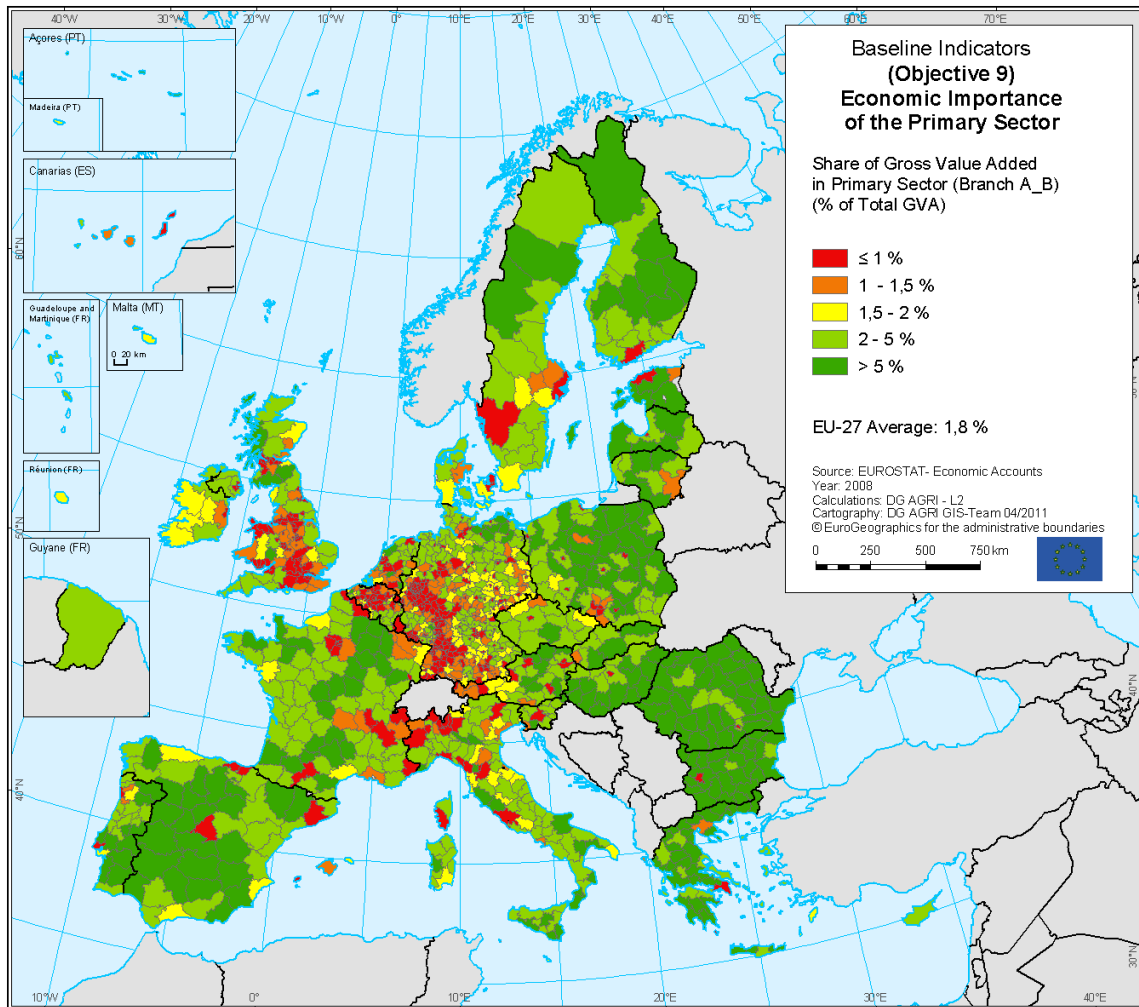
CTRY	Predominantly Rural	Intermediate Regions	Predominantly Urban	National		Million Euro
BE	2.52	1.26	0.39	0.67		1 852.40
BG	15.58	7.64	0.32	6.91		4 774.90
CZ	4.53	2.41	1.17	2.54		4 817.40
DK	2.11	1.21	0.14	1.24		1 411.20
DE	2.18	1.18	0.32	0.90		19 161.00
EE	6.70	0.90		2.77		561.00
IE	2.09		0.13	1.30		1 711.60
GR	6.70	4.06	0.52	3.14		7 318.50
ES	7.77	3.64	0.98	2.66		28 736.30
FR	4.21	2.68	0.56	2.04		31 425.20
IT	3.69	2.57	0.73	2.06	2 007	28 253.20
CY		2.26		2.26		386.70
LV	7.21	5.75	1.22	3.05		874.60
LT	7.97	2.95	1.06	3.72		1 710.40
LU		0.36		0.36		110.30
HU	7.79	5.34	0.22	4.25		5 878.60
MT			1.95	1.95		131.20
NL	2.25	3.03	1.41	1.83		8 827.20
AT	3.87	1.18	0.47	1.71		4 016.80
PL	8.43	3.33	0.84	3.69		17 563.30
PT	5.36	3.30	0.61	2.35		4 324.30
RO	13.04	7.47	0.33	7.45		16 662.50
SI	4.11	1.60		2.51		1 017.80
SK	6.84	3.33	1.22	4.21		3 744.40
FI	5.40	2.78	0.36	2.87		3 938.60
SE	4.37	1.68	0.17	1.77		4 416.60
UK	3.97	1.86	0.38	0.77		12 393.70
EU27	4.49	2.33	0.58	1.80		199 903.50
EU15	3.89	2.17	0.56	1.60		156 073.30
EU12	8.31	3.96	0.81	4.15		43 830.20

Source: Eurostat

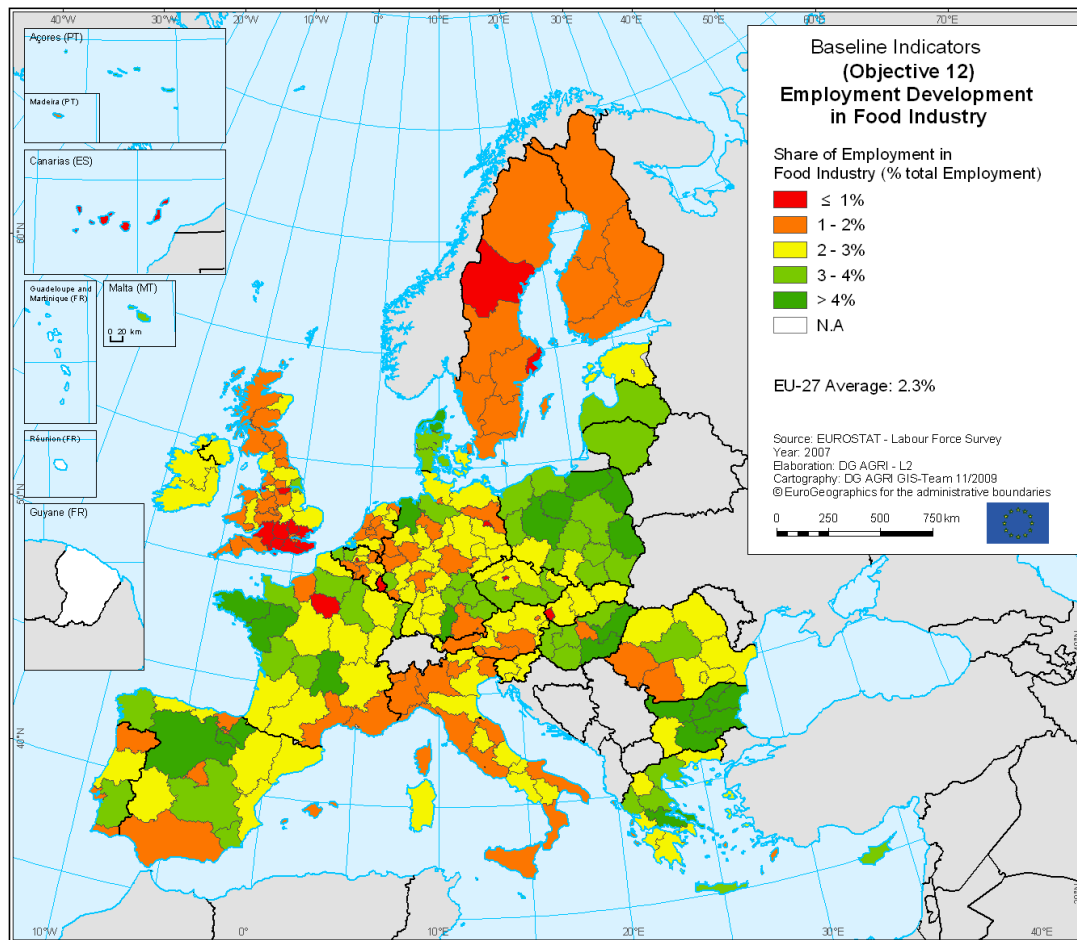
Results at national level: Economic Accounts

Results by "Type of area": Economic Accounts.

Map 2 Importance of the primary sector in GVA



Map 3 Employment in the food industry



Source: DG AGRI – Rural Development in the European Union, Report 2009

Table 4 Income per inhabitant (index of EU-27 =100) – 2008

CTRY	Predominantly Rural	Intermediate Regions	Predominantly Urban	National
BE	72.8	91.6	128.1	114.6
BG	28.5	35.7	99.7	43.4
CZ	65.7	68.5	123.3	80.4
DK	112.0	106.7	171.6	122.8
DE	97.0	103.8	134.3	115.6
EE	45.4	88.7		67.8
IE	110.0		194.1	133.1
GR	79.7	88.6	107.4	93.5
ES	84.0	96.0	114.1	103.2
FR	83.1	93.8	137.7	106.3
IT	94.2	100.1	112.9	103.4
CY		97.0		97.0
LV	33.4	44.0	77.7	56.3
LT	42.2	59.8	94.4	60.9
LU		278.4		278.4
HU	46.8	50.3	142.7	64.4
MT			77.6	77.6
NL	157.2	122.8	137.2	133.3
AT	96.1	135.1	147.1	123.9
PL	40.7	51.1	82.8	56.1
PT	64.5	58.2	93.5	77.6
RO	32.6	45.2	112.9	46.5
SI	76.4	101.9		90.9
SK	58.5	62.4	166.5	72.2
FI	99.7	107.4	158.7	117.6
SE	107.9	111.6	167.6	122.7
UK	75.5	97.7	123.3	115.2
EU27	73.1	99.2	123.6	25 100 pps
EU15	90.0	114.1	126.6	110.7
EU12	42.6	54.1	98.8	58.7

Source: Eurostat

Results at national level: Economic Accounts

Results by "Type of area": Economic Accounts and Demographic Statistics

Map 4 Economic development: GDP per capita at regional level

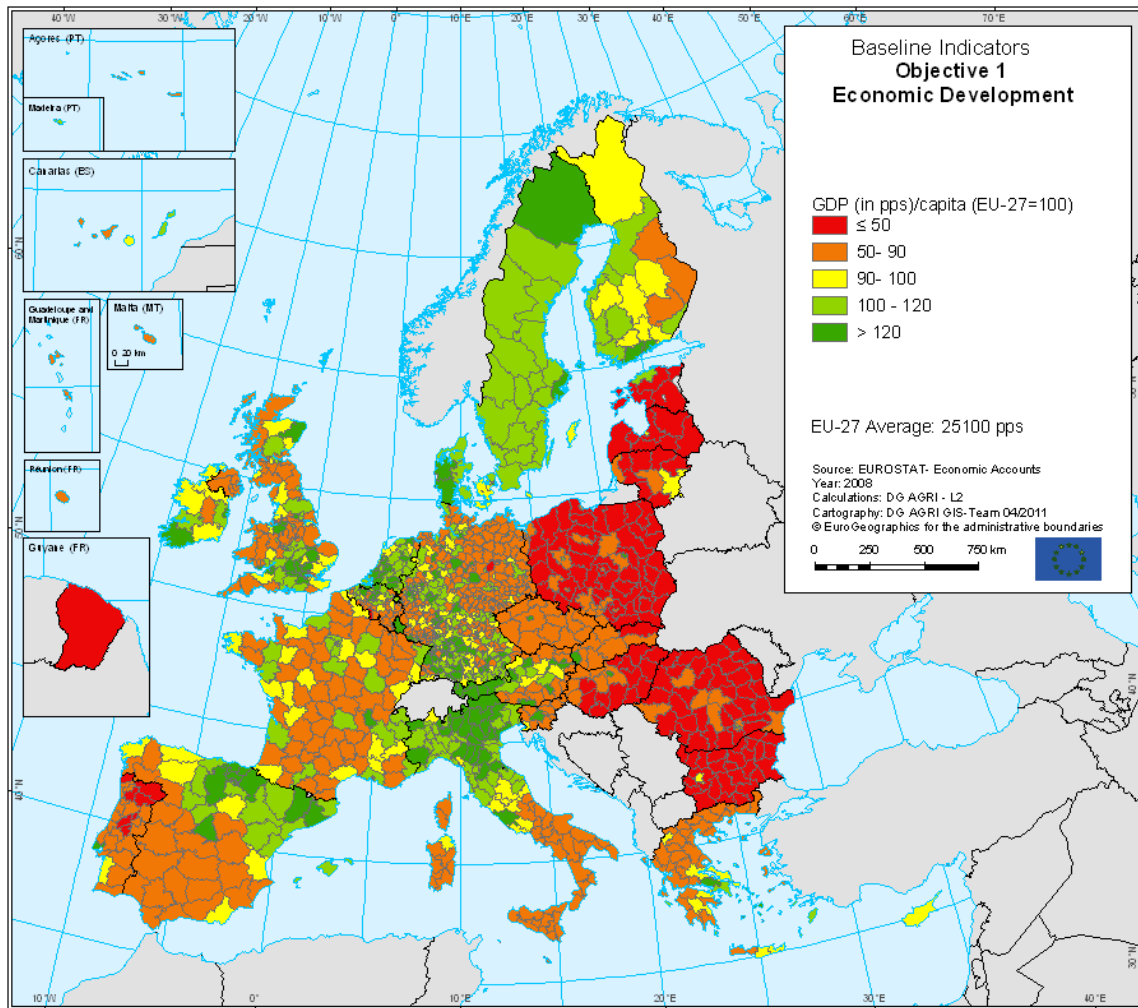


Table 5 Population density (inhabitants/km²) by type of area – 2008

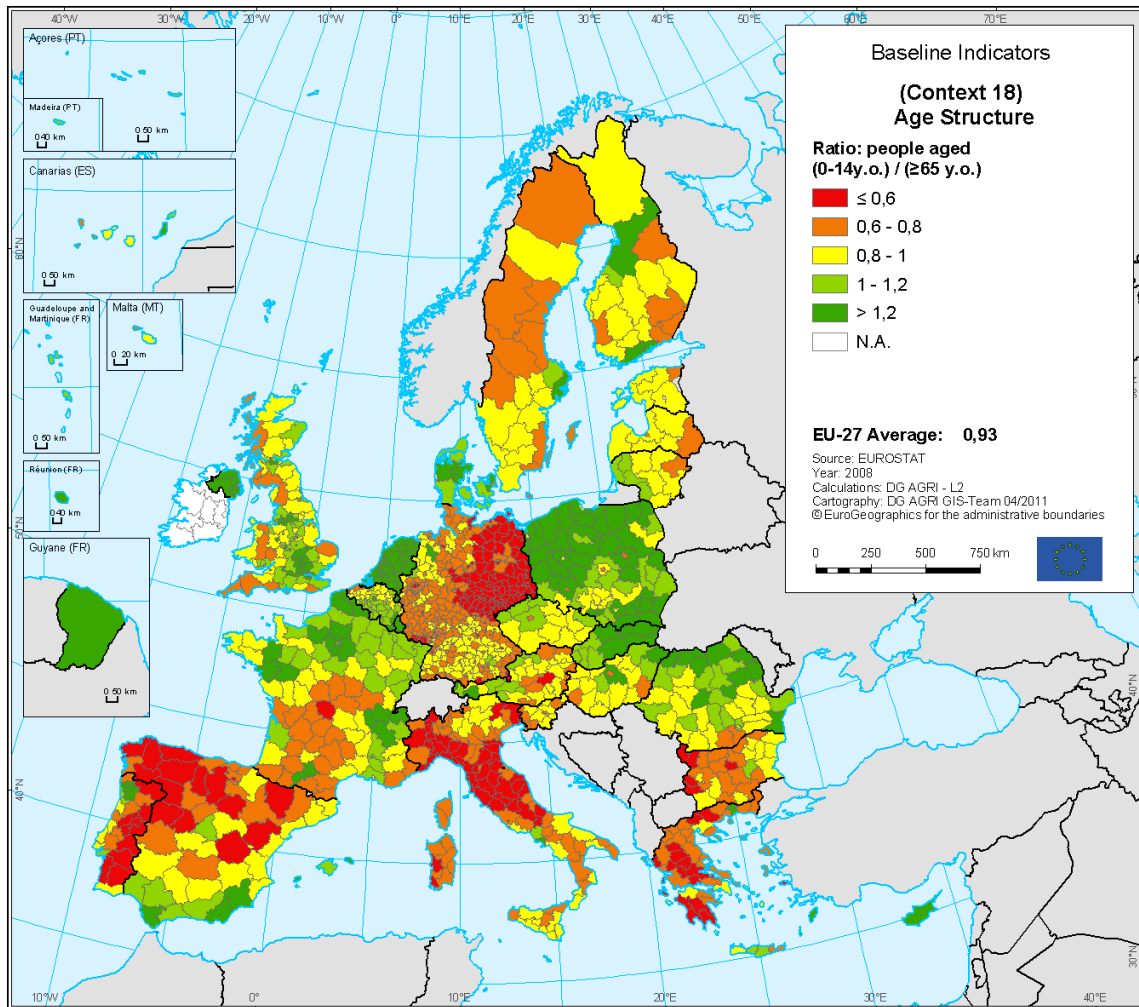
CTRY	Predominantly Rural	Intermediate Regions	Predominantly Urban	National
BE	89.9	264.3	692.3	352.4
BG	49.6	68.3	922.2	68.6
CZ	92.7	158.0	216.0	134.9
DK	76.0	169.5	2 245.3	127.5
DE	100.7	190.2	827.3	229.9
EE	18.1	90.2		30.9
IE	47.6		1 322.8	64.7
GR	44.9	74.4	710.3	85.9
ES	25.9	87.2	302.6	90.0
FR	45.0	132.9	445.7	101.4
IT	91.3	210.9	587.7	202.7
CY		85.7		85.7
LV	22.2	23.0	109.4	36.4
LT	35.8	84.1	90.1	53.6
LU		189.1		189.1
HU	76.9	116.4	3 250.8	107.9
MT			1 305.4	1 305.4
NL	145.9	266.1	748.3	486.8
AT	54.4	140.2	389.0	100.2
PL	83.1	119.6	346.6	121.9
PT	49.7	202.4	771.0	115.3
RO	72.1	102.6	1 278.6	93.5
SI	71.1	146.2		100.4
SK	94.2	114.7	299.1	110.3
FI	9.0	36.7	219.3	17.5
SE	9.6	27.6	301.4	22.5
UK	26.8	138.0	694.9	250.1
EU27	48.4	119.8	516.4	115.7
EU15	41.9	124.6	558.1	122.1
EU12	67.2	105.7	315.3	96.5

Source: Eurostat

Results at national level: Demographic Statistics

Results by "Type of area": Demographic Statistics

Map 5 Age structure (*)



A.4 Medium-term perspectives for agricultural markets

Table A.4 1 Total cereal market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	294.7	280.7	294.0	289.6	293.4	295.0	298.4	301.7	304.5	307.3	310.4	312.9
of which EU-15	212.2	200.0	211.4	207.6	209.9	210.6	212.6	214.6	216.2	217.7	219.5	220.9
EU-12	82.6	80.7	82.7	82.0	83.5	84.4	85.7	87.1	88.3	89.5	90.8	92.0
Consumption	279.5	278.4	276.8	278.4	280.4	283.3	287.6	290.4	293.8	296.6	299.2	300.9
of which EU-15	212.3	211.9	210.0	211.3	213.0	215.6	219.3	221.7	224.5	226.9	229.1	230.6
EU-12	67.2	66.4	66.7	67.1	67.4	67.7	68.3	68.7	69.3	69.7	70.1	70.3
of which food and industri	64.9	64.5	65.4	65.5	65.8	65.9	66.0	66.2	66.3	66.5	66.7	66.8
of which feed	172.3	171.0	167.4	168.9	168.9	169.2	169.3	168.9	169.8	170.7	171.2	171.7
of which bioenergy	7.8	8.7	9.1	9.0	10.7	13.3	17.1	20.2	22.6	24.7	26.3	26.9
Imports	8.0	9.5	10.0	11.5	11.1	11.2	11.4	11.5	12.1	12.5	12.5	12.4
Exports	27.2	29.3	28.2	23.7	23.4	23.0	23.1	23.3	22.9	22.8	22.8	23.3
Beginning stocks	57.1	53.1	36.6	35.6	34.6	35.2	35.0	34.0	33.4	33.1	33.2	33.8
Ending stocks	54.2	37.2	36.4	35.4	36.1	35.9	34.9	34.3	34.0	34.1	34.7	35.4
of which intervention	6.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 2 Total wheat market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	138.5	135.9	146.2	141.1	143.1	143.2	145.1	146.9	148.4	149.6	151.1	152.3
of which EU-15	105.6	104.4	112.0	107.9	109.1	108.9	110.1	111.2	112.0	112.6	113.5	114.1
EU-12	32.9	31.5	34.2	33.2	33.9	34.2	35.0	35.7	36.4	36.9	37.6	38.2
Consumption	128.7	125.6	126.4	126.9	128.5	130.2	132.7	134.0	135.7	136.4	137.7	138.1
of which EU-15	104.4	102.3	102.6	103.0	104.4	105.9	108.1	109.3	110.7	111.3	112.5	112.8
EU-12	24.3	23.3	23.8	23.9	24.1	24.3	24.5	24.7	25.0	25.1	25.3	25.3
of which food and industrie	55.4	55.0	55.9	55.9	56.3	56.3	56.4	56.6	56.8	56.9	57.1	57.2
of which feed	56.6	54.2	53.4	54.0	54.2	54.3	54.4	54.2	54.6	54.8	55.0	55.0
of which bioenergy	3.9	3.8	3.7	3.3	4.3	5.9	7.9	9.4	10.5	11.1	11.6	11.4
Imports	5.3	5.1	4.5	5.3	5.4	5.4	5.4	5.1	5.1	4.9	4.7	4.5
Exports	21.4	20.7	23.0	19.2	18.7	18.3	18.3	18.5	18.1	18.1	18.1	18.8
Beginning stocks	22.3	16.1	11.3	12.4	12.8	13.9	14.0	13.4	12.9	12.5	12.5	12.5
Ending stocks	17.2	12.0	13.2	13.6	14.8	14.9	14.3	13.8	13.4	13.4	13.4	13.4
of which intervention	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 3 Total coarse grain projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	156.2	144.7	147.8	148.6	150.3	151.8	153.3	154.8	156.1	157.7	159.2	160.6
of which EU-15	106.6	95.6	99.3	99.7	100.8	101.7	102.5	103.4	104.2	105.1	106.0	106.8
EU-12	49.6	49.1	48.5	48.8	49.5	50.1	50.8	51.4	52.0	52.6	53.2	53.8
Consumption	150.8	152.8	150.4	151.6	151.9	153.1	154.9	156.4	158.1	160.1	161.5	162.8
of which EU-15	107.9	109.6	107.5	108.3	108.6	109.6	111.1	112.3	113.8	115.5	116.6	117.8
EU-12	42.9	43.2	43.0	43.3	43.3	43.4	43.8	44.0	44.3	44.6	44.9	45.0
of which food and industrial	9.5	9.5	9.5	9.5	9.5	9.5	9.6	9.6	9.6	9.6	9.6	9.6
of which feed	115.6	116.8	114.0	115.0	114.7	114.9	114.9	114.7	115.2	115.9	116.1	116.7
of which bioenergy	3.9	4.9	5.4	5.7	6.4	7.4	9.2	10.8	12.1	13.5	14.7	15.5
Imports	2.8	4.4	5.5	6.2	5.8	5.8	6.1	6.3	7.1	7.6	7.8	7.9
Exports	5.7	8.6	5.2	4.5	4.7	4.7	4.7	4.8	4.7	4.8	4.8	4.6
Beginning stocks	34.7	37.0	25.3	23.1	21.8	21.3	21.0	20.6	20.5	20.6	20.7	21.2
Ending stocks	37.0	25.3	23.1	21.8	21.3	21.0	20.6	20.5	20.6	20.7	21.2	22.0
of which intervention	5.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 4 Soft wheat market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	129.8	127.6	137.1	132.2	134.1	134.2	136.0	137.7	139.1	140.2	141.7	142.7
of which EU-15	97.0	96.2	103.1	99.2	100.3	100.1	101.2	102.2	102.9	103.4	104.2	104.7
EU-12	32.8	31.4	34.0	33.0	33.8	34.1	34.8	35.5	36.2	36.8	37.4	38.0
Consumption	118.8	116.1	116.9	117.1	118.7	120.4	122.8	124.2	125.8	126.5	127.9	128.2
of which EU-15	94.9	93.2	93.5	93.7	95.0	96.5	98.7	99.9	101.4	101.9	103.1	103.4
EU-12	23.9	22.9	23.4	23.4	23.7	23.9	24.1	24.3	24.5	24.6	24.8	24.8
of which food and industry	47.0	46.6	47.4	47.4	47.7	47.7	47.8	47.9	48.0	48.2	48.3	48.5
of which feed	56.0	53.9	53.0	53.6	53.9	53.9	54.1	53.9	54.3	54.4	54.7	54.6
of which bioenergy	3.9	3.8	3.7	3.3	4.3	5.9	7.9	9.4	10.5	11.1	11.6	11.4
Imports	3.1	3.2	2.8	3.4	3.5	3.5	3.6	3.4	3.4	3.3	3.2	3.1
Exports	20.4	19.5	21.9	18.1	17.7	17.3	17.3	17.4	17.0	17.0	16.9	17.6
Beginning stocks	22.3	16.1	11.3	12.4	12.8	13.9	14.0	13.4	12.9	12.5	12.5	12.5
Ending stocks	16.1	11.3	12.4	12.8	13.9	14.0	13.4	12.9	12.5	12.5	12.5	12.5
of which intervention	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 5 Barley market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	62.0	54.4	56.8	56.8	57.2	57.4	57.7	58.0	58.2	58.5	58.7	59.0
of which EU-15	50.7	44.3	46.3	46.3	46.4	46.6	46.8	46.9	47.0	47.2	47.3	47.4
EU-12	11.3	10.1	10.5	10.6	10.7	10.8	10.9	11.1	11.2	11.3	11.4	11.5
Consumption	54.7	55.6	54.7	54.9	54.7	54.8	54.8	54.8	54.9	55.0	55.1	55.2
of which EU-15	45.3	46.0	45.1	45.3	45.1	45.1	45.1	45.1	45.1	45.2	45.2	45.3
EU-12	9.4	9.6	9.5	9.6	9.6	9.6	9.7	9.7	9.8	9.8	9.9	9.9
of which food and industry	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
of which feed	42.3	43.0	42.0	42.4	42.1	42.0	41.8	41.6	41.5	41.5	41.4	41.5
of which bioenergy	0.4	0.7	0.8	0.8	0.9	1.0	1.3	1.5	1.7	1.9	2.1	2.2
Imports	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Exports	3.6	5.4	3.7	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.3
Beginning stocks	14.1	17.9	11.5	10.1	8.9	8.0	7.5	7.1	7.0	7.0	7.2	7.6
Ending stocks	17.9	11.5	10.1	8.9	8.0	7.5	7.1	7.0	7.0	7.2	7.6	8.2
of which intervention	5.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 6 Maize market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	57.8	58.2	57.5	58.2	59.5	60.7	61.8	63.0	64.1	65.3	66.4	67.6
of which EU-15	37.1	35.1	35.9	36.4	37.2	38.0	38.7	39.5	40.2	40.9	41.7	42.4
EU-12	20.8	23.1	21.6	21.8	22.3	22.7	23.1	23.5	23.9	24.3	24.8	25.2
Consumption	60.7	63.1	62.0	62.9	63.5	64.6	66.2	67.5	69.1	70.9	72.2	73.4
of which EU-15	42.4	44.2	43.2	43.8	44.3	45.3	46.6	47.8	49.1	50.7	51.7	52.7
EU-12	18.3	18.8	18.8	19.1	19.1	19.3	19.6	19.7	20.0	20.3	20.5	20.7
of which food and industry	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
of which feed	47.5	49.3	47.9	48.6	48.6	49.0	49.3	49.4	50.0	50.7	51.0	51.6
of which bioenergy	2.3	2.9	3.3	3.5	4.0	4.7	6.0	7.2	8.2	9.3	10.2	10.9
Imports	2.4	3.5	5.1	5.7	5.3	5.3	5.5	5.7	6.4	6.9	7.1	7.2
Exports	2.1	3.1	1.3	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1
Beginning stocks	17.7	15.2	10.8	10.1	10.1	10.3	10.5	10.5	10.5	10.7	10.8	11.0
Ending stocks	15.2	10.8	10.1	10.1	10.3	10.5	10.5	10.5	10.7	10.8	11.0	11.2
of which intervention	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 7 Total oilseeds market projections for the EU, 2009-2020 (mio t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	29.6	28.9	29.4	30.0	30.3	30.8	31.2	31.6	32.1	32.5	33.0	33.3
of which EU-15	19.5	18.3	18.7	19.0	19.2	19.5	19.7	20.0	20.2	20.4	20.8	20.9
EU-12	10.0	10.5	10.7	10.9	11.1	11.3	11.4	11.6	11.8	12.0	12.2	12.4
Consumption	45.2	44.9	45.6	46.2	46.6	47.0	47.5	47.9	48.4	48.8	49.4	49.8
of which EU-15	38.7	38.4	39.1	39.5	39.9	40.2	40.6	40.9	41.3	41.7	42.2	42.5
EU-12	6.5	6.5	6.6	6.7	6.7	6.8	6.9	7.0	7.0	7.1	7.2	7.3
Imports	16.5	16.3	16.8	16.8	16.9	16.8	16.8	16.8	16.8	16.8	16.9	16.9
Exports	0.8	0.7	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Beginning stocks	4.7	4.7	4.3	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0
Ending stocks	4.7	4.3	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	4.0	3.9

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 8 Total oilseed meals market projections for the EU, 2009-2020 (mio t)

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production		25.9	26.0	26.4	26.7	26.9	27.1	27.4	27.6	27.9	28.1	28.4	28.7
of which	EU-15	22.6	22.6	23.1	23.3	23.5	23.6	23.9	24.0	24.2	24.4	24.7	24.9
	EU-12	3.3	3.4	3.4	3.4	3.5	3.5	3.6	3.6	3.6	3.7	3.7	3.8
Consumption		50.4	50.4	51.1	51.6	51.9	52.3	52.7	53.1	53.5	53.8	54.2	54.6
of which	EU-15	43.2	43.1	43.7	44.2	44.4	44.7	45.0	45.3	45.6	45.9	46.2	46.5
	EU-12	7.2	7.3	7.4	7.4	7.5	7.6	7.7	7.8	7.9	7.9	8.0	8.1
Imports		25.2	24.2	25.3	25.9	26.2	26.2	26.1	26.1	26.3	26.4	26.6	26.7
Exports		0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Beginning stocks		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ending stocks		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 9 Total oilseed oils market projections for the EU, 2009-2020 (mio t)

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production		14.2	14.1	14.5	14.8	14.9	15.1	15.4	15.5	15.8	15.9	16.2	16.4
of which	EU-15	11.9	11.7	12.1	12.4	12.5	12.7	12.8	13.0	13.2	13.3	13.6	13.7
	EU-12	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.7
Consumption		16.0	16.3	16.5	16.7	17.1	17.4	17.7	17.9	18.2	18.3	18.3	18.1
of which	EU-15	13.7	13.9	14.1	14.4	14.8	15.0	15.3	15.5	15.7	15.9	15.9	15.7
	EU-12	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4
Imports		2.4	2.6	2.6	2.5	2.7	2.9	3.2	3.3	3.4	3.4	3.2	2.8
Exports		0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6
Beginning stocks		0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Ending stocks		0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 10 Total vegetable oils market projections for the EU, 2009-2020 (mio t)

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production		14.2	14.1	14.5	14.8	14.9	15.1	15.4	15.5	15.8	15.9	16.2	16.4
of which	EU-15	11.9	11.7	12.1	12.4	12.5	12.7	12.8	13.0	13.2	13.3	13.6	13.7
	EU-12	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.7
Consumption		23.5	23.9	24.2	24.6	25.2	25.7	26.3	26.7	27.1	27.4	27.4	27.3
of which	EU-15	20.8	21.2	21.5	21.9	22.5	22.9	23.4	23.8	24.1	24.4	24.4	24.3
	EU-12	2.6	2.7	2.7	2.7	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.0
of which bioenergy		8.9	9.1	9.4	9.8	10.3	10.7	11.3	11.7	12.1	12.3	12.3	12.1
Imports		9.9	10.4	10.5	10.6	11.0	11.4	11.9	12.2	12.5	12.6	12.4	12.1
Exports		0.9	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Beginning stocks		1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Ending stocks		1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 11 Area under arable crops in the EU, 2009-2020 (mio ha)

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals		58.5	56.3	57.7	57.1	57.4	57.4	57.6	57.8	57.9	58.0	58.2	58.3
of which	EU-15	35.5	34.3	35.1	34.8	34.9	34.9	35.0	35.1	35.2	35.2	35.3	35.4
	EU-12	23.1	22.0	22.5	22.4	22.5	22.5	22.6	22.6	22.7	22.8	22.8	22.9
Soft wheat		22.9	23.0	23.8	23.3	23.4	23.4	23.5	23.7	23.7	23.8	23.9	24.0
Durum wheat		2.8	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Barley		13.9	12.4	12.8	12.8	12.8	12.8	12.8	12.8	12.7	12.7	12.7	12.7
Maize		8.4	8.1	8.2	8.2	8.4	8.5	8.6	8.7	8.8	9.0	9.1	9.2
Rye		2.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.5
Other cereals		7.7	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.2	7.1
Oilseeds		10.8	10.9	10.8	10.9	10.9	11.0	11.0	11.0	11.0	11.0	11.1	11.1
of which	EU-15	6.0	5.9	5.9	6.0	5.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	EU-12	4.8	5.0	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Rapeseed		6.5	6.9	6.9	7.0	7.0	7.1	7.1	7.1	7.2	7.2	7.3	7.3
Sunseed		3.9	3.7	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4
Soyabeans		0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Sugar beet		1.6	1.6	1.5	1.6	1.7	1.7	1.7	1.8	1.7	1.8	1.7	1.8
Protein crops		0.9	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total selected arable crops		71.9	70.0	71.1	70.8	71.0	71.1	71.3	71.5	71.6	71.8	72.0	72.1
Total utilized agricultural area		188.8	188.3	187.7	187.2	186.6	186.1	185.5	185.0	184.4	183.9	183.3	182.8

Note: years refer to campaign years (e.g. 2009 refers to the marketing period of the Summer 2009 harvest, i.e. July 2009 to June 2010)

Table A.4 12 Beef and veal market projections for the EU, 2009–2020 ('000 t cwe)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Indigenous Production	7 995	7 954	7 739	7 589	7 681	7 798	7 688	7 514	7 455	7 471	7 451	7 430
of which EU15	7 149	7 122	6 946	6 815	6 894	6 996	6 910	6 767	6 720	6 737	6 719	6 700
of which EU12	847	832	793	775	787	801	778	746	735	734	732	730
Imports of live animals	1	0	0	0	0	0	0	0	0	0	0	0
Exports of live animals	61	89	88	84	80	77	75	73	71	69	66	64
Net Production	7 936	7 865	7 651	7 506	7 601	7 721	7 613	7 441	7 385	7 403	7 385	7 366
Imports (meat)	428	430	496	509	545	552	563	635	640	623	616	619
Exports (meat)	124	138	123	114	116	128	106	95	91	88	84	79
Net trade	-304	-293	-373	-395	-429	-424	-457	-540	-549	-535	-532	-540
Consumption	8 240	8 139	8 079	7 959	8 012	8 063	8 017	7 950	7 915	7 921	7 913	7 904
of which EU15	7 657	7 558	7 521	7 402	7 442	7 486	7 444	7 382	7 347	7 352	7 343	7 331
of which EU12	583	582	558	557	570	577	573	568	568	569	570	572
per capita consumption (kg)	16.55	16.33	16.00	15.70	15.90	16.08	15.89	15.67	15.53	15.51	15.43	15.38
of which EU15	19.42	19.07	18.88	18.50	18.52	18.55	18.37	18.16	18.01	17.96	17.88	17.80
of which EU12	5.64	5.63	5.41	5.40	5.53	5.61	5.57	5.52	5.53	5.55	5.57	5.60

Table A.4 13 Pig meat market projections for the EU, 2009–2020 ('000 t cwe)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Indigenous Production	22 186	22 333	21 804	22 610	23 082	23 092	22 914	23 111	23 484	23 527	23 482	23 738
of which EU15	18 836	18 976	18 586	19 263	19 697	19 759	19 664	19 846	20 176	20 248	20 249	20 474
of which EU12	3 350	3 356	3 218	3 346	3 385	3 333	3 251	3 264	3 308	3 279	3 233	3 264
Imports of live animals	0	1	1	0	0	0	0	0	0	0	0	0
Exports of live animals	120	79	81	67	67	67	67	67	67	66	66	66
Net Production	22 066	22 255	21 724	22 543	23 016	23 025	22 848	23 044	23 417	23 461	23 416	23 672
Imports (meat)	39	37	36	42	44	41	41	41	41	42	41	41
Exports (meat)	1 538	1 657	1 594	1 564	1 501	1 408	1 325	1 273	1 250	1 213	1 194	1 185
Net trade	1500	1620	1558	1522	1458	1367	1284	1231	1209	1171	1153	1144
Consumption	20 566	20 420	20 166	20 866	21 304	21 309	21 368	21 632	21 997	22 024	22 021	22 247
of which EU15	16 299	16 192	15 990	16 636	17 032	17 051	17 093	17 343	17 666	17 692	17 691	17 896
of which EU12	4 267	4 228	4 176	4 230	4 273	4 258	4 275	4 289	4 331	4 332	4 330	4 351
per capita consumption (kg)	41.32	40.87	40.21	41.46	42.19	42.07	42.06	42.47	43.07	43.02	42.92	43.27
of which EU15	41.33	40.85	40.14	41.57	42.38	42.25	42.19	42.65	43.29	43.22	43.08	43.45
of which EU12	41.29	40.94	40.48	41.03	41.47	41.36	41.56	41.74	42.18	42.25	42.29	42.56

Table A.4 14 Poultry meat market projections for the EU, 2009–2020 ('000 t cwe)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Indigenous Production	11 663	11 618	11 918	12 000	12 083	12 129	12 196	12 272	12 371	12 410	12 466	12 491
of which EU15	8 939	8 912	9 141	9 212	9 274	9 307	9 355	9 411	9 489	9 516	9 583	9 599
of which EU12	2 724	2 706	2 777	2 788	2 810	2 822	2 841	2 861	2 882	2 894	2 883	2 891
Imports of live animals	0	1	1	1	1	1	1	1	1	1	1	1
Exports of live animals	7	7	8	8	8	8	8	8	7	7	7	7
Net Production	11 657	11 611	11 911	11 994	12 076	12 122	12 189	12 265	12 364	12 404	12 460	12 484
Imports (meat)	849	814	807	800	816	809	830	845	857	871	881	892
Exports (meat)	940	882	922	930	900	902	840	810	779	758	757	726
Net trade	91	68	116	129	84	93	11	-35	-78	-113	-124	-166
Consumption	11 572	11 551	11 802	11 864	12 003	12 054	12 223	12 354	12 494	12 585	12 661	12 742
of which EU15	8 896	8 888	9 089	9 133	9 256	9 298	9 454	9 576	9 702	9 784	9 851	9 925
of which EU12	2 677	2 663	2 714	2 732	2 747	2 756	2 768	2 778	2 792	2 801	2 810	2 817
per capita consumption (kg)	23.25	23.12	23.53	23.58	23.77	23.80	24.06	24.25	24.46	24.58	24.68	24.78
of which EU15	22.56	22.42	22.82	22.82	23.03	23.04	23.34	23.55	23.78	23.90	23.99	24.10
of which EU12	25.90	25.79	26.30	26.50	26.66	26.77	26.91	27.04	27.20	27.32	27.44	27.56

Table A.4 15 Sheep and goat meat market projections for the EU, 2009–2020 ('000 t cwe)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Indigenous Production	878	854	844	824	811	817	803	795	793	784	784	776
of which EU15	791	771	762	742	732	737	724	717	716	707	707	699
of which EU12	87	82	82	82	80	80	79	78	78	77	77	77
Imports of live animals	0	0	0	0	0	0	0	0	0	0	0	0
Exports of live animals	4	7	13	12	11	11	12	11	12	12	12	12
Net Production	874	847	831	812	800	805	791	784	781	772	772	764
Imports (meat)	271	268	262	266	265	265	260	271	262	262	255	255
Exports (meat)	8	11	17	16	16	15	16	15	16	16	16	16
Net trade	-263	-257	-245	-251	-249	-250	-244	-256	-246	-246	-238	-238
Consumption	1 137	1 104	1 076	1 062	1 051	1 053	1 036	1 040	1 028	1 019	1 011	1 004
of which EU15	1 057	1 026	998	983	975	977	960	965	953	946	938	931
of which EU12	80	79	78	78	76	77	75	75	74	73	73	73
per capita consumption (kg)	2.28	2.21	2.15	2.11	2.08	2.08	2.04	2.04	2.01	1.99	1.97	1.95
of which EU15	2.68	2.59	2.50	2.46	2.43	2.42	2.37	2.37	2.34	2.31	2.28	2.26
of which EU12	0.78	0.76	0.76	0.76	0.74	0.75	0.73	0.73	0.72	0.72	0.72	0.71

Table A.4 16 Aggregate meat market projections for the EU, 2009–2020 ('000 t cwe)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Indigenous Production	42 722	42 758	42 305	43 023	43 658	43 836	43 601	43 691	44 103	44 192	44 183	44 435
of which EU15	35 715	35 782	35 435	36 032	36 596	36 799	36 653	36 741	37 100	37 208	37 258	37 473
of which EU12	7 007	6 977	6 870	6 991	7 061	7 037	6 948	6 950	7 003	6 983	6 925	6 963
Imports of live animals	2	2	2	1	1	1	1	1	1	1	1	1
Exports of live animals	191	182	189	170	166	163	161	158	157	154	152	150
Net Production	42 533	42 578	42 118	42 854	43 493	43 674	43 441	43 534	43 947	44 039	44 032	44 287
Imports (meat)	1 586	1 549	1 600	1 617	1 669	1 668	1 693	1 792	1 800	1 798	1 793	1 807
Exports (meat)	2 610	2 687	2 656	2 623	2 533	2 454	2 288	2 194	2 136	2 075	2 051	2 006
Net trade	1025	1138	1055	1006	864	786	594	401	336	277	258	199
Consumption	41 515	41 214	41 124	41 751	42 371	42 480	42 643	42 976	43 433	43 549	43 606	43 896
of which EU15	33 909	33 663	33 597	34 154	34 705	34 812	34 951	35 266	35 668	35 774	35 822	36 083
of which EU12	7 607	7 551	7 527	7 597	7 666	7 668	7 692	7 710	7 765	7 776	7 784	7 813
per capita consumption (kg)	83.41	82.52	81.89	82.85	83.95	84.03	84.05	84.43	85.08	85.10	85.00	85.39
of which EU15	85.98	84.92	84.35	85.35	86.35	86.26	86.27	86.73	87.41	87.38	87.23	87.61
of which EU12	73.60	73.13	72.95	73.69	74.41	74.49	74.78	75.03	75.64	75.84	76.02	76.43
of which Beef and Veal meat	16.55	16.33	16.00	15.70	15.90	16.08	15.89	15.67	15.53	15.51	15.43	15.38
of which Sheep and Goat meat	2.28	2.21	2.15	2.11	2.08	2.08	2.04	2.04	2.01	1.99	1.97	1.95
of which Pig meat	41.32	40.87	40.21	41.46	42.19	42.07	42.06	42.47	43.07	43.02	42.92	43.27
of which Poultry meat	23.25	23.12	23.53	23.58	23.77	23.80	24.06	24.25	24.46	24.58	24.68	24.78

Table A.4 17 Milk production, deliveries and dairy herd in the EU, 2009–2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Dairy cows (mio heads)	23.7	23.7	23.5	23.4	23.2	22.9	22.8	22.6	22.5	22.3	22.2	22.0
of which EU15	17.9	18.0	17.9	17.8	17.7	17.6	17.5	17.4	17.4	17.4	17.3	17.2
of which EU12	5.8	5.7	5.6	5.6	5.5	5.3	5.3	5.2	5.1	5.0	4.9	4.8
Milk yield (kg/dairy cow)	6,256	6,283	6,391	6,443	6,514	6,593	6,666	6,740	6,776	6,839	6,915	6,995
of which EU15	6,738	6,773	6,883	6,930	6,987	7,054	7,134	7,199	7,209	7,256	7,318	7,387
of which EU12	4,780	4,742	4,831	4,885	4,980	5,074	5,106	5,185	5,286	5,387	5,493	5,599
Milk production (mio t)	148.5	148.6	150.3	150.5	150.8	151.0	151.8	152.3	152.5	152.7	153.2	153.8
of which EU15	120.6	121.6	123.1	123.3	123.7	123.9	125.0	125.6	125.8	125.9	126.3	126.8
of which EU12	27.9	27.1	27.2	27.2	27.1	27.1	26.8	26.7	26.8	26.8	26.9	27.0
Delivered to dairies (mio t)	133.6	133.9	135.7	136.0	136.4	136.7	137.6	138.1	138.4	138.7	139.3	139.9
of which EU15	115.3	116.4	118.0	118.2	118.6	118.9	120.0	120.5	120.7	120.9	121.3	121.8
of which EU12	18.3	17.5	17.7	17.8	17.8	17.8	17.6	17.6	17.7	17.8	18.0	18.1
On-farm use and direct sales (mio)	14.9	14.7	14.6	14.5	14.4	14.3	14.3	14.2	14.1	14.0	13.9	13.9
of which EU15	5.3	5.2	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0
of which EU12	9.6	9.5	9.5	9.4	9.3	9.3	9.2	9.1	9.1	9.0	8.9	8.9
Delivery ratio (in %)	89.9	90.1	90.3	90.4	90.4	90.5	90.6	90.7	90.8	90.8	90.9	91.0
of which EU15	95.6	95.7	95.9	95.9	95.9	95.9	96.0	96.0	96.0	96.0	96.0	96.1
of which EU12	65.5	64.7	65.2	65.3	65.6	65.7	65.7	65.8	66.1	66.5	66.8	67.2
Fat content of milk (in %)	4.03	4.04	4.04	4.04	4.04	4.04	4.04	4.03	4.03	4.03	4.03	4.03
Non-fat solid content of milk (in %)	9.28	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29	9.29

Table A.4 18 Cheese market projections for the EU, 2009–2020 ('000 t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production	8 721	8 828	8 971	9 024	9 096	9 168	9 274	9 376	9 438	9 495	9 558	9 625
of which EU15	7 583	7 704	7 807	7 837	7 889	7 947	8 026	8 101	8 141	8 175	8 214	8 258
of which EU12	1 138	1 125	1 163	1 188	1 207	1 221	1 248	1 275	1 297	1 320	1 344	1 367
Imports	84	78	71	82	71	68	73	66	66	72	75	79
Exports	577	536	604	611	593	585	603	608	597	590	588	593
Consumption	8 228	8 371	8 438	8 495	8 574	8 651	8 744	8 834	8 908	8 977	9 046	9 111
of which EU15	7 133	7 240	7 286	7 327	7 383	7 438	7 505	7 567	7 619	7 666	7 712	7 756
of which EU12	1 095	1 131	1 153	1 169	1 191	1 213	1 239	1 267	1 289	1 311	1 333	1 355
per capita consumption (kg)	16.53	16.75	16.83	16.88	16.98	17.08	17.21	17.34	17.44	17.54	17.63	17.72
of which EU15	18.09	18.26	18.29	18.31	18.37	18.43	18.52	18.61	18.67	18.73	18.78	18.83
of which EU12	10.60	10.95	11.17	11.33	11.56	11.78	12.05	12.33	12.55	12.78	13.02	13.25

Table A.4 19 Butter market projections for the EU, 2009–2020 ('000 t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production	2 083	2 013	2 059	2 060	2 057	2 047	2 070	2 073	2 060	2 060	2 064	2 081
of which EU15	1 849	1 801	1 845	1 850	1 847	1 838	1 862	1 865	1 854	1 853	1 857	1 874
of which EU12	234	212	214	210	210	209	208	207	206	206	207	207
Imports	62	37	34	35	33	34	36	36	37	37	37	38
Exports	148	146	130	113	82	88	103	107	100	96	95	97
Consumption	2 001	1 979	1 983	1 990	1 991	1 989	1 995	1 998	2 002	2 002	2 005	2 009
of which EU15	1 803	1 788	1 793	1 801	1 801	1 800	1 805	1 808	1 812	1 812	1 815	1 818
of which EU12	199	191	189	190	190	189	190	190	190	190	191	191
per capita consumption (kg)	4.02	3.96	3.95	3.96	3.94	3.93	3.93	3.92	3.92	3.91	3.91	3.91
of which EU15	4.57	4.51	4.50	4.50	4.48	4.46	4.46	4.45	4.44	4.43	4.42	4.41
of which EU12	1.92	1.85	1.83	1.84	1.84	1.84	1.84	1.85	1.85	1.86	1.86	1.87
Ending Stocks	115	40	20	12	28	32	40	44	39	38	38	50
of which private	38	38	20	12	28	32	40	44	39	38	38	50
of which intervention	77	2	0	0	0	0	0	0	0	0	0	0

Table A.4 20 SMP market projections for the EU, 2009–2020 ('000 t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production	976	883	862	809	785	765	799	788	772	757	749	746
of which EU15	813	763	749	699	680	667	704	697	685	674	670	669
of which EU12	162	120	114	110	105	99	95	91	87	83	80	77
Imports	6	3	3	3	3	3	3	3	3	3	3	3
Exports	230	271	266	230	204	190	187	186	171	168	168	168
Consumption	647	647	646	641	632	622	625	614	604	593	586	578
of which EU15	571	571	570	566	556	546	549	539	528	518	511	504
of which EU12	75	76	76	76	76	76	76	76	75	75	75	75
Ending Stocks	278	246	199	140	93	49	39	31	32	31	29	31
of which private	20	60	60	61	74	49	39	31	32	31	29	31
of which intervention	258	186	139	79	19	0	0	0	0	0	0	0

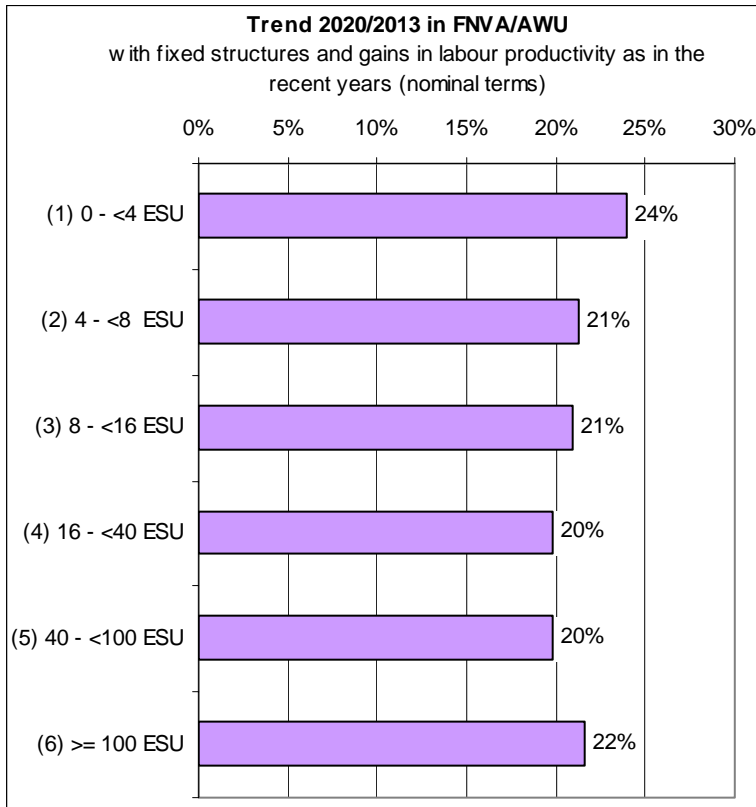
Table A.4 21 WMP market projections for the EU, 2009–2020 ('000 t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production	790	784	789	807	804	796	799	804	801	793	796	787
of which EU15	736	733	738	752	750	742	746	750	747	739	741	733
of which EU12	54	51	51	55	54	53	54	54	55	54	55	54
Imports	1	2	2	1	1	1	1	1	1	1	1	1
Exports	456	451	445	455	452	446	449	451	447	441	445	438
Consumption	335	335	345	353	353	350	352	355	356	354	353	352
of which EU15	299	301	309	316	316	313	316	318	320	318	316	315
of which EU12	36	34	37	37	37	37	37	37	37	37	37	37

Table A.4 22 Biofuels market projections for the EU, 2009–2020 (billion litres)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Usable production	15.3	15.8	16.4	16.9	18.2	20.0	22.5	24.9	26.9	29.1	31.7	35.1
of which												
Ethanol	5.7	6.1	6.3	6.4	7.2	8.5	10.3	12.0	13.4	14.8	16.3	18.0
of which 2nd generat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.8	1.6	3.0
Biodiesel	9.6	9.7	10.1	10.5	11.1	11.5	12.1	12.8	13.5	14.3	15.4	17.1
of which 2nd generat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	1.1	2.1	4.0
Consumption	17.1	18.8	20.1	22.8	25.1	28.2	31.6	34.7	37.3	39.9	41.7	42.7
Ethanol	7.1	7.8	9.1	11.1	12.5	13.8	15.7	18.0	19.9	21.5	22.2	21.8
Biodiesel	10.0	11.0	11.0	11.7	12.6	14.5	15.9	16.7	17.5	18.3	19.5	20.9
other use of ethanol	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Energy share	2.3	3.1	3.4	4.0	4.7	5.5	6.2	6.8	7.3	7.8	8.2	8.5
Ethanol	2.3	2.6	3.3	4.3	5.0	5.6	6.6	7.8	8.7	9.6	10.0	9.8
Biodiesel	4.1	4.4	4.3	4.6	4.9	5.5	6.0	6.3	6.6	6.9	7.3	7.9
Net trade	-1.9	-3.0	-3.6	-5.9	-6.9	-8.2	-9.1	-9.9	-10.4	-10.8	-9.9	-7.6
Ethanol	-1.4	-1.7	-2.8	-4.7	-5.3	-5.2	-5.3	-6.0	-6.5	-6.8	-5.9	-3.8
Biodiesel	-0.5	-1.3	-0.9	-1.1	-1.6	-3.0	-3.8	-3.9	-3.9	-4.0	-4.0	-3.8
Producer Price	51.8	61.9	65.5	61.8	58.9	56.9	54.5	52.9	52.4	52.5	52.0	48.8
Ethanol	51.8	61.9	65.5	61.8	58.9	56.9	54.5	52.9	52.4	52.5	52.0	48.8
Biodiesel	80.0	86.6	97.3	101.2	102.6	106.1	111.1	113.6	116.7	116.7	118.1	119.4

Graph 51 Trend in income by economic size



Source: EU FADN DG AGRI



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 2

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Annex 2: Greening the CAP

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Annex 2a: Factsheets on the environment

Annex 2b: Climate change impact of different greening measures

Annex 2c: Rural development premia and other information on costs

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Annex 2e: Annex on cross compliance

This annex complements Annexes 3 and 4 on direct payments and rural development and looks in particular at the impact of greening direct payments that is part of the Integration scenario.

The proposal of the Commission for the Multiannual Financial Framework for the period 2014-2020 of 29 June 2011 (the MFF proposal) that sets the budget and main orientations for the CAP now makes 30% of direct payments conditional on 'greening' with a view to shifting the agricultural sector in a more sustainable direction.¹

1. THE OBJECTIVE OF FURTHER GREENING IN THE LIGHT OF CURRENT TRENDS

Agriculture and forestry covering 47% and 37% of the EU territory respectively have an important role to play in delivering environmental public goods and addressing climate change, mainly through sustainable land management. The CAP has evolved throughout the years to increasingly recognize and support agriculture and forestry in this role, while mitigating adverse effects from agriculture polluting the soil, water and air, emitting greenhouse gases and threatening habitats and wildlife. In this respect, both the intensification of production and abandonment of traditional land management practices present a threat to ecosystems.

The CAP today supports the sustainable management of natural resources by means of a combination of instruments. Farmers and other land managers are encouraged to protect the environment and fight climate change by direct payments that are decoupled from production and linked to environmental requirements via cross compliance, as well as by more targeted measures under rural development programmes, notably agri-environment measures. Still, the role of the CAP goes beyond the impact of specific measures and needs to be seen in the broader terms of maintaining a sustainable agriculture embedded in vibrant rural communities throughout the EU territory.²

Annex 2a provides an overview of the current situation of ecosystems and the role of agriculture and the CAP in the EU.³ Emissions of nitrous oxide and methane from agriculture have been decreasing faster than in other sectors, while carbon dioxide emissions from cropland and the cultivation of peatlands have continued. Agriculture and forestry have been making an important contribution to the production of renewable resources. Natura 2000 sites cover over 10% of total agricultural area; still, 40-85% of habitats and 40-70% of species of European interest have an unfavourable conservation status. Although the concentration of nitrates in surface and ground water has decreased

¹ Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions *A budget for Europe 2020*, 29.6.2011, COM(2011) 500 final

² On the role of direct payments and rural development in the delivery of environmental public goods see *APP Briefs no 2 and 4*, the *Study on the Provision of Public Goods through agriculture in the European Union (2009)*, the final report of the Thematic Working Group 3 of the ENRD *Public goods and public intervention in agriculture*, the studies *Reflecting environmental land use needs into EU policy: Preserving and enhancing the environmental benefits of "Land Services": Soil sealing, biodiversity corridors, intensification /marginalisation of land use and the permanent grassland (2009)* and *Reflecting environmental land use needs into EU policy: preserving and enhancing the environmental benefits of unfarmed features on EU farmland (2008)*, and the *CLIMSOIL* study (2008).

³ See also Annex 1 on the *Situation and prospects for EU agriculture and rural areas*.

in most Member States, significant pressures on water quality (notably nitrates, particularly in intensive livestock areas, and plant protection products) and quantity remain with 24% of water abstraction used for agriculture (rising to 80% in some Member States with serious water shortage problems). Phosphorus loads to waters originating from agriculture appears to be a key constraint to reach good ecological status of waters across the EU. This means that further targeted action will be required in intensive agricultural areas to meet targets under the Water Framework Directive⁴ and the Nitrates Directive.⁵ Most importantly, soil erosion remains a very serious problem throughout Europe, while an estimated 45% of soils have low organic matter.

All in all, despite significant efforts the results to date in terms of preventing further degradation of ecosystems are mixed. This means that more efforts will no doubt be required, also to meet the ambitious EU climate and energy and biodiversity targets that are part of the Europe 2020 strategy (in particular, for a Resource Efficient Europe). Hence sustainable management of natural resources and climate action are among the main objectives of the future CAP that also strongly relies on maintaining a sustainable agriculture and a balanced territorial development throughout the EU.

In particular, the future CAP should be geared in order to contribute significantly to meeting the ambitious EU biodiversity headline target for 2020. In this respect the EU biodiversity strategy to 2020⁶ includes the following target for agriculture: *Maximising areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP so as to ensure the conservation of biodiversity and to bring about a measurable improvement in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU 2010 Baseline, thus contributing to enhance sustainable management*".

The need to further green the CAP is addressed in different ways in the alternative policy options that are the subject of the current impact assessment. The table below highlights the elements directly aimed at enhancing the environmental performance of the CAP in the options under consideration, although other elements such as the distribution of support may also have important environmental consequences (see Annex 3 on direct payments):

Policy option	Greening element
Adjustment	Enhanced cross compliance Moderate increase in Pillar II budget with the additional resources available for the same 'new challenges' as in the Health Check (climate change, water, biodiversity, renewable energy and innovation)
Integration	Greening component of direct payments including a specific top-up for Natura 2000

⁴ Directive 2000/60/EC

⁵ Directive 91/676/EEC

⁶ COM(2011)244 final

	Enhanced cross compliance Reinforced strategic targeting in Pillar II, with the environment and climate change as guiding considerations
Refocus	Doubling of 2 nd pillar budget with all budgetary resources available for the environment and climate change

In relation to the different instruments, the following elements are worth noting:

- a greening component of direct payments under the Integration scenario to support, across the whole of the EU territory, simple, generalized, non-contractual, annual environmental measures that go beyond cross compliance;
- enhanced cross compliance under the Adjustment and the Integration scenario, including improvements in the GAEC to better address climate change as well as the inclusion of the Water Framework Directive once implemented; and
- a stronger rural development policy, that benefits from additional funding under the Adjustment and Refocus scenario, as well as reinforced strategic targeting in the Integration scenario.

In all cases, such further greening of the CAP will need to respond to the rising environmental and climate change challenges and the growing expectations that EU citizens have from the CAP in terms of environmental performance and landscape amenities.⁷ At the same time, this should neither put under threat the viability of the farming sector nor unduly complicate the management of the policy.

These considerations are echoed in the results of the public consultation where the majority of respondents identified climate change, biodiversity, soil protection, landscape and water as the main environmental challenges, and strongly supported rural development measures. In relation to the greening of direct payments, environmental organizations and think-tanks broadly supported the orientations in the Communication, with organizations from the farming and processing sectors expressing concerns about the effect on the competitiveness of EU agriculture.

⁷ *The value of EU agricultural landscape* (JRC IPTS draft March 2011 - work in progress) estimates that society's willingness to pay for landscape varies between EUR 89-169/ha with an average value of EUR 142/ha in 2009. The average for grassland and permanent crops is EUR 189/ha and for arable land EUR 113/ha. The total value of EU landscape in 2009 is estimated to be between EUR 16.1-30.8 billion per year (with an average of EUR 25.8 billion, representing around 7.5% of the total value of EU agricultural production and roughly half of CAP expenditure).

2. DESCRIPTION OF A GREENING COMPONENT OF DIRECT PAYMENTS

2.1. The greening component within the direct payments model

The greening component of direct payments would operate as follows:

- each farmer will be required to undertake a number of environmental actions, such as maintenance of permanent grassland, use of green cover, crop rotation and ecological set aside as applicable; some apply to all agricultural areas, while others apply only to grassland, arable land or permanent crops;
- these measures will cover the whole EU territory, will be defined as uniformly as possible, and all farmers in a region will get the same payment per ha (corresponding to the share of direct payments allocated to greening);
- to retain the WTO Green Box classification of Pillar I payments, the greening component will need to be a decoupled payment applying to all farmers in a specific area (MS or region); in this respect, care must be exercised in rewarding specific types of production, and certainly not production *per se*.

The degree of ambition for the greening depends on the actual content of the measures. These need to be defined in such a way that they bring important benefits without threatening the viability of the farming sector and without unduly complicating the management of the system, i.e. to strike the right balance between pushing farmers to adopt more environmentally friendly practices for which they may not be fully compensated and still ensuring that these are framed as incentives (that is a combination of "carrot" and "stick" approach). The lower the overall direct payment budget, the less persuasive can such an approach be; ultimately, if the cost is too high compared to the payment, farmers may choose in certain cases to forego direct payments altogether and the intended environmental benefits are lost.

As regards the level of payment, the greening component will be financed through a share of the budget for direct payments, and since the level of the basic payment may differ among and within Member States, the level of payment for the greening component may also differ from one region to another. To keep the system as simple as possible, it is nonetheless envisaged to set payment levels for the greening component as a whole (not per measure) that will be the same for all farmers in a given region.

However, it may be envisaged for the payment for Natura 2000 to be a separate additional payment. Including Natura 2000 as part of the greening is a clear sign of commitment of the CAP to contribute to the preservation of habitats and species in the EU.

The end result would be more sustainable land management with farmers better incorporating the long term benefits for the environment as well as their own competitiveness in their decision making. Those farmers that already manage their land in a sustainable manner will be rewarded compared to those for which the introduction of the relevant measures could potentially entail significant costs; they would also be dissuaded from moving or reverting to more harmful practices.

2.2. Choice of greening measures and discretion for Member States

In selecting the measures for the greening component consideration is needed to strike the right balance between what is best achieved by broad-brush effective and easy to control annual requirements in Pillar I and the more targeted, multi-annual and locally tailored approach of rural development. The greening should strengthen in a sound manner the baseline for more targeted voluntary measures under rural development.

The measures under consideration for the greening component include:

- **maintenance of permanent grassland**, which concerns permanent grassland,
- **crop rotation/diversification**, which concerns arable land and open air horticulture,
- **ecological set aside/ecological focus areas and green cover**, which are potentially applicable on arable land and open air horticulture as well as on permanent crops, and
- support to all designated agricultural **Natura 2000** areas.

In mixed farms e.g. arable/permanent grassland, the arable part would need to comply with crop rotation, green cover and ecological set aside while the permanent grassland measure would apply to the permanent grassland part.

In addition, although **organic farming** would not qualify as a measure because the relevant commitments are multi-annual, complex, undertaken on a voluntary basis and subject to detailed controls, it may be envisaged that farms (or part thereof) with organic farming certification (around 7.6 million ha, of which half is permanent grassland) receive automatically the greening component since the environmental benefits (and in most cases climate action) from organic farming are at least as high as from the greening measures combined. This should not nonetheless result in reduced support to organic farming under rural development policy, notably agri-environment measures.

The following measures were considered but finally not taken up:

- specific support to HNV farming, given that currently available data and methods would not allow identification of individual farms or parcels with the requisite certainty for a Pillar I measure; Rural development policy is more suited to support HNV farming taking account of specific needs. However, greening should in any case have a positive impact on HNV farming (see section 4.3).
- improved nutrient balance, given the associated costs and more detailed controls that would be required (and given that the measure would vary considerably depending on soil and water quality). Rural development policy also appears better suited to support this type of measure.

Although some discretion left to Member States on further specifying measures may be justified to take into account regional specificities in the design of 'green' payments (although clearly these cannot be as well targeted as Pillar II measures), it will be essential to provide for uniform application within and across Member States thus ensuring equal treatment for all farmers and a strong impact on the environment and climate change.

For the greening to be effective, it is key not to go for a 'menu' approach with a list of measures, offering choice to Member States and/or farmers. Such an approach would very much water down the greening effect, especially if the payment does not match the efforts required by farmers, leading them to choose the measures with which they comply already or the measures with the least cost, thus bringing less environmental benefits. In addition, the more choice offered in Pillar I greening, the more complicated it becomes to ensure coherence with the cross compliance especially GAEC (risk for having too various baselines between Member States) and subsequently with Pillar II: risk for having double payments. Therefore, an approach to greening with only a few measures which yield significant environmental benefits is to be favoured.

2.3. Main elements of each of the measures considered

2.3.1. Permanent grassland

Permanent grassland is grassland that has not been in rotation for at least 5 years, irrespective of its biodiversity value.

Current baseline

- At present there is an **obligation to maintain the ratio of permanent pasture** at Member State/regional level under Article 6(2) of Regulation (EC) No 73/2009, to take corrective measures if the decrease is more than 5%, and to ensure this does not decrease more than 10% (safety net system). Beyond a decrease of 10%, there is an obligation at farm level to re-convert land into land under permanent pasture in order to re-establish the balance.
- **Protection of permanent pasture** is a compulsory GAEC on minimum maintenance at parcel level that has been implemented by Member States by introducing minimum frequency and periods for grazing, mowing and/or minimum livestock, removal of unwanted shrubs/plants, and a ban of ploughing up and protection of specific types of valuable pastures.

Rural development

Similar measures (including extensive grassland, conversion of arable to grassland) are present in 62 RDPs in 23 Member States, with premiums ranging from EUR 50-75 through EUR 130-270 up to EUR 400-500.

- Example (Germany): extensive pasture with premium EUR 110/ha; cannot exceed 1.4 LU/ha; no irrigation; no application of plant protection products (PPPs); minimum 0.3 LU/ha on the main forage area.

Proposed measure:

Obligation to maintain permanent grassland at farm level

The proposed measure would ensure that grassland does not move around (resulting in high GHG emissions and nutrient release), but could significantly constrain any change in land use patterns on the farm and may thus have consequences on the land market. For this reason, a similar margin for decrease at farm level as currently available under Article 6(2) at Member State / regional level should be foreseen. This would imply an

individual monitoring of the permanent pasture parcels at the farm level, which could render redundant the national ratio under Article 6(2).

The GAEC on protection of permanent pasture would be specified to better target highly biodiverse grassland, and 2 new GAEC standards to protect more specific land uses (wetland, and carbon rich soils) would be introduced. More ambitious agri-environment measures in the form of multi-annual commitments would remain available.

2.3.2. Crop rotation / diversification

Crop rotation is the planned and ordered succession of different crops on the same field (usually lasting 3-5 years). As a general matter, crop rotation needs to be tailored to local conditions (soil, crops, climate, market outlets) and farming systems; it is therefore difficult to come up with an EU wide definition that is sufficiently specific. Typical rotations are usually associated with types of farming systems (e.g. livestock farming systems depend on the use of land for grazing and forage crops).

Current baseline

Experience with **Standards for crop rotation** (previously compulsory but now optional GAEC on soil organic matter) showed the reluctance of many Member States to define standards which would affect income and the 'freedom to farm'. In addition control issues played a role.

Rural development

Crop rotation (including crop diversification, sequence and break crops) is present in 20 RDPs in 9 Member States with premiums from EUR 20-30 to EUR 300.

- Example (Slovenia): 5 year crop rotation for entire arable land with at least 3 different crops, cereals less than 60%, legumes present at least once.

Proposed measure

[3] crops with the main crop not exceeding [70%] of arable and open air horticulture area and the [third] not less than [5%] (crop diversification)

Crop diversification may not bring the full environmental benefits of crop rotation, but is better suited for Pillar I as an annual measure. No specific crops should be required or excluded as part of the crop rotation to ensure WTO compatibility, even if requiring e.g. leguminous crops could enhance the climate and environmental benefits of the measure. It should be possible to exempt very small parcels of arable land from this requirement.

The current GAEC on crop rotation would be removed. More ambitious crop rotation measures could still be funded under rural development.

2.3.3. Ecological set aside / ecological focus areas

Ecological set aside is land left fallow (not in production) for environmental purposes.

Current baseline

- Retention of landscape features, including, where appropriate, hedges, ponds, ditches, trees in line, in group or isolated and field margins (compulsory GAEC on minimum level of maintenance) may involve withdrawing areas from cultivation that are next to the features.
- **Retain terraces** (optional GAEC on soil erosion)
- **Establishment of buffer strips along water courses** (compulsory GAEC as from 2012) is not yet implemented in most MS.
- Buffer strips or other features pursuant to the Nitrates Directive, the Pesticides Directive and Regulation and Natura 2000 Directives.

Rural development

Similar measures are present in 23 RDPs in 11 Member States, with premiums ranging from EUR 60 through EUR 300 to EUR 600 in a few cases.

- Example (Hungary): no arable crop production near sensitive and endangered water supplies and areas threatened by erosion or flood for 10 years; premium EUR 180-390/ha.

Proposed measure

[5%] of land set aside / ecological focus area at farm level (arable, open air horticulture and permanent crops)

In the case of permanent crops, ecological focus areas may take the form of buffer or grass strips. Areas that are already set aside under cross compliance (e.g. buffer strips as well as landscape features) would count towards the requirement, provided their quantification does not prove to be unduly burdensome. Finally, it should be possible to exempt very small parcels of arable land or permanent crops from this requirement.

Even if the benefits of set aside may vary depending on whether the area set aside can move around the farm and on where it is located, it would be very difficult to manage a measure with specific requirements on location of the area set aside. Rural development can however build on this baseline requirement and further support green infrastructure to enhance connectivity.

2.3.4. Green cover

Green cover is the temporary plant cover of land that would otherwise remain bare at certain times in the year.

Current baseline

- A minimum quantity of vegetation cover during rainy periods may be required under the **Nitrates Directive (SMR 4)**. Some 16 MS have implemented such obligations.
- **Minimum soil cover** and **Minimum land management reflecting site specific conditions** are compulsory GAECs for soil erosion. The implementation is primarily

focused on erosion vulnerable zones. Only 5 Member States have defined standards for land that is not in production.

Rural development

Voluntary measures including winter cover are present in 54 RDPs in 16 Member States with premiums ranging from EUR 45-50 through EUR 150-400 and in exceptional cases EUR 800-900.

- Example (Romania): 80% of arable land; premium EUR 130/ha; cover crops must be planted by end September and incorporated into the soil by end March; only organic fertilizer can be used; annual rotation of areas under green cover allowed.

Proposed measure

[70%] of land at farm level (arable, open air horticulture and permanent crops) covered from [15 November] to [15 February]

Green cover may be particularly difficult to manage and control. To facilitate to the extent possible management and control, the measure should set out clear obligations for farmers, preferably controllable by remote sensing; thus a period needs to be specified. To maximize environmental benefits, the winter cover should be seeded as soon as possible after harvesting the preceding crop. In addition, an exception for mulching for permanent crops as well as for winter stubbles for arable land on biodiversity grounds may be provided.

On this basis the GAEC standard on minimum soil cover could be dropped. More demanding measures in Pillar II with respect to green cover would still be possible.

2.3.5. Natura 2000

The Natura 2000 network, i.e. the EU wide network of Special Areas of Conservation under the Habitats Directive and Special Protection Areas under the Birds Directive, is the centrepiece of EU nature and biodiversity policy. The Natura 2000 is not a network of strictly protected areas but areas providing space for species and habitats of Community importance. They are often privately owned and production activities can continue. A significant proportion of semi-natural habitats and of species protected under the Birds and Habitats Directives rely on the continuation of certain traditional biodiversity-friendly methods of land management. The overall objective of the Habitats Directive is to achieve favourable conservation status of species and habitats.

Farmers in Natura 2000 areas should manage their land in accordance with the EU legislation, which entails no deterioration of species and habitats of Community importance. They may thus very often face substantial constraints on what they may do on their farm. For example, there are strict limits on how much they may intensify their production systems, and this puts limits on their competitiveness.

The environmental benefits and conditions imposed on farmers in Natura 2000 areas across the EU differ considerably and depend heavily on the existence and content of site-specific conservation measures.

Currently there is relatively little specific support going to Natura 2000 areas, despite the possibilities offered under rural development.

Current baseline

SMR 1 (Birds Directive) and 5 (Habitats Directive)

Rural development

Article 38 of Regulation 1698/2005 allows for compensation for the disadvantages for farmers in Natura 2000 areas.

Proposed measure

Farmers in all designated Natura 2000 areas get an additional payment.

The payment would contribute to keeping farming in place in Natura 2000 areas and help compensate for the basic restrictions under the legislation and would apply even before site-specific conservation measures are established. It would be designed to cover the basic non-deterioration requirements, but for more demanding land management requirements, rural development payments would continue to be used.

2.3.6. Organic farming

Farms (or parts thereof) with organic certification get automatically the green direct payment.

2.4. Alternatives to a greening component of direct payments

While the objective of greening the CAP seems uncontested, there are different opinions as to how this objective may best be pursued, including suggestions that it may be more appropriate instead of a greening component of direct payments either to enhance cross compliance or to provide more funding for rural development.

2.4.1. First alternative: enhanced cross compliance

To make the greening effective, the measures in the greening component should be compulsory for the farmer, the discretion left to the Member State limited, and sanctions effective. If greening is effectively a requirement in the direct payments system, then wouldn't it be simpler to work instead on enhancing cross compliance?

Although this line of reasoning is put forth arguably on simplification grounds, it hides the complexities inherent in Member States defining and administering GAEC tailored to regional specificities. As the experience with the optional GAEC on crop rotation has shown, this approach would not necessarily ensure that the entire EU territory is effectively greened. At the same time, it would meet with considerable resistance from farmers as it would be framed as a requirement rather than an incentive, and arguably do away with the political visibility of greening direct payments that is one of the main drivers of this reform.

2.4.2. Second alternative: more funding for rural development

Seen from the perspective of providing choice for the farmers, it would seem preferable to envisage measures with payment levels differentiated by measures according to cost incurred and income forgone, as well as to give more discretion to Member States for their design so as to tailor them as much as possible to specific situations. Wouldn't it

thus be simpler to use part of Pillar I funding for complying with environmental measures within rural development policy instead?

The problem with this approach is that it would give too much discretion to Member States and farmers, and, even in a best case scenario, would not link the greening requirements to Pillar I payments and would not cover the entire EU territory; this is clearly seen when one compares existing premia under agri-environment today with the future payment levels for the greening component as well as considers the varied uptake of agri-environment across Member States. This would be particularly detrimental for climate change objectives as it leaves the possibility for only a part of the farm to adopt climate friendly practices while the rest of the farm continues to be operated with potentially detrimental methods undermining the global result.

In sum, the greening component of direct payments makes the greening of the CAP more visible and has the merits of broad territorial coverage and uniform application; however, it does not allow for targeting the measures to specific situations (and would thus need to be complemented by better targeted rural development measures), and most importantly it will need to be required rather than offered a pure an incentive for the greening to be effective and credible.

3. IMPACT OF THE GREENING COMPONENT OF DIRECT PAYMENTS

3.1. General considerations on impact

3.1.1. Costs and benefits

As a general matter, the impact of the greening component will depend to a large extent on the definition of each measure reflecting the corresponding tradeoffs, e.g. between simplification, effectiveness, equity and targeting.

The measures under consideration bring considerable environmental benefits, while the efforts that may be required on the part of farmers and thus costs incurred vary. In general terms, the costs and benefits may be summarized as follows (see also **Annex 2b** for a detailed analysis of the measures, in particular from the perspective of their impact on greenhouse gas emissions and removals):

Permanent grassland

- Benefits for climate change mitigation (maintenance and protection of carbon pools esp. peatlands) and adaptation, biodiversity, soil, water management, flood prevention and landscape amenities
- Opportunity cost of not converting into arable land may be high, given the increased demand for arable land that can be put to a more profitable use; hence the need to support on environmental grounds grassland-based livestock
- Relatively low cost of maintenance (mowing, grazing, avoiding undesirable shrubs and bushes)
- To note that there are important differences in the amount of permanent grassland in the different Member States.

Crop rotation/diversification

- Benefits for soil organic matter (climate change) and structure; reduction of soil erosion and nutrient leaching; nutrients management and input reduction (nutrients and plant protection products); pest and weed control; water quality and quantity; climate change mitigation and adaptation; improved habitats and landscape diversity
- Significant short term costs to put in place (may require new equipment and skills, different marketing outlets); income foregone for the main crop, esp. in case of monoculture; short-term impact on yields clearly negative in intensive farming
- Long-term benefits (improved yields and profitability over time, pest and disease control, less need for chemical inputs) require clear quantitative assessment, in addition to qualitative assessment – "fallacy of composition" risk (what is good in smaller scale could be bad in larger scale if global price impact too strong)

Ecological set aside / ecological focus areas

- Benefits for biodiversity; soil and water quality; climate change mitigation and adaptation; pest control; landscapes; pollination
- Impacts vary depending on whether set aside is rotational, on how land is maintained and on its location (e.g. buffer strips along water courses, or joined up with other farms to form a connected network)
- Opportunity cost of no production (income foregone, to be balanced with possible increase in prices)

Green cover

- Benefits for water quality (esp. reduction of nitrate leaching); soil quality, moisture and reduction of erosion; climate change mitigation (increase in soil organic matter and reduction in chemical fertilizers) and adaptation; flood prevention
- Cost of seeds, machinery, energy and labor for sowing in autumn and mechanical destruction and ploughing in spring; in the case of winter stubble, income foregone (no selling or grazing of the straw); possible cost savings on fertilizer and impact on yields for the next crop
- To note that in Nitrate vulnerable zones, green cover may already be compulsory.

Natura 2000

- Benefits for biodiversity, water quality and climate change mitigation, that largely depend on conservation measures put in place in each Member State
- Explicit recognition of role of farmers in N2000 areas
- No additional cost given that relevant requirements are already mandatory

Annex 2c includes the ranges of rural development premia and examples of calculations as well as other sources of information on costs that were the basis for the cost assumptions used in the modelling exercise in section 3.2. below.

3.1.2. Relation with cross compliance and rural development

Being positioned between cross compliance requirements and the voluntary measures under rural development, the measures of the greening component should effectively go beyond cross compliance standards. This may allow for some streamlining of GAEC to exclude the parallel application of similar conditions within the green elements of direct payments and within GAEC, for instance by doing away with the optional GAEC on crop rotation.

With respect to the green cover measure there is however an overlap with SMR4. Some 16 Member States have implemented varying obligations for green cover to achieve the objectives of the Nitrates Directive (e.g. in the case of Ireland and Wallonia these are general obligations applying throughout the territory).

There are many cases where rural development measures add value by being more ambitious or better tailored to the local situation, by being part of a package of measures, or by encouraging connectivity of environmental features between farms. Therefore, the possibility should be offered to grant support under rural development to measures that go beyond the greening component.

It should be noted that similar measures to those foreseen as part of the greening component represent today a significant share of agri-environment commitments in some programming areas. This is particularly the case in EU12 partly due to lack of experience and capacity to implement more complex measures. However, most new Member States have in the meantime acquired experience, and may be further helped in this process.

Finally, integration into the compulsory scope of the Farm Advisory System (FAS) may be envisaged.

3.1.3. Administration and controls

From a simplification perspective, administration of the greening component should be kept as simple as possible. This is particularly important since the greening component will most likely increase the administrative burden for authorities and farmers in terms of additional controls as well as monitoring and evaluation requirements. See also **Annex 11** on simplification.

To ensure effective greening, an appropriate sanctioning mechanism should be provided. Reductions and exclusions could as is already the case with current rules for area-related schemes go from a partial reduction to loss of the greening component as well as exclusion taking into account the severity and extent of the irregularity.

For controls, the current system as regards decoupled payments relies on two layers: 100% IT cross checks (Land Parcel Identification System) and 5% on-the-spot checks. With the introduction of the greening component, the system will rely essentially on on-the-spot checks, thus higher costs for controls. However, where possible, the use of remote sensing for on the spot checks could help keep costs down compared to field visits. In relation to the measures proposed:

Permanent grassland

The additional burden of on-the-spot checks linked to this measure depends on the related requirements. Specific maintenance requirements are more complicated to control than just to verify the existence of grassland, and very difficult to control by remote sensing.

Crop rotation / diversification

The requirement to declare the crop on each parcel is not a legal obligation under the current decoupled system, but many Member States do nevertheless require it from farmers. The on-the-spot checks may be possible by remote sensing. This is however subject to various conditions, e.g. whether crops need to be from different crop families.

Ecological set aside / ecological focus areas

On-the-spot checks may be done by remote sensing to the extent that no verification on input use is required. Declaration and control of very small landscape features for the purpose of the set aside would complicate the administrative burden.

Green cover

The on-the-spot checks would have to be carried out during the winter period. This would be an additional burden that would require a change in existing control procedures. In addition, this may be impracticable in some cases due to weather conditions which do not only affect the possibility of control but also the operation of the measure itself. As a general matter, this is the most complex measure from an administration and control point of view (see also annex 8 on simplification).

Natura 2000

By cross-checking spatial data from the European database on Natura 2000 sites with those on Pillar I beneficiaries, it will be easy to determine eligibility (Member States already have relevant experience with the implementation of the current Natura 2000 payments for farmland in Pillar II). It is possible to combine LPIS and Natura 2000 data together. On the other hand, controls in relation to site-specific conservation measures would be problematic.

3.1.4. WTO classification

To qualify for the Green Box (WTO) the decoupled nature of the greening component must be safeguarded. In this respect, any link to production per se or to types of production, for instance by requiring the presence or absence of certain crops as part of the green cover or crop rotation even if environmentally justified should be avoided.⁸

⁸ It would not be possible to qualify the greening component as an environmental payment, since this would require a costs incurred/income foregone calculation.

3.2. Impact on farm income modelled using FADN data

3.2.1. Options

The impact of the greening component on farm income has been estimated using Farm Accountancy Data Network (FADN) data. **Annex 2d** sets out a detailed explanation of the methodology used and the resulting costs for the measures considered and impact on farm income across Member States and farming systems.

To this end, the following options are compared to a "basis" scenario which does not include a greening component and where direct payment envelopes are distributed among Member States on the basis of the approach set out in the MFF proposal:

- Option 1: 30% of the direct payments envelope is allocated to the greening component; the measures are defined as under section 2.3 above;
- Option 2: same as Option 1, with a more ambitious crop diversification measure (the main crop cannot exceed 50% of the farm arable crop area);
- Option 3: same as Option 1, with a more ambitious ecological set aside measure (10% of the farm area is set aside);
- Option 4: same as Option 1, but a lower percentage (25%) of the direct payments envelope is allocated to greening;
- Option 5: same as Option 1, but the distribution of direct payment envelopes among Member States is based on the '90% of EU average and objective criteria' scenario (see Annex 3).

3.2.2. Cost calculation method

It has not been possible to quantify economic benefits, due to the lack of data on the impact of the agricultural benefit of the measures on yields; moreover, any benefits would have in most cases a medium- to long-term time horizon and would vary significantly across regions and farming systems.

In relation to costs, the following assumptions were made:

- for permanent grassland, it is assumed that the opportunity cost is 2/3 of the difference in gross margin with alternatives at regional level where these exist (assuming that the newly converted grassland would have a lower productivity than land already in fodder crops), otherwise zero;
- for crop diversification, for farms that have a single crop covering more than 70% (or 50% for option 2) of the arable crop area, the cost of cultivating a different crop for the area that still needs to be diversified is based on the difference between the individual farm's gross margin and the average regional gross margin for arable crops in specialized arable farms that already apply crop rotation;
- for ecological set aside, the cost for the area that still needs to be set aside is estimated as 2/3 of the individual farm's average gross margin (assuming that the agronomic quality of the land set aside is below average);

- for green cover, there is no information in the FADN database on existing practices; it was thus assumed that a large part of cereals area as well as 30% of the permanent crops area is already covered, and for the remaining area to be covered the costs were set at EUR 50/ha across the board on the basis of experience from calculations of rural development premia for similar measures;

The resulting average costs per ha of potentially eligible land across the EU27 range from EUR 33 to EUR 41/ha of PEA, depending on the option of greening, with up to half coming from the cost of maintaining permanent grassland (average EUR 17/ha).

These figures are average costs spread out over all potentially eligible ha. The relevant costs for the land affected are considerably higher (it is estimated that 25-30% of the potentially eligible area would see its land use and production methods modified or would face an opportunity cost). For instance, under option 1, the cost of the permanent grassland measure would be EUR 216/ha of permanent grassland where there are alternative opportunities, while the cost of ecological set aside would be EUR 261/ha of land that needs to be set aside. Per farm, average costs range from EUR 1041 to EUR 1280 across the five options.

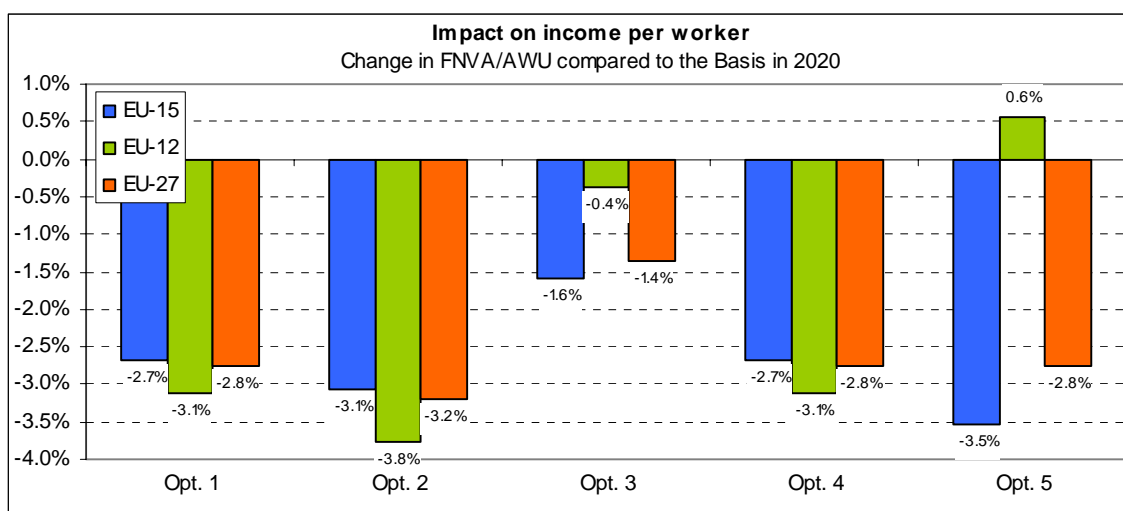
Moreover, these average figures hide wide variations across Member States / regions and farming systems, reflecting differences in land use and profitability as well as in current environmental practices (and hence the area whose land use and production methods would need to be modified).

The Member States that would be facing the highest overall costs are NL, SI, and BE. As a general matter, higher costs are associated with crop diversification in southern Member States, set aside in Member States with high area productivity, for instance due to the importance of horticulture, green cover in some southern Member States or the Baltic countries, or permanent pastures in Member States where milk and beef production are important and based on both intensive and extensive systems (such as SI, NL and BE).

Finally, costs are higher for options 2 and 3. A more ambitious crop diversification under option 2 would bring average cost up from EUR 4 to EUR 9/ha of potentially eligible land. Similarly, a more ambitious ecological set aside under option 3 would bring average cost up from EUR 6 to EUR 14/ha of potentially eligible land.

3.2.3. Results

When estimating the impact on farm income, it is assumed that farmers fully comply with greening and receive their full direct payment amounts; hence, the impact on income is solely driven by the costs of greening. The impact on farm income on average across EU27 is shown below:



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

In the EU-27, depending on the option, the greening would result in a decrease in the average income ranging between -3.2% and -1.4%. It is interesting to note that, with in contrast with option 2 where the increased costs of the more ambitious crop diversification measure result in a further decrease in farm income, the more ambitious set aside requirement under option 3 has a positive effect on income. The higher rate of set-aside results indeed in a higher increase in market margin (in particular for field crops, such as cereals and rice) which offsets the cost for the greening.

As with costs, the impact on income per worker⁹ varies significantly across Member States, regions and farming systems. More specifically, by Member State:

⁹ The income per worker is measured with the Farm Net Value Added per Annual Work Unit (FNVA/AWU).

	FNVA/AWU (€/AWU)	FNVA/AWU - comparison with the Basis in 2020				
	MFF € per AWU	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
	Basis	1	2	3	4	5
	-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Belgium	61 583	-5.1%	-5.9%	-5.7%	-5.1%	-7.2%
Bulgaria	9 470	-2.8%	-4.0%	-1.4%	-2.8%	-1.8%
Cyprus	15 064	-4.3%	-5.7%	-8.4%	-4.3%	-7.1%
Czech Republic	23 372	-4.5%	-4.2%	1.0%	-4.5%	-4.5%
Denmark	71 177	-3.1%	-4.3%	-4.9%	-3.1%	-6.2%
Germany	44 364	-4.8%	-5.9%	-3.5%	-4.8%	-6.2%
Greece	15 413	-1.0%	-1.3%	-0.7%	-1.0%	-4.0%
Spain	29 192	-1.8%	-2.0%	-0.3%	-1.8%	-1.6%
Estonia	24 949	-3.2%	-3.1%	1.0%	-3.2%	19.3%
France	38 466	-2.9%	-2.9%	0.1%	-2.9%	-4.0%
Hungary	27 795	-2.6%	-3.6%	1.1%	-2.6%	-2.6%
Ireland	27 237	-2.7%	-1.9%	0.8%	-2.7%	-2.7%
Italy	35 189	-0.5%	-0.6%	0.1%	-0.5%	-2.4%
Lithuania	19 345	-0.3%	-0.1%	4.4%	-0.3%	12.9%
Luxembourg	50 691	-5.6%	-5.3%	-3.2%	-5.6%	-6.0%
Latvia	14 786	-0.7%	-1.1%	2.2%	-0.7%	25.7%
Malta	31 121	-3.1%	-4.8%	-7.7%	-3.1%	-4.9%
Netherlands	67 857	-4.3%	-5.6%	-8.0%	-4.3%	-5.1%
Austria	32 384	-2.3%	-2.5%	-0.9%	-2.3%	-2.3%
Poland	12 991	-3.5%	-3.8%	-1.3%	-3.5%	-1.4%
Portugal	11 357	-3.6%	-4.8%	-3.6%	-3.6%	2.1%
Romania	4 882	-2.7%	-4.4%	0.0%	-2.7%	3.3%
Finland	28 456	-1.9%	-2.2%	0.9%	-1.9%	-1.3%
Sweden	43 959	-4.0%	-4.4%	-1.1%	-4.0%	-3.1%
Slovakia	20 563	-2.3%	-1.9%	3.2%	-2.3%	3.8%
Slovenia	7 727	-12.7%	-13.0%	-9.4%	-12.7%	-15.2%
United Kingdom	50 363	-4.8%	-5.1%	-2.9%	-4.8%	-3.3%
EU-27	23 717	-2.8%	-3.2%	-1.4%	-2.8%	-2.8%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Options 4 and 5 have the same definition of the greening measures as in option 1, so the result on income is the same for the EU-27. But, in Option 5, since the redistribution of direct payments between Member States is not identical in the two options, the impact on income by Member States differs in the two options.

The results by type of farming (table below) show the largest negative impacts for pig and poultry and milk farms due to the increase of fodder prices:

	FNVA/AWU (€/AWU)	FNVA/AWU - comparison with the Basis in 2020				
	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
	Basis	1	2	3	4	5
	-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Fieldcrops	24 404	-1.4%	-1.9%	4.0%	-1.4%	-1.2%
Horticulture	36 293	-0.8%	-1.3%	-2.0%	-0.8%	-0.8%
Wine	35 023	-0.2%	-0.1%	0.4%	-0.2%	-0.4%
Other permanent crops	20 896	-0.6%	-0.6%	-0.5%	-0.6%	-1.0%
Milk	29 141	-5.3%	-5.6%	-5.7%	-5.3%	-5.3%
Other grazing livestock	22 771	-3.9%	-3.4%	-1.4%	-3.7%	-4.2%
Granivores	23 210	-10.1%	-15.2%	-25.4%	-10.1%	-10.2%
Mixed	14 789	-5.6%	-6.1%	-3.7%	-5.6%	-5.0%
Total	23 717	-2.8%	-3.2%	-1.4%	-2.8%	-2.8%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

4. GREENING OF THE CAP AS A WHOLE

4.1. Further greening of the CAP

In addition to the greening component of direct payments, improvements on existing instruments are also envisaged. Moreover, the setting up of a European Innovation Partnership (EIP) on "Agricultural Productivity and Sustainability" is currently under consideration.

4.1.1. Further greening of Pillar I: cross compliance

In addition to the streamlining of cross compliance and any adjustments taking into account the possible future greening component of direct payments, it is envisaged to strengthen the role of cross compliance for the environment and climate change by:

- reinforcing climate action in the GAEC framework, including a better protection of valuable grassland, wetlands and carbon rich soils, and reinforcing measures aimed at maintaining the soil organic matter level;
- including the Water Framework Directive once the Directive is implemented and the relevant requirements are operational at farmer level.

See **Annex 2e** for more details on cross compliance.

4.1.2. Further greening of Pillar II

Rural development policy supports the provision of a wide range of environmental public goods and will no doubt continue to do so in the future CAP. The relevant measures currently include not only agri-environment payments but also payments related to Natura 2000 areas, the Water Framework Directive, Natural Handicap Areas, forests and environmental investments. Also measures that support training and the diffusion of knowledge and information, as well as support to the setting-up and use of advisory services play an important role in improving knowledge of farmers and foresters on environmental matters and in the uptake of more environment-friendly management practices.

The agri-environment measure is especially important. Because of this, it is currently the only measure that all Member States/regions must include in their rural development programmes (RDPs). The measure functions by supporting voluntary commitments (beyond a baseline of legal obligations) undertaken for a period of five years or longer by farmers and other land managers. Payments are based on costs incurred and income foregone, with the possibility of paying for transaction costs in addition. It is widely used, inter alia, to support and promote organic farming throughout the EU.

Various ways of strengthening the environmental benefits delivered by rural development policy in the future are under consideration. Apart from individual adjustments to measures, it will be especially important to do more to encourage co-operative environmental action between farmers and other land managers (given the importance of ensuring connectivity of certain environmental measures and an ecosystem based approach to environmental protection), as well as to better link environmental payments to training and the use of advisory services.

In addition, forestry measures can be reinforced to deliver more in terms of protection of water, soils, biodiversity and carbon stocks.

Under the Integration scenario in particular, it is envisaged to better align rural development policy with the Europe 2020 strategy through priorities and targets in RDPs.¹⁰ Thus, the sustainable growth objective, and in particular the resource efficiency flagship initiative and the associated climate and biodiversity targets at EU levels should translate into effective operational targets set in RDPs and monitored by means of an improved CMEF. In addition, the focus on innovation should produce a better dissemination of innovative practices with a view to improving resource efficiency.

4.2. Impact of the alternative policy options

The impact on the environment and climate change of the different scenarios needs to be assessed by looking at all policy instruments working together. In fact, direct payments in combination with cross compliance currently contribute to the supply of certain basic environmental public goods that are then complemented by the more targeted measures of Pillar II delivering public goods in particular with respect to environment and climate change. With respect to the greening component in particular, the impact will to a large extent depend on how the component is designed as discussed above. But as is already the case today, and even more with the introduction of the greening component of direct payments in the future, the impact on the environment is not simply a question of transferring funds from the 1st to Pillar II.

4.2.1. Adjustment scenario

In addition to the considerable environmental impact from the redistribution of direct payments in this scenario that would favor permanent grassland (see Annex 3 on direct payments), the strengthening of cross compliance and the moderate increase of the available funds in Pillar II for new challenges would positively benefit environmental conditions, though this is unlikely to constitute a sufficient response to the serious environmental and climate change challenges facing the EU.

For example, as regards biodiversity, after the experience of missing the 2010 target, it remains doubtful that this scenario would be sufficient to ensure the achievement of the EU 2020 headline target of halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible. This target calls for the maintenance of a sustainable agriculture with a CAP that can cover an extensive area with biodiversity-related measures.

4.2.2. Integration scenario

Compared to the adjustment scenario the integration scenario places considerably greater demands on the agricultural sector to contribute to the provision of environmental public goods.

At the same time, the strengthening of cross compliance and the reinforced strategic approach for rural development should optimize the use of resources for the Europe 2020

¹⁰ See Annual Growth Survey, Annex 1: Progress Report on Europe 2020, COM (2011) 11 final, that includes provisional national targets set by Member States in their draft National Reform Programmes.

priorities. Even if the rural development budget stays the same, the shift of some agri-environmental actions to Pillar I should free up some funds that might now be used for more targeted and more ambitious agri-environment measures, thus producing a further reinforcement of the environmental outcome of the policy.

If the right balance is struck, including in terms of the design of the greening component, there is considerable potential to improve resource efficiency that is a win-win situation for both farmers and the environment. This would probably be the only way to address on a sufficient scale the critical situation on climate, biodiversity and in many cases also water. With respect to biodiversity, in the integration scenario the CAP is best shaped to contribute to achieving the 2020 biodiversity target and is in line with the actions called for in the biodiversity strategy, with the greening component of Pillar I as a major feature.

4.2.3. *Refocus scenario*

The doubling of funds for rural development under this scenario and the clear focus on measures for the improvement of the environment and climate change actions should result in significant positive impacts on these aspects.

However, the fact that direct payments under Pillar I are phased out could severely compromise such an outcome. Without basic income support, the less competitive farmers who very often manage marginal land and land in remote areas in an extensive manner, thereby helping to maintain areas of high natural value, may cease their agriculture activity because they no longer make a sustainable income; moreover, GAEC that are part of the baseline for agri-environment measures no longer apply to land that does not receive direct payments. On the other hand, agriculture activity may be concentrated and intensified in the most competitive areas. (see below relevant extracts from Scenar 2020). In particular as regards biodiversity, this scenario would seriously undermine the achievement of the recently adopted EU biodiversity strategy to 2020.

Extracts from SCENAR 2020 - II

The role of farming to maintain landscape quality and biodiversity (associated with both Natura 2000 and HNV areas) underlines the potential risk associated with land abandonment, which is apparent to different degrees in the three scenarios elaborated in the macroeconomic part of Scenar 2020-II. This possibility is put into perspective by the type of subsequent regional analysis performed, and within Scenar 2020-II an attempt has been made to identify the regions particularly characterised by those types of land use that might indicate an ongoing process of land abandonment. To do this, the future shares of different farming types projected on the horizon of 2020 have been clustered to give a broad overview of agricultural performance (but only for the Reference scenario). The conditions representing a risk of land abandonment are found in a third of the EU regions. Most of the regions in this cluster are located in France, Greece, Italy, Portugal and Spain in the western and southern EU; in Bulgaria, Hungary, Poland and Romania in the eastern EU; and in Finland and Sweden in the northern EU. The reduction in agricultural utilised land projected in the macro-economic analysis with regard to the Liberalisation scenario, however, indicates the heightened risk of more widespread land abandonment within the EU as the agricultural economy becomes more liberalised. In any case in the Liberalisation scenario the Good Agricultural and Environmental Conditions (GAEC) do not apply anymore due to the cessation of direct payments in the absence of Pillar 1. Farmers will still have to fulfil requirements of the environmental legislation, without further consideration of good agricultural practices that are present in the GAEC and not in the existing legislation. In the less competitive regions, in particular, structural land abandonment would be accompanied by environmental decline. As a secondary effect of such structural change, targeted Pillar 2 measures aiming to enhance the environment would not find addressees and, therefore, could no longer contribute to sustaining extensive farming practices and thus securing the ecological values and benefits which these provide.

Note that the average decrease in the nitrogen surplus in the Liberalisation scenario at NUTS2 level hides local concentration of the production. Particularly under the Liberalisation, the narrower concentration of production which is expected would mean also greater localised water pollution risks. Moreover, the predicted increase in farm specialisation and concentration under Liberalisation would increase the negative externalities of agriculture, both by leading to increased concentrations of pollutants in more intensive areas, by losing the features of mixed and less intensive farms which are key to protecting farmland biodiversity, and by leading to the abandonment of farmland in remoter areas, with concomitant loss to biodiversity and landscape, and an increase in climate change gas release through increased soil erosion. These effects are, however, not taken into account in CAPRI.

In addition to this assessment of environmental conditions via the indicators included in the CAPRI model (nitrogen and phosphate surplus, ammonia and greenhouse gas emissions), the consequences of the decline in agricultural land use for the environment should be mentioned. In particular under the Liberalisation scenario, the steep increase in land abandonment risks seriously undermining the ecosystem services and biodiversity values of the respective landscapes. This should be a serious concern for future policy design.

4.3. HNV farming and the CAP post 2013

The concept of High Nature Value (HNV) farming was introduced into the Community Strategic Guidelines for Rural Development (2006/144/EC) and appeared among the Common Impact Indicators of the CMEF framework for Rural Development. Agricultural land management has created a rich landscape diversity, including a mosaic of woodlands, wetlands, and extensive tracts of an open countryside. The HNV farming concept underpins the causality between certain types of farming activity and certain environmental outcomes such as high levels of biodiversity and the presence of environmentally valuable habitats and species.

The EU estimate of the extent of HNV amounts to 30% of EU farmland. In the context of RD monitoring and evaluation Member States are developing approaches to identify and assess HNV farming in their territory.

The emphasis on HNV farming in the 2007-2013 has not at all lost its validity for the CAP post 2013. Within the EU 2020 Strategy, the Flagship Initiative on "Resource Efficient Europe" refers to biodiversity targets. The recent EU Biodiversity Strategy to 2020 includes specific targets to meet, which will place even more importance to supporting and maintaining HNV farming.

The reformed CAP towards 2020 should strike the right balance between contributing to ensuring the protection of the biodiversity values and agricultural habitats across the EU countryside, providing support to maintaining and enhancing HNV farming, and meeting its overall objectives.

The greening component of Pillar I foreseen in the integration scenario, and rural development measures should be developed in a complementary manner so as to foster HNV farming. Given that Pillar I greening requirements form part of the baseline for agri-environment measures, there is a certain risk that the latter are simply substituted by requirements established under Pillar I.

Whereas 'typical' low-intensity HNV farming should benefit under the integration scenario compared to the current baseline, this scenario will also support and promote the 'green infrastructure' and biodiversity in more profitable and intensive farming systems (e.g. ecological set-aside focus areas) thereby enhancing the 'nature value' in the more productive areas, ensuring better connectivity and buffering the areas of high nature value.

HNV in the Integration scenario

The environmental assets of HNV farming have emerged over centuries as free-of-charge side effects of profitable farming. Typically HNV farming practices are associated with low intensity grazing or mowing practices on semi-natural vegetation. Very often these types of farming are found on poorer land. Economic viability of this kind of systems is hampered by structural and natural handicaps, which brings the risk of either land abandonment or pressure to intensify production. However, HNV examples can be found also in intensively managed farming areas that sustain large populations of species important for nature conservation. In those areas the preservation of HNV features is often in strong competition with productive land use interests. Several elements of different CAP instruments as included in the integration scenario have the potential to support the maintenance of HNV farming and protection of biodiversity values:

Direct payments:

the redistribution of direct payments will improve the viability of HNV farming such as grazing livestock, grassland based farming and farming in LFA

the specific direct payment layer for LFA and Natura 2000 benefit HNV farming that is predominant in these delimited areas

HNV farming systems will comply with greening requirements of Pillar I at lower costs

the permanent grassland measure in the greening layer will ensure a better protection at farm level of the environmental value of grasslands

Cross compliance:

the GAEC framework will be adapted to enhance the protection of highly biodiverse pastures, wetlands and carbon rich soils

Rural Development:

improved targeting of measures through changes in the management system and programme design with integration of targets linked to EU priorities (including for biodiversity)

continuation of an extensive toolbox that can be tailored to specific needs of HNV farming in different regions of the EU, including by offering packages of measures.

specific support possibilities for farmers in LFA and in Natura 2000

possibility to support collaborative action and local bottom-up approaches stimulating local capacity to improve sustainability

support for training and innovation to boost sustainable land management

5. CONCLUSION

The CAP will need to increase its support to climate action and environmental public goods. One way to achieve this objective is to introduce simple measures of general application required for direct payments in Pillar I in combination with incentives for more targeted measures offered in rural development programs in Pillar II.

The analysis presented in this annex shows that there is a place for a greening component of direct payments within this two pillar structure, which would - together with enhanced cross compliance and a stronger rural development - considerably enhance the climate and environmental performance of the CAP throughout the EU territory.

To be effective, the design of such a greening component should strike the right balance between benefits for the climate, the environment, the long-term competitiveness and the efforts required by the farming sector, while staying simple as befits Pillar I and keeping administrative burden as low as possible.



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 2A

{COM(2011) 625 final}
{COM(2011) 626 final}
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{COM(2011) 628 final}
{COM(2011) 629 final}
{SEC(2011) 1154 final}

ANNEX 2A: FACT SHEET BIODIVERSITY AND AGRICULTURE

1. INTRODUCTION

The Communication of the European Commission "Options for an EU vision and target for biodiversity beyond 2010" of January 2010 (COM(2010)4) recognises the positive role of agriculture for preserving and enhancing biodiversity. The recent Communication on "Our life insurance, our natural capital: an EU biodiversity strategy to 2020" (COM(2011)244) sets out a target and actions for the Commission and Member States that are needed in agricultural and forest areas in order to achieve the EU 2020 and the global 2020 biodiversity targets, and by which a significant contribution is made towards the objectives of the Europe 2020 Strategy.

By managing a large part of the European Union's territory, agriculture and forestry have a significant impact on, and a huge role in preserving farm and forest-genetic resources, biodiversity, and a wide range of valuable habitats. Many valuable habitats and the presence of species have a direct interdependence with agriculture (e.g. many bird species nest and feed on farmland). The maintenance of a number of species and ecosystems that have emerged over centuries of agricultural cultivation depends on the continuation of appropriate land management practices. Agriculture is also the first to benefit from biological diversity and related ecosystem services (like pollination).

Specialisation and intensification of certain production methods (such as the use of more chemicals and heavy machinery) as well as marginalisation or abandonment of traditional land management may become a threat to biodiversity on farmland.

The first ever systematic assessment of the conservation status of Europe's most vulnerable habitat types and species protected under the Habitats Directive was released in 2009¹ as part of the regular 6-yearly progress reporting across all Member States and all the 11 bio-geographical regions. The results demonstrate that, in general, all habitat types associated with agriculture are doing significantly worse in terms of conservation status than other types of habitats. This might be due to shifts towards inappropriate agricultural practices in some part of the EU, while in other areas the abandonment of the agricultural land and the absence of management is the underlying reason for decline.

Therefore, preventing these processes and preserving certain habitats and biodiversity are key to halting the loss of biodiversity and maintaining key ecosystem services that are underpinning our economy and society's well-being.

The ambitious EU 2020 headline target and long-term vision for 2050 endorsed by EU leaders in March 2010 send a clear signal that all policies including agriculture and

¹ Report from the Commission to the Council and the European parliament - Composite Report on the Conservation Status of Habitat Types and Species as required under Article 17 of the Habitats Directive (COM(2009) 358 final)

forestry, have to step up efforts to deliver on biodiversity objectives, and that this needs to be reflected in the coming financial framework (2014-2020).

2. CURRENT STATUS AND TRENDS REGARDING BIODIVERSITY IN THE EU

Biodiversity loss in the EU is the result of a combination of direct pressures and underlying socio-economic drivers. Most of the pressures on biodiversity stem from human-induced disturbance to ecosystems with underlying causes of economic and market failures. The 2010 EU biodiversity baseline documents the impact of these key pressures on biodiversity in the EU². In particular, Europe's biodiversity remains under severe threat from:

- Habitat loss due to land use change and fragmentation, including through conversion of grassland into arable land, land abandonment, urban sprawl, and rapidly expanding transport infrastructure and energy networks;
- Pollution. 26% of species are threatened by pesticides and fertilisers such as nitrates and phosphates (IUCN);
- Overexploitation of forests³, oceans, rivers and soils;
- Invasive alien species;
- Climate change. Shifts in habitats and species distribution due to climate change are being observed. Climate change interacts and often exacerbates other threats.

A recent assessment (2009) published by the European Environmental Agency⁴ states that European biodiversity continues to be under serious pressure and that the policy response, although successful in some areas, is not yet adequate to halt the general decline. Many ecosystems have been degraded thereby reducing their capacity to respond to future shocks such as the effects of climate change.

Progress towards the European target of halting biodiversity loss by 2010 has been assessed⁵. Analysis of the indicators suggests that with respect to the *status and trends in biodiversity* some progress has been made towards halting biodiversity loss in Europe. Overall, however, the status of most species and habitats still gives rise to concern. The overall risk of extinction of wildlife has probably increased and livestock genetic diversity also remains at risk.

² European Environment Agency, 2010. EU 2010 Biodiversity baseline. EEA Technical report No 12/2010. <http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline/>

³ Whilst wood harvesting in the EU is largely sustainable, dead wood (which is a key indicator for forest biodiversity and the conservation value of a forest) remains well below optimal levels from a biodiversity perspective in most European countries (EEA, 2009).

⁴ Progress towards the European 2010 biodiversity target. EEA Reoprt No. 4/2009

⁵ Report from the Commission to the Council and the European Parliament. The 2010 Assessment of Implementing the EU Biodiversity Action Plan, COM(2010)548 final.

Nevertheless, progress has been made in protecting habitats with up to 18 % of EU land area now included in the Natura 2000 network. At the same time, 40–85 % of habitats and 40–70 % of species of European interest have an unfavourable conservation status. Linked to this is the progressive decline in grasslands and wetlands across Europe and rises in urban, woodland and open water habitats.

In assessing the *threats to biodiversity* it can be stated that some have decreased. Acidification and eutrophication from excessive nitrogen accumulation are declining and nitrogen surpluses on farmlands are decreasing. While invasive alien species are recognised as a major driver of biodiversity loss, in the future the issue needs to be considered more broadly in the context of climate change, particularly adaptation.

3. THE EU BIODIVERSITY AGENDA

The EU Biodiversity Agenda is based on the United Nations Convention on Biological Diversity signed by the European Community in December 1993. Subsequently, in 1998, the Community adopted a European Community Biodiversity Strategy. The Strategy mentions as one of the key objectives the need to “reverse present trends in biodiversity reduction or losses and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status”.

In 2001, the European Council of Göteborg "agreed on a strategy for sustainable development". To contribute to this strategy, the European Council "agreed that biodiversity decline should be halted with the aim of reaching this objective by 2010".

To follow this up, a Biodiversity Action Plan (BAP) was adopted in 2006⁶ with a detailed set of actions to accelerate progress towards this target, including some on agriculture and rural development. The 2008 implementation report⁷ confirmed that there was an urgent need for further integration of biodiversity considerations into sectoral policies, which remained a key challenge. In spite of significant action carried out within the framework of the BAP, the 2010 BAP report⁸ concluded that the EU had missed its 2010 target of halting biodiversity decline.

At the heart of the EU's regulatory response to halting biodiversity loss by 2010 are the Birds Directive (1979) and the Habitats Directive (1992). Central to these Directives is the creation of a Europe-wide ecological network of protected sites – the Natura 2000 network.

In January 2010, the European Commission published the Communication "Options for an EU vision and target for biodiversity beyond 2010". It sets out first steps towards establishing specific targets for 2020 and a long-term vision to be achieved by 2050. It acknowledges that the target of halting the loss of biodiversity in the EU by 2010 will not

⁶ COM(2006) 216 final "Halting Biodiversity loss by 2010 – and beyond: sustaining ecosystems services for human well being"

⁷ COM(2008) 864 final on a "Mid-term assessment of implementing the EC Biodiversity Action Plan"

⁸ COM(2010)548 final http://ec.europa.eu/environment/nature/biodiversity/comm2006/bap_2010.htm

be achieved. Particular risks are stated for grasslands, wetlands, estuary and coastal habitats.

In March 2010, the Environment Council adopted a new headline target for biodiversity: "To halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, restore them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss", which was endorsed by European Heads of States and Governments.

Subsequently, the Commission adopted an EU biodiversity strategy to 2020⁹. Within the six targets that need to be achieved in order to deliver on the 2020 headline target, agriculture and forestry is specifically addressed. The Strategy sets out a limited number of focused actions both for the Commission and Member States that are essential to the success, among which those related to the below target on agriculture (actions 8-10), outline some directions to be considered within the CAP reform and design of the future programming (2014-2020).

Target 3A) Agriculture: By 2020, maximise areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP so as to ensure the conservation of biodiversity and to bring about a measurable improvement(*) in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU2010 Baseline, thus contributing to enhance sustainable management.

Target 3B) Forests: By 2020, Forest Management Plans or equivalent instruments, in line with Sustainable Forest Management (SFM)¹⁰, are in place for all forests that are publicly owned and for forest holdings above a certain size** (to be defined by the Member States or regions and communicated in their Rural Development Programmes) that receive funding under the EU Rural Development Policy so as to bring about a measurable improvement (*) in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 Baseline.

(*) Improvement is to be measured against the quantified enhancement targets for the conservation status of species and habitats of EU interest in Target 1 and the restoration of degraded ecosystems under Target 2 of the strategy.

(**) For smaller forest holdings, Member States may provide additional incentives to encourage the adoption of Management Plans or equivalent instruments that are in line with SFM.

4. OVERVIEW OF CAP INSTRUMENTS ADDRESSING BIODIVERSITY ISSUES

The requirement of integrating environmental concerns into sectoral policies, as spelled out in the Treaty, has been an important element in the reforms of the Common Agricultural Policy. The CAP has a wide range of instruments essentially based on two complementary approaches. They provide incentives for farmers to deliver

⁹ COM(2011)244 final

¹⁰ As defined in SEC(2006) 748.

environmental public goods, including the preservation of habitats, biodiversity and environmentally valuable landscapes. This concerns both the first pillar (combination of direct payments and cross-compliance) and the second pillar (agri-environment measures, non-remunerative investments, support for Natura 2000).

4.1. First pillar (market and income policy)

Measures under Pillar I are focused on a single income payment per farm, which is decoupled from production. Decoupling is expected to reduce the incentives for intensive production and for using inputs beyond the carrying capacity of the environment.

With the introduction of mandatory cross-compliance, the full granting of direct payments is linked to the respect of a number of "Statutory Management Requirements" (SMRs) on the whole farm, including those stemming from the implementation of the Birds and Habitats Directives. The beneficiaries of direct payments must also maintain all farmland in "Good Agricultural and Environmental Condition" (GAEC). The scope of GAEC includes requirements beneficial for biodiversity such as the retention of landscape features, the establishment buffer strips along water courses and the creation and/or retention of habitats (optional standard). Finally, beneficiaries of direct payments are obliged to maintain land under permanent pasture.

Measures targeted towards the preservation of habitats and biodiversity are supported via article 68 of Regulation 73/2009. It concerns specific types of farming which are important for the protection or enhancement of the environment and for specific agricultural activities entailing additional agri-environment benefits (e.g, support in Portugal for maintaining natural pastures of high natural value or the protection of the national olive-growing heritage; support for the conversion to organic farming in France).

In addition, the reforms of certain Common Market Organisations have introduced or strengthened measures aiming at the protection of the environment. In particular, the fruit and vegetables and wine CMOs have been included in the single payment scheme which means that cross-compliance will be mandatory for those producers receiving direct payments. For the fruit and vegetables CMO, producer organisations must devote at least 10 percent of expenditure in each Operational Programme to environmental measures. There will be a 60 percent Community co-financing rate for organic production in each Operational Programme.

4.2. Second pillar (rural development policy)

As regards the second pillar of the CAP, the Community strategic guidelines identify three priority areas for measures aimed at improving the environment and the countryside, including biodiversity, the preservation and development of high nature value farming and forestry systems and traditional agricultural landscapes. These are translated into national strategy plans, which in turn form the basis for the national and regional rural development programmes. The measures under axis 2 ("Improving the environment and the countryside") are expected to significantly contribute to the EU commitment to halt the loss of biodiversity by 2020.

The rural development policy provides Member States with several possibilities including:

- Agri-environment payments for commitments going beyond mandatory standards: Most important in this respect are the agri-environment measures that are targeted towards achieving environmental objectives while reflecting region-specific needs and specificities. Agri-environment payments encourage farmers to adopt agricultural activities (e.g. organic farming as an environmentally friendly farming system) or levels of production intensity that deliver positive environmental outcomes, while not being necessarily the first choice from the point of view of profitability. Agri-environment payments cover income forgone and costs incurred due to following environmental commitments.
- Natura 2000 payments in agricultural and forest areas: These measures include allowances compensating for region-specific disadvantages that result from the application of mandatory requirements as prescribed by the site's management plan of the area concerned. Those payments will ease the application of the respective legal environmental policy framework.
- Compensation allowances in Less Favoured Areas: LFA payments contribute as additional income support to ensure continued land use in area suffering from naturally adverse conditions. By fine-tuning eligibility criteria, LFA payments can be steered towards sustainable types of farming systems.
- Conservation of genetic resources in agriculture and the preservation of local animal breeds and plant varieties: Rural Development measures as well as the implementation of actions established on the basis of Council Regulation (EC) 870/2004 contribute to the conservation, characterisation, collection, and utilisation of genetic resources in agriculture (plant, tree, and animal species).
- Investment into human and physical capital: Training measures, farm advisory services, non-productive investments, as well as the conservation and upgrading of the rural heritage contribute in manifold manners to enhancing biodiversity and habitats.
- Forest-environment payments for commitments going beyond mandatory standards:
- Restoring forestry potential and introducing preventing actions

Looking at the Rural Development budget, 44% of the EAFRD funding for the 2007-2013 period (some 43 billion €) has been allocated by Member States to Axis 2 measures (“improving the environment and the countryside”). The CAP Health Check assigned some additional funding to 5 "new challenges", including biodiversity. For the current programming period, 22 billion € representing half of the budget devoted to the environmental axis of Rural Development policy, will be spent on agri-environment; 472 million € will be spent on Natura 2000 measures on farm land; and 111 million € on Natura 2000 measures on forestry land.

Some examples of Rural Development measures enhancing biodiversity and habitat values, as implemented in Member States' programmes:

Agri-environment:

- Support for organic farming (all Member States)

- Protection of the habitats of the bear and the jackal (Greece)
- Conservation of genetic resources (Saxony-Anhalt)
- Conservation of endangered animal breeds (Italy-Liguria)
- Extensive management of grassland and maintenance of heaths (Hamburg)
- Perennial fields and riparian boundary strips and biobeds (Romania)
- Protection of birds (crex crex) and other wildlife and improvement of biotope network, reducing entry of harmful substances in bordering habitats (3 metres strips), conservation of protected fauna and flora (Romania)
- Eléments du réseau écologique et du paysage, conservation des éléments clé du maillage écologique qui constituent des réservoirs de biodiversité en même temps que des couloirs de dispersion (Belgique)
- Support for limestone and woodland pastures as well as semi-natural grazing lands and mown meadows with special natural and cultural values. (Sweden)
- Pasture land for wintering geese. Extra grass and rest for migratory geese populations (The Netherlands).

Vocational training:

- skills updating and enhancement, in particular covering environmentally compatible production methods (Hamburg)

Use of advisory services:

- Scope of the measure extended to provide information on the use of quality and environmental management systems in agricultural and forestry businesses (Saxony-Anhalt)

Non-productive investments:

- Non-remunerative investments for creation of buffer areas/hedgerows and creation/maintenance of small lakes or ponds (Italy-Liguria)

Forest-environment payments:

- Support for project-related individual measures on forestry land in Natura 2000 areas (Saxony-Anhalt)

Conservation and upgrading of the rural heritage:

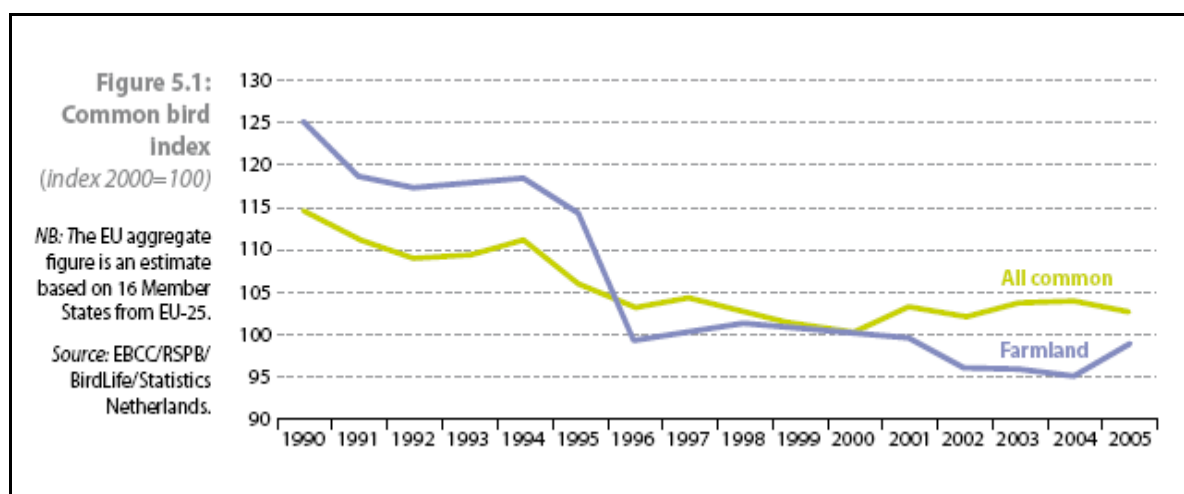
- Restoration of grasslands and moorlands (Belgium-Wallonia)
- Implementing Natura 2000 in coherence with other European conservation systems, to contribute to environmental education and public awareness (Saxony-Anhalt),

- Drawing up of protection and management plans for Natura 2000 areas (Italy-Liguria, Hamburg, Schleswig-Holstein).

5. MONITORING AND REPORTING ON BIODIVERSITY WITHIN AGRICULTURAL AREAS AND FORESTRY:

Within the set of biodiversity indicators, the one mostly used for agricultural areas and forestry is the Common Bird Index, including the farmland bird and the forest bird indexes. The farmland bird index is also one of the impact indicators forming part of the Common Monitoring and Evaluation Framework for Rural Development Policies.

Some controversies developed around the bird indicators as there were some changes in the methodology during the nineties which limit the validity of long-term trends. However, since 1990 when the methods have become more fine-tuned, data show that the European Union's common farmland birds have declined by 20–25 % and, during the same period, common bird populations have decreased by around 10 %¹¹.



As regards the forest bird index, there are even more concerns about the stability of the methods and, therefore, the robustness of this indicator.

Under Rural Development Policy, biodiversity targets are matched by result and impact indicators introduced into the Common Monitoring and Evaluation Framework for Rural Development (CMEF):

- "Area under successful land management contributing to biodiversity and high nature value farming/forestry" (result indicator – measure-based)
- "Reversing biodiversity decline, measured by farmland bird species population" (impact indicators - target-based)
- "Maintenance of high nature value farmland and forestry" (impact indicators - target-based)

¹¹ SEBI2010 indicator No 1 — Common birds in Europe — uses a population index of 100 for the year 1980, but its geographical coverage is wider than the European Union.

Member states are obliged to make those indicators operational and provide the necessary quantitative or qualitative information.

6. IMPORTANT FORTHCOMING DEVELOPMENTS

EURECA, the European Ecosystem Assessment, has been launched by the EEA and shall deliver the first assessments in 2011, with more following in subsequent years. EURECA assesses the state of ecosystems in Europe and their possible developments. Regarding the CAP, reconciling demands for ecosystem services such as food, (bio) energy, nature, and landscape values will be taken into account.

In the Commission's White Paper on climate change adaptation, the role of biodiversity and healthy ecosystems is acknowledged as a cross-cutting issue. The white paper recognises the importance of ensuring healthy, resilient and properly functioning ecosystems in the defence against the impacts of climate change and promotes the application of Green Infrastructure type of (ecosystem-based) approaches. The EU strategy on Green Infrastructures is foreseen to be adopted in 2012.

In December 2008, the Commission presented a Communication "Towards an EU Strategy on Invasive Species". The Commission aims to tackle the challenge posed by IAS through the review of existing legislation (i.e. Plant and Animal Health Regimes) and through a dedicated EU strategy on invasive species, to be adopted in 2012. Several measures will be proposed which should substantially reduce the impact of invasive alien species in Europe. The Commission will also examine the possibility of setting up an Early Warning and Information System based on a regularly updated inventory.

As the establishment of Natura 2000 is at an advanced stage, the next period will be critical to making the network fully operational through the effective management and restoration of the sites. This will not happen without adequate financial investments in Natura 2000. A new Communication on financing Natura 2000, is planned by the European Commission, foreseen for 2011. A first estimation of Natura 2000 cost for agriculture gives the figure of 2 billion € representing 35 % of the total Natura 2000 cost set at 5,8 billion €per year.



EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate H - Sustainability and Quality of Agriculture and Rural Development
H.1. Environment , Genetic Resources and European Innovation Partnership

FACT SHEET

INTEGRATING ENVIRONMENTAL REQUIREMENTS INTO THE CAP

1. INTRODUCTION

Around half the land in the European Union (EU) is farmed. Farming has contributed over the centuries to creating and maintaining a unique countryside. Agricultural land management has been a positive force for the development of the rich variety of landscapes and habitats, including a mosaic of woodlands, wetlands, and extensive tracts of an open countryside.

The links between the richness of the natural environment and farming practices are complex. While many valuable habitats in Europe are maintained by extensive farming, and a wide range of wild species rely on this for their survival, agricultural practices can also have an adverse impact on natural resources. Pollution of soil, water and air, fragmentation of habitats and loss of wildlife can be the result of inappropriate agricultural practices and land use.

Maintaining agricultural land management, in line with site-specific requirements and needs, is essential for preserving the environmental and scenic values of the EU's rural areas. Therefore, the Common Agricultural Policy (CAP) has an important role in contributing to EU environmental objectives.

Treaty requirements to integrate environmental concerns into other policies are reflected in the Treaty on the Functioning of the European Union, (Part 1, Title II, Article 11) as follows 'Environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development'. Since the 1990s, the CAP has increasingly aimed at heading off the risks of environmental degradation, while encouraging farmers to continue to play a positive role in the maintenance of the countryside and the environment; and to serve sustainability purposes better.

Because the integration approach promoted by the Treaty has been well developed in the agricultural sector, environmental policy has also become heavily dependent on CAP Rural Development funding, which has increasingly been used to deliver environmental public goods. It needs to be recognised that there is a logic to funding this type of environmental measures through a CAP instrument, as many of the environmental services farmers can provide are jointly provided with production.

2. THE INTEGRATION APPROACH : TOWARDS A SUSTAINABLE AGRICULTURE

The key concept shaping the way how environmental requirements are integrated in the CAP is that of “sustainable agriculture”. The concept of "sustainability" refers, beyond the preservation of the environment, to the need to ensure economic viability and social acceptability. Pursuing sustainable agriculture means addressing economic, environmental, and social targets in a coherent and mutually reinforcing manner. Evidently, sustainable agriculture cannot exist, unless it provides farmers with a sufficient income.

In this context we must recall that agriculture has been increasingly exposed to high market volatility, which represents a major challenge to economic viability. Furthermore, production in less productive areas is under constant competitive pressures that call into question continued land management. Thus, any strategy pursuing the environmental dimension of farming would need to incorporate also instruments addressing the economic and social dimension of farming. Furthermore, it also needs to reflect the fact that farming is dependent on many aspects of environmental protection (fertile soil, sufficient water supply, pollinating insects etc); and that some environmental services depend on farming remaining in place.

3. ENVIRONMENTAL LEGISLATION RELEVANT FOR AGRICULTURE

The legal framework of environmental policy provides the context beyond which the integration of environmental requirements into the CAP has to operate. EU agriculture is subject to a comprehensive regulatory framework related to environmental issues.

The most important legal acts are

- Natura 2000, an EU-wide network of nature protection areas which has been established aiming to ensure the long-term survival of Europe's most valuable habitats and endangered species,
- the Water Framework Directive (WFD) which makes provisions for a long-term-oriented approach towards sustainable water management,
- the Nitrates Directive which was established in 1991 and provides for a series of measures designed to reduce and prevent water pollution caused or induced by nitrates from agricultural sources,
- and the EU legislation on pesticides which provides for measures minimising the risk of negative health and environmental impacts of pesticide use.

This general environmental policy needs to be complemented by an integration approach. To this end the CAP has set up many tools to integrate environmental requirements into the CAP.

4. MEASURES INTEGRATING ENVIRONMENTAL CONCERNS INTO THE CAP

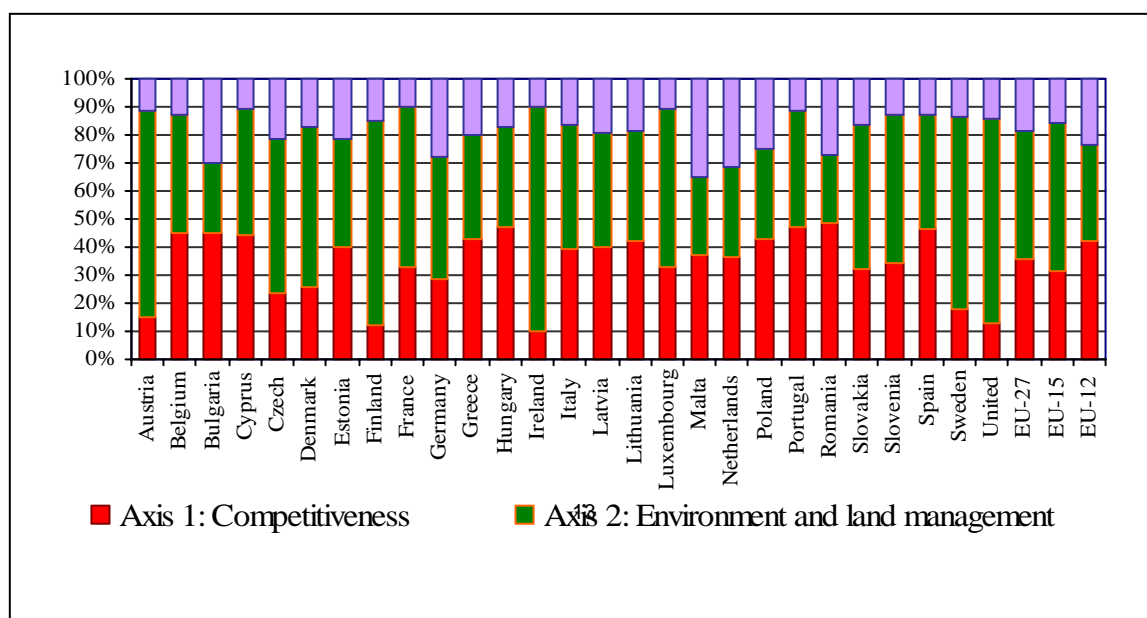
Today, the CAP includes a series of measures that contribute to preserving and enhancing the environment, in line with the principles prescribed in the Council's Environmental Integration Strategy of 1999. CAP measures promote in manifold ways the development of agricultural practices that contribute to preserving the environment and safeguarding the countryside.

Integrating the environment into the CAP is effectively achieved in both pillars of the CAP: Environmentally harmful effects of farming are limited through "cross-compliance" as cross-compliance establishes a link between income payments and the respect of mandatory standards. The encouragement of beneficial environmental outcomes of farming is subject to incentive measures, established on a voluntary basis (the two approaches are complementary and non-overlapping):

- Direct payments provide a general layer of support to all farmers, which constitutes the basis for keeping farming in place throughout the European countryside. In combination with cross-compliance direct payments contribute to the protection of natural resources and the respect of basic requirements for agricultural activities. Thus, direct payments provide the basis for the delivery of public goods through agriculture.
- Rural Development Policy consists of measures targeted towards delivering public goods, including the enhancement of the environment, creating an enabling context for improving competitiveness of the agriculture and forestry sector, and promoting the diversification of economic activity and quality of life in rural areas. The flexible and strategic approach of programming under Pillar II ensures a high degree of targeting. Agri-environment payments encourage farmers to adopt or maintain agricultural activities favourable to preserving the environment. Training and advisory services ensure a better performance of EU agriculture, also with respect to environmental outcomes. Other environment-related measures are non-productive investments and training. Compensation payments applied in areas subject to requirements of Natura 2000 or the Water Framework Directive help to support the implementation of these mandatory standards. Some investment measures can help ensure environmental protection (e.g. manure storage facilities, water saving measures...).

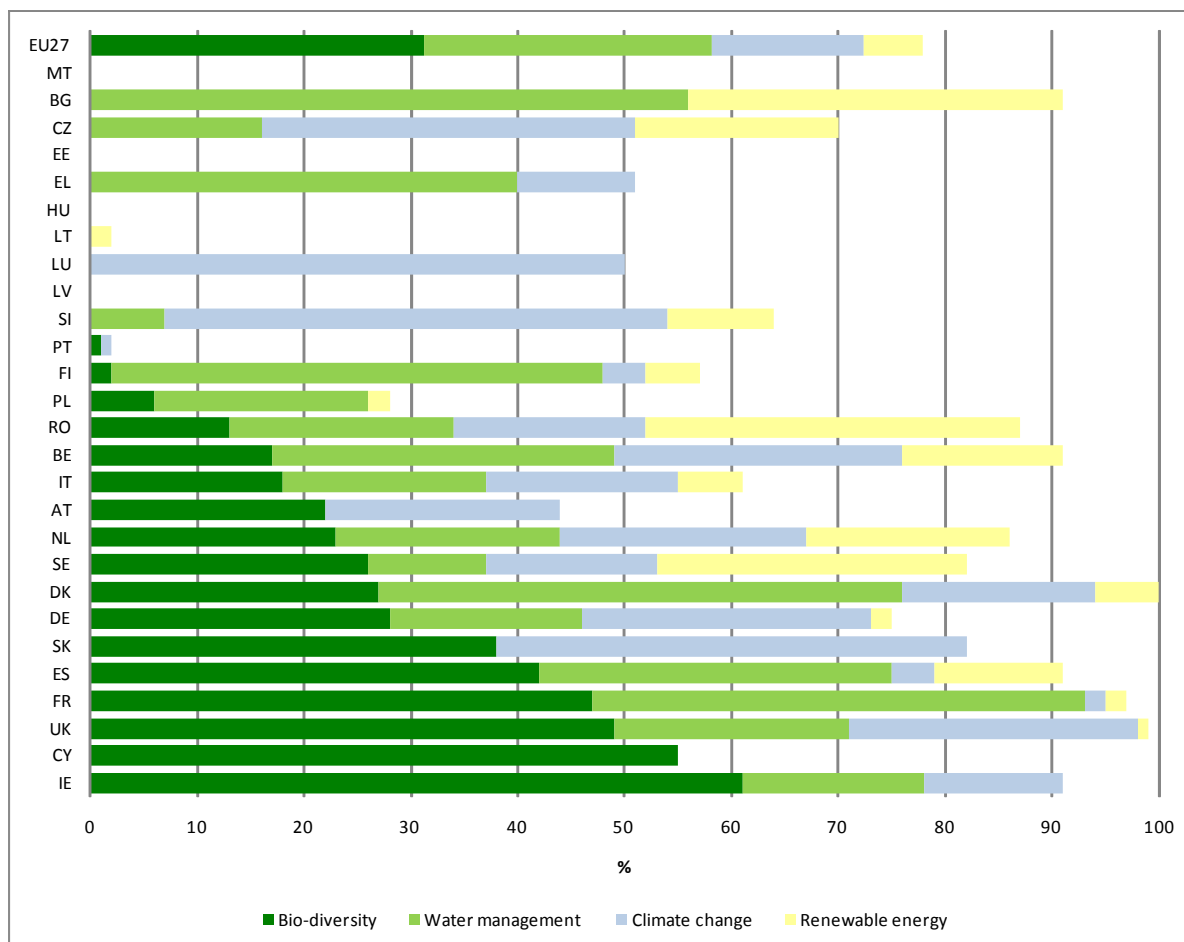
Looking at the Rural Development budget, we observe a strong environmental focus (cf table below): 45% of the EAFRD funding for the 2007-2013 period (some 43 billion €) has been allocated by Member States to Axis 2 measures ("improving the environment and the countryside"). For the current programming period, 22 billion € representing half of the budget devoted to the environmental axis of Rural Development policy, will be spent on agri-environment; 472 million € will be spent on Natura 2000 measures on farm land; and 111 million € on Natura 2000 measures on forestry land.

The three 2007-2013 RD thematic axes in the MS



EU Average: Axis 1: 35.8% Axis 2: 45.4% Axis 3: 18.8%

Overall distribution of CAP Health Check and EERP funds (€4.95 billion) according to “new priorities”



Note: These figures do not include national co-financing

5. ASSESSING THE INTEGRATION PROCESS

In order to be accountable, policy outcomes need to be assessed against declared objectives. Also the process of integrating environmental concerns into the Common Agricultural Policy needs regular assessments. In the EU, an elaborated approach towards regular policy evaluation has been established at European, national, and regional level.

The Common Monitoring and Evaluation Framework (CMEF) provides a single framework for monitoring and evaluation of all rural development interventions for the programming period 2007-2013, it establishes means for improving programme performance, ensuring the accountability of programmes and allowing an assessment on the achievement of established objectives. The CMEF is laid down in a set of documents drawn up by the Commission and agreed with Member States. These documents were put together in 2006 in a handbook which includes a series of evaluation guidelines and guidance fiches on the common indicators for monitoring and evaluation.

In addition, there is ongoing work on “agri-environmental indicators” for monitoring the integration of environmental concerns into the Common Agricultural Policy. This work

involves different partners, namely DG AGRI, ENV, Eurostat, JRC, SANCO and the EEA. A related work plan was established in line with requests of the Council to report on progress on the integration of environmental concerns into EU policies.

Among its primary objectives, this system aims at providing information on the state of the environment in agriculture, monitoring the linkages between agricultural practices and their effects on environment, and assessing the extent to which agricultural and rural development policies promote environment friendly farming activities and sustainable agriculture.

In September 2006, the Commission issued a Communication entitled "Development of agri-environmental concerns into the CAP" (COM (2006)508) which presents a list of 28 indicators to be implemented. Some agri-environment indicators form also part of the Common Monitoring and Evaluation Framework for Rural Development.



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Directorate H - Sustainability and Quality of Agriculture and Rural Development
H.1. Environment , Genetic Resources and European Innovation Partnership

FACT SHEET

ORGANIC AND MINERAL FERTILISERS

1. INTRODUCTION

Farmers spend much effort, time and investment to improve and maintain soil fertility through appropriate land use, crop rotation, liming, manuring and fertilizing. Nutrients are essential for crop yield and quality.

Organic manures and composts contribute valuably to a base dressing of plant nutrients, but generally an additional precise application of mineral fertilizers is required, specifically calculated for each nutrient: nitrogen, phosphorus, potassium, magnesium, calcium, sulphur, etc. The total and available nutrient contents of manures and compost can be measured or estimated so that the balancing mineral fertilizer requirements can be calculated. In some regions with intensive livestock production, manures (sometimes processed to reduce bulk) are exported to other, mainly arable, areas. This helps ensure the best utilisation of nutrients by avoiding any excessive applications.

Because crops use nitrogen from manures only at certain times of the year, effective storage of livestock manures is necessary to preserve nutrient value and to prevent that manure is applied when there is no or little crop uptake. In some areas, especially in Nitrate Vulnerable Zones, there are legal requirements for minimum storage capacity. In temperate areas of northern Europe the required storage capacity can be up to nine months of production and the period of spreading limited to a few months.

However, while mineral and organic fertilisers are necessary for agricultural production, excessive nutrient surpluses can pose a threat to the environment and human health, leading to i.a. pollution of drinking waters, eutrophication of water bodies, negative impacts on species and ecosystems in water bodies, proliferation of algal blooms in coastal waters, global warming and stratospheric ozone depletion, and contribution towards acid rain. Soils are also at risk as excessive organic nutrient supply can deplete oxygen in the soil. The result is that the natural micro-organisms cannot function properly and soil fertility is affected. In addition, highly nitrate-contaminated ground and surface water is considered a health risk and cannot be used as drinking water. This results in extra costs for the water industry to remove nitrates from ground and surface water sources of drinking water. Furthermore, excessive and technically inappropriate fertilization practices (mineral and organic) contribute to enhanced greenhouse gas (GHG) release.

While mineral fertilizers affect indirectly the soil organic matter (SOM) content by increasing biomass production, including the root system, organic fertilizers contribute

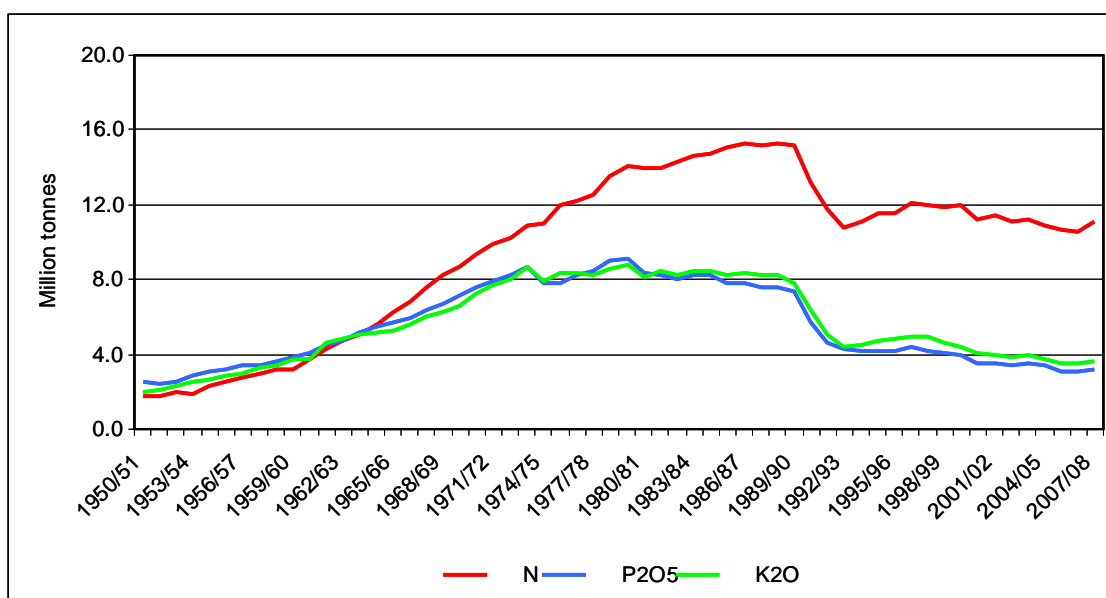
directly and indirectly to the SOM content as they contain a certain percent of organic matter. Thus, they not only contribute to a recycling of nutrients but significantly improve aggregate stability, soil structure, water infiltration and water retention. The stabilization of soil structure counteracts soil compaction and reduces erosion losses. Complexes of organic matter and mineral soil parts, mainly clay, enhance the pore stability, improving aeration and water infiltration ("soil as a sponge"). Mainly farmyard manure (not animal slurry or sewage sludge) and compost provide agricultural soils with humified substances, helping to avoid organic matter depletion – thus maintaining and improving soil fertility in general and beyond their nutritional value.

2. CURRENT STATUS AND TRENDS REGARDING THE USE OF FERTILISERS

2.1. Mineral fertilisers

Mineral fertiliser consumption has been declining in EU-27 since the late 1980s, as shown in the figure below.

Fertilizer consumption in the EU 27 (Source: Fertilizers Europe, 2009)



Forecast by Fertilizers Europe indicate that, between 2009 and 2019, the use of nitrogen, phosphorus and potassium in the EU-27 is expected to increase respectively by 4.1%, 3.9% and 7.7% (base year: 2009). When using 2007 as base year (which eliminates two exceptional years), the expected changes become +3% for N, -9.7% for P₂O₅ and -4.4% for K₂O.

However, this is still a substantial decline from the consumption peak of the seventies and eighties; by 2017, nitrogen will have decreased by 28% in the EU-27, compared to 1988 when the nitrogen consumption peaked. It is also estimated that there will be a decrease of 67% phosphorus and 61% potassium, compared to 1979, when the consumption of phosphorus and potassium peaked. Due to fertilization rates partly far beyond the need of crops and despite lowered rates, many soils still show an oversupply with some nutrients, e.g. phosphorous.

In the long-term forecast (until 2019), Fertilizers Europe foresees a general decrease of all nutrients in the EU-15, with the exception of Austria and Sweden (strong

development of energy crops), and Spain (development of irrigation). In the EU-12, on the other hand, with the exception of Slovenia and Latvia, consumption of all nutrients will increase. As a consequence, the significant development of nitrogen consumption in the new Member States will counteract the decrease in EU-15 consumption, resulting in an overall increase of nutrient consumption for the whole EU-27. Likewise, the development of energy crops will continue to partially compensate the negative impact of the reform of the CAP (decoupling) on phosphorus and potassium consumption, and will contribute to the increase in nitrogen (4.1%) consumption.

3. ORGANIC FERTILISERS

Animal numbers and industrialization of animal farming increased during the past fifty years, contributing to a greater overall nitrogen burden through organic fertilisers. Due to the agricultural systems of intensive production facilities the share of slurry increased compared to farmyard manure, supplying soil with more instantly available nutrients and less humus. The trend towards regional intensification has caused a surplus of organic fertilizers, mainly slurry, in certain regions while arable dominated regions often suffer from a lack of available organic fertilizers with valuable humus fractions. Changes in agricultural policy notably in 1984, 1992, 1999 and 2003 have since contributed to stabilising or reducing livestock numbers.

Comparison between 2003 and 2007 shows that, for EU 15, pig and laying hen numbers slightly increased, while goat, sheep, cattle and poultry, other than laying hen, numbers decreased. For EU 27 similar but less pronounced trends are noticed. Globally the nitrogen "pressure" on EU 15 agricultural soils from animal husbandry (mainly cows, pigs, poultry and sheep) is estimated at approximately 7,6 million tons annually spread on agricultural soils. Therefore, the total diffuse nitrogen "pressure", when the additional 8,9 million tons nitrogen from mineral fertilisers is added, was approximately 16,5 million tons in 2003, compared to almost 18 million tons in 1999 and 17,4 million tons in 1995.

Whereas mineral phosphorous is a non-renewable resource, it is not the only possible source of this indispensable nutrient for plant growth. Manure and to a lesser extent sewage sludge and biowaste are potential sources of phosphorous. For 15 Member States out of 22 (no data available for Cyprus, Luxembourg, Bulgaria, Romania and Malta), the main source of phosphorous in agricultural land is manure. In Denmark, Netherlands and Estonia the amount of phosphorous coming from manure is more than three times that coming from mineral fertilisers – but those Member States have a surplus of manure due to the high density of animal farms – whereas in Finland, France, Greece, Hungary, Italy, Latvia, Slovenia and Spain, mineral phosphate fertilisers are the main source of phosphorous.

Furthermore, among the 22 Member States, only the UK and the 3 Baltic States have a negative balance in phosphorous. The others have a phosphorous surplus which means that the input of phosphorous to the soil is higher than the output leading to soil accumulation and subsequent leaching into surface water and groundwater causing eutrophication problems such as in the Danube River and the Baltic Sea.

This phosphorous surplus is not always appropriately managed in the Member States. Reducing phosphorous inputs in those regions where soils are saturated would not only decrease problems of eutrophication, it would also reduce cadmium inputs from mineral phosphate fertilisers.

4. OVERVIEW OF EU POLICY INSTRUMENTS ADDRESSING FERTILISER ISSUES

4.1. Industrial policy

Regulation 2003/2003 relating to fertilisers aims to ensure the free movement of mineral fertilisers within the European Community. All types of fertiliser which comply with this regulation are designated "EC fertilisers" and are subject to its provisions. A type of fertiliser is designated as "EC fertiliser" only if:

- it does not adversely affect human, animal, or plant health, and the environment
- it is effective
- appropriate sampling, analysis, and if required, test methods are available.

The Regulation does not apply to cadmium and does not therefore address the issue of the unintentional presence of this substance in fertilisers. The need for a limit on the cadmium content of phosphate fertilisers has been discussed for a number of years within the Commission. This may end in a Commission proposal at the beginning of 2012.

The marketing of organic fertilisers and soil improvers is not regulated at EU level. Preliminary discussions on a possible legislation for these products started in the fourth quarter of 2009.

4.2. Environmental policy

The **Water Framework Directive** (Dir. 2000/60/EC) requires Member States to establish, at the latest by end 2009, river basin management plans (RBMP), each one including a programme of measures aiming to prevent deterioration, enhance and restore bodies of surface water and groundwater to good status and to preserve protected areas dependent on aquatic ecosystems as a rule by 2015. As of January 2011, 17 Member States had adopted their RBMPs. Annex VIII to the Directive provides an indicative list of the main pollutants, such as substances which contribute to eutrophication, in particular nitrates and phosphates.

EU rules regarding the protection of waters against nitrate pollution from agriculture are covered by the **Nitrates Directive** (Dir. 91/676/EEC). Obligations under this directive mainly relate to organic and mineral fertilizer management (e.g. buffer strips along watercourses, fertilisation plans, manure storage) and limitation of land application (e.g. amount of nitrogen from livestock manure limited to 170 kg/ha/year in nitrates vulnerable zones).

The **Directive on industrial emissions** (Directive 2010/75/EU) provides for a permitting system for certain categories of industrial installations (including intensive pig and poultry rearing installations). Operators should take all appropriate preventative measures against pollution, in particular through the application of best available techniques (BAT) enabling them to improve their environmental performance.

4.3. Common Agricultural Policy

The CAP includes a series of instruments that contribute to the protection of the environment.

Within the first pillar, direct payments to farmers are linked to various obligations – some of them related directly or indirectly to water quality – through the mechanism of cross-compliance. The Nitrates and Groundwater Directives are included in the Statutory Management Requirements to be respected under cross-compliance. The new standard of good agricultural and environmental condition requiring the establishment of buffer strips along watercourses by 2012 is also particularly relevant with regard to fertiliser use.

Member States may also support farmers undertaking agri-environmental actions via the fruit and vegetables Operational Programmes. Examples of such actions include the preparation and implementation of balanced fertilisation plans (CY, HU, IT, SE), introduction of methods/systems (equipment) for optimising use of fertiliser to avoid overfertilisation (FR), precision farming (IT).

The second pillar offers a broad menu of flexible policy measures which can be used to support sustainable water management practices. The possible types of support relate primarily to:

- training and information;
- farm modernisation;
- compensations for farmers facing area-specific disadvantages due to requirements introduced by the Water Framework Directive;
- environmentally beneficial land management practices which go beyond legal requirements (e.g. wetland restoration, development of semi-natural water bodies, reduced application of fertilisers).

In addition, some of the obligations of the Nitrates Directive have been funded on a temporary basis by other measures of rural development, i.e. the 'meeting standards' measure and the support to investments, e.g. for building manure storage.

Some concrete examples of measures taken from the RDPs 2007-2013 concerning the environmental measures related to water quality.

- Under the measures on vocational training and use of advisory services

Netherlands: formulation of "business water plans" (describing how to improve the impact on quantity and quality of water at farm level)

- Under the measure on farm modernisation

Belgium – Flanders and Wallonia: aid for investments on water purification, storage and use of rainwater

- Under the agri-environmental measures

Luxembourg: management of nitrogen and phosphorous fertilisers to improve water quality.

Finland: Establishment and management of riparian zones to reduce nutrients runoff into watercourses and to reduce risks of flooding.

- Under the measure on non-productive investments

Netherlands: Support for several types of investments aimed at improvement of the water quality, in and nearby pre-defined priority areas (Natura 2000 and other important nature areas).

5. IMPORTANT FORTHCOMING DEVELOPMENTS

Discussions on a possible EU legislation concerning the marketing of organic fertilisers and soil improvers: since end 2009.



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FACT SHEET INTEGRATED FARMING

1. INTRODUCTION

Integrated farming or integrated production is an approach to crop and livestock production based on the adoption of a holistic approach to farm management aiming to make production processes economically viable, socially acceptable and ecologically responsible. There is wide variation of integrated farming approaches which cover production systems which can be positioned between conventional production and organic production.

This approach pays particular attention to:

- the whole “farm system” and its relationships with the wider socio-economic and ecological environment;
- the different components of the farm system (crop and/or animal productions undertaken, cropping pattern, land use, farming practices, farm management).

No Community-wide regulation exists on integrated farming. This has led to national and regional authorities developing their own production and marketing standards, which they enforce with the aid of duly accredited certifying bodies. Despite the absence of specific rules, Community regulations include the possibility of awarding financial support to farmers using this agricultural system via *i.a.* operational programmes for fruit and vegetables, agri-environment, support for investment, training, support for food quality schemes.

2. CURRENT STATUS OF INTEGRATED FARMING

Integrated farming has an important potential for realising economic and environmental benefits. The adoption of integrated production by farmers can bring advantages such as savings on external inputs (pesticides, synthetic fertilisers) without necessarily eliminating their use altogether. However, it involves additional investment in time, training and advice resulting from the need to control and manage the information produced by the holdings themselves. Except for a few specific regions and labels, the market for integrated production is not well developed. However, the development of integrated production is being strongly influenced by a number of large retail chains, which are increasingly demanding products that meet requirements very similar to those typically met by this system. The pesticide and fertiliser industries also promote integrated farming.

Hardly any recent quantitative data is available on the application of this farming system in the EU. Integrated crop management (i.e. integrated farming limited to plant production) is estimated to cover only about 3 % of the utilised agricultural area in the EU (EEA, 2003). Based on a survey commissioned by the European Crop Protection Association in 1999, the area under integrated crop management in the European Union in 1999 was 3,641,420 ha. The Member State with the largest area under ICM was United Kingdom, followed at a considerable distance by Denmark and Austria. Available data on integrated livestock production is even scantier.

'Integrated farming' is not synonymous with 'integrated pest management'. IPM constitutes an important pillar of integrated farming and includes the set of practices and/or agricultural techniques used in integrated farming systems for the control of pests, diseases and weeds. IPM emphasizes working with and enhancing naturally occurring pest management mechanisms, using farming, biological, and physical techniques to keep pests below thresholds of economic damage. Where these methods do not provide adequate control, conventional pesticides are used as a last resort, with preference for the least toxic options. Developed by academics in the 1950s, IPM has gained acceptance by numerous farmers, particularly in the fruit and vegetable sector. By 2014, minimum requirements for IPM will become mandatory for all farmers in the EU in accordance with the Framework Directive on the sustainable use of pesticides.

3. OVERVIEW ON POLICY INSTRUMENTS

3.1. Environmental policy

The Framework Directive on the sustainable use of pesticides (Directive 2009/128) will regulate the plant protection element of integrated farming, i.e. integrated pest management. It stipulates that minimum requirements for integrated pest management will become mandatory for all farmers at the latest by 2014. In addition, Member States will be required to encourage professional users to implement crop or sector specific guidelines for IPM on a voluntary basis.

3.2. Common Agricultural Policy

The CAP offers various possibilities to support integrated farming-related measures. The most prominent ones are the fruit and vegetables operational programmes in the first pillar, and participation in food quality schemes and agri-environmental measures in the second pillar.

For instance, with regard to the fruit and vegetables CMO, many Member States included in their national frameworks for environmental actions support for integrated farming (BE, CY, DK, GR, ES, FR, IT, NL, UK). In addition, support was also granted for specific practices which are part of integrated farming, e.g. use of alternative methods or materials to chemical plant protection of chemical disinfection (16 MS), planting of hedges with indigenous plant species to provide a habitat to birds and insects (CY), installation of habitats and/or landscape elements favourable to biodiversity (FR, SK), training, advice and or technical assistance in support to environmental actions (14 MS).

Similar measures have also been included into the rural development programmes for the period 2007-2013. A few examples are provided hereunder:

- Vocational training and information actions

BE-Fl: awareness raising on innovative and sustainable practices including integrated production

- Setting up of advisory services

ES-Andalusia: Setting up of i.a. specific advisory actions, including on integrated pest management and integrated production

- Adding value to agricultural and forestry products

ES-Andalusia, Latvia: Support for improving quality of production, with particular reference to organic and integrated production.

- Participation of farmers in food quality schemes

BE-Wa, EL, ES-Andalusia, France, Poland, Portugal mainland: support to certification for food products recognised under a Community or national quality scheme

- Information and promotion activities

Poland, Slovenia: Quality schemes which may be supported include organic and integrated production

- Agri-environment

AT, BE-Fl, CY, CZ, EL, ES-Andalusia, Cataluña, HU, Italy- Emilia Romagna, LV, PT, SI, SK: support for integrated production in various crops



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FACT SHEET

ENVIRONMENTAL RISKS DUE TO FARMLAND ABANDONMENT

1. INTRODUCTION

By managing a large part of the European Union's territory, agriculture has a significant impact on and has as well a huge role in preserving farm-genetic resources, biodiversity, and a wide range of valuable habitats. Many valuable habitats and the presence of species have a direct interdependence with agriculture (e.g. many bird species nest and feed on farmland). The preservation of a number of species and ecosystems that have emerged over centuries of agricultural cultivation depends on the continuation of appropriate land management practices. Agriculture is also the first to benefit from biological diversity and ecosystem services (like water retention, pollination).

In many parts of Europe the continuation of land management is threatened by abandonment of farming activities. Land abandonment is one of various pressures which can lead to biodiversity loss in the EU. Preventing this process is therefore an important element in the political debate with implications for the policy design of the CAP.

A recent JRC report proposes to define farmland abandonment as the loss of utilised agriculture area that has not been converted into artificial zone or afforested (tree plantation). This non-utilised agricultural land is no longer farmed for economic, social or other reasons (no alternative use), and is not included anymore in the crop rotation system. Depending on the climate and ecological context, this abandoned farmland will gradually be covered by other species and habitats as the succession proceeds (eg scrubs and trees).

2. THE SCALE OF FARMLAND ABANDONMENT

Farmland abandonment is commonly understood as the cessation of agricultural activity on a given surface of land. This process has been observed in many regions of Europe at different periods. Farmland abandonment bears significant environmental consequences and is often associated with social and economic problems in rural areas.

The differences in methodology used in available studies make it impossible to validate and to compare the results for getting a clear insight on the real extent of farmland abandonment. However, looking at the literature available, it can be concluded that overall farmland abandonment tends to be of a lower importance in Western Europe while in Southern or Eastern Europe it is of more importance due to natural conditions as well as problems attributable to economic and political transition in eastern Member States.

Some studies speak about an average of 0.2 % of land abandonment in Europe, others refer to a level of 2%. Often figures on land abandonment are given only at national level: As an example, a recent study from the JRC¹² states that in the 1990s 2% of the French UAA, 4% of Poland's and 8% of Spain's UAA were abandoned.

3. RISK OF FARMLAND ABANDONMENT AND DRIVING FORCES

From a policy point of view it is important to analyse the leading causes of farmland abandonment rather than getting a picture of the farmland already abandoned. Manifold causes exist for farmland abandonment in Europe, depending on the area and the period under consideration. The agricultural situation differs from region to region, as a consequence of natural conditions, historic developments and the economic and demographic context. In most cases, a combination of different factors leads to farmland abandonment.

There is a general agreement in the scientific literature about the main drivers for farmland abandonment:

- Environmental/biophysical conditions: Farmland abandonment is more likely to occur in areas characterized by adverse conditions concerning climate, soil or water availability.
- Economic conditions: Farmland abandonment may increase where the agriculture income is substantially below that of the rest of the economy (regional income).
- Structural conditions and remoteness: Farmland abandonment is more likely to occur where the economical viability of farming is low due to unfavourable farm structure and remoteness to markets.
- Social conditions: Farm land abandonment may happen due to unfavourable social factors such as high age of active farmers as well as a low level of training.

The literature stresses a strong relationship between farmland abandonment and a low competitiveness of farming systems. The risk of arable land being abandoned is much lower than is the case for extensive and traditional grazing systems with high proportions of permanent grasslands.

Currently there is no clear-cut assessment of the relative weight of the different factors which are determining farmland abandonment. In the context of the ongoing work on agri-environmental indicators, the JRC established an expert panel group that will identify the weight and the thresholds to be given to each of these factors.

It needs also to be borne in mind that, in mountain areas, the same drivers can lead to a decision to afforest agricultural land. In that case, the same environmental consequence as for land abandonment can occur. It needs to be recognised that, although this particular situation is probably not accounted for as land abandonment, it can have similar consequences for biodiversity.

¹² JRC (2008) Analysis of Farmland Abandonment and the Extent and Location of Agricultural Areas that are Actually Abandoned or are in Risk to be abandoned.

4. ENVIRONMENTAL IMPACT OF FARMLAND ABANDONMENT

Farmland abandonment is occurring mostly on semi-natural grassland. Semi-natural grasslands in Europe developed over centuries as a result of continuous management by farmers. Grazing and haymaking were the most common activities but also other management systems were used like sod cutting and burning grass and heather. As a result of continuous management, species diversity increased and specific grassland vegetation types can now be identified.

The abandonment of semi-natural grasslands, for example species rich swards, generally has a negative impact on biodiversity and ecosystems because vegetation succession leads to species-poor and more homogeneous vegetation types. In most places in Europe the final succession stage will be forest, except in the forest-steppe zone of south-eastern Europe and above the treeline in mountainous areas. Vegetation succession also results in a structural change from an open to a closed landscape, which in turn has an impact on the fauna and on the status of habitats suitable for meadow birds and butterflies.

Other environmental effects of abandonment may include the loss of small scale mosaics of landscape and land use and their characteristic species, and also those of forest edge habitats; a reduction in genetic diversity in both wild species and in local breeds of livestock or varieties of crops (which are often well adapted to semi-natural habitats); and an increased fire risk in forests where grazing areas act as firebreaks.

5. POLICY MEASURES AIMING TO AVOID LAND ABANDONMENT

For avoiding land abandonment, the CAP offers two main measures with the objective of keeping farming in place and thereby contributing to maintaining the production capacity of European agriculture: decoupled direct payments with their link to cross-compliance requirements and the Less Favoured Area payments.

Decoupled direct payments contribute to stabilizing and enhancing farm income.

Besides their role of supporting farm incomes, direct payments, in combination with cross-compliance, underpin the respect of basic requirements for agricultural activities. Cross compliance consists of mandatory requirements related to the environment, food safety, animal health and welfare (SMRs). Furthermore, it includes the requirement to keep land in Good Agricultural and Environmental Conditions (GAEC). In case a farmer does not respect these basic requirements on all his land, his direct payments are reduced or entirely cancelled. Linking direct payments to basic agricultural land management requirements helps to protect natural resources and maintain the capacity to produce, also on marginal land which might be at risk of abandonment.

It is important to ensure that the GAECs on minimum level of maintenance are adapted to local conditions. If the fight against encroachment of vegetation is too intensive or not limited to unwanted vegetation, this can be environmentally counterproductive.

Compensatory payments in Less Favoured Areas help maintain farming activity in areas which, due to adverse natural conditions, are less profitable. This concerns in particular marginal areas or mountainous areas where the LFA payments contribute to avoiding land abandonment and, thereby, negative effects for the environment and/or the attractiveness of the rural areas in question. However, for receiving LFA payments, eligibility rules are established which mean that not every farmer in these areas are de facto able to receive

LFA payments. Moreover, the level of LFA payment in some Member States is very modest, and so can only play a minor role in helping to avoid land abandonment.

There are also agri-environmental measures which can contribute to avoiding land abandonment; but agri-environment is not really designed to address the issue of land abandonment on its own: it is best used to fine tune land management to specific environmental needs, while the other instruments address the income aspect.

6. OUTLOOK

In view of maintaining the production capacity of European agriculture, to enhance biodiversity and ecosystem services provided by natural or semi-natural ecosystems, to keep rural areas alive and to improve social conditions, it is necessary to avoid farmland abandonment. As the global demand for food increases, there is a justified interest in keeping agricultural land fit for agricultural production. In addition, there is a strong societal interest in maintaining valued landscapes or precious habitats as well as avoiding environmental damage that can result from land abandonment.

Thus, land abandonment is an issue which needs policy attention. Due to a lack of reliable data concerning the scale of the problem, there is a strong need for further research. It will only be possible to achieve a full picture of the problem by region-specific studies which can then be compared and summed-up. However, this is not a valid reason for delaying action, as farmland abandonment already takes place and it risks increasing in coming years.



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FACT SHEET **AGRICULTURAL LANDSCAPES AND ECOSYSTEMS**

1. THE AGRICULTURAL LANDSCAPE PERSPECTIVE

Human interventions such as agricultural land use and forestry have shaped landscapes over centuries. Whereas natural landscapes in the final stage of natural succession are dominated by forests in certain areas, land use led to a rich variety of cultivated landscapes and semi-natural habitats. Farmed landscapes are generally appreciated for their aesthetics; in addition they can represent cultural identity and the natural heritage. The scenic value of landscapes makes rural areas attractive for the establishment of enterprises, for tourism and recreation businesses, and as places to live in.

A landscape perspective facilitates the understanding of the interaction between productive land use and nature as a system that integrates all natural resources, such as soil, air, water and biodiversity. It addresses simultaneously the goals of ecosystem maintenance, agricultural and forestry production, and improved quality of life. Accordingly, measures directed towards sustainable land use systems would always also address goals related to preserving biodiversity, soil, and water.

Man-made modifications of the landscape often enhanced biodiversity, depending on region-specific conditions and land use pattern. Following centuries of cultivation, many species turned into farmland specialists. Unlike natural landscapes, cultural landscapes are not stable, but depend on continued human intervention.

Environmentally valuable agricultural landscapes are characterised by their specific pattern of perennial natural and planted vegetation, the maintenance of soil cover, and special grazing management, all contributing to the connectivity between semi-natural habitats, biodiversity and cultivation. Hedgerows, stonewalls, meadows, and intermediate elements such as small woods and watercourses are important features of the ecological and scenic values of cultivated landscapes.

When the farming structure and land management methods that helped creating valuable habitats and biodiversity lose their economic viability, changing land use practice, intensification and restructuring become drivers of ecosystem changes. Standardisation and specialisation of production, mechanisation, land improvement, such as drainage and irrigation, longer crop rotations, and increased parcel sizes can lead to major environmental pressures. Eutrophication, pollution, fragmentation and spatial isolation result in the destruction of habitats and biodiversity decline.

2. THE CONCEPT OF "ECOSYSTEM" SERVICES

The interaction between productive land use and the preservation of valuable habitats and landscapes is more and more discussed with reference to "ecosystem services". Reference to "ecosystems" can be found in the European Union 2020 Biodiversity Strategy. It mentions as one of the key objectives of the strategy the need to "place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status".

Practical definition of concepts of "ecosystem" and "ecosystem services" emerged in a recent discussion of environmental and agricultural organisations:

- **Ecosystem.** An ecosystem is a dynamic complex of plant, animal, and micro-organism communities and the nonliving environment interacting as a functional unit. Humans are an integral part of ecosystems. Ecosystems vary enormously in size; a temporary pond in a tree hollow and an ocean basin can both be ecosystems.
- **Ecosystem services.** Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and water; regulation services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation, nutrient cycling, and the preservation of habitats and biodiversity; and cultural services such as recreational, spiritual, and other nonmaterial benefits such as landscape amenities.

These definitions underline that the different natural resources, such as biodiversity, air, soil and water, cannot be meaningfully addressed as an isolated concept, but only by considering the overall economic, social, and environmental context.

The communication "Options for an EU vision and target for biodiversity beyond 2010" (COM(2010) 4) links agricultural land use explicitly to the concept of ecosystems when stating that the *"decline in the viability of farming practices favourable to biodiversity led to the loss of some critical ecosystem services in rural areas"*. Furthermore, it advocates *"the enhanced application of payments for ecosystem services to reward those whose land provides these services"*.

3. CAP MEASURES ADDRESSING LANDSCAPE PRESERVATION

Valued agricultural landscapes have the characteristics of public goods: Landscapes provide benefits to many users, while there are limited or no possibilities to ensure that every user provides his or her share to covering the costs. Thus, markets cannot ensure a sufficient supply of valued landscapes and policy intervention is needed to ensure delivery.

The CAP offers a wide range of measures contributing to the maintenance and preservation of agricultural landscapes.

- CAP measures such as income support and market stabilisation help keeping sustainable farming in place throughout the European countryside. In combination with cross-compliance, direct payments contribute to the protection of and landscape elements and the respect of basic requirements for agricultural activities, thus providing the basis for the delivery of public goods through agriculture.

- Rural Development Policy consists of measures targeted towards delivering environmental public goods. Agri-environment payments encourage farmers to adopt agricultural activities favourable to preserving the environment and the countryside. Other measures relevant in this context are non-remunerative investments and training.

CAP measures concerning income support and market stabilisation help keeping sustainable farming in place throughout the European countryside. Cross compliance provides a mechanism that links direct payments to compliance by farmers with basic standards, including the protection of landscape elements and habitats: Non-compliance is sanctioned by payment reductions. In addition, cross-compliance standards serve as a baseline for agri-environment payments which are granted for voluntary commitments beyond those basic requirements.

Rural Development Policy consists of a range of measures targeted towards delivering environmental public goods. Agri-environment payments encourage farmers to adopt agricultural activities favourable to preserving the environment and the countryside. Examples include targeted actions such as protecting and promoting local crop and livestock diversity, preserving hedgerows and extensive pastures, maintaining continuous year-round soil cover or special grazing management with the aim of keeping the landscape open. In parallel, forestry measures such as Natura 2000 payments or forest environment payments support forest owners to improve forest land and its ecosystem services (water protection, soil formation and protection, biodiversity conservation or carbon stocks) Other Rural Development measures relevant in this context are non-remunerative investments and training.

In addition, and similar to income support under the first pillar of the CAP, to the above-mentioned measures, compensatory payments in the Less Favoured Areas help maintaining farming in less competitive areas, which is the very precondition for ensuring land management in view of preserving the countryside.

4. IMPORTANT FORTHCOMING DEVELOPMENTS

The established sectoral sub-targets for biodiversity under the 2020 Biodiversity Strategy¹³ include conserving and restoring nature, maintaining and enhancing ecosystems and their services and ensuring the sustainability of agriculture, forestry and fisheries. These sub-target definitions will have implications also for the CAP being a land management policy relevant for preserving valuable landscapes and ecosystems.

¹³ COM (2011) 244



EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate H - Sustainability and Quality of Agriculture and Rural Development
H.1. Environment , Genetic resources and European Innovation Partnership

FACT SHEET PESTICIDES

1. INTRODUCTION

Pesticides are used to kill or control harmful organisms such as weeds, micro-organisms or insects. In Community legislation, pesticides have usually been divided into two major groups (plant protection products and biocides). This fact-sheet will address the main group used in agriculture, i.e. plant protection products (PPPs).

PPPs are used by farmers to fight crop pests and reduce competition from weeds, thus improving yields, protecting the quality of the produce (blemish-free produce), and ensuring food safety (Food contaminants such as mycotoxins can be reduced and prevented by using pesticides). This, in turn, ensures reliable supplies of agricultural products every year and contributes to the availability of low-priced fruits and vegetables, affordable for all consumers.

However, human and animal health can be negatively affected through direct exposure (industrial workers producing PPPs and operators applying them) and indirect exposure (residues of PPPs in agricultural produce and drinking water, exposure of bystanders or animals via spray drift).

Spray drift, leaching or run-off are diffuse sources of uncontrolled dissemination of PPPs into the environment leading to pollution of soil and water compartments (surface water and groundwater). Environmental contamination can also occur during and after application, cleaning of equipment or uncontrolled, illegal disposal of PPPs or their containers (point sources).

PPP use may also cause direct and indirect effects on the ecosystem, e.g. loss of biodiversity. Non-target organisms can be directly impacted by PPP during spraying. Indirectly, over-efficient weed control means that insect-feeding birds may suffer from shortage of food. Conversely, if weed control is less systematic, the resulting increase in insect populations is beneficial for the populations of these birds. However, biodiversity is also influenced by a number of other factors, such as agricultural practices, plot sizes, type of crops, etc.

2. CURRENT STATUS AND TRENDS REGARDING PLANT PROTECTION PRODUCT USE IN THE EU

Official EU statistics on the use of PPPs are currently not available. Estimations are nevertheless provided to Eurostat by the European Crop Protection Association. The

latest report from ESTAT on the use of PPPs in the EU was published in 2007 using data from the period 1992-2003. This report shows that agriculture is by far the biggest PPP-using sector. The use (both nature and total volumes applied) of pesticides varies depending on the type of agricultural produce - the largest quantities of PPPs are used on vines, cereals, fruit, vegetables and potatoes - and on a range of factors, such as outbreaks of plant diseases or plagues of insects. Moreover, a number of other features affect figures from one year to the next, such as weather, seasonal factors, prices of pesticides and land set-aside obligations. The major types of product in 2003 were fungicides (ca. 49% of the market), followed by herbicides (38%), insecticides (10%) and other pesticides (3%).

The ESTAT report also reveals that, in 2003, five countries together accounted for nearly 75% of the total of the 220,000 tonnes of PPP used in EU-25: France (28%), Spain and Italy (14%), Germany (11%) and UK (7%). The use of PPPs per hectare of agricultural land is much higher in the western than in the eastern Member States. The total amount of PPP used in the EU-25 increased steadily in the 1990s, stabilising in the late '90s, and then declined continuously from 1999 until 2003. This decline is attributed to the EU-15 Member States. The consumption of PPP in the new Member States slightly increased during that period. The replacement of products used at high dosage rates by substances active at very low dosages is probably the main reason for the overall decrease. This illustrates that volume as such is not the only indicator of pesticide effect: the modern low dosage products are more efficacious and they tend to have significant fewer unwanted side-effects. However, new approaches to agricultural management also play a role: the increase in organic farming in north-western Europe (from 3% in 2000 to 4.7% in 2007) and the use of integrated crop management techniques in many pesticide-intensive farming systems (less than 3% of UAA in the late 1990s). Irrigated farming generally relies on high to very high doses of pesticides per hectare, whereas they are generally not used, for example, in extensive grazing systems.

The 2009 Commission report on the monitoring of pesticides residues in products of plant origin in the EU and EEA countries indicates that, in 2007, 96.01% of the samples analysed were compliant with the legal Maximum Residue Levels (MRLs). In 3.99% of all samples, residues above the MRL were found. The number of exceedances of MRLs was higher in produce imported from Third Countries (6.84 exceedances/100 samples) than in produce from the EU (2.31 exceedances/100 samples). Compared to previous years, the frequency of samples exceeding MRLs has slightly been decreasing since 2003 where it peaked at 5.5%. Organic cereals, fruit and vegetables have, overall, a lower rate of MRL exceedances (1.24%) in comparison with conventionally grown products (3.99%).

3. OVERVIEW OF POLICY INSTRUMENTS ADDRESSING THE MARKETING AND USE OF PLANT PROTECTION PRODUCTS

3.1. Health policy

The evaluation, marketing and use of PPPs (herbicides, insecticides, fungicides etc.) in the Community are regulated under **Council Directive 91/414/EEC**. This Directive lays out a comprehensive risk assessment and authorisation procedure for active substances and products containing these substances. An EU list of approved active substances (Annex I to Directive 91/414/EEC) is established, and Member States may authorise only plant protection products containing active substances included in this list.

As from June 2011, Council Directive 91/414 has been replaced by **Regulation (EC) No 1107/2009** concerning the placing of plant protection products on the market. This Regulation specifies strict criteria for approval of substances. In particular it provides that carcinogens, mutagens, endocrine disruptors, substances toxic for reproduction or which are very persistent will not be approved, unless exposure to humans is negligible.

In the EU, as from 1 September 2008, a new legislative framework on pesticide residues (**Regulation (EC) No 396/2005**) is applicable. This Regulation completes the harmonisation and simplification of pesticide MRLs. With the new rules, MRLs undergo a common EU assessment to make sure that all classes of consumers, including the vulnerable ones, like babies and children, are sufficiently protected. The Regulation covers pesticides currently or formerly used in agriculture in or outside the EU (around 1100). Where a pesticide use is not specifically mentioned, a general default MRL of 0.01 mg/kg applies.

3.2. Environmental policy

Together with the Regulation 1107/2009 on the placing of PPPs on the market, the Council and European Parliament adopted the **framework Directive 2009/128/EC on the sustainable use of pesticides**, which aims at filling the current legislative gap regarding the use-phase of pesticides at EU level. This directive sets minimum rules for using pesticides in the Community, improving the quality and efficacy of pesticide application equipment, ensuring better training and education of users and developing integrated pest management schemes. In particular, minimum requirements for integrated pest management will become mandatory for all farmers by 2014 at the latest.

The **Water Framework Directive (WFD) 2000/60/EC** aims to ensure *i.a.* the good chemical status of both surface water and groundwater bodies across Europe. For surface waters this goal is defined by limits on the concentration of specified pollutants of EU relevance, known as priority substances, including a number of pesticides (e.g. atrazine). To date, 33 priority substances have been identified. A daughter Directive 2008/105/EC, published in December 2008, established limits, known as Environmental Quality Standards, for these 33 substances and for an additional 8 substances regulated under previous legislation. The list of priority substances is currently under review, and more substances, including some additional PPPs, may be included in the Commission proposal due this year. In the context of assessing the ecological status of surface waters under the WFD, Member States must identify additional substances of national concern, including other PPPs, which are being discharged in significant quantities into the body of water as "river-basin specific pollutants". These have to be monitored and must meet national quality standards in order for the relevant river basins to meet the "good ecological status" criterion. The Water Framework Directive's requirement for good chemical status of groundwater is reinforced by the 2006 Groundwater Directive 2006/118/EC, which specifies measures to assess, monitor and control groundwater pollution, as well as generic quality standards for active substances in pesticides, singly and in total. Member States are required to establish more stringent quality standards if it is needed for achieving WFD objectives.

3.3. Common Agricultural Policy

The CAP contains several tools where support is either linked to the respect of environmental requirements (e.g. cross-compliance linked to Single Farm Payment) or granted to farmers for the provision of specific environmental services (Rural

Development). These could contribute to reducing the risks linked to the use of PPPs in the agricultural sector.

In the first pillar, with the introduction of mandatory cross-compliance, the full granting of direct payments is linked to the respect of a number of statutory management requirements applicable on the whole farm, including those stemming from the implementation of Directive 91/414. The Health Check of the 2003 CAP reform introduced a new standard of good agricultural and environmental condition related to water, i.e. establishment of buffer strips along water courses. Member States will be able to define restrictions applying to these buffer strips, including restrictions on the use of PPPs.

The farm advisory system can help farmers respect their cross-compliance obligations and improve the environmental performance of their farms.

In the framework of the Common Market Organisation for fruit and vegetables, support is granted to producer organisations for the implementation of operational programmes that must comprise two or more environmental actions or devote at least 10% of the expenditure on environmental actions. Examples of such actions include the installation of biobeds for filling, storing and washing sprayers (FR); the use of alternative methods and materials to chemical plant protection (natural enemies, traps, solarisation, etc) (BE, CY, ES, FR, HU, IE, IT, NL, SE, UK); organic (ES, IT, NL, SE, UK) and integrated production (CY, EL, ES, FR, IT, NL); integrated pest management (BE, CY).

The second pillar offers a broad menu of flexible policy measures which can be used to support input reduction measures. The possible types of support relate primarily to:

- training and information,
- use of advisory services
- support for farm modernisation (e.g. improvement of spraying equipment)
- pesticide-related obligations for farmers introduced by the Water Framework Directive, imposing major restrictions in farming practice which result in a significant loss of income (article 38);
- environmentally beneficial land management practices which go beyond legal requirements (e.g. support for pesticide use reductions, organic farming, integrated farming).

Some concrete examples of measures taken from the RDPs 2007-2013 contributing to a more sustainable use of pesticides are given hereunder.

- Under the measures on vocational training and use of advisory services

Malta: Advisory services shall cover inter alia supporting documentation required in terms of Rural development measures, including plant protection plans.

- Under the measure on farm modernisation:

Bulgaria: Investments connected to the conversion and development of organic farming and agri-environment

Netherlands: Support contributing to a further reduction of emission of nutrients, ammonia, greenhouse gases and pesticides.

- Under the agri-environmental measures

All Member States (except NL): conversion and/or maintenance of organic farming

AT, BE-FI, CY, CZ, EL, ES, HU, IT, LV, PT, SI, SK: Support to integrated production

Belgium-Flanders: mechanical weeding.

Finland: use of pest monitoring

France: implementation of biological control

Luxembourg: pesticide use reduction in arable crops; biological control against grape berry moths using pheromones for mating disruption

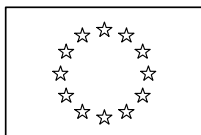
Poland: Establishment of buffer zones where the use of fertilisers and pesticides is prohibited

Sweden: environment protection plan, including measures to reduce risks linked to pesticide use

4. IMPORTANT FORTHCOMING DEVELOPMENTS

General principles of integrated pest management will become mandatory for all farmers from 2014. This will raise the baseline for agri-environment measures encouraging voluntary actions with regard to pest management.

Member States must communicate National Action Plans under the Pesticide Framework Directive to the Commission by 14 December 2012, this will encourage Member States to take a structured approach to their measures in favour of sustainable use of pesticides, and this should then flow through into the measures they support under rural development.



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FACT SHEET SOIL

1. INTRODUCTION

Soil is a complex, living resource which performs vital functions as a basis for production (food, livestock feed, fibre, and fuel). Soil is essential for the preservation of water and ecosystem stability. As a global carbon sink, soil has an important role in the mitigation of climate change. Soil is a reservoir for genes and it is an important element constituting landscape amenities and habitat values.

However in spite of the importance of the afore-mentioned functions, soil problems have not received as much attention as the threats such as related to water or air. The lack of attention to soil degradation is illustrated not only in the limited soil protection targets across the EU, but also in the scarcity of data.

Soil is a non-renewable resource and needs to be managed sustainably. Seven of the *soil degradation processes* commonly identified as matters of primary concern (water, wind and tillage erosion; decline of soil organic matter; compaction; salinisation ; acidification; diffuse contamination; and declining soil biodiversity) *are closely linked to agriculture*.

Erosion is known to be a serious problem throughout Europe, especially in the Mediterranean zone (water erosion) and in northern Europe (wind erosion). It is a natural process, which can however be significantly accelerated by inappropriate farming practices, namely: ploughing up-and-down slopes, removal of vegetative soil cover and/or hedgerows, abandonment of terraces, overstocking and inadequate use of heavy agricultural machinery. An estimated 115 million hectares or 12% of Europe's total land area are subject to water erosion, and 42 million hectares are affected by wind erosion. With the very slow rate of soil formation, any soil loss of more than 1 t/ha/yr can be considered as irreversible within a time span of 50–100 years.

Soil organic matter is a major contributor to soil fertility, as it binds nutrients to the soil, thus ensuring their availability to plants. It is the home for soil organisms, from bacteria to worms and insects, and allows them to transform plant residues, and hold on to nutrients available to plants and crops. It also maintains soil structure, thereby improving water infiltration, decreasing evaporation, increasing water holding capacity and avoiding soil compaction. Moreover, soil organic matter accelerates the break down of pollutants and can bind them to its particles, so reducing the risk of run-off.

In addition, because soil organic matter contains around 60% carbon, it is the defining factor in soil's influence on the global carbon cycle. There is more carbon stored in soil than in the atmosphere and in vegetation combined. In the EU alone, there are more than 70 billion tonnes of organic carbon in our soils. However, as with other carbon cycles, there are constant transfers of CO₂ (carbon dioxide) between the soil and the atmosphere and vice versa, through plants. In addition to CO₂, soils also play a significant role in the balance of other greenhouse gases: nitrous oxide (N₂O) emissions are associated with the decomposition of organic matter and the use of nitrogen fertilisers, and methane (CH₄) is produced in soils under anaerobic conditions¹⁴.

Decline of soil organic matter has severe consequences for soil biodiversity as well as for suitability and possibility to produce certain crops. An estimated 45% of European soils have low organic matter content, in particular in southern Europe but also in areas of France, Germany and the United Kingdom. Some agricultural practices can have adverse effects on the soil organic matter content: conversion of grassland to arable land, drainage of wetlands, poor crop rotation and plant residue management such as burning crop residues, accelerated mineralization due to management practices such as continued tillage and deforestation. Recent trends in land use and climate change resulted in soil organic matter losses at a rate equivalent to 10 % of the total fossil fuel emissions at pan-European scale. A survey of Belgian croplands (210 000 soil samples taken between 1989 and 1999) indicated a mean annual loss of 76 g C/m². A large-scale inventory in Austria revealed that croplands were losing 24 g C/m² annually. Carbon losses from soils across England and Wales in 1978-2003 were about 13 million tonnes of carbon annually. Contrary to cropland, grassland is seen as a net carbon sink in most European countries, with an overall mean of 60 g C/m² annually. However, the undisputed hot spot of CO₂ emissions from soils comes from the drainage of peatlands. Although peatlands represent only around 2% of the crop area in Europe, they are responsible for more than 50% of CO₂ emissions from croplands.

Soil compaction, i.e. an increase in bulk density and a decrease of soil porosity, can be induced by inappropriate use of heavy machinery and high livestock densities, in particular in wet conditions or on wet soils. Negative effects of compaction includes a loss of soil fertility due to changes in soil structure because of reduced oxygen and water supply to plant roots, reduced water infiltration and retention resulting in increased water run-off, and in increased emission of greenhouse gases from the soil due to changes in the nutrient cycle.

Salinisation, i.e. the accumulation in soils of soluble salts (mainly sodium, magnesium, and calcium), can occur naturally in low, poorly drained areas in hot and dry climates, where surface water collects and evaporates, but can be exacerbated by agricultural activities, in particular due to poor irrigation technology, inappropriate drainage and the use of saline waters for irrigation and the overexploitation of groundwater. The countries most affected are Spain, Hungary and Romania.

Acidification, i.e. a significant decrease of the pH value of the soil, describes the loss of base cations through leaching and replacement by acidic elements. It depletes the buffering capacity of the soils and thus changes its ability to neutralise acidity, seriously damaging certain soil biota which are unable to adapt to changes in soil chemistry.

¹⁴ Both N₂O and CH₄ are greenhouse gases, almost 300 and 20 times more potent than CO₂ respectively.

Diffuse contamination by nutrients, fertiliser impurities (e.g. cadmium) and biocides is more concentrated in areas with intensive agricultural production and can have significant impacts on soil biology communities (and thus soil functions), groundwater sources, and crop uptake. According to the Soil Chapter in the SOER 2010 (p. 21), approximately 15 % of the land surface of EU-25 experienced soil nitrogen surpluses in excess of 40 kg N/ha. Proxy measurements such as the concentration of nitrates and phosphates in water bodies, including groundwater supplies, can be used as an indication of excessive nutrient application to soils.

Soil biodiversity is affected by all the threats listed above, and therefore all driving forces mentioned apply to the loss of soil biodiversity, changes in land use (agricultural and forestry practices) and soil contamination being the most prominent.

It is difficult to extrapolate current *trends* into the future based on the limited existing data. However, the human-induced driving forces causing the threats are showing an upward trend. Climate change, in the form of rising temperatures and extreme weather events, is exacerbating both greenhouse gas emissions from soil and threats such as organic matter decline, erosion, salinisation and landslides. All this suggests that soil degradation in Europe will continue, possibly at a faster pace.

2. EU INITIATIVE FOR SOIL PROTECTION

Soil protection is not a specific objective of any EU legislation but it features in some legislation as a secondary objective. To close this gap, the Commission proposed a Soil Framework Directive in September 2006¹⁵.

In essence, the Directive would require Member States to preserve soil functions, to identify where degradation is already occurring and, setting their own level of ambition and their own timetable, to combat such degradation. This means that where soil friendly sustainable agricultural practices are carried out, they should continue. Where the Member States' own diagnosis establishes that soil degradation is occurring at an unacceptable level, then Member States will need to develop appropriate responses to ensure sustainable use. The European Parliament endorsed the proposal in November 2007, while the Environment Council has been so far unable to reach a qualified majority in its favour.

Currently the most relevant EU environmental directives with respect to soil quality are the Nitrates Directive and the Water Framework Directive. The Nitrates Directive, where properly implemented, is having positive effects on local and diffuse soil pollution by nitrates (and phosphates). The Water Framework Directive is primarily focused on water quality and mitigating the effects of floods and droughts. Because of the link between water and soil quality, measures taken under these directives may contribute to reducing diffuse soil contamination, with expected positive side effects on soil biodiversity.

Other EU environmental directives, such as the Birds and Habitats Directives, the Sewage Sludge Directive and the Plant Protection Products Directive, are expected to have beneficial effects on soil quality, but to a lesser extent. Finally, the Resource Efficiency Road Map, scheduled for 2011, will look at soil in its context as a key resource for the rural economy.

¹⁵ COM(2006) 232, http://ec.europa.eu/environment/soil/index_en.htm.

3. SOIL CONSERVATION FARMING PRACTICES

Data collected under the project "Sustainable Agriculture and Soil conservation" (SoCo, 2009) on the type and distribution of various soil-relevant agricultural practices have allowed the assessment of *two farming systems* (conservation agriculture and organic farming) and *eleven conservation practices* (no-tillage, reduced tillage, cover crops, ridge tillage, agro-forestry, buffers, contour farming, intercropping, sub-soiling, terracing, water management). The analysis was performed from environmental and economic perspectives, and with respect to their effectiveness in addressing soil degradation processes. These practices appear to have varying capacity for achieving environmental objectives. Knowledge regarding their economic implications is limited.

Conservation agriculture comprises a combination of practices, which minimise alteration of the composition and structure of the soil, safeguarding it against erosion and degradation, and preserving soil biodiversity. No-tillage and reduced tillage, in combination with permanent soil cover (cover crops, crop residues) and crop rotation, are essential practices in conservation agriculture. These practices are also referred to as "simplified cultivation techniques". Under conventional tillage, soil organic carbon distribution is uniform over the first 30 centimetres, as a result of soil turnover by ploughing. When conservation agriculture is applied, soil organic matter originated by crop residues is not buried but accumulates in the topsoil: 75 % of the organic carbon from the crop can be found in the uppermost 5 cm.

Uptake of *no-tillage* varies from 4.5 to 10 % (of total arable land) in Finland and Greece and from 2.5 to 4.5 % in the Czech Republic, Slovakia, Spain and the United Kingdom. *Reduced tillage* is practised on 40 to 55 % of the arable land in Finland and the United Kingdom, and on 20 to 25 % in France, Germany and Portugal. All mentioned practices minimise the risk of soil degradation. On the economic side, significant cost savings with respect to labour and fuel consumption are reported, depending on the geographical location (northern or southern Europe). Similarly, consumption of fuel can realistically drop for reduced tillage and no-tillage respectively. Nevertheless, switching to conservation agriculture might require significant capital investment (for example, in sowing equipment) and greater attention in the use of chemicals (that is for weeding). Furthermore, conservation agriculture is a complex, site-specific farming system, requiring training of farmers.

Systematic use of *cover crops* leads to an annual increase in organic carbon of up to 160 kg C/ha/yr. Due to the positive correlation between organic carbon content on the one hand and aggregate stability, moisture content and biodiversity abundance on the other hand, the effect of cover crops on the latter characteristics is also expected to be positive. Cover crops are also considered the best measure against wind erosion.

So-called *catch crops*, in particular, reduce nutrient leaching and thus have a positive impact on soil contamination. Soil cover in general shows significant effects in reducing nitrate losses, whatever the tillage system used, and thus improves water quality. Reduced emissions of N₂O were observed when no- and reduced tillage was combined with cover crops, especially leguminous ones.

As regards *organic farming*, the area cultivated over the period 1998-2005 under this farming system (including conversion areas) increased by 130 % in the EU-15, and by 2005 it amounted to 4 % of the total utilised agricultural area in the EU-25. However, there is considerable variation between Member States. Organic farming, although

different from conservation agriculture, has similar positive effects on soil organic matter, soil structure, and soil biodiversity. Energy consumption is reduced and beneficial effects are reported on water quality, in particular with respect to pesticides (which are strictly limited in organic farming), on biodiversity (in particular species abundance and/or richness), and landscape.

4. OVERVIEW OF CAP INSTRUMENTS ADDRESSING SOIL ISSUES

The CAP contains several tools essentially based on two complementary approaches where support is either linked to the respect of mandatory management requirements (e.g. direct payments in combination with cross-compliance) or granted to farmers for committing themselves to provide environmental services beyond mandatory requirements (Rural Development Policy). Both tools could contribute to agricultural soil conservation purposes.

4.1. First Pillar (market and income policy)

Compulsory cross compliance, a horizontal tool for both pillars, plays an important role in soil protection, conservation and/or improvement. Under cross compliance rules, the receipt of the Single Farm Payment (but also for payments for eight rural development measures under Axis 2) is linked to compliance with a set of standards. Statutory management requirements (SMRs) create synergies between the Direct Payments Scheme and a number of relevant EU environmental directives, including the Nitrates Directive. The requirement to keep agricultural land (whether in productive use or not) in Good Agricultural and Environmental Conditions (GAEC) aims at preventing land abandonment and ensuring a minimum maintenance of agricultural land.

The "health check" of the Common Agricultural Policy in 2009 has kept compulsory some soil-related GAEC standards (minimum soil cover, minimum land management reflecting site-specific conditions, and arable stubble management), while others became optional (retain terraces, standards for crop rotations, appropriate machinery use). Member States have certain margin of discretion in determining national GAEC obligations for farmers. The fact that GAEC requirements are defined at national level enables Member States to address soil degradation processes flexibly according to local conditions. Some Member States used GAEC to compensate for gaps in their existing national legislation on soil protection, while other Member States already had a legislative basis in place and merely adapted it for cross compliance.

4.2. Second pillar (rural development policy)

Within Pillar 2, a wide range of measures is available which are potentially relevant to soil protection/conservation. These measures offer Member States the possibility of supporting actions to reduce soil degradation on agricultural land when such a need has been identified in their territories:

- Vocational training and information actions: These measures promote important diffusion of knowledge among farmers which is essential for changing practices toward those which are more environment-friendly and sustainable, or help farmers meet costs arising from the use of advisory services or to cover costs arising from the setting up of farm management, farm relief and farm advisory services.

- Modernisation of agricultural holdings or Investment support: These measures can be used to encourage transfer of technologies protecting and enhancing the environment in order to improve the overall performance of the agricultural holding, while respecting the Community standards applicable to the investment concerned.
- Restoring agricultural production potential: This measure is used to mitigate damage caused by natural disasters as well as for preventive action.
- Natural handicap payments in mountain areas and payments in other areas with handicaps: LFA payments aim to ensure continued agricultural land management in areas facing adverse natural conditions. LFA measures are generally relevant to soil protection through avoiding land abandonment. Farmland abandonment has generally negative impacts on soil, such as increased erosion and reduction of soil organic matter quality. Targeting LFA aid to areas suffering from natural handicaps like poor soil texture or steep slopes, and to extensive farming systems important for land management, reduces the above risks. Maintaining agricultural land use in these areas thus delivers environmental and landscape benefits that would otherwise not be provided by the market alone.
- Natura 2000 payments and payments linked to Directive 2000/60/EC: Such payments help farmers to cope with disadvantages resulting from the implementation of the respective directives (Birds, Habitats and Water Framework Directive) in certain agricultural areas.
- Agri-environment measures: These measures encourage farmers to provide environmental services beyond mandatory requirements by offering payments to cover income foregone or costs incurred due to providing such services. The baseline of mandatory requirements comprises cross compliance rules as well as minimum requirements for fertiliser and plant protection product use and other relevant mandatory requirements established by national legislation and identified in the Rural Development Programme. Some schemes pursuing objectives like water or biodiversity protection, or landscape maintenance, are equally favourable to soil conservation. Reduction of input (e.g. fertilisers, plant protection products), crop rotation, cover crops, buffer strips, conversion of arable land to grassland, extensification of livestock and in specific cases voluntary set-aside, are examples of farming practices to protect, maintain or improve soil quality.
- Support for non-productive investment: The aim of this measure is to underpin the commitments undertaken under agri-environment schemes and Natura 2000 through support of non-remunerative investments.
- First afforestation of agricultural land and first establishment of agroforestry systems on agricultural land: These measures pursue to stimulate the diversification from agriculture toward forestry that has a high ecological potential. They offer a strong potential to prevent serious soil degradation processes, in particular soil erosion. First afforestation of agricultural land has been used in many programmes.

Annex (Soil Fact-Sheet)

Examples of RD agri-environment schemes with an influence on soil conservation (from "Sustainable Agriculture and Soil Conservation" study (SoCo project, Case Studies, 2009))

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
West-Vlaan-deren (BE) Diffuse contamination, soil erosion, decline in organic matter	Agri-environment scheme (RDP)	General objective of agri-environment scheme to achieve green and blue services of agriculture for environment and nature.	Broad range of environmentally favourable farming practices	Multiple soil related targets
	Agri-environment scheme Water	Only available in zones important for surface water collection. Objective: to tackle soil degradation processes of the region.	Manure standards are more restrictive than in Manure Decree (zero or reduced manuring).	Diffuse pollution
	Agri-environment scheme Erosion	Only on parcels susceptible to erosion. Objective: to tackle soil degradation processes of the region.	Non-inversion tillage, no-tillage, grass buffer strips, grass corridors, talus or erosion pools.	Soil erosion, soil compaction
	Soil Cover		Cover crop during winter months.	Soil erosion
Bjerringbro and Hvorslev (DK) Soil compaction, decline in organic matter, soil erosion	Conversion to organic farming	Conversion to organic farming for cultivated agricultural areas during a 5-year commitment period.	Organic farming practices.	Multiple soil related targets
	Extensive production on agricultural land	Pesticide-free farming during a 5-year commitment period. Support is paid for cultivated agricultural areas only.	No use of pesticides.	Soil biodiversity

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
	Establishment and management of set-aside border strips	Replacement and special conservation of set-aside areas. The set-aside must be placed on border strips adjacent to lakes and watercourses, and will reduce soil erosion to the lake or watercourse.	Set aside of agricultural land.	Multiple soil related targets
	Shelter belts	Establishment of landscape and biotope-improving vegetation, including shelter plants.	Planting shelter belts.	Wind erosion
Axe and Parrett catchments (UK) Soil compaction, diffuse contamination, erosion	Agri-environment scheme: Environmental Stewardship Scheme England	One of the four primary overall objectives is natural resource protection with focus on water quality and soil erosion. Environmental Stewardship Scheme comprising three elements.	Broad range of environmentally favourable farming practices	Soil in general as a natural resource, soil erosion, risk of runoff, protecting watercourses from diffuse pollution
	Entry Level Stewardship (ELS)		Choice of any of the following: - management of high erosion risk cultivated land - management of maize crops - buffer strips, field margins - beetle banks across contours.	
	Organic Entry-Level Stewardship (OELS)		As per ELS but for organic farmers.	
	Higher Level Stewardship (HLS)	Targeted to environmental priorities of the respective Joint Character Area.	Choice of: - converting arable to grassland - in-field grass areas - seasonal livestock removal - no use of fertiliser on grassland.	
Rodópi (GR) soil erosion, decline in organic matter, compaction	Agri-environment scheme Natura 2000 (RDP)	Protect and improve natural areas within the boundaries of Natura 2000 sites.	- harvesting from the centre of the field - uncultivated islands in the parcel - limitations on grazing - protecting water collection elements - particular rules for each site.	Indirectly soil erosion, soil compaction

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
	Agri-environment scheme Organic agriculture (RDP)	Income support for organic farmers to avoid use of chemical fertilisers or pesticides.	Particular requirements for organic agriculture.	Indirectly soil erosion, decline in soil organic matter, compaction, soil contamination
Guadalentín basin (ES) Soil erosion, salinisation, decline in organic matter	Agri-environment scheme Soil Erosion Control	To make agricultural production compatible with soil conservation. Targeted at soil conservation and the control of water erosion. Allocation of 8 % of Agri-environment scheme budget (fourth rank).	<ul style="list-style-type: none"> - maintain and build new infrastructure such as ponds, ditches, trenches, stone terraces - tillage following slope line is prohibited - establish permanent vegetation strips on erosion prone land with min 25 % planted with re-vegetation species and max 75 % cereals and protein crops - parcels crossed by water flows maintain a 3-5 m wide strip that is vegetated and not cultivated - mulching with remains of pruning. 	Soil erosion by water
	Agri-environment scheme Organic Agriculture	Preserve ecosystems, maintain/increase soil fertility and organic matter content, obtain crops free of chemical residues and reduce chemical pollution from agricultural sources. Allocation of 57 % of Agri-environment scheme budget.	<ul style="list-style-type: none"> - comply with production rules of EU Organic Farming Regulation and Confederation of Agricultural Producers of Spain - hydroponic systems are prohibited -(and others not related to soil conservation). 	Decline of soil organic matter, indirectly compaction and pollution
	Agri-environment scheme Integrated Production	Preserve ecosystems, recover/maintain soil fertility and organic matter content, obtain crops with less chemical residues and reduce chemical pollution from agricultural sources. Allocation of 17 % of Agri-environment scheme budget.	<ul style="list-style-type: none"> - reduction of chemical plant treatments for pest control - comply with technical rules for Integrated Production by RPOPIRM - hydroponic systems are prohibited - (and others not related to soil conservation). 	Decline of soil organic matter, indirectly compaction and pollution

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
Midi-Pyrénées (FR) Erosion, decline in organic matter	2 nd Programme (Regulation 2078) (1993–1999)	EUR 40 000 /yr	Conversion of arable land into grassland, grass strips along river banks, hedgerow plantations	Some projects only (Rougiers de Camarès (Aveyron); Bes Quercy (Tarn et Garonne))
	3 rd Programme (2000-2006)	Local definition of environmental priorities (biodiversity, water quality and quantity, eutrophication, erosion) by local authorities and farmers organisation, first involvement of NGOs	- Grassland payment scheme (prime à l'herbe) : 43% of AEM payments - Farm Territorial contract followed by Sustainable Agricultural Contract - main focus on management of existing grassland	Eutrophication, erosion
	Current Programme (2007-2013)	Two environmental priorities: • compliance with and implementation of WFD • biodiversity (Compliance with Birds and Habitats Directives)	Broad range of environmentally favourable farming practices	Multiple soil related targets
	LFA	Aimed at preventing land abandonment, keeping the farming population in these areas, and preserving cultural landscapes.	Support permanent grasslands	Soil degradation (+landscape preservation)
	National policy : Decree 'areas under environmental constraints'	Preservation of humid areas with a high potential for biodiversity (e.g. peat bogs, marsh swamps), 'drinking water' areas and areas subject to erosion.	Recommendations concerning soil cover (temporary or permanent), soil tillage, management of crop residues, provision of organic matter, input management (fertilisers and pesticides), crop diversification (rotation and cropping plan) and preservation or implementation of structures to limit run-off (hedges, banks, ponds, 'fascine').	Soil erosion, soil compaction, soil organic matter decline, soil contamination (+landscape features)

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
<p>Marche (IT)</p> <p>Erosion, loss of organic carbon, compaction</p>	<p>F- Measures of Axis 2 (RDP 2000-2006)</p>	<p>'Protection and Valorisation of the landscape and of Environmental resources'</p> <p>430 000 ha</p>	<p><i>Submeasure</i></p> <p><i>F1): actions targeting the management of agriculture according to low environmental impact techniques and environmentally protective techniques;</i></p> <p><i>Submeasure F2 and F2 B): actions targeted to organic farming techniques and protection of the environment.</i></p> <p>The measure F1 requires farms receiving RDP funds to adopt on the entire farm area techniques with low impact like:</p> <p><i>a Fertilisation Plan defined on the basis of the physical and chemical characteristics of soils and the crops grown,</i></p> <p><i>b) integrated pest control</i></p> <p><i>c) a crop rotation plan for five years and the respect of surface water management as indicated by GAEC,</i></p> <p><i>d) cover crops maintained during winter.</i></p> <p>Other optional techniques can be adopted like erosion control with barriers, hedges, tree rows. The measure F2 and F2B are mainly focused on the organic farming techniques as set by</p> <p>Reg.CEE 2092/91.</p>	<p>Erosion, Loss of soil organic carbon</p>

Case study and main soil degradation problem	Name of agri-environment incentive scheme	Objectives and Description	Technical Measures	Soil degradation issue targeted
Svratka river basin (CZ) Soil erosion, compaction, decline in organic matter	Agri-environment scheme conversion	Compensation payments to farmers for conversion of arable land to grassland. Targeted to vulnerable soils.	Conversion of arable land to grassland	Soil erosion
	Agri-environment scheme cover crops	Compensation payments to farmers for growing cover crops	Growing cover crops	Soil erosion and preventing loss of nitrogen
Uckermark (DE) Erosion, compaction decline in organic matter	Agri-environment scheme Environmental friendly cultivation and maintenance of grassland	Overall objective: contribute to the protection of the rural habitat, landscape, natural resources, soil and genetic diversity.	Grassland extensification: application of manure and fertiliser is forbidden; restrictions on periods of grassland use.	Impact on soils is a by-product, indirect effects on soil erosion, compaction and diffuse pollution.
	Environmental and animal friendly agriculture and horticulture and genetic diversity		Greenbelt setting for fruit and vegetable production.	
	Organic farming		Organic farming practices. Includes restriction on use of fertiliser, soil conserving farming practices such as ban on grassland conversion.	



EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate H - Sustainability and Quality of Agriculture and Rural Development
H.1. Environment , GMO and genetic resources

FACT SHEET

WASTE, SEWAGE SLUDGE, BIOWASTE IN AGRICULTURE

1. INTRODUCTION

Agriculture is considered to be a major source of waste including, *inter alia*, livestock manure, crop residues, plastics and packaging. However, an important part of agricultural "waste" (e.g., slurry, manure, straw, vegetable and cereal residues), is re-used within the agricultural production cycle or for energy recovery (e.g., biogas) and should therefore not be considered as waste.

Moreover, some residues that can be qualified as "waste" have an important role to play from the viewpoint of soil fertility and the carbon cycle. The soil organic matter or carbon cycle is based on continually supplying carbon in the form of organic matter as a food source for microorganisms, the loss of some carbon as carbon dioxide, and the building up of long term carbon in the soil that contributes to soil aggregation and formation. If the rate of addition is less than the rate of decomposition, soil organic matter will decline and, conversely if the rate of addition is greater than the rate of decomposition, soil organic matter will increase. As soil organic matter is crucial to soil fertility, keeping a steady flow of (at least part of) production residues such as straw, vegetable and cereal residues entering the soil is fundamental for food and biomass production.

The agricultural sector also plays an important role in the recycling of waste generated by other sectors. This is particularly the case for sewage sludge, which results mainly from the treatment of urban wastewater. Over the period 2003-2006 (latest data), about 37% of the total sewage sludge produced in the EU (*ca.* 10 million tons dry matter) was used in agriculture¹⁶, with some countries/regions (France, Denmark, the Walloon Region, Spain and the United Kingdom) reaching rates of over 50%. This could also be the case in the future for biodegradable waste, e.g. food and catering waste, following processing into compost.

For both sources, the effective use of these waste streams is important for the sustainable use of phosphorus, an essential fertiliser that has been identified in several recent scientific studies¹⁷ as an under pressure resource.

¹⁶ Source: http://ec.europa.eu/environment/waste/sludge/pdf/part_iii_report.pdf.

¹⁷ Sustainable Use of Phosphorus, Schroder, Cordell, Smit and Rosemarin, 2010

2. CURRENT TRENDS REGARDING WASTE AND SEWAGE SLUDGE IN THE EU

The volume of waste generated by economic activities can be allocated to the four main economic sectors: agriculture, industry, construction and services. In 2006 industry and construction generated the highest volume of waste, together accounting for 82.7% of all waste produced by economic activities. Services accounted for 11.6% of the total waste and agriculture for 5.8%. Significant deviations from these averages can however be found when looking at country specific data. Some countries show a surprisingly high percentage of waste in one of the four sectors when compared with the EU27 averages. For instance, Cyprus and Lithuania reported substantial volumes of waste from agriculture (23.5% and 30.5%), whereas Romania and Bulgaria reported most of their waste from the industrial sector (95.6% and 98.7%).

The activities differ considerably in the composition of their waste. Some activities are dominated by one waste category, e.g. agriculture by animal faeces, urine and manure. Other activities have a much more mixed composition of their waste; for instance manufacturing and services.

3. OVERVIEW OF POLICY INSTRUMENTS ADDRESSING WASTE ISSUES

3.1. Environmental policy

Waste policies in the EU have been progressively put in place since the 1970s. The EU's current waste policy is based on the 'waste hierarchy'. This first aims at waste prevention, then at reducing waste disposal through re-use, recycling and other waste recovery operations. This hierarchy has been strengthened by the revised Waste Framework Directive (Directive 2008/98/EC), and by the thematic strategy on the prevention and recycling of waste (COM(2005) 666). With regard to residues from agricultural production, the European Court of Justice has ruled that, where the further use of the material is not a mere possibility but a certainty, without any further processing prior to reuse and as part of a continuing process of production, then the material would not be a waste. All three parts must be met. This is the case e.g. when livestock effluents are used as fertiliser or soil improver. However, that is not the case for composting or biogas production because they correspond to further processing of livestock effluents. Consequently, manure and slurry will fall under the scope of the Waste Framework Directive when they are destined for a waste treatment operation such as incineration, landfilling, anaerobic digestion, or composting.

The Sewage Sludge Directive (86/278/EEC) seeks to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals and man. To this end, *inter alia*, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. Since 2009, DG ENV has been assessing whether this Directive should be revised – and if so, the extent of this revision. Work on an impact assessment is ongoing.

In 2008, the Commission adopted a Green Paper on bio-waste, which was followed-up in 2010 by a Communication explaining the future steps in bio-waste management in the European Union. Defining EU standards of quality for compost is one of the options envisaged in order to increase the use of compost made from i.a. biowaste.

3.2. Common Agricultural Policy

The CAP includes a series of instruments that contribute to the protection of the environment, in line with the principles prescribed in the Council integration strategy.

Within the first pillar, direct payments to farmers are linked to various obligations through the mechanism of cross-compliance. The Sewage Sludge Directive is included in the Statutory Management Requirements to be respected under cross-compliance. In the framework of the Common Market Organisation for fruit and vegetables, support is granted to producer organisations for the implementation of operational programmes that must comprise two or more environmental actions or devote at least 10% of the expenditure on environmental actions. Examples of such actions include the support for the production and use of compost (BE-FI, ES, IT); the environmental management of packaging (AT, BE-FI + Wa, DK, ES, FR, HU, IE, IT, NL, PT, SE, SK, UK), the use of recyclable substrates (BE-FI).

The second pillar offers a broad menu of flexible policy measures which can be used to support sustainable waste management practices. The possible types of support relate primarily to:

- training and information;
- farm modernisation;
- adding value to agricultural and forestry products
- environmentally beneficial land management practices beyond legal requirements
- basic services for the economy and the rural population.

Some concrete examples of measures taken from the RDPs 2007-2013 concerning the environmental measures related to waste management.

- Under the measures on vocational training and use of advisory services

Malta: Advisory services shall cover i.a. waste management plans

UK-England: Training on i.a. resource use, including waste reduction, waste management, etc.

- Under the measure on farm modernisation

Malta: support for investments in systems of waste management that go beyond the relevant statutory management requirements

- Under the measure 'adding value to agricultural and forestry products'

Belgium-Flanders: support for waste treatment

Belgium-Wallonia: Valorization of wood waste for renewable energy production

- Under the measure 'basic services for the economy and the rural population'

France: Development of essential services, including waste management

- Under the measure 'conservation and upgrading of the rural heritage'

Ireland: Environmental initiatives aimed at waste reduction; alternative or renewable energy actions

In addition, it should be highlighted that organic farming contributes to better waste management since it shall be based on i.a. the specific principle of recycling wastes and by-products of plant and animal origin as input in plant and livestock production. 26 Member States have used agri-environmental measures to support the conversion to and/or maintenance of organic farming.

4. IMPORTANT FORTHCOMING DEVELOPMENTS

Preparatory work for a possible revision of the sewage sludge directive (2009-2011)

Preparatory work for a possible legislative proposal on biowaste (2009-2011)

Preparatory work for a possible Green Paper on the sustainable use of phosphorus (2010-2011)

Preparatory work for a setting of end-of-waste criteria for compost and digestate from biodegradable waste (technical report expected end of 2011, possible adoption – 2012).

Preparatory work for a setting of recycling target for bio-waste within the framework of revision of Waste Framework Directive (2010-2014).



EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate H - Sustainability and Quality of Agriculture and Rural Development
H.1. Environment , Genetic resources and European Innovation Partnership

FACT SHEET WATER AND AGRICULTURE

1. INTRODUCTION

Agriculture can impact in different ways on the good chemical and quantitative status of groundwater and on the good chemical and ecological status of surface waters.

Modern-day agricultural practices often require high levels of fertilisers and manure; leading to high nutrient (e.g. nitrogen and phosphorus) surpluses that are transferred to water bodies through various diffuse processes. Excessive nutrient concentrations in water bodies, however, cause adverse effects by promoting eutrophication, with an associated loss of plant and animal species. In high nutrient waters with sufficient sunlight, algal slimes can cover stream beds, plants can choke channels and blooms of plankton can turn the water murky green. Oxygen depletion, the introduction of toxins or other compounds produced by plants, reduced water clarity and fish kills can also result. Excess levels of nutrient, in particular nitrates, can be detrimental to human health.

Pesticides used in agriculture are transported to both surface and groundwaters, threatening both wildlife and human health. The excessive sediment run-off from agricultural land results in turbid waters and the clogging of spawning areas. This in turn leads to loss of aquatic habitats. Microbial pathogens from animal faeces can pose a significant risk to public and animal health. The adverse impacts of all these agricultural pollutants are exacerbated by the use of water for agriculture (primarily irrigation), the net effect of which is to increase the concentration of pollutants in water bodies.

Irrigation as part of intensive agriculture, including horticulture, can lead, and has in fact led, to unsustainable use of water in specific areas of some Member States. In addition, charges for irrigation water do not always cover all costs. Problems arising from irrigation mainly occur in Southern Member States and are often linked to specific crops, such as maize, potato, and fruit and vegetables.

On the other hand, agriculture can also play a positive role in respect to water resources and related ecosystems. Thus, for instance, traditional irrigation systems create diverse and intricate landscapes, which support a variety of wildlife and have important cultural and historic value. In the same way, the creation and management of rice fields often provides important feeding and over-wintering opportunities for some bird species. Moreover, through a redistribution of water resources, new irrigation projects can contribute to improving aquifer recharge and habitat conservation in the areas receiving the new water. This may be the case, for instance, for irrigation projects that entail the

creation of wetland areas, which may provide new feeding and/or breeding opportunities for wildlife.

The preservation of farming activities in mountain and hill zones can ensure the maintenance of a positive land management in these areas, which eventually contributes to preventing floods and landslides and, by decreasing the rapidity of peak run-off of waters, to better regulating the flow pattern and level of the surface water bodies downstream.

Certain farming systems contribute to the building-up of organic matter in the soil and, thus, to the maintenance or even the enhancement of the binding, storage and buffering capacity of these soils, which help limit the diffusion of pollution from soil to water.

2. CURRENT STATUS AND TRENDS REGARDING WATER IN THE EU

In the WFD implementation process, pressures by agriculture have been identified as very high. A review¹⁸ of the draft River Basin Management Plans (dRBMP), which were ready in September 2009, showed evidence that the agricultural sector generates a significant pressure on both surface waters and ground waters in terms of quality and quantity. Results show that diffuse or point source pollution by nitrogen is reported in 91% of the dRBMPs, phosphorus in 90% of the cases and pesticides in 69% of the dRBMPs. Hydro-morphological pressures are reported in about 50% of the dRBMPs. Furthermore, irrigation presents a pressure to water quantity found in about 37% of the dRBMPs (this survey did not include most of Southern European countries and therefore the real percentage is larger).

The first results from the assessment of final River Basin Management Plans confirm these figures.

Pursuant to Article 5 of the Water Framework Directive (WFD), Member States produced in 2004-2005 an environmental analysis of river basin districts and an economic analysis of water use. The results indicate that Member States consider that only a very small percentage of their waters is not at risk of failing to meet WFD environmental objectives.

¹⁸ Ecologic, 2010. Assessment of agriculture measures included in the draft River Basin Management Plans

<http://ec.europa.eu/environment/water/quantity/pdf/summary050510.pdf>

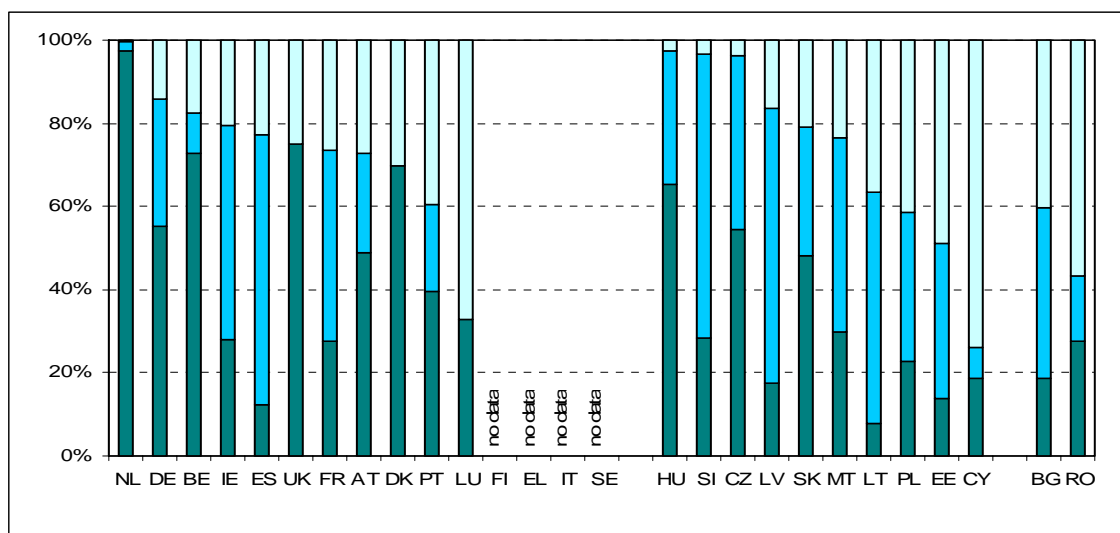


Figure 1: Percentage of surface water bodies at risk of failing WFD objectives per Member State - ■ = 'at risk', ■ = 'insufficient data', ■ = 'not at risk' (based on Member States' reports)

According to the European Environmental Agency, the past decades have seen significant progress in treating the sewage and industrial wastes which are being pumped into Europe's river systems, resulting in lower levels of most pollutants and a measurable improvement in water quality. The agricultural sector, on the other hand, has not made sufficient progress.

Fertiliser input per hectare of agricultural land is declining from a high level in the EU-15. However, it is increasing significantly in the EU-10. Concentrations of phosphorus in European rivers and lakes generally decreased during the 1990s, reflecting the general improvement in wastewater treatment over this period. However, the decrease was not sufficient to halt eutrophication. There was a small decrease in nitrate concentrations in some European rivers during the 1990s. Nitrate concentrations in Europe's groundwaters have remained constant and are high in some regions, threatening drinking water abstractions.

Conclusions in the latest nitrates report¹⁹ state that regarding water quality, for groundwater, 66% of the monitoring stations show stable or decreasing nitrate concentrations. However, in 34% of the stations an increase in nitrate pollution was still observed and 15% of stations showed nitrate concentrations above the quality threshold of 50 mg per litre. Within groundwater bodies, shallow levels showed higher nitrate concentrations than deeper levels. The highest proportion of contaminated water lies between 5 and 15 metres below the surface.

For fresh surface water, 70% of the monitoring stations show stable or decreasing nitrate concentrations. In 3% the concentration is exceeding 50 mg per litre while in 21% the concentration is below 2 mg per litre. In 33% of the stations monitoring trophic status, the water is defined eutrophic or hypertrophic. The pressure from agriculture with respect

¹⁹ Report from the Commission to the Council and the European Parliament on implementation of the Nitrates Directive for the period 2004-2007; SEC(2010)118

to surface water nitrate pollution has decreased in many Member States, although agriculture still contributes largely to nitrogen loads to surface waters.

While pesticide use has remained constant or has declined in general, pesticide concentrations above EU drinking water standards are found in several EU Member States. There has been no significant progress in dealing with the legacy of some localised hot spots of pesticide contamination.

According to the EEA, in Europe as a whole, 44% of water abstraction is used for energy production, 24% for agriculture, 21% for public water supply and 11% for industry. However, these figures mask significant differences in sectoral water use across the continent. In southern Europe, for example, agriculture accounts for 60% of the total water abstracted and reaches as much as 80% in certain areas. The data further show that agricultural water use across Europe has increased over the last two decades, driven in part by the fact that farmers have seldom had to pay the true cost of water. In general, agricultural water use currently appears stable across Europe but at a high level.

3. OVERVIEW OF POLICY INSTRUMENTS ADDRESSING WATER ISSUES

3.1. Environmental policy

The main legislation influencing water management is the **Water Framework Directive**²⁰, which entered into force in December 2000. This Directive requires Member States to establish, at the latest by end 2009, river basin management plans, each one including a programme of measures aiming to prevent deterioration, enhance and restore bodies of surface water and groundwater and preserve protected areas. MS are also required to ensure, at the latest by end 2010, that water pricing policies provide adequate incentives for users to use water resources efficiently and that the various economic sectors contribute to the recovery of the costs of water services, including those relating to the environment and resources. This directive is complemented by the recent groundwater²¹ and priority substances directives²².

The WFD implementation follows a pre-established schedule (see table below).

Year	Issue	Reference
2000	Directive entered into force	Art. 25
2003	- Transposition into national legislation - Identification of River Basin Districts and Authorities	Art. 23 Art. 3
2004	Characterisation of river basin: pressures, impacts and economic analysis	Art. 5

²⁰ Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000, establishing a framework for Community action in the field of water policy.

²¹ Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration

²² Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy

2006	- Establishment of monitoring network - Start public consultation (at the latest)	Art. 8 Art. 14
2008	Present draft river basin management plan to public	Art. 13 & 14
2009	Finalise river basin management plan including programme of measures	Art. 13 & 11 + Annex VI
2010	Introduce pricing policies	Art. 9
2012	Programmes of measures operational	Art. 11
2015	Meet environmental objectives (Good status of waters)	Art. 4

Through the **Nitrates Directive**²³, the European Union has introduced a series of measures designed to reduce and prevent water pollution caused or induced by nitrates from agricultural sources. These measures include the obligation to identify polluted waters or waters at risk if no action is taken and to designate the zones that drain in these waters, as well as to establish codes of good practice and action programmes that contain an obligatory set of measures for farmers located in vulnerable zones.

Measures required under *inter alia* the Nitrates Directive must be included in the programmes of measures established under the Water Framework Directive.

Irrigation projects are in the scope of the **Environmental Impact Assessment Directive**²⁴, which entered into force in 1997. This Directive requires MS to determine whether public and private irrigation projects should be subject or not to an environmental impact assessment, aiming to identify, describe and assess the direct and indirect effects of the project.

Several other legal acts and initiatives of EU environmental policy are contributing to the protection of waters, e.g. the urban waste water directive, the thematic strategies on soil protection (if adopted) and on the sustainable use of pesticides, the European Climate Change Programme, the 2009 White Paper "Adapting to climate change in Europe – Options for EU action", the 2007 Communication on water scarcity and droughts.

3.2. Common Agricultural Policy

The CAP contains several tools where support is either linked to the respect of environmental requirements (e.g. cross-compliance linked to Single Farm Payment) or granted to farmers for the provision of specific environmental services (Rural Development). These could contribute to implementing the WFD in the agricultural

²³ Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources

²⁴ Council Directive 85/337/EEC, on the assessment of the effects of certain public and private projects on the environment, as last amended by Council Directive 97/11/EC.

sector. Most of these instruments have the potential to provide improvements not only in terms of water quality but also in terms of water quantity and hydromorphology.

In the first pillar, decoupling is particularly important for water management issues. It is expected to reduce incentives for intensive production, including the incentive to irrigate. With the introduction of mandatory cross-compliance, the full granting of direct payments is linked to the respect of a number of statutory management requirements on the whole farm, including those stemming from the implementation of the Nitrates directive and the first Groundwater directive, and on keeping all farmland in good agricultural and environmental condition. The CAP reform of 2009 introduced 2 new standards of GAEC related to water: a) establishment of buffer strips along water courses, b) compliance with authorisation procedures for use of water for irrigation.

The farm advisory system can help farmers respect their cross-compliance obligations and improve the environmental performance of their farms.

Member States may also support farmers undertaking agri-environmental actions via the fruit and vegetables Operational Programmes. Examples of such actions include the preparation and implementation of balanced fertilisation plans (CY, HU, IT, SE), the use of water saving irrigation systems (EL, ES, FR IT, NL UK), the use of water saving technologies in the product preparation/processing phase (BE, ES, FR, IT, UK).

The second pillar offers a broad menu of flexible policy measures which can be used to support sustainable water management practices. The possible types of support relate primarily to:

- training and information;
- farm modernisation;
- improving and developing infrastructure related to the development and adaptation of agriculture
- forestry measures aiming at the restoration of the agricultural or forestry production potential damaged by natural disasters and at introducing appropriate prevention actions, where there are risks of floods
- obligations for farmers introduced by the Water Framework Directive, imposing major restrictions in farming practice which result in a significant loss of income (article 38);
- environmentally beneficial land management practices which go beyond legal requirements (e.g. wetland restoration, development of semi-natural water bodies, reduced application of fertilisers).

In addition, some of the obligations of the Nitrates Directive have been funded on a temporary basis by other measures of rural development, i.e. the 'meeting standards' measure and the support to investments, e.g. for building manure storage.

Some concrete examples of measures taken from the RDPs 2007-2013 concerning the environmental measures related to water quality.

- Under the measures on vocational training and use of advisory services

Netherlands: formulation of "business water plans" (describing how to improve the impact on quantity and quality of water at farm level)

- Under the measure on farm modernisation

Belgium – Flanders and Wallonia: aid for investments on water purification, storage and use of rainwater

Hungary: aid for investments for on-farm water saving irrigation systems

- Under the measure on infrastructures related to agriculture

Italy-Marche: improvement and rationalisation of the irrigation network

Spain-National Framework: Horizontal Action of Management of the water resources

France: support for collective water storage infrastructures

- Under the agri-environmental measures

Luxembourg: management of nitrogen and phosphorous fertilisers to improve water quality.

Finland: Establishment and management of riparian zones to reduce nutrients run-off into watercourses and to reduce risks of flooding.

- Under the measure on non-productive investments

Netherlands: Support for several types of investments aimed at improvement of the water quality, in and nearby pre-defined priority areas (Natura 2000 and other important nature areas).

3.3. Important forthcoming developments

According to article 13.6 of the WFD, river basin management plans and the programmes of measures had to be published before 2009.

To date (May 2011) 20 Member States have adopted their plans (AT, BG, CZ, DE, EE, FI, FR, HU, IE, IT, LT, LU, LV, MT, NL, PL, RO, SE, SK and UK). 2 Member States have finalised the plans and are expected to adopt them in the coming weeks (CY and SL). The remaining 5 Member States (BE, DK, EL, ES and PT) accumulate more important delays although they are all expected to complete their plans by early 2012. Updated information can be found on the following website: http://ec.europa.eu/environment/water/participation/map_mc/map.htm

The programmes of measures have to be made operational at the latest by end 2012 (article 11.7 of the WFD).

The Commission is expected to table a '[Blueprint for Safeguarding Europe's Water](#)' by 2012.

The Blueprint will synthesise policy recommendations building on four on-going assessments:

- The assessment of the River Basin Management Plans delivered by the Member States under the Water Framework Directive;
- The review of the EU action on Water Scarcity and Drought;
- The assessment of the vulnerability of water resources to climate change and other man made pressures and,
- The Fitness Check which will address the whole EU water policy in the framework of the Commission Better Regulation approach.



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Langue unique EN (page de couverture)

COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 2B

{COM(2011) 625 final}
{COM(2011) 626 final}
{COM(2011) 627 final}
{COM(2011) 628 final}
{COM(2011) 629 final}
{SEC(2011) 1154 final}

Annex 2B: Assessment of selected measures under the CAP for their impact on greenhouse gas emissions and removals, on resilience and on environmental status of ecosystems

The purpose of this note is to summarise the information available on the potential to reduce GHG emissions or enhance carbon sequestration of agricultural activities and on the cost-effectiveness of the measures currently being discussed or already available in the CAP. It does not address adaptation, but adaptation is covered indirectly either through win win effects of many mitigation measures or through other measures assessed in the Impact assessment.

This note does not aim to assess the full scope of the role agriculture and land use plays in mitigation. Most notably, agriculture can contribute to climate change mitigation through the provision of renewable energy and materials. A holistic analysis of these would require the consideration of emissions avoided through substitution (which generally happen in other sectors and depends on a number of factors) and the emissions associated with production for such purposes (which would require a precise knowledge of how much of agricultural production is aimed at such substitution). Such an analysis would go beyond the scope of this exercise.

It should also be noted that there are climate policy instruments dedicated to controlling greenhouse gas emissions. These include non-CO₂ agricultural emissions that are already part of MS emission limits under the Effort Sharing Decision (ESD). CO₂ emissions and removals (under land use, land-use change and forestry) are not yet part of the EU GHG reduction commitment. The Commission is currently assessing whether or how such emissions and removals could be taken into account under the EU's GHG commitment. The outcome of this work may have implications on the most efficient policy mix (at EU or MS level) that could be deployed to incentivise such actions.

The note focuses first on the measures being considered as greening components of the first pillar, and then treats a selection of other relevant measures improving the GHG balance of agricultural land that can be supported under rural development. The third part of the note summarises the most relevant measures and their GHG impacts in the animal sector.

The selection of measures includes those where relevant data on effectiveness and/or costs are available and which are known to have a significant effect on mitigation.¹

The most cost-effective set of mitigation options in agriculture varies widely from region to region as the impacts, costs and positive and negative side effects of individual measures vary depending on climatic and soil conditions and on the production systems concerned. Therefore generalisations on overall EU level costs or impacts would be highly uncertain. This note allows comparisons of the cost-effectiveness between

¹ Other measures which may be relevant for reducing agricultural emissions and/or increasing carbon sequestration include productivity increases, biochar, composting/mulching and grassland management. These have not been included in this summary either because of lack of relevant information or because they are known to have an uncertain or limited effect.

different measures as well as relating the GHG impact to other (biodiversity, landscape...) desired impacts of the measures.

1. Greening components of the first pillar

1.1. Green cover

Description: The term 'green cover' is used to describe a situation where arable land which would normally be bare at certain times of the year is given a temporary plant cover so as to avoid the negative environmental effects of leaving soil bare.

Main functions of green cover are: erosion control, improvement of soil quality and soil organic matter content, flood prevention, prevention of N and pesticide and P runoff and pesticide drift and run-off.

Soils in row-crop production systems are especially vulnerable to rainfall events that occur at particular times of the year. Those times are (1) when the soil is most exposed because crops are not present or crop residues are minimal and (2) when potential pollutants in the soil system are at high levels and crops are not actively growing. The erosive impact of heavy precipitation events can be very large - These forms of erosion can cause severe and lasting damage to soil and water resources which often require costly remediation actions². Green cover contributes to the mitigation of these forms of erosion, acting as a physical barrier, and to the reduction/prevention of runoff.

If the green cover is ploughed into the soil before the new crop is sown, this increases soil organic matter, with benefits for soil quality and for climate change mitigation. This is particularly significant in Mediterranean areas, where soils often have low or very low soil organic matter content (many less than 0.5% organic carbon) and are close to the threshold of soil degradation and desertification. Even small increases of soil organic matter, e.g. through the use of green cover, will take them back from this point and protect these soils³. Increased soil organic matter also improves soil structure, enabling the soil to fulfil other functions such as the retention of water (useful against droughts, and for flood prevention).

Cover crops constitute fast-growing crops (such as rye, buckwheat, cowpea, or vetch), which are grown either in the season during which cash crops are not grown or between the rows of some crops (e.g., fruit trees). If ploughed under as green manure it has beneficial effects to the soil and subsequent crops, though during its growth it may be grazed. Crops for green manure are usually annuals, either grasses or legumes, which are usually planted in autumn and turned under in the spring before the summer crop is sown.

Mitigation potential: Catch crops can add carbon to soils and may also extract plant-available nitrogen unused by the preceding crop, thereby reducing N₂O emissions and reducing the amount of fertiliser N that needs to be added.

² Conservation Implications of Climate Change: Soil Erosion and Runoff from Cropland, A report from the Soil and Water Conservation Society (USA), 2003, p. 16.

³ Soil Carbon and Organic Farming, Soil Association (UK), 2009, p. 48.

Effectiveness: The PICCMAT⁴ project reviewed studies from a range of countries and therefore climatic and agricultural systems, which have reported increases in soil organic carbon (SOC) resulting from cover crops.

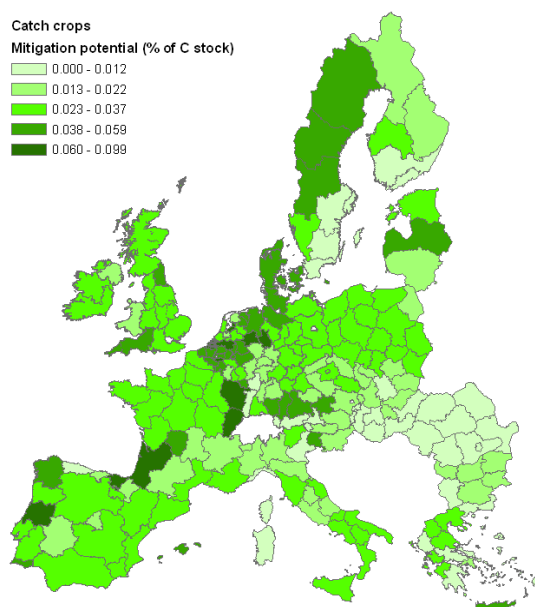
Mitigation effectiveness in t CO₂-eq per hectare and year (from PICCMAT):

	Dry climates	Moist climates
Average	0.39	0.98
Range	0.07-0.71	0.51-1.25

Major costs: Costs are low. Additional seed is needed for the catch crop, but money is saved through decreased nitrogen fertiliser requirements.

Other positive effects: Green cover acts as a physical barrier to prevent and slow down pesticide drift and run-off. As some pesticides degrade quite quickly, this delay in their reaching water can permanently reduce their impact on the water ecosystems. In addition, green cover helps to avoid the loss of phosphorus (P) from the soil surface, so avoiding depletion of P as a nutrient, as well as avoiding water pollution by P. As well as reducing mineral fertiliser requirements, catch crops improve soil structure and nitrate adsorption, reducing N leaching (Velthof and Kuikman, 2000). Green cover can contribute to the reduction of leaching by capturing the remaining N after harvest of the preceding crop and limit N subsequent fertilization and related emissions. They have also been reported to help with pest control (Arrouays et al, 2002), and reduced fallow periods limit soil erosion, which can lead to significant losses of C, especially in winter (Petrova, 1989; Tsvetkova et al, 1995; Mihailova et al, 2001, Boehm et al, 2004).

Optimising GHG impact: The variety of benefits associated with catch crops makes them a “win-win” or “no regrets” mitigation option. A small investment in education could yield high benefits.



Source: PICCMAT

⁴ <http://climatechangeintelligence.baastel.be/piccmat/>

1.2. Crop rotation

Description: **Crop rotation** is a planned and ordered sequence of cultivated species of different botanical families that are grown in succession on a same field. In modern EU agriculture, **most crop rotations last between 3 and 5 years**, compared to duration of 5 to 10 years in organic agriculture. They involve a succession of crops, often with a first sequence that is used to prepare and regenerate the soil (e.g. legumes or grasslands), and a second sequence that benefits from the fertility of the regenerated soil.

Effectiveness:

The aspects of crop rotations most relevant for climate change mitigation are the increase of soil organic matter, and the reduced need for N fertilisation. Enhanced crop rotations will enhance soil organic matter (SOM), and so sequester carbon – or reduce C loss from the soil. A secondary benefit of the improved SOM is that less N fertiliser needs to be added to the crops; as the production and use of N fertiliser contributes to the release of GHG, a reduction in fertiliser use is beneficial for climate change mitigation.

The effects of crop rotation vary with soil type and crops produced, farming operations and management of crop residue. This includes (i) use of more forage crops in rotations; (ii) replacement of continuous two-course rotations of row crops with crop rotations of winter cereals; (iii) elimination of summer fallow; (iv) use of more winter crops; (v) winter cover crops.

Catch crops also affect emissions of N₂O in several ways: 1) reduction of N-leaching, 2) less need to apply N-fertiliser, and 3) addition of organic N to the soil.

As a mitigation measure, rotation should include crops that are beneficial for soil improvement, i.e. are fibrous rooted, high residue producing crops, for instance grass and small grains (wheat, barley, or oats). Long-term studies have shown that such management practice generates great variations of the soil carbon level and total soil nitrogen, depending on the period of the rotation. Soils have higher carbon levels in pasture lands and pasture lands which were previously cereal fields than in permanent cereal fields. Continuous leguminous cropping can increase soil carbon storage and total soil nitrogen by up to 20% in the 0-15 cm soil depth compared with rotation including cereals⁵. In contrast, large carbon *losses* from soils are likely with root crops, such as sugar beet or where almost the entire crop is removed for harvest (e.g. maize for silage production).

Perennial plants used for forage are very effective in crop rotations due to increases in organic matter and reduced soil erosion. Cover crops and double cropping systems introduced in rotation offer the same positive impacts mentioned in point 1.1.

Due to the diverse impacts, exact quantification of the mitigation effects of rotations are difficult. Examples of mitigation effects (from PICCMAT): Cereal crops with straw return increase soil organic matter whereas maize silage, potatoes and sugar beet decrease it. For a 20 year period crop rotation on average gave an increase of soil carbon equivalent to 0.7 t CO₂-eq per hectare and year (disregarding N₂O effects).

⁵ Anne Turbé, Arianna De Toni, Patricia Benito, Patrick Lavelle, Perrine Lavelle, Nuria Ruiz, Wim H. Van der Putten, Eric Labouze, and Shailendra Mudgal. Soil biodiversity: functions, threats and tools for policy makers. Bio Intelligence Service, IRD, and NIOO, Report for European Commission (DG Environment), 2010, p. 165 (<http://ec.europa.eu/environment/soil/biodiversity.htm>).

Major costs: Provided that machinery is available, the measure is a low cost practice that often forms the basis for other conservation practices. Generally, it increases crop rotation's productivity. Investment costs for small specialist farms in order to diversify.

Other positive effects: Although the use of **long crop rotations** has declined in recent years in European farming, they potentially **have many other agronomic, economic and environmental advantages when compared with shorter rotations and monoculture**. Major benefits include: Reduced runoff and erosion, increased organic matter, improved soil quality, controlled weeds, improved pest management by breaking disease cycles (For example, nematodes and anthracnose, the maize pest *diabrotica* can be highly susceptible to crop rotation), moisture efficiency, yields and profitability over time, improved aesthetics and wildlife habitat. In addition, rotations add diversity to farm operations and can reduce economic and environmental risks.

The agronomic benefits of rotation are due to the interactions between different crops. The crop that is cultivated first produces some modifications to the environment (especially to the soil), which can assist the growth of the crop that follows. By contrast, the simplification of cropping structure, especially monoculture, requires higher inputs to mitigate the negative effects of sequences lacking mutual support of crops.

Optimising GHG impact: The crop rotation measure needs to be refined in order to ensure mitigation benefits (e.g. by favouring legumes and other forage crops and possibly avoiding crops associated with carbon losses).

1.3. Permanent pasture

Description: The measure could entail an obligation to maintain all permanent pasture or to maintain the ratio between permanent pasture and arable land at individual farm level. Protecting permanent grassland is a priority for biodiversity policy and climate change mitigation; but its protection is also good for water quality (although less so in intensive dairy production with very high fertilizer use), flood prevention, for protecting vulnerable soils from erosion, and increasing soil organic matter.

Grasslands, being a mixture of different grass species, legumes and herbs, not only act as carbon sinks and to prevent erosion, but are also habitats for animals, e.g. birds and insects. Permanent grasslands act as well as a fixer for nutrients and a water regulator due to the build-up of organic matter in the soil profile.

Unlike some other land use measures where trade-offs between environmental and climate mitigation goals can make the policy choice rather complex, maintenance of permanent grassland is a win-win solution which optimises production of fodder, carbon sequestration, biodiversity and watershed protection in one go, besides the aesthetic role and recreational functions of grassland.

Environmental concerns about conversion of permanent grassland to arable land or to tree plantations are justified because of potential major impacts in terms of biodiversity loss, increase in GHG emissions, and higher erosion risks.

Main environmental functions besides climate change mitigation: biodiversity preservation, landscape conservation, erosion control, improvement of water quality and flood prevention.

Effectiveness: The conversion of grassland to cropland by ploughing entails large carbon losses. The re-conversion of cropland to grassland yields carbon sequestration effects,

but these are generally assumed to be slower than the release of carbon when grasslands are ploughed (see figure 1 in annex).

Due to this asymmetry in carbon stock changes following conversion an obligation to maintain existing permanent pasture is more effective than an obligation to only maintain the amount of surface of permanent pasture at farm level, which would still allow for some conversion within the farm. Thus, a shift of responsibility for maintaining grassland surface size from the MS to individual farm level would only be effective as a GHG reduction measure if this will lead to a reduction of the total area being converted.

This asymmetry is not captured in emission inventories under UNFCCC. Most MS use rather crude estimates for emissions from land use change⁶. Carbon losses are particularly high when converting grassland on organic soils.

According to data submitted by MS to the UNFCCC, in the EU in 2008, 6.5 mio hectares were converted from grassland to cropland, and 7.6 mio hectares were converted from cropland to grassland (data for EU27 except Malta and Cyprus).

Figure 2 in the Annex indicates the distribution of soil organic matter across Europe. In regions, where general soil content is high, larger losses from conversion of grassland can occur.

Estimates of emissions/removals from land conversion in t CO₂/ha/year (example of France, Arrouays et al. 2002)

	average	range
grassland to cropland	+3.49 (emission)	+2.4-4.6 (emission)
cropland to grassland	-1.80 (removal)	-0.84-2.75 (removal)

Permanent grassland protection is crucial to maintaining and improving climate change mitigation potential in agriculture in the EU. It is one of the key land management practices helping maintain and enhance carbon levels in soils: according to data from the European Soil Database, grasslands contain about three times the quantity of C in the soil compared to arable land (8.7% in grassland and 2.8% in arable land in the top 30 cm of soil)⁷. Permanent grasslands are effective sinks for carbon, in contrast with arable land, mainly because of the build-up of organic matter in the soil profile. According to the CLIMSOIL Report⁸, most grasslands in temperate regions are considered to be carbon sinks with a measured carbon sequestration rates in the range 450-800 kg C/ha/y. It is

⁶ Tier 1 level of GHG reporting: Average carbon stock levels are calculated for cropland and grassland. Transition in each direction is assumed complete within 20 years.

⁷ Average EU-26 (no figures for Cyprus).

⁸ René Schils, Peter Kuikman, Jari Liski, Marcel van Oijen, Pete Smith, Jim Webb, Jukka Alm, Zoltan Somogyi, Jan van den Akker, Mike Billett, Bridget Emmett, Chris Evans, Marcus Lindner, Taru Palosuo, Patricia Bellamy, Jukka Alm, Robert Jandl and Ronald Hiederer, Review of existing information on the interrelations between soil and climate change (CLIMSOIL), Final Report to DG Environment, December 2008, pp. 59 and 63 (http://ec.europa.eu/environment/soil/review_en.htm).

estimated that the rate of carbon accumulation in the grassland soils of Europe is 670 kg C/ha/y on average, or an annual total between 1 and 45 Mt C (Smith *et al.*, 2005)⁹.

Ploughing up permanent grassland is therefore highly undesirable from a climate change perspective. Even a tiny loss of 0.1% of carbon emitted into the atmosphere from European soils (all types of soils, not only grassland) is the equivalent to the carbon emission of 100 million extra cars on our roads – an increase of about half of the existing car fleet¹⁰. Thus, preserving existing carbon stocks in the soil and fighting the depletion of soil organic matter through improved protection of pastures and meadows are of utmost importance for our environment. When grasslands are ploughed up, one third of their carbon stock may eventually be released.

UNFCCC reporting data from MS provide an estimate of emissions and removals from land conversion. These data are, however, of limited accuracy as, for instance, most MS do not consider the asymmetry in gains and losses from land conversion. According to UNFCCC reporting, emissions from the conversion of grassland to cropland were 29.3 Mt CO₂ and removals from the conversion of cropland to grassland were -31.8 Mt CO₂. Thus, a net contribution from total land conversion between cropland and grassland was a slight sink of -2.5 Mt CO₂.

The inventories used for UNFCCC reporting need improvement, and it can be assumed that the application of higher tier levels¹¹ in carbon monitoring would lead to higher estimates for carbon losses. In particular, monitoring schemes have to be set up in most MS in order to better quantify areas subject to land use change and the associated emissions and removals (see for instance that, according to reported data, more than half of the conversion between cropland and grassland in the EU takes place in France, which is most likely an artefact of differences in methodology).

Major costs: There are opportunity costs, in particular for farms interested in restructuring production (e.g. reducing animal numbers or switching to indoor housing). Maintenance costs are low.

Other positive effects: As described above, besides the climate change aspects, maintaining permanent pasture is also a key environmental measure as there are considerable benefits for biodiversity (in particular on HNV grassland), water regulation, and soil protection. Maintenance of productive permanent pasture is also key aspect of culturally valued European landscapes.

Optimising GHG impact: Minimising conversion of permanent grassland, except possibly in duly justified cases (e.g. re-structuration of farm); strict limitation on conversion of grasslands on organic soils. In coming years, an increase in demand for arable land at the expense of grassland seems quite likely, as this appears to be the direction of most of the major drivers – demography, an increased demand for cheap (i.e.

⁹ Other estimates (Janssens *et al.*, 2003) put that value at 100 Mt C/y, but with a very large standard deviation of 133 Mt C/y.

¹⁰ IP/09/353, 5.3.2009.

¹¹ UNFCCC permits data reporting of different quality, or "tiers". Tier 1 approaches involve the application of standard (global) emission factors multiplied with the area. For the conversion of grassland to cropland and vice versa, standard figures for carbon content are used, and it is assumed that the new content is reached gradually over 20 years. Higher tiers involve the use of emission factors adapted to the national circumstances or more advanced modelling.

intensively reared) meat in developing countries, increased demands for energy including bio-energy, as well as the loss of arable land to urbanisation. So if the present protection for permanent grassland is not strengthened, we risk seeing an increasing incidence of the ploughing up of grassland for arable uses, with all the negative environmental impacts explained above.

1.4. Ecological set-aside

Description: Set aside is land left fallow (not in production) for environmental purposes, e.g. a certain percentage of each holding.

Effectiveness:

Maintaining land uncropped can bring benefits for biodiversity¹² (more heterogeneous habitats, increase of species, habitat connectivity) for natural resources (reducing diffuse pollution by N, P and plant protection products, preventing soil erosion and improving water quality) and for climate change (reduced need for fertilisers, and increased soil organic matter, increasing water retention).

By reinforcing biodiversity, ecological set-aside will help ecosystems adapt to climate change. It will also enhance the capacity of the landscape to hold water, and so help to reduce flooding, and attenuate the effects of drought. The beneficial effects of ecological set-aside for biodiversity and other ecosystem services will be enhanced if the ecological set-aside is connected as much as possible to wider green infrastructure. The net effect on GHG will be locally variable and depend on the type of agricultural production no longer taking place on the set aside land. If farmers are free to select the area to be set aside on their farm, most likely the least productive land will be chosen, which would mean that the loss of agricultural production is likely to be below the percentage of set aside.

The overall climate change impact of set aside depends on the net effect of the different factors listed below:

- Avoided emissions from agricultural production that would have taken place on the land (fertiliser, agrochemicals, fuel, soil emissions)
- Carbon sequestration in soil and above-ground biomass on set aside land
- Emissions resulting from production of displaced production elsewhere (leakage)
- Emissions resulting from indirect land use change resulting from displaced production

As a result, the global climate impact of set aside may range from negative to positive. It is only positive if the emissions associated with the displaced production are lower than the local GHG benefits from reduced emissions and increased sequestration. This is more likely to be the case on land with high emissions per unit of production due to low productivity (as little production would be displaced per unit area) or high emissions (for instance in arable cropping on organic soils).

¹² ¹² Van Buskirk J. & Y. Willi (2004), Enhancement of Farmland Biodiversity within Set aside Land, Conservation Biology n. 18, pp. 987-994.

Mitigation effectiveness in t CO₂-eq per hectare and year (only effects on set aside land considered, leakage and indirect land-use change effects disregarded)

	Dry climate	Moist climate
Average	3.93	5.36
Range	-0.07-7.9	-0.07-3.3

As regards to indirect emissions from intensification elsewhere or from indirect land-use change, similar considerations apply as to those in relation to biofuels and bioliquids. The Commission adopted a report on this issue (COM(2010)811final), which concluded that a number of deficiencies and uncertainties associated with the modelling remain to be addressed. Nevertheless, the Commission acknowledges that indirect land-use change can have an impact on GHG emissions savings. Concluding from this report, a precise quantification of the indirect land use change induced by set aside is difficult but the effect can be significant and influences the GHG balance of the measure.

Land that is set aside should be vegetated as leaving it fallow may reduce mitigation effectiveness by 0.7 t CO₂-eq per hectare and year (Arrouays et al, 2002).

Due to the slow accumulation of soil carbon on set aside land, which can be rapidly lost following ploughing, set aside would have to be non-rotational and permanent in order to yield a meaningful carbon sequestration effect (and the same tends to apply to other benefits, such as biodiversity). From a carbon sequestration point of view, allowing either permanent pasture or revegetation with woody plants or afforestation (including the establishment of hedges) would be advantageous.

Biomass harvested from set aside land can contribute positively to climate change mitigation if used to substitute fossil sources of energy or energy intensive materials.

Major costs: Opportunity costs result from reduced production.

Side effects: Taking into account that demand for agricultural products increases globally, production no longer taking place on the set aside land will be displaced, most probably to outside the EU with associated emissions there. As a result, indirect land use changes are likely to be induced outside the EU, which can potentially exceed carbon sequestration gains on the set aside land.

It should be noted that GHG emission reduction is not the primary objective for ecological set-aside, as it is more important for water and soil protection, as well as improving habitats for biodiversity.

Other positive effects:

Although set-aside was introduced in 1992 as a production control management tool, it has always been recognised, including by the Commission¹³, that set-aside has delivered some important environmental benefits for resource protection, farmland birds and wider biodiversity and has the potential for achieving even greater environmental benefits.

In set aside land, some natural landscape elements (e.g. bushes or grassland) can develop and if properly designed, these features can form a continuous array in the landscape thus creating green infrastructure. Set-aside has also a range of agronomic benefits such as

¹³ recital 32 of Regulation 1782/2003

disease prevention and improved soil structure and fertility, increased resilience against extreme weather events. This makes that set-aside would enhance the contribution of agriculture policy to biodiversity and other environmental objectives, as well as contributing to the implementation of various environmental Directives, such as the Birds, Habitats, and Water Framework Directives.

While on the more intensive arable farms set-aside might imply a reduction in the arable land put to production of food or other commodities, there should also be benefits in terms of both shorter and longer-term economic returns from the surrounding land: ecological set-aside will assist pollinators and the natural predators of certain crop pests, and will help to increase soil organic matter and soil quality (particularly where this set-aside is rotational), all of which should be positive for farm viability. Other economic benefits could come from rural tourism especially if the set-aside had a connective pattern to it.

Optimising the GHG effect: A strong positive mitigation effect can be obtained from set aside if the measure is applied towards organic soils, where large emission savings can be obtained. This would, however, be difficult with an obligatory requirement for setting aside a fixed percentage on each farm.

2. Other measures related to agricultural land

2.1 Emissions from fertiliser use

2.1.1. Optimisation of fertiliser application

Description: In many cases, fertiliser rates can be reduced by more efficient application at the right time of the crop growth and under the most optimal weather and soil conditions, and by avoiding overdosing

Precision farming and placement gives the optimal amount of fertiliser at the right time in relation with crop growth. *Split applications* of N fertiliser can lower the emission of N₂O. Other measures related to fertiliser timing and fertiliser use under wet conditions are no application of manure during autumn (Netherlands, regulated by law) and no use of animal manure and fertiliser at the same time. Under wet conditions denitrification might take place and the danger of leaching is great in autumn. Also the emissions from crop residuals are expected to decrease.

Effectiveness: Using precision farming systems can lead to a reduction of 30% in fertiliser use. No fertilisation in autumn and winter might lead to a reduction of emission from crop residuals between 8 (other arable land) and 40% (sugar beet). The decrease in fertiliser depends on manure type, use of manure in spring and other variables.

The fact that less fertiliser is used leads to a decrease in energy consumption and CO₂ emissions for its production.

Mitigation potential for reduced application of fertiliser in t CO₂-eq/ha/year and costs (IIASA)

	Mitigation potential	Costs
Grassland	3.7	5-7 EUR/t
Cropland	10.2	5-7 EUR/t

Major costs: Major investment costs (e.g. 8-27 EUR per ha for a 250 ha Unit) for precision farming, and increased labour and machinery use (for split applications) which are partly balanced with reductions in fertiliser costs, and potential yield benefits.

Side effects: Reduction of fertiliser use cause fewer emissions of NH₃ and lead to less nitrate leaching.

2. 1.2. Optimisation of fertiliser type

Description: The use of fertiliser with nitrification inhibitors and slow release fertilisers can decrease emissions of N₂O that result from denitrification.

Nitrification inhibitors are compounds that prevent the turnover of ammonia into nitrate. They can be applied in animal manure and fertiliser. The effect of the measure is a decrease in the use of fertiliser or a higher N uptake from the same amount of fertiliser in arable crops and grassland.

Slow release fertilisers can limit losses of nitrate and can reduce the emission factor of N₂O from fertiliser. However, the effectiveness of this measure was judged as insufficiently tested so far (PICCMAT).

Effectiveness: Apparently, GHG reductions depend on the type of inhibitor (e.g. DCD (dicyandiamide) or DMPP (3,4-dimethylpyrazole phosphate), fertiliser used (ammonium nitrate or urea) and soil conditions. GHG reductions from 26-49% were observed without effects on the crop yield for cereals and maize on a clayey loam soil. Other combinations of soil, inhibitor and fertiliser type yield lower reductions.

Major costs: Fertilisers with nitrification inhibitors and slow release fertilisers are more expensive, but if their use reduces fertiliser requirements, there might be a reduction in total costs.

Side effects: Decrease of ammonia emission and nitrate leaching.

2.2 Soil carbon sequestration / reduction of soil carbon loss

Under most arable cropping systems, the carbon content in the soil is kept at a relatively steady (and generally very low, compared to the native vegetation) level or continues to decline over time, which causes GHG emissions. Mitigation is possible by reducing carbon losses from the soil and enhancing carbon gains, e.g. by increasing the input of organic material.

Particular attention is to be given to organic soils (peat soils) that lose large amounts of carbon under arable cultivation or drainage conditions.

Overall, there are numerous technical measures that can be beneficial for enhancing or protecting soil carbon, and these have to be fine-tuned to local conditions. The most well-known ones are summarised below.

2.2.1. Zero tillage - conservation tillage

Description: Advances in weed control methods and farm machinery now allow many crops to be grown with minimal tillage (reduced tillage) or without tillage (no-till).

Other erosion prevention measures also exist, which are not further elaborated here (e.g. contour ploughing, maintenance of terraces, etc.).

Effectiveness: According to older studies, reduced- or no-till agriculture often results in soil C gain, though this is not always the case (West & Post 2002; Ogle *et al.* 2005; Gregorich *et al.* 2005; Alvarez 2005). The mitigation potential was estimated is 0.15 - 0.70 t CO₂ eq./ha/yr (Smith *et al.* 2008, global average). However, more recent scientific publications shed doubt on the effectiveness of reduced tillage as a mitigation measure in general, as it tends to lead to an accumulation of organic carbon in the topsoil, whereas the lower strata may become impoverished. Most older studies only looked at the topsoil, which means that the effectiveness of this measure is possibly overstated. As the changes in the soil profile are likely to be highly specific to the soil types and management systems involved (before and after the reduced tillage regime is introduced), benefits cannot be generalised. More research would clearly be needed in the EU, not the least because most of the scientific literature on the subject originates in North America.

Carbon sequestration is not permanent. In case of re-conversion to more frequent tillage regimes, carbon can be rapidly lost again.

The reduced tillage or no-till practices also allow using less heavy machinery than for tillage, which leads to less CO₂ emissions from tractors.

Major costs: Specific machinery is required (direct seeding), which means high upfront investment costs. In regions where zero tillage can be applied without yield penalties there are costs savings from requiring less fossil fuel for machinery passes. Fuel use in conventional systems (Tebruegge, 2000; Smith *et al.*, 1998) in the UK and Germany varies from 0.046-0.053 t C ha⁻¹ yr⁻¹; whereas for zero-till systems, it is only 0.007-0.029 t C ha⁻¹ yr⁻¹ (0.007 is for direct energy use only; 0.029 includes the embodied energy in herbicides). Additional expenditure is usually needed for herbicides.

Side effects: In some cases, no-tillage can increase N₂O emissions. Weed control has to be undertaken with herbicides, and an ecological evaluation is needed.

Where soil organic carbon can be increased this generally contributes to improved soil fertility and productivity, enhanced soil biodiversity, and increased infiltration, reduced runoff and enhanced soil moisture retention, thereby reducing risk of drought and desertification.

2.2.2. Restoration of organic soils

Description: Organic soils constitute hotspots of emissions from agriculture, i.e. high emissions on a relatively small surface. Emissions are highest where organic soils are used for arable cropping, as this land use generally involves the most soil disturbance and drainage, but grasslands on organic soils can also have a high impact on climate change.

According to UNFCCC reported data from the MS, in 2007, cropland on organic soils occupied an area of 2.0 million hectares, which corresponded to 1.6% of total cropland. Emissions from cropland on organic soils were 37.5 Mt CO₂-eq., which corresponded to 87.6% of total emissions from cropland¹⁴. The surfaces of organic cropland are concentrated in a few MS with relatively large surfaces in DE, FI, SE, PL, DK and UK (more details in annex).

Many areas of organic soils in Europe which are currently used for agriculture were drained in the past and therefore have artificially reduced water tables. Measures to undo this artificial drainage, such as blocking drainage pipes, would mitigate GHG emissions and have a beneficial impact on carbon storage. The most important mitigation practice is re-establishing a high water table (Freibauer *et al.* 2004). Furthermore, emissions on drained organic soils can be reduced to some extent by practices such as avoiding row crops and tubers, and avoiding deep ploughing.

Effectiveness: The mitigation potential of organic soil restoration (including re-wetting) is estimated at 36.67 – 73.33 CO₂-eq/ha/year (Smith *et al.* 2008, global average). Where this measure is applied efficiently (i.e. while avoiding excessive emissions of methane), it can bring by far the greatest per hectare GHG savings of any soil related mitigation measure. Nevertheless, the effectiveness of re-wetting depends on the depth and dynamics of the water table, which influence methane and nitrous oxide emissions over time.

Peatland restoration is already being promoted in some countries. For example, in Germany some federal states are compensating farmers for restoring peatlands and setting targets of 60 % restoration by 2020, and in the federal state of Baden-Württemberg restoration of 50 % of cultivated peats is estimated to potentially mitigate 0.2-2.7 % of total GHG emissions from the area (Neufeldt, 2005).

Major costs: Rewetting may only require minor engineering works to block existing drains or more major land works, for example to divert water channels. If the land is used for grazing, there should be limited effect on production. However, land under arable management would usually no longer be suitable for this purpose, as the water table generally needs to be around 1.0-1.2 m below the surface for these crops (Joosten *et al.*, 2002), requiring a change to grassland or abandonment. Novel production methods suited for restored wetlands (such as paludiculture for biomass production at potentially very high intensity) should be given more opportunities.

Other positive effects: Rewetting drained peat soils should reduce their vulnerability to physical erosion, and may also reduce losses of dissolved organic matter, via decreased rates of decomposition (Tipping *et al.*, 1999). Biodiversity benefits are likely to be considerable.

2.2.3. Residue management, including avoidance of burning

¹⁴ Cropland remaining cropland. Land use change is not considered in these calculations.

Description: Residue incorporation, where stubble, straw or other crop debris is left on the field, and then incorporated when the field is tilled, is used in some areas for water conservation, but it also enhances carbon returns to the soil, thereby encouraging carbon sequestration. Prohibition of residue burning (already part of GAEC).

Effectiveness: There are no good estimates for this measure overall, as carbon sequestration effects are partly offset by higher N₂O emissions. However, Smith et al (2000) argue that the incorporation of cereal straw across Europe would have a net positive effect with increased N₂O emissions being outweighed by the increases in SOC storage.

Estimated mitigation potential is 0.15 - 0.70 t CO₂ eq./ha/yr (Smith et al. 2008).

Major costs: Opportunity cost may occur in cases of reduced yield. Loss of potential revenues from agricultural by-products (e.g. straw). Low costs for prohibition of burning.

2.2.4 Agroforestry

Description: Agroforestry consists on increasing the number of trees on suitable agricultural lands.

Effectiveness: Trees can stock a significant amount of carbon both in the above ground part and in the roots. The mitigation potential was estimated as 0.5-10 t CO₂ eq/ha/year. (Verchot 2007).

Major costs: The planting of trees, which can be compensated by the harvest of fruits when fruit trees or the harvest of wood when the trees are mature.

Side effects: increase water retention, biodiversity and adaptation capacities, decrease erosion.

3. Animal production

The assessment below of the GHG reduction potential via measures implemented in the livestock sector is based on the results of the recently finished study "Evaluation of the livestock sector's contribution to the EU GHG emissions" (GGELS)¹⁵. Most of the proposed measures can be implemented and financed by RD funding.

The first part reviews the potential for GHG reductions of technical measures in the EU livestock sector and the second part quantifies the impacts of a selection of these measures using the CAPRI model. The measures presented focus on the two most "promising" areas of intervention in the livestock sector (measures on enteric fermentation and animal waste management systems, AWMS). There are large uncertainties around the indicated total mitigation potential. On the one hand, the net impact of specific abatement measures depends on the baseline climates, soil types and farm production systems; on the other, the number of studies that actually quantify GHG reductions is rather limited, both in terms of regions and mitigation measures covered.

3.1. Review of technological measures and their potential for GHG reduction

¹⁵ December 2010; commissioned by Dg AGRI and carried out by the JRC.

Enteric Fermentation

Emissions from enteric fermentation of livestock can be reduced with actions focusing on:

- Health, maintenance and performance of the animals. To this end, diet components can be changed significantly (crude fibre, N-free extract, crude protein and ether extract) so that methane emission due to enteric fermentation might decrease. However, such actions based on overall diet efficiency of livestock may be only relevant for developing countries, as feeding regimes notable in the EU are already optimized.
- Alteration of bacterial flora, including removal of ruminant protozoa, as well as cattle breeding for minimizing methane production.
- Additives in feed are being explored towards limiting enteric fermentation. However their use is currently limited by negative effects on milk production.
- Increase of lactations per cow has the potential to reduce methane emissions by -10%, because heifers emit greenhouse gases without producing milk.

From the studies reviewed in GGELS, an indicative overall technical potential between -5% and -10% was found in measures acting on enteric fermentation.

Animal Waste Management Systems (AWMS)

This is the sub-sector with the highest potential for reduction and capable of a high contribution in terms of GHG reduction.

Composting: composting cattle manure by aerating storage containers using porous membranes and ventilation pipes reduces CH₄ emissions compared to storage as slurry (-30%) or stockpile (-70%). However the same treatment increases N₂O emissions. Another option would be collecting and burning the CH₄ emitted by the manure (Pattey et al., 2005). Furthermore, increased straw content may significantly reduce emissions during composting. In deep litter from fattening pigs, this method reduced virtually all CH₄, and N₂O emissions (Sommer et al., 2000). Composting slurry with or without other organic material and transforming the biogas into heat and/or electricity will avoid emissions of CH₄ and N₂O from storage, reducing them by up to -95%. In addition the process will decrease the CO₂ emissions by fossil fuel substitution (Mol et al., 2003).

Compaction and Coverage: Manure compacting and coverage may limit GHG emissions. For instance, cattle farmyard manure was compacted by driving over it and then covered in plastic sheeting. Comparisons to uncovered heaps confirmed reductions of CH₄, though N₂O emissions may increase depending on weather conditions (Chadwick, 2005). Covering solids storage, separated from pig slurry, considerably reduced emissions of CH₄ and N₂O, up to -80% to -90% compared to no coverage.

Temperature of storage tanks: Emissions from slurry stored inside can be reduced by moving storage tanks outside, even if temporally. For instance, storage in Scandinavian countries is at much higher temperatures compared to outside for most of the year. This will result in higher methane emissions from in-house stored slurry, and frequent removal to outside will reduce emissions, up to -35%. The same technique, i.e., taking advantage of lower outside temperatures, was successfully tested in the Netherlands.

Anaerobic digestion: Biogas production is a very efficient way to reduce GHG emissions, both via production of renewable energy and through avoidance of emissions from manure management. Technical reduction potential is about -90% for CH₄ and -30 to -50% for N₂O.

Slurry Removal from Stables: Slurry removal between fattening, in combination with cleaning the slurry pit decreases methane emission from stables of up to -40%. Of course mitigation strategies localized at housing level require further effective slurry management and treatment down the “production” chain, i.e., in order to avoid increased methane emissions afterwards, for instance in field manure applications.

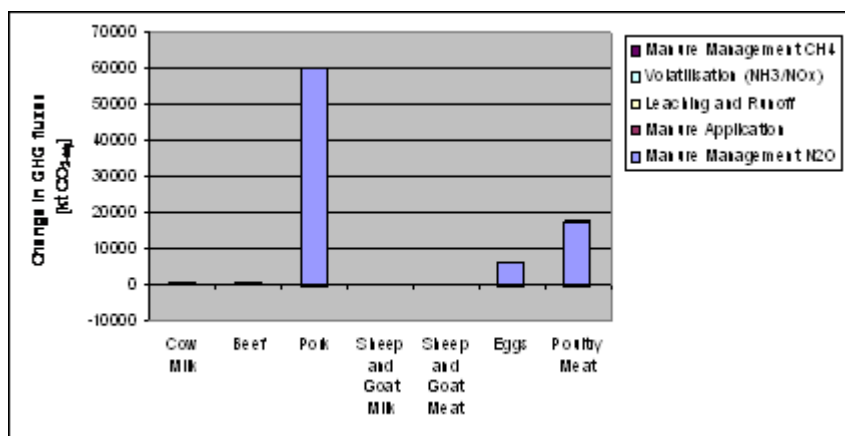
3.2. Quantification of selected measures using CAPRI

Based on estimated GHG reduction factors a quantification of the total EU level technological potential for the reduction of GHG and ammonia (NH₃) was carried out with the CAPRI model. The technical reduction potential of the measures was defined as the reduction (or increase) of emissions compared to the emissions calculated in the reference situation, if the measure would be applied on all farms. Therefore, the results must not be interpreted as estimations of the real reduction by each measure, as the implementation rates of the respective measures are unknown.

The following technological scenarios have been selected for the quantification of the emission reduction potential:

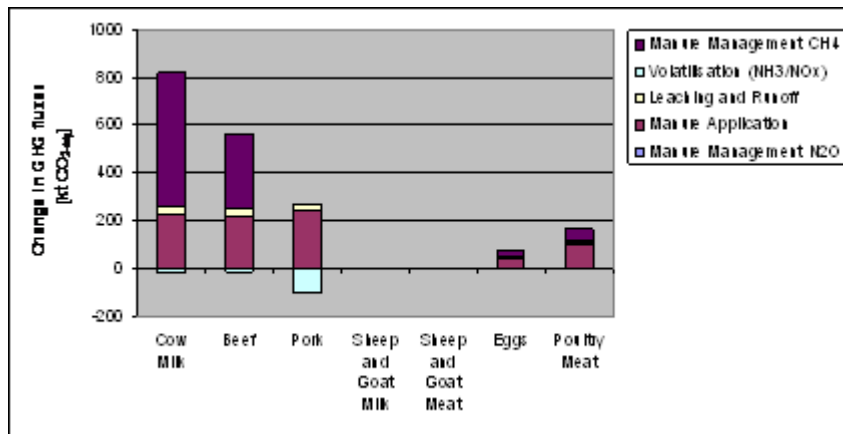
100% Animal House adaptations: Design modifications of animal houses are a possibility to reduce emissions. This can be achieved if either the surface area of the slurry or manure exposed to the air is reduced or the waste is frequently removed and placed in covered storages.

Ammonia emissions from cattle housing can be reduced through regular washing or scraping the floor, frequent removal of manure to a closed storage system and modification of floor design. For pig housing an emission reduction can be obtained by combining good floor design (partly slatted floor, metal or plastic coated slats, inclined or convex solid part of the floor) with flushing systems. In case of laying hens manure can be dried, either through the application of a manure belt with forced drying or drying the manure in a tunnel. For other poultry emissions can be reduced by regularly removing the manure using a scraper or continuously blowing heated air under a floating slatted and littered floor to dry the litter



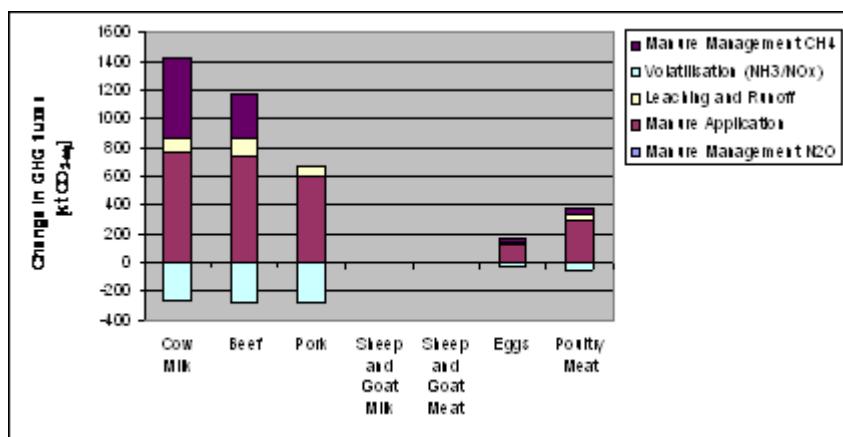
Effects on total GHG fluxes for EU-27 for the scenario ‘100% Animal House adaptation’ in 1000 tons of CO₂-eq

100% Covered outdoor storage of manure (low to medium efficiency): Low to medium efficient storage coverage systems of manure are covers of floating foils or polystyrene; high efficient coverage systems are those using tension caps, concrete, corrugated iron and polyester.



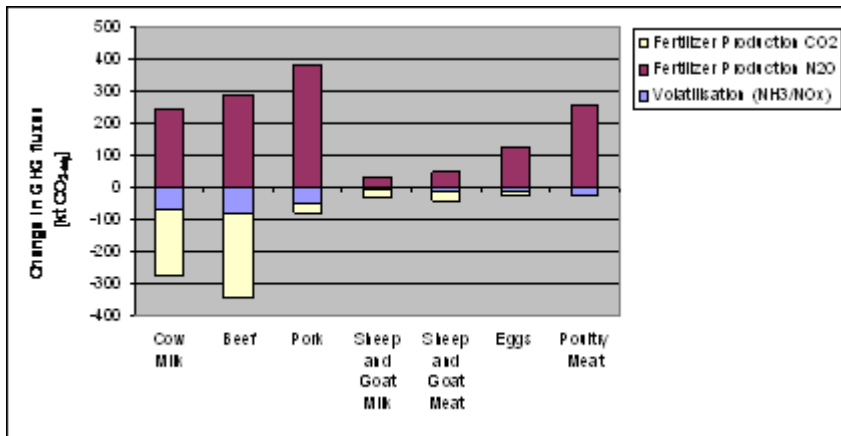
Effects on total GHG fluxes for EU-27 for the scenario ‘100% Covered outdoor storage of manure (low to medium efficiency)’ in 1000 tons of CO₂-eq

100% Covered outdoor storage of manure (high efficiency):



Effects on total GHG fluxes for EU-27 for the scenario ‘100% Covered outdoor storage of manure (high efficiency)’ in 1000 tons of CO₂-eq

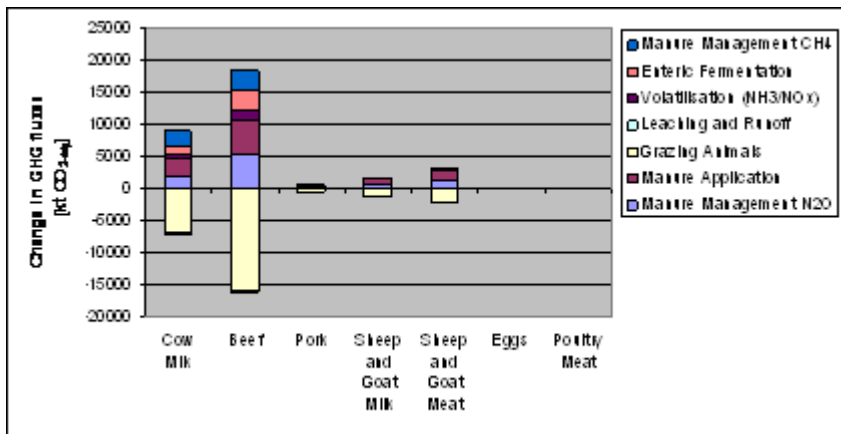
Urea substitution by ammonium nitrate for mineral fertilizer application: The share of N lost as ammonia is higher for urea than for other mineral fertilizers. Therefore, the substitution of urea with ammonium nitrate would reduce ammonia emissions; moreover, there is a minor effect on N₂O and CO₂ emissions from the production of mineral fertilizers and volatilized NH₃.



Effects on total GHG fluxes for EU-27 for the scenario 'Urea Substitution' in 1000 tons of CO₂-eq

Reduced grazing: A reduction of the grazing intensity or the time animals spend on pastures would probably reduce GHG emissions due to lower emission factors and higher carbon sequestration rates. Therefore, emissions were calculated for a scenario of zero percent grazing of animals.

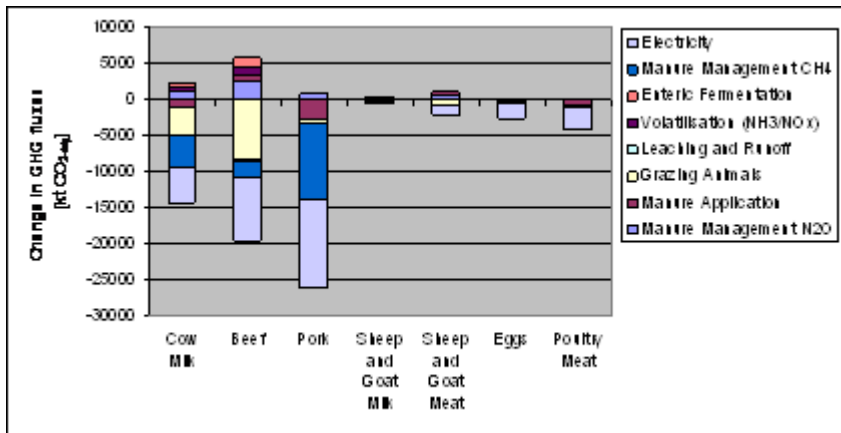
A simplistic approach for the quantification of carbon sequestration of grasslands was used, with a unique factor for all grassland, and statistics on the actual grazing intensity on European level are not available so the effect of a reduced grazing intensity cannot be quantified with the CAPRI model. Finally, it was not assessed to which degree grass consumed by grazing animals could also be harvested at a reasonable cost, and which share would have to be replaced by feed crops. For this and other reasons (animal health etc.), the scenario should rather be considered as a pure thought experiment and by no means as a recommendation for this measure.



Effects on total GHG fluxes for EU-27 for the scenario 'No Grazing of animals' in 1000 tons of CO₂-eq

As for the results, it was observed that N₂O emissions from grazing went down, while N₂O-emissions from manure management and application went up. Surprising is the increase in methane emissions from enteric fermentation, which was supposed to decrease due to the higher net energy requirement for animal activity of grazing animals. The rise in emissions is due to a lower digestibility of hay and silage compared to fresh grass directly taken up by grazing animals.

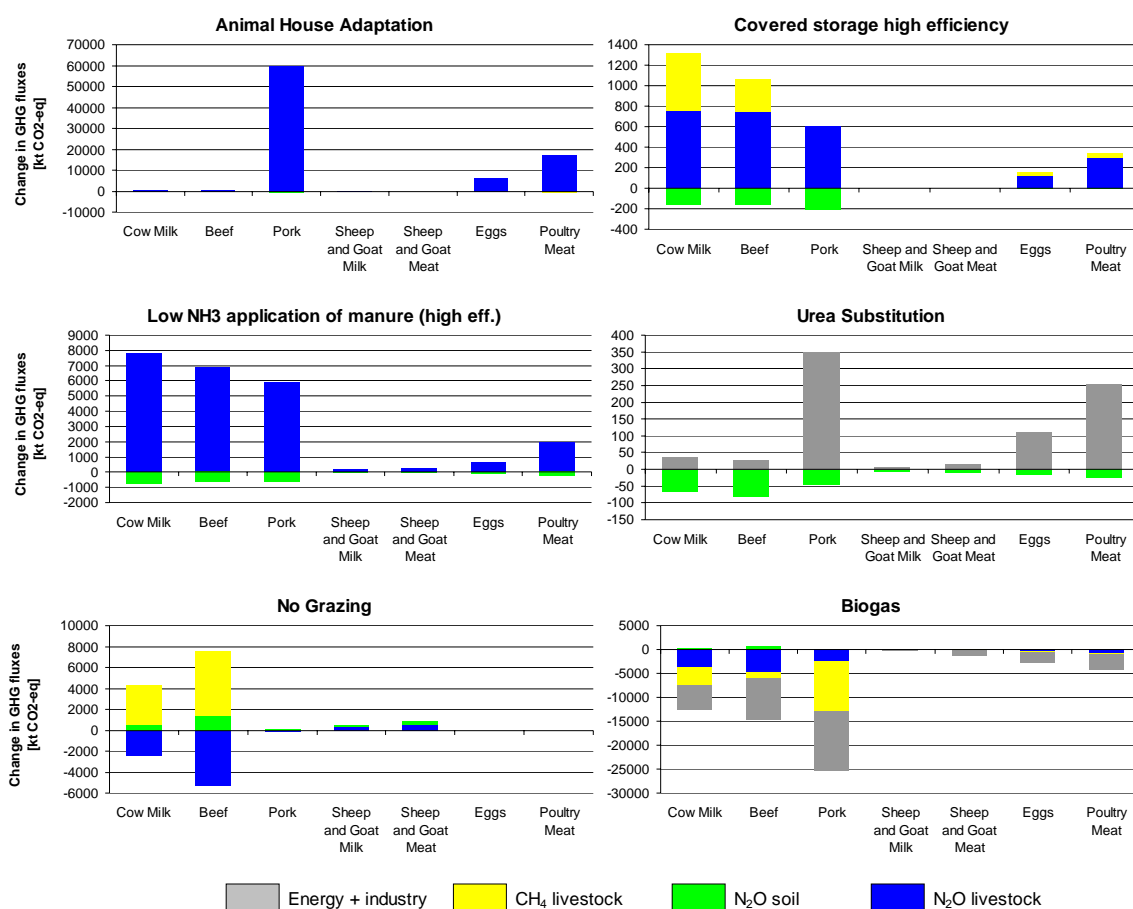
Biogas production for animal herds of more than 100 LSU (livestock units): Biogas production is one of the most efficient ways to reduce greenhouse gas emissions, by almost eliminating methane emissions from manure management, by substituting fossil energy sources and, to a lower degree, by reducing N₂O emissions from the application of the digested slurry.



Effects on total GHG fluxes for EU-27 for the scenario 'Biogas' in 1000 tons of CO₂-eq

Conclusions for measures in the livestock sector

- Technological emission reduction measures are estimated to be able to reduce emissions from livestock production systems by 15-19%. This figure is for a best case scenario, assuming 100% of the farms would take up all measures above, and shows the limited mitigation potential for the livestock sector.
- Important to mention that this figure is only tentative as data for emission reductions are available mainly for ammonia (NH₃) emissions, and are associated with high uncertainty; these measures often lead to an increase of GHG emissions, for example through pollution swapping (manure management and manure application measures), or by increased emissions for fertilizer manufacturing (urea substitution).
- Despite the results presenting some reductions mainly in ammonia emissions, when combining all GHG fluxes the final result is for most of the measures limited or no reduction of emissions for the reasons explained in the previous point. Basically, only anaerobic digestion in the simulation shows positive effects with a total reduction of GHG-emissions by 60 Mt CO₂-eq across the EU where most of the reduction could be realized in beef (-14 Mio tons), cow milk (-12 Mio tons) and pork (-25 Mio tons) production. As a comparison, the recent IIASA study¹⁶ estimates a potential reduction range for anaerobic digestion plants for liquid manure in the Pork sector of -16.6 to -34.4 Mt CO₂-eq.



¹⁶ Potentials and costs for mitigation of non-CO₂ GHG emissions in the EU until 2030. May 2010

Figure 1 - Impact of selected technological abatement measures, compared with the reference situation for the year 2004, if the measure would be applied by all farms, calculated with a cradle-to-gate life-cycle analysis with CAPRI (Source: GGELS)

It is clear that agriculture has some further possibilities to reduce its influence on climate change by reducing the emissions of methane, nitrous oxide and carbon dioxide released by farming activities and by maintaining and sequestering carbon in farmland soils. Note has to be taken that agriculture also provides an indirect contribution to emission reductions in other sectors through the supply of biomass for the production of bioenergy and renewable materials. For this part efforts made in the agricultural sector are accounted and reflected in other sectors, as only nitrous oxide and methane are reported in the agriculture inventory whilst carbon dioxide from energy use (including in agriculture) is in the energy inventory and carbon dioxide from soils in the LULUCF inventory.

Annex:

Figure 1: Carbon losses and gains resulting from land conversion

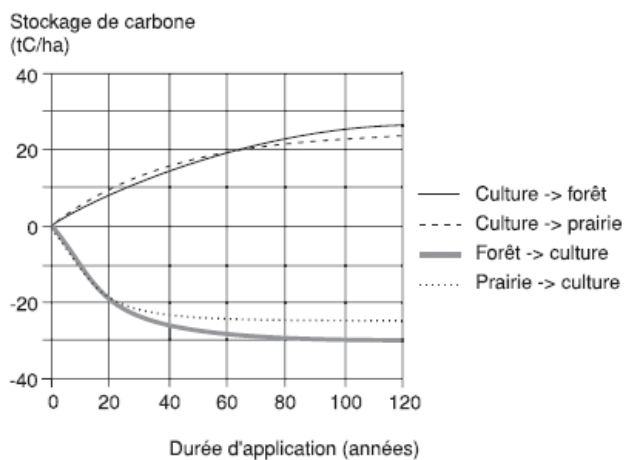


Figure 5. Evolutions du stock de carbone dans le sol associées aux pratiques provoquant les stockages (0,5 tC/ha/an durant les 20 premières années) ou les déstockages (1 tC/ha/an) extrêmes. Il s'agit de valeurs modales pour le territoire français ; l'intervalle de confiance à 95% sur ces valeurs est de l'ordre de ±40%.

Figure 2: Distribution of soil organic content in Europe

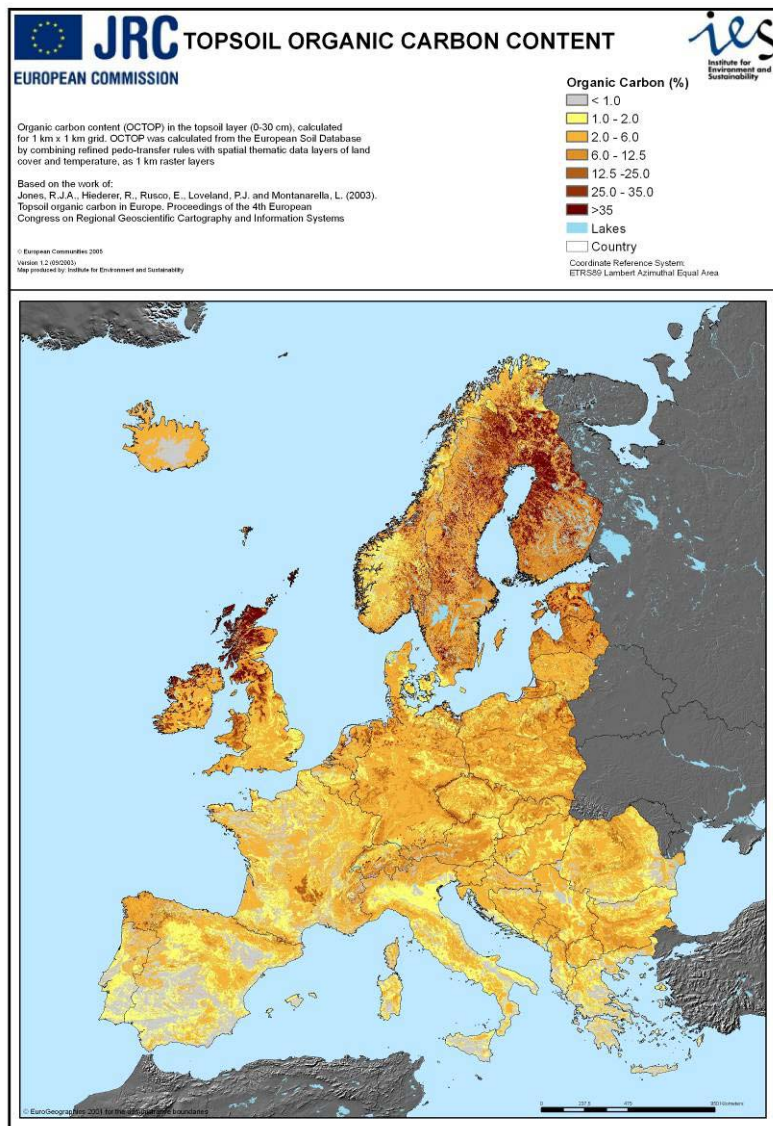


Figure 3: Land conversion between grassland and cropland (EU27 without MT and CY), based on UNF CC reporting 2008

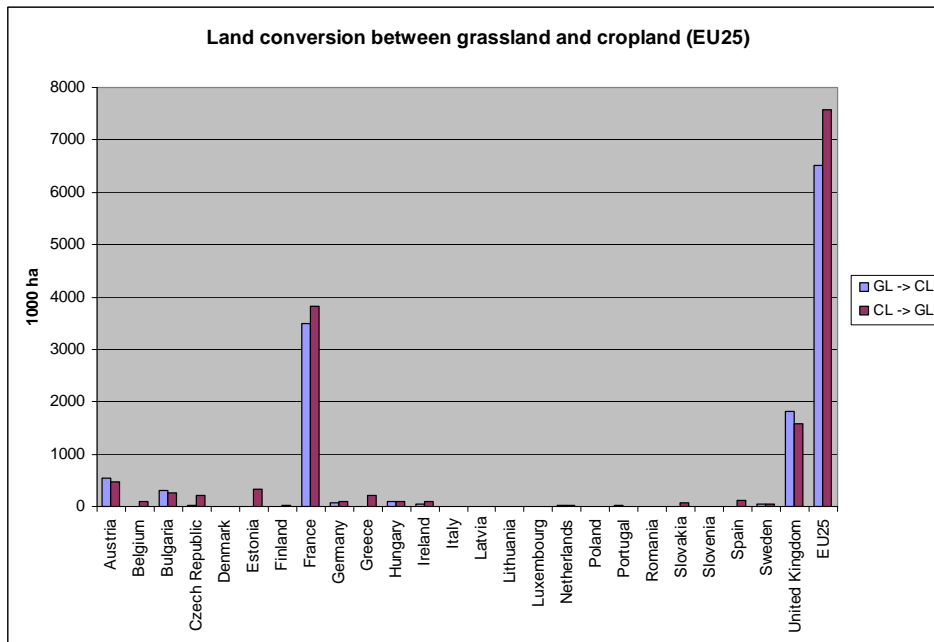


Figure 4: Emissions from conversion between grassland and cropland (EU27 without MT and CY), based on UNFCCC reporting 2008

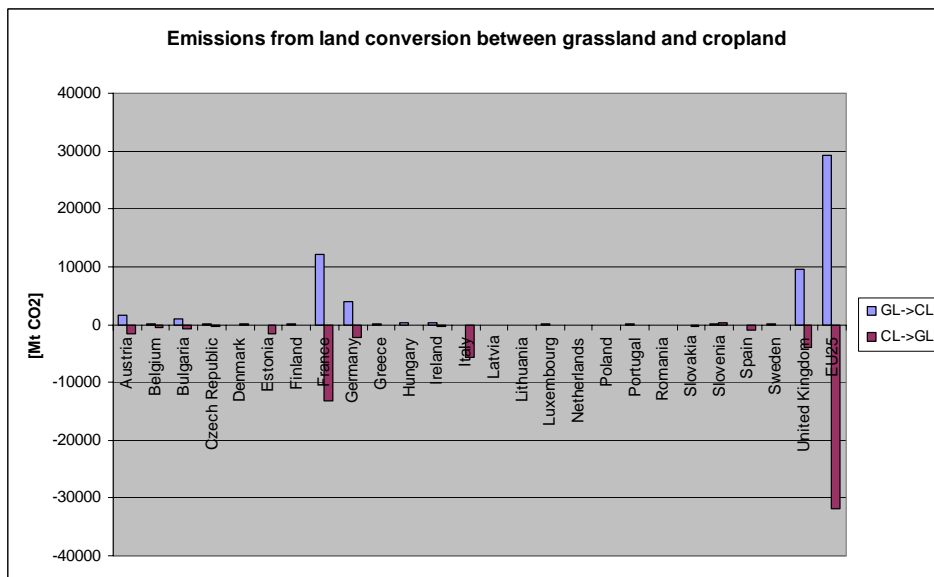


Figure 5: Surface of cropland on mineral and organic soils (EU27 without MT and CY), based on UNFCCC reporting 2008

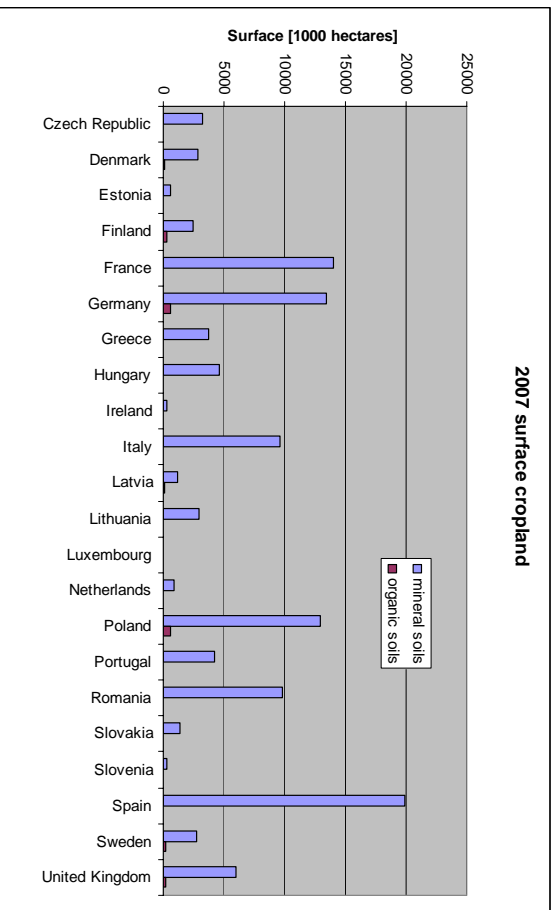


Figure 6 GHG emissions from cropland on mineral and organic soils (EU27 without Malta and Cyprus), based on UNFCCC reporting 2008

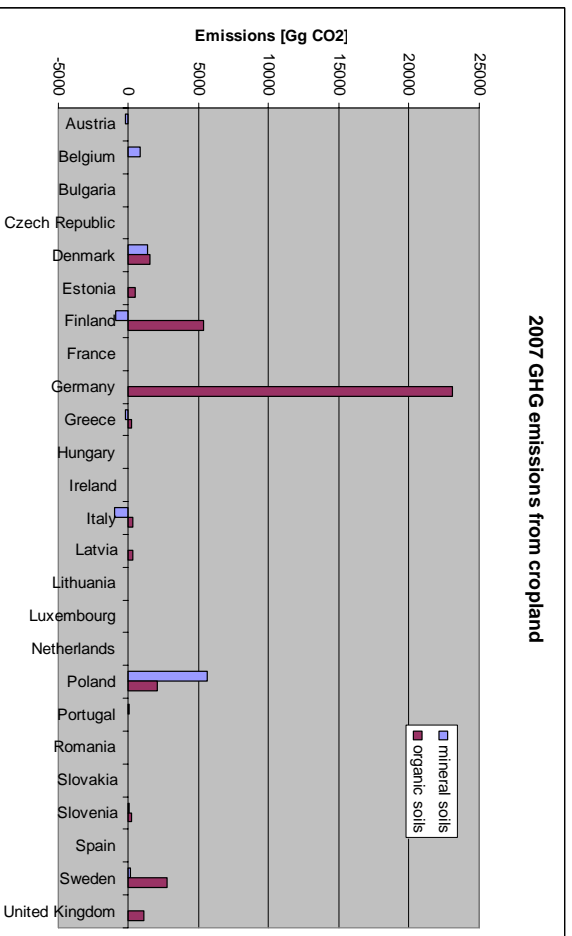


Table 1: Member States with surfaces of cropland with organic soils, based on UNFCCC reporting 2008 (reporting data are incomplete, e.g. NL did not report cropland on organic soils)

Member State	surface [1000 ha]
Germany	23127
Finland	5338
Sweden	2750
Poland	2030
Denmark	1564
United Kingdom	1129
Estonia	480
Italy	330
Latvia	308
Slovenia	244
Greece	244

Table 2: Effect of a selection of mitigation measures on carbon sequestration in agriculture (CLIMSOIL report)

	Potential implementation cost	Probability of implementation*	Global mitigation potential (Smith <i>et al.</i> , 2008) (tCO ₂ eq./ha/yr)
Catch crops	Low	High	0.29 - 0.88
Reduced tillage	Low	Medium (low in some areas)	0.15 - 0.70
Residue management	Low	High	0.15 - 0.70
Extensification	Medium	Low	1.69 - 3.04
Fertiliser application	No	Medium (already done in some areas)	0.26 - 0.55
Fertiliser type	Low	Medium (already done in some areas)	0.26 - 0.55
Rotation species	No	Medium	0.29 - 0.88
Adding legumes	Low	High	0.26 - 0.55
Permanent crops	Variable	Low (reduces flexibility)	1.69 - 3.04
Agroforestry	Medium	Low (reduces flexibility)	0.15 - 0.70
Grass in orchards & vineyards	Medium/high	Low	1.69 - 3.04
Optimising grazing intensity	Low / medium	Medium (already done in some areas)	0.11 - 0.81
Length and timing of grazing	Medium	Medium	0.11 - 0.81
Grassland renovation	Low	High	0.11 - 0.81
Optimising manure storage	Medium / high	Medium	
Manure application techniques	Medium	Medium	1.54 - 2.79
Application of manure to cropland versus grassland	Low	Medium	1.54 - 2.79
Organic soil restoration	Medium / high	Medium	36.67 – 73.33

* Based on potential uptake by farmers



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Annule et remplace le document SEC(2011) 1153 final du 12 octobre 2011
Langue unique EN (page de couverture)

COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 2C

{COM(2011) 625 final}
{COM(2011) 626 final}
{COM(2011) 627 final}
{COM(2011) 628 final}
{COM(2011) 629 final}
{SEC(2011) 1154 final}

Annex 2C: Available information on costs of greening

1. INFORMATION IN RURAL DEVELOPMENT PROGRAMMES

It is assumed that the level of aid for similar measures in rural development calculated based on costs incurred / income foregone could be used as proxy of costs of greening measures within first pillar. See below table with level of agri-environmental premiums (based on RDP 2007-2013):

	Green cover	Crop rotation	Ecological set-aside	Permanent pastures (AEM on PP are often going beyond "minimum maintenance")
AT	€130 arable land €50 catch crops in maize			€350 (up to €750)
BE	€100			€200-240
BG		€76		€97 €155 for restoration and maintenance of overgrazed grassland
CZ	From €104 to 401			€75; up to €117 with management
DE	€70-85 as starting level	From €20 to 100	€120-140 as starting level	€75-120 for extensive grassland (most basic)
DK			€61	€188 if grazing; €107 if mowing;
EE	A part of a measure (whole measure €80)	A part of a measure (whole measure €80)		
ES	€100-145 winter cover in arable; €100-430 vineyards €90-240 permanent crops	(use of Art.68: €60)	From €35 to 144	From €20-57 for most basic up to €100-150 and above €200 for most demanding
FI	€30-45	€24 (crop diversification)	€50 grass area; €155-180 biodiversity field; €350/450 riparian zones	Up to €55 (extensive grassland production); €24 extensive cultivation of perennial grassland
FR	Starting with €230-300 (in DOM)	€32	Max €600 (Guyane)	€76 for most basic; up to €150
HU				€108 if grazing; €71 if mowing; €250 conversion of arable into grassland
IE	€80		€23 for management of set-aside	€314
IT	~ €150	~ €150	~ €500	~ €280
LT	€145		€160 for conversion of arable into meadows; €62 if special crops to be sown in certain periods	€98 for meadows; €109 water bodies in meadows; €168-229 if wetlands
LU			€325	€107
LV	€87			€123
MT		€12		
NL		€150 (basic) (crop diversification)		€69 (up to €190)
PL	€84-108 depending on type of cover			€128
PT			From €100 to €200	€100 (basic) up to €200 in HNV
RO	€130			€124
SE	€55 €100 if catch crops;		€22 €33 for riparian strips along watercourses	€5-222 €138-600 if specific management added
SI	€83; (€31 grassland, €184 permanent crops)	€91		€48
SK	€158 (for both rotation and green cover in one measure)		€45 (buffer strips)	From €65 for basic to 186 for more requirements

UK	~ 150€for most basic ones	from €102	€300-480 (Wales); €435-510 (N.Ireland)	from €50/110 for basic ones to €80
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Examples of calculations:

FR / Extensive grassland premium in AEM:

- Description des engagements

Éléments techniques	Méthode de calcul	Formules de calcul	Surcoûts et manques à gagner annuels	Montant annuel
<p>Maintien de la quantité de surfaces engagées pendant 5 ans</p> <p>Le labour des prairies permanentes engagées est interdit. Seul un renouvellement au cours des 5 ans est autorisé, par travail superficiel du sol.</p> <p>Le retournement ou le déplacement des prairies temporaires engagées est autorisé une fois au plus au cours des 5 ans de l'engagement, dans la limite de 20% de la surface engagée pour le cas général et de 35% de la surface engagée pour les exploitations situées dans des départements de zone de montagne sèche⁵.</p>	<p>Manque à gagner : diminution de rendement sur les prairies temporaires non retournées</p> <p>Gain : achat des semences sur les prairies temporaires non retournées</p>	<p>= 9% de prairies temporaires non retournées en 5 ans x</p> <p>(perte de productivité passage d'une PT à une PP : 1,5 t/ha/an en moyenne x 800 UF/t MS x 0,14 €/UF = 168 €/ha</p> <p>- achats de semences "herbe" : 75 €/ha)</p>	8,37 €	
<p>Obligation d'existence d'éléments de biodiversité à hauteur d'au moins 20% de la surface engagée (voir liste à suivre et coefficients de correspondance).</p> <p>Maintien de la totalité des éléments de biodiversité sur les surfaces engagées.</p>	Non rémunéré		- €	

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⁵ Dans le cas des exploitations pratiquant la transhumance, les surfaces d'estives collectives sont comptabilisées dans la surface engagée de l'exploitation individuelle, au pro-rata de leur utilisation. Les départements de zone de montagne sèche sont les suivants : Alpes-de-Haute-Provence, Hautes-Alpes, Alpes-Maritimes, Ardèche, Aude, Aveyron, Drôme, Gard, Hérault, Lozère, Pyrénées-Orientales, Tarn, Var et Vaucluse.

<p>Pour chaque parcelle engagée, respecter les conditions suivantes :</p> <ul style="list-style-type: none"> - fertilisation totale en N limitée à 125 unités/ha/an, dont au maximum 60 unités/ha/an en minéral. - fertilisation totale en P limitée à 90 unités/ha/an, dont au maximum 60 unités/ha/an en minéral - fertilisation totale en K limitée à 160 unités/ha/an, dont au maximum 60 unités/ha/an en minéral <p>La restitution au pâturage n'est pas prise en compte.</p>	<p>Manque à gagner : diminution de rendement</p> <p>Gain : économie d'achat et d'épandage des fertilisants minéraux</p>	<p>= perte rendement fourragère liée à l'économie de 55 UN : 2,24 € /UN économisée x 55 UN économisée/ha par rapport à un apport de référence de 180 UN total/ha</p> <p>- économie réalisée sur l'achat d'azote minéral : 0,66 €/UN x 30 UN minéral économisée par rapport à un apport de référence de 90 UN minéral /ha</p> <p>- économie d'un épandage : 1 heure/ha x (16,54 €/heure de main d'œuvre + 14,9 €/heure de matériel)</p>	71,96 €
<p>Les apports de fertilisation sont enregistrés dans un document précisant au moins, pour chaque parcelle engagée, la date, la nature et la quantité de l'apport.</p>	Non rémunéré		- €
<p>Désherbage chimique interdit, à l'exception des traitements localisés visant :</p> <ul style="list-style-type: none"> - A lutter contre les chardons et rumex, - A lutter contre les adventices et plantes envahissantes conformément à l'arrêté préfectoral de lutte contre les plantes envahissantes et à l'arrêté DGAL « zones non traitées » <p>A nettoyer les clôtures.</p>	Non rémunéré		- €
<p>Maîtrise mécanique ou manuelle des refus et des ligneux, par gyrobroyage, ou selon les préconisations départementales.</p>	Non rémunéré		- €
<p>Écobuage dirigé suivant les prescriptions départementales, ou, en l'absence de telles prescriptions, écobuage interdit.</p>	Non rémunéré		- €
<p>Interdiction de nivellement et de nouveau drainage</p>	Non rémunéré		- €
Total			80,33 €
			76,00 €

Sources : productivité moyenne des prairies permanentes et temporaires ; barèmes calamités agricoles ; valeur fourragère : INRA ; prix du fourrage : institut de l'élevage (prix du marché : 0,14 €/unité fourragère) ; semences : groupement national interprofessionnel des semences (GNIS) ; perte de rendement par unité d'azote économisée : INRA d'Avignon, modèle STICS (simulateur multidisciplinaire pour les cultures standards), 20 kg de matière sèche/ha/unité d'azote à 0,8 unités fourragères/kg de matière sèche ; coût des fertilisants : institut de l'élevage (prix du marché de l'ammonitrate) ; temps de travail et coûts du matériel : fédération nationale des coopératives d'utilisation de matériel agricole (FNCUMA).

Tout bénéficiaire de ce dispositif s'engage à respecter les exigences de la conditionnalité et les exigences complémentaires relatives aux pratiques de fertilisation et d'utilisation de produits phytopharmaceutiques.

FR / crop rotation in AEM:

Description des engagements

Eléments techniques	Méthode de calcul	Formules de calcul	Surcoûts et manques à gagner annuels	Montant maximal annuel
Diversité à l'échelle de la succession de cultures, pour chaque parcelle engagée : - Présence d'un minimum de trois cultures différentes sur 5 ans - Non retour d'une même culture deux années successives sur la même parcelle Le gel sans production est considéré comme une culture pour la vérification de ces obligations.	Manque à gagner : écart entre la marge brute moyenne de l'assolement de référence et la marge brute moyenne de l'assolement cible, moins économies de traitements phytosanitaires	= marge brute hors prime PAC d'un assolement moyen blé sur 50% de la surface, et colza et orge sur 25% chacun : 474,71 €/ha - marge brute moyenne hors prime PAC d'un assolement cible « blé (47,5% de la surface) - colza (20%) - orge (20%) - autre (12,5% moyenne tournesol, pois, seigle, triticale) : 453,16 €/ha - économie de traitement phytosanitaires : 10% traitements herbicides + 10% traitements hors herbicides = 10% x 45,64€/ha + 10% x 44,75€/ha = 4,56 + 4,48 = 9,04 €	8,14 €	
Diversité à l'échelle de l'assolement, pour l'ensemble des parcelles engagées : - Part de la culture principale inférieure à 45% - Part des trois cultures majoritaires et du gel sans production inférieure à 90%	Coût : temps de travail supplémentaire liés à la conduite de chantiers différents de cultures + temps de travail supplémentaire liés au fractionnement des parcelles	Deux chantiers différents supplémentaires : 16 h x 16,54 €/heure de main d'œuvre / 80 ha = 3,31 € Fractionnement des parcelles : 5 % x 390 € = 19,50 €	22,81 €	
Total			30,95 €	32,00 €

Sources : marges brutes : RICA 2004 / SCEES / modèle « coûts de production » ; charges d'approvisionnement en traitements phytosanitaires : RICA 2004 – exploitations spécialisées en grandes cultures ; temps de travail et coûts du matériel : fédération nationale des coopératives d'utilisation de matériel agricole (FNCUMA).

Tout bénéficiaire de ce dispositif s'engage à respecter les exigences de la conditionnalité et les exigences complémentaires relatives aux pratiques de fertilisation et d'utilisation de produits phytopharmaceutiques.

Le niveau d'aide est de 32 euros/ha/an.

Adaptation régionale

Le dispositif s'appuie sur un cahier des charges national, il n'y a pas d'adaptation régionale possible.

214 B - CUCUMS ARABUS

UK / Rough grass margin:

Establish a grass margin between 2m to 8m in width adjacent to a cereal or root crop.

Grass may be cut in the first year but must not be cut before 1 August.

There must be no use of herbicides unless to spot treat and control notifiable weeds or invasive alien species such as spear thistle, creeping thistle, curled dock, broad-leaved dock, ragwort, Japanese knotweed, rhododendron or Himalayan balsam. The land must be managed without any lime, inorganic or organic fertilisers manure, lime or slag.

Basis of Calculations

Land is currently under arable production

In agreement, arable production is lost

Cost for establishment in year 1 seed and cults (spread over 5 years)

Grass margins are on headland is 80% average level of production. However, production is also reduced at edge of grass margin so 100% gross margin lost

Income Foregone

Income foregone due to loss of arable production	£
Gross Margin of average rotation	440.75
Cost of seed and cultivation for Grass Margin/ ha over 5 years (cultivation £173.80 / seed £100)	54.76
Topping twice during first five years £54.80 divided by 5	10.96
Income Foregone	506.47
Total	

Points allocation: 500/ ha

Limitations of using those amounts as costs of greening:

- The content of the measures are different in each MS and do not exactly correspond to the greening measures as envisaged. In general requirements in RD go beyond what is expected for greening.
- The way cost incurred/income foregone have been calculated is also different between MS.
- In RD, aid amount per ha are only paid for the share of farms for which the farmer has an AE contract and not to all hectares as it may be the case for greening
- Information are lacunar as some countries do not offer the "similar" measure in RD and thus level of aid has not been calculated

2. OTHER SOURCES OF INFORMATION

Other sources of information have been looked at however without any convincing quantitative elements that could be used directly in a model based on FADN. Several case studies have been conducted and give a good feel for the variability of conditions, costs, benefits, problems. This could be used for qualitative assessment. Some interesting § are quoted below (see underlined text concerning cost).

2.1. Study on Environmental impacts of different crop rotations in the EU

http://ec.europa.eu/environment/agriculture/pdf/BIO_crop_rotations%20final%20report_rev%20executive%20summary_.pdf

Section 5.1 deals with 'economic impacts of monoculture and crop rotations'. The summary is the following (page 87):

Profitability is a function of yields, prices and costs. As long as a chosen rotation system does not change significantly relations between those variables, there are no clear conclusions regarding financial performance of different rotation systems. The relationship between these variables remains broadly stable on the short-term, explaining why short-term comparisons do not yield significant results regarding the financial performance of different cropping systems. Gebremedhin and Schwab (1998) emphasise that "caution must be exercised while interpreting the results of comparative static economic analysis of cropping systems as results can be distorted by the production of multiple products, expanded performance criteria which are not easily valued, and use of different technologies. There is a need to analyse cropping systems as they generate their physical and financial performance over time". For instance, Katsvairo and Cox from Cornell University (USA, 2000) presented 6-year study results show, that "continuous maize under high chemical and soybean–maize–maize and soybean–maize rotations under low chemical management had similar net returns in ridge tillage (26€, 20€ and 13€/ha, respectively).

By adopting a long-term perspective and provided that the rotation effect, as defined in previous sections, is well captured by the farmer, the review of existing literature (see section 9. for the references on the economic analysis of cropping systems) strongly suggests that rotations allow for synergic effects in terms of yielding potential and reduced dependence on external inputs, thus resulting in higher profitability for rotations overtime, compared to monoculture.

However, the fact that the variability in profitability is significant both between cropping systems and within cropping systems illustrates the importance of farming practices in the overall economic balance of the farm. An adequate choice of varieties, cultivation techniques, and intensity of production is essential in increasing the economic returns of cropping systems.

2.2. IEEP study for DG ENV on costing the environmental needs related to rural land management

This study assesses overall costs to tackle environmental issues at EU level based on current public funding (mainly EARDF/AEM).

Extract of table A 6.1 (page 91 of annexes): Average, minimum and maximum payment rates for different types of management from a selection of RDPs:

Management Option	Number of reviewed RDPs in which options occur	Number of Options identified	Average Payment Rate	Median	Minimum Payment Rate	RDP	Maximum Payment Rate	RDP
MO4: Reduction of inputs (fertilisers and plant protection products).	6	20	€96	€73	€10	FI	€450	BE (Fl)
MO6: Conversion of arable land to grassland, environmental land use change	8	18	€313	€298	€101	HU	€733	UK (En)
MO7: Creation of Field Margins	7	18	€454	€467	€13	FI	€865	UK (En)
MO9: Crop Rotation and Diversification to Reduce Disease	2	2	€28	*	€24	FI	€32	FR
MO11: Fallow (whole field)	4	7	€152	€140	€102	UK (Sc)	€237	UK (Sc)
MO12: Fallow (zones - eg. Skylark (<i>Alauda arvensis</i>) plots)	2	2	€330	*	€15	BE (Fl)	€645	UK (En)
MO13: Forest conservation and restoration	5	52	€133	€121	€36	HU	€268	DK
MO17: Grassland Management	21	121	€230	€130	€7	NL	€1,103	DK
MO18: Grazing Management	2	11	€168	€153	€2	UK (Sc)	€450	DK
MO23: Organic Management	21	150	€351	€304	€7	UK (Sc)	€990	BE (Fl)
MO24: Over Winter Crops / Stubble Mgt	10	16	€128	€117	€11	FI	€390	NL
MO25: Soil Management	2	2	€97	€97	€94	SL	€100	IT (Li)
MO30: Organic conversion	11	61	€503	€438	€64	DK	€1,650	BE (Fl)

Source: Individual RDPs for the 2007-13 programming period

As regards green cover and crop rotation:

Case study 3: estimating the costs of agricultural soil conservation with a specific focus on the Murcia region of Spain

- Costs of maintaining overwinter stubbles (page 120 of annexes):

Two estimates have been found for the practice of retaining overwinter stubbles on annual herbaceous crops (mostly cereals for the Murcia Region). The Murcia Regional Government estimates a production loss of €28/ha for not being able to sell or graze the straw, whereas the Valencia Regional Government estimates such cost to be €26/ha. The cost estimate for the Murcia Region includes the cost of not cultivating the land left with crop residues on the following year (€32.6/ha). This cost is equivalent to increasing the fallow index in cereals from the current 40% to 100%. Therefore overall, the cost of maintaining overwinter stubbles would be €60.6/ha including the cost of increasing crop rotations. This estimate is similar to the €7/ha considered for cover crops in the Impact Assessment of the Soil Thematic Strategy (EC, 2006).

- Extract of table 5.19 (page 100): Costs of practices recommended for the soil erosion and organic matter content threats:

Practice	Increased costs (€/ha)	Reduced production (€/ha)	Source of the cost estimate	Observations
Buffer strips on the field	400-800		EC (2006)	Establishing 3-meters wide buffer strips for medium and high erosion respectively
	75-150	20	EC (2006)	Maintaining 3-meters wide buffer strips for medium and high erosion respectively
Keeping overwinter stubbles	-	60.6	CARM (2007)	Cost of not cultivating the following season: 32.6 (equal to the increase in fallow index to 100) Cost of not selling/grazing the straw: 28
	-	26	JA (2007)	Cost of not selling/grazing the straw: 26
Change crop rotations/Increase fallow index	33.5-217	58.3	CARM (2007)	Cost of increasing the fallow index from 40 to 100: 32.6

- Extract of Table 2.1: Estimated costs of addressing soil organic matter decline in the EU-27:

land use	Total area (million Ha)	% area likely to be affected by threat	Management practices required to address key issues identified	% of area where management is needed	Total area (Mha) where management is needed	Cost per ha of achieving required area (€)	Total cost for measure (million €)
productive arable	104.3	45	Incorporation of legumes into the ground	100%	47.0	57	2,676
productive arable	104.3	45	arable stubble management	100%	47.0	44	2,066
productive arable	104.3	45	no burning of stubble or crop remains	100%	47.0	44	2,066
productive arable	104.3	45	incorporation of crop remains	100%	47.0	44	2,066
productive arable	104.3	45	residue management - no removal with mulching crop remains and stubble	100%	47.0	44	2,066
productive arable	104.3	45	retaining stubble	100%	47.0	44	2,066
productive arable	104.3	45	conservation agriculture, with three underlying practices – reduced and no-tillage, cover crops and crop rotation	100%	47.0	116	5,447
productive arable	104.3	45	Catch crops / green manure / less fallow / winter cover	100%	47.0	57	2,676

productive arable	104.3	45	Adding legumes / N fixing crops to rotation or undersowing	100%	47.0	57	2,676
productive arable	104.3	45	Residue management	100%	47.0	44	2,066
agricultural land	172.5	100	catch crops	21	36.22	57	2,065
agricultural land	172.5	100	adding legumes	28	48.30	57	2,753
agricultural land	172.5	100	residue management - no removal	49	84.52	44	3,719

The cost estimates from the Murcia region are high proportionately in comparison with these estimates for the EU-27, even when the costs for soil organic matter are taken alone. However they constitute a more accurate reflection of the costs of management needed to address the specific soil degradation issues in this region, which has a higher proportion of land with soil related problems than in the EU as a whole.

This highlights the need to treat any estimation of costs that have been calculated for the EU-27, without recourse to detailed assessments at the national or regional level, with considerable caution. The detailed assessment and comparison of the costs and benefits of potential management options to address a particular environmental pressure, for example a decline in soil organic matter, will strongly depend on the extent of the pressure and the type and extent of the implementation of the options by Member States under local social, economic and environmental conditions.

As regards green cover for permanent crop:

9.4.5. Maintaining vegetation strips/field margin (page 120 of annexes):

Cost estimates for the practice of maintaining vegetation strips/margins have been obtained from the Regional Rural Development Programmes for Murcia, Andalusia and Valencia. The most detailed estimate in the Murcia Regional Government's one, that considers an average per hectare cost of maintaining vegetated strips on the range €109 to €669 for tree crops and €55 to €159 for annual crops, depending on slope. It also differentiates between the costs of maintenance and establishment costs which are shown respectively in Tables A9.10 and A9.11.

A relevant factor in these estimates the relatively lower cost compared with maintaining vegetated strips in steep slopes. The Murcia Regional Government estimated an average per hectare cost of maintaining vegetated strips in tree crops on the range €109 to €669 depending on slope, whereas the average per hectare cost of mulching using ground pruning residues was estimated at €136/ha (CARM, 2007). For slopes greater than 6% the latter would be less costly than the former, with the relative advantage increasing with slope.

Table A 2.1 Annual cost of maintaining vegetation covers in annual and tree crops

Tree crops				Annual crops			
Slope (%)	Maintenance	Loss of production	€Ha	Slope (%)	Maintenance	Loss of production	€Ha
5-6	33.50	73.50	109	5-7	30	25	55
7-9	45.50	94.50	140	8-9	34	28	62
10-12	55.50	115.50	171	10-11	41	35	76
13-15	71	147	218	12-13	49	41	90
16-18	106	221	327	14-15	60	51	111
19-20	217	452	669	16-17	75	63	138
				18-19	86	73	159

Source: CARM (2007).

Table A 2.2 Capital cost of establishing vegetation covers in annual and tree crops

Tree crops		Annual crops	
Slope (%)	€/Ha	Slope (%)	€/Ha
5-6	130	5-7	148
7-9	172	8-9	164
10-12	211	10-11	202
13-15	268	12-13	240
16-18	396	14-15	291
19-20	787	16-17	358
		18-19	408

Source: CARM (2007).

The Valencia Regional Government considers a €50/ha cost for the establishment, maintenance and control of cultivated or natural vegetation cover under tree crops, regardless of the slope, but does not provides any justification of such cost estimate. The Andalusian Regional Government considers an annual cost of €10 - €20/ha for the establishment, maintenance and control of cultivated or natural vegetation cover under tree crops, regardless of the slope. We are inclined to use the Murcia Regional Government estimates as they have been calculated based on the technical recommendations by a group of regional soil experts, are disaggregated in their different cost components and are discriminated by slope and type of crop. The cost estimates from the Valencia and Andalusia Regional Governments are not disaggregated in their cost components and therefore hide some of the detail necessary for this study. Moreover, the Murcia regional estimates are of a similar order of magnitude to estimates for other countries such as England (Stevens *et al*, 2009).

Four significantly different cost estimates for the use of chopped pruning residues as soil mulch have been found. The Murcia Regional Government provides an estimate of €136/ha for tree crops, whereas the Andalusia Government estimates €60/ha for vineyards, which appears unusually low. Calatrava and Franco (2011) provide an average cost of €75/ha from 250 Andalusian olive farmers' responses to a survey questionnaire, whereas the Murcia farmers surveyed expressed an average of €209/ha. We will again use the costs estimates for the Murcia Regional Government due to the way in which they were calculated.

Another recommended practice is the leaving of non-harvested or non-cultivated margins in cereal crops. All sources of data provide similar values in the range of €15.2/ha to €17.6/ha. However, these are calculated only for low gradient slopes. It is assumed that uncultivated margins will be occupied by semi-natural vegetation but that no cost for there establishment will be considered.

As regards grassland (in HNV):

High Nature Value (HNV) Farming: The concept of HNV farming recognises the biodiversity benefits that are associated with particular types of farming, particularly low intensity farming systems. Although there is some debate about precisely how to define HNV farmland, estimates of the area of HNV farmland in the EU-27 have been produced (Parrichini *et al*, 2008) and Member States are also producing more detailed figures as the basis for monitoring success in maintaining this resource.

Two estimates have been produced on the scale of support needed to maintain HNV farming practices in the EU-27, one calculating the funding needed under Pillar One to maintain the economic viability of HNV farming systems and the other calculating the cost of maintaining HNV farming through the agri-environment measure.

The first of these provides costs for the introduction of a targeted scheme for HNV farming under Pillar One of the CAP, as part of a wider strategy for maintaining HNV farming in the EU-27 (Beaufoy and Marsden, 2010). Rough calculations suggest that, to maintain HNV farming systems in all Member States would require expenditure of €6 billion/year, assuming an average payment for HNV farming of €200 per hectare per year over an estimated HNV farmland area of 80 million hectares (likely to be a significant overestimate of the actual HNV farmland area). This cost estimate, however, is only one element of the total potential funding needed to maintain HNV farming. On top of this cost would also be costs associated with more specific and targeted management needs, for example for certain threatened species

or habitats, funded for example through the agri-environment measure, as well as costs associated with capital investments, and presumably also LFA type payments, although this is not made clear.

The second estimate attempted to estimate the total economic costs associated with maintaining HNV farming through the agri-environment measure in the EU-27 (Kaphengst *et al.*, 2010, in preparation). To do this, an average payment rate for HNV management was calculated, based on data on a range of relevant management practices collected from six RDPs¹ and this was applied to an estimated target area of HNV farmland to which agri-environment actions are anticipated to be applied, again based on relevant targets identified within the RDPs and scaled up to the EU-27. An average per hectare figure for maintaining HNV grassland under the agri-environment measure was derived of €169/hectare and a total cost of maintaining HNV farming practices over 26 million hectares of HNV farmland in the EU-27 was calculated as €4.37 billion. It should be noted that these costs are concerned solely with the costs of delivering the necessary management through current agri-environment actions. Therefore it is assumed that land managers would also be in receipt of Pillar 1 direct payments and LFA payments.

As regards benefits:

Extract of Table 2.2: The range of environmental benefits provided by different farming and forestry practices

Type of management required to address pressure	Biodiversity	Landscape	Water Quality	Water Quantity	Soils	Climate Change Mitigation	Climate Change Adaptation
MO4: Reduction of inputs (fertilisers and plant protection products).	Y1	N	Y1	N	Y1	P	P
MO6: Conversion of arable land to grassland, environmental land use change, and specification of input levels.	Y1	Y1	Y1	Y1	Y1	Y1	Y1
MO7: Creation of buffer strips (incl. riparian zones, buffer strips along watercourses, grass margins and field corners).	Y1	N	Y1	N	Y1	Y1	N
MO9: Crop rotation and diversification to reduce disease.	Y1	N	N	N	Y1	Y1	N
MO11: Fallow (whole field).	Y1	N	Y1	Y1	Y1	Y1	N
MO12: Fallow (zones, eg Skylark plots).	Y1	N	N	N	N	N	N
MO17: Grassland management (including grazing, mowing and cutting regimes, reduced fertiliser inputs).	Y1	Y1	Y1	N	Y1	P	N
MO18: Grazing management (including reducing and increasing grazing pressure on land).	Y1	Y1	N	N	Y1	P	N
MO23: Organic management (in accordance with certified organic standards).	Y1	N	Y1	Y1	Y1	P	N
MO24: Over-winter crops / stubble management (eg maintenance/ inclusion of over-winter stubbles, catch crops and green cover crops in rotations).	Y1	N	Y1	Y1	Y1	Y1	N
MO25: Soil management (including crop rotation, reduction of soil inputs and change in ploughing regime).	Y1	N	Y1	Y1	Y1	Y1	Y2
MO30: Organic conversion (in accordance with certified organic standards).	Y1	N	Y1	Y1	Y1	P	N

Y1 = Management option contributes directly to environmental objective

Y2 = Management option contributes indirectly to environmental objective

¹ The six RDPs used were Austria, Bulgaria, Czech Republic, Poland, Romania, UK (England)

P = Management option has the potential to contribute to environmental objective depending on how and where it is applied.

2.2.1. *Study on Addressing soil degradation in EU agriculture: relevant processes, practices and policies (SoCo pilot project 2009-2010; Report EUR 23767)*

On green cover:

<http://soco.jrc.ec.europa.eu/index.html>

From main report (page 94) - <http://soco.jrc.ec.europa.eu/documents/EUR-23820-web.pdf>

Box 3.10: Short-term costs and technical limitations

Adopting cover crops (Uckermark, DE)

High costs associated with labour, the preparation of seedbeds and the purchasing of seeds (costs for mustard seed were noted as particularly high), are off-putting for farmers if a return cannot be gained from the cover crop, for example by selling the crop as fodder or by using it to replace mineral fertilisers and external improvements of soil organic matter content.

Box 3.12: Difficulties in introducing cover crops during winter in the Marche (IT)

Clay-rich soils in combination with steep slopes in the part of the Marche region with medium-height hills create difficulties for seedbed preparation of spring crops after a winter cover crop as well as difficulties in introducing no-tillage. Since the lower hills are also dominated by clay soils, the same difficulties in seedbed preparation were also reported there.

Extracts from case studies (2009) on intercrops (cover crops):

BE-FL page 17 - http://soco.jrc.ec.europa.eu/documents/casestudyBE_004.pdf

Intercrops

Intercrops are sown after the main crop, before winter. They serve two main goals. Firstly, they reduce erosion by covering soil that would otherwise be left bare. Secondly, they mitigate nitrate leaching by taking up the residual nitrate in the soil. After incorporation of the intercrop, its residues contribute to the soil organic matter pool and provide an additional source of nitrogen for the next crop. Most sown intercrops in West-Flanders are white mustard (*Sinapis alba* L.), grasses (mostly Italian rye-grass, *Lolium multiflorum* Lam.) and phacelia (*Phacelia tanacetifolia* Benth.). Almost all interviewed farmers sow intercrops.

Economic costs

- Farmers perceive sowing seed to be rather expensive.
- The Flemish government stopped subsidising intercrops in 2007, the objective of which was to get soil cover widely adopted. Most farmers regret the decision, but continue to apply the measure nonetheless. The nature and environmental organisations acknowledge the use of intercrops but believe this is good agricultural practice and should not be paid for. One farmer remarked that the subsidy was anyhow rather low (€50/ha). Several municipalities continue to subsidise intercrops.

Technical restraints

- In grain rotations (e.g. wheat-maize) rye-grass becomes soon a bothersome weed.
- In cabbage rotations (e.g. cauliflower) white mustard may promote cabbage specific pests and diseases, such as club root and cabbage root fly.

- The development of large amounts of aboveground biomass (e.g. with white mustard) hampers the destruction and incorporation of the green manure. The most used technique for destruction is herbicide application. Experts mention that this is not such a constraint as one can sow white mustard later in time, or mow it before seed production.
- Maize and sugar beet are harvested late. Intercrops sown after those crops may not produce sufficient biomass.
- Winter control of gastropods and fungi is not possible.

Environmental effectiveness

- Several demonstration experiments proved that intercrops strongly reduce erosion. This is also confirmed by the experience of the farmers.
- Farmers report that intercrops increase the organic matter content of their soils. However, experts indicate that the effect of intercrops on the build-up of organic matter is limited.

CZ page 18 - http://soco.jrc.ec.europa.eu/documents/casestudyCZ_001.pdf

Intercrops

Intercrops (e.g. mustard, clover, grass [*lolium*]) means the growing of two or more crops on the same field with the planting of the second crop after the first one has completed its development are already widely used as soil conservation measure in the case study area especially in organic farming. In intercropping, there is often one main crop and one or more added crops, with the main crop being the one of primary importance because of economic or food production reasons.

Economic costs of intercrops

Because of the necessary purchase of seeds the costs of adopting this measure are rather high. Further, there are additional costs for seedbed preparation associated with additional working costs and labour costs. Intercrops are less cultivated for economic reasons but rather for soil conservation.

The government supported intercrops in 2004-06 (€144/ha) but reduced the payment from 2007 to €104. It is questionable whether farmers will join in sufficient numbers the scheme again. The scheme was very popular in years 2004-06. The payment is granted to area which exceeds some minimal area.

Technical restraints

The use of intercrops is limited by certain types of crop rotations and climatic conditions in region.

Environmental effectiveness

Experts reported that the cover crops are effective in erosion prevention. Some farmers reported that for that reason they would continue with the measure despite of payment decrease/cease of support. When there is excessive amount of organic matter and crops survive winter fully herbicide is used to destroy it. The effectiveness of this measure as a prevention of nutrients loss is linked to sufficient biomass produced.

This means that the economic efficiency of intercrops is relatively low when compared to other soil conservation measures. Sometimes intercrops such as clover are used for fodder. Intercrops are important for soil conservation. As intercrops ensure covering the soil by plants, water erosion and soil run-off is generally reduced and soil fertility increases. Further, the cultivation of intercrops has a positive effect on biodiversity, provides for preservation of nutrients and accumulates soil with organic matter. Another positive effect in using intercrops is the control of spreading of weeds, e.g. bromes, and pests like mice and snails. The main factor influencing the adoption of this measure is that intercropping is associated with high costs for seeds and high working costs.

Cover crops belong to the medium cost-effective measure and undersown crop represents the second most cost-effective measure.

Successful and unsuccessful practices in relation to the Management System

As repeatedly noted and as explained in the previous paragraphs, there are no universally applicable practices that give good results in terms of soil protection. Each practice has to be evaluated according to the environment of applicability and of the Management System (see Chapter 4.2). The success or failure of a practice is closely linked to the environment of the application. However, some success stories in implementing certain practices can be highlighted by the case study Marche. One of the soil conservation practices that is mostly applied in Marche region is cover crops. Cover crops are applied mainly to reduce the soil erosion process. It is necessary to make distinctions on the basis of the Management System adopted:

- perennial crops with cover crop between the crop row,
- cover crops in arable land.

The first one is very common in the Marche region especially for vines (Management System Grapevines – SC7). The effectiveness of this practice is very good and the objective to reduce soil erosion is fully achieved. Indeed the maximum risk of soil erosion in the Marche region is during the spring/summer period due to heavy storm and rainfall and the benefit of cover crops in perennial crops is strictly linked to this period.

Different results are obtained for the cover crops in arable land. The Measure F2 of the RDP

2000-2006 for Marche (see Chapter 5.6.2), foresees cover crops during autumn/winter as practice entitled for compensation. On the contrary to the previous situation, during winter soil erosion processes are limited. In addition, due to the soil properties, very clayey, it is very difficult, if not impossible, to prepare the seedbed in spring because of high soil moisture levels. Where cover crops in arable land are applied, the soil structure is damaged by subsequent ploughing, and there are strong signs of compaction.

FR Midi-Pyrénées page 75 - http://soco.jrc.ec.europa.eu/documents/casestudyFR_000.pdf

Soil cover

The investigation highlighted that three different types of soil cover are currently in use in Midi-Pyrénées:

Straw residues on soil: this technique requires a systematic rotation of winter and spring crops. After the winter crop harvest, straws are spread over the soil evenly or homogeneously to have the complete coverage of the surface. Generally, a straw spreader is used to do this work;

Regrowth (as rape): A spontaneous coverage that is equally effective to limit erosion;

Cover crops: Investigations have shown that there are different types of coverage, cover crops with a single crop or a mixture of crops.

For single crops, oat, sunflower or horse bean are the most used for different reasons. Oats has an important coverage and competitive power against weeds, but retains a very wet soil, unfavourable for maize. Horse bean is good for soil structure and nitrogen fixation. Sunflower is interesting for its root pivot. In mixed crops, several types of combinations exist. Farmers highlighted benefits and downsides of some of the most used:

- *Mustard + Phacelia + horse bean + oat* (easy destruction of Phacelia and dark colour for soil warming; good permanent cover for oat; mechanical destruction with frost for mustard and horse bean)
- *Oat + fodder pea + horse bean + sunflower* (good for soil structure, promotes biological life)
- *Sunflower + vetch + fenugreek + Phacelia* (very good for roots, increases organic matter; problems of destruction with frost for sunflower and fenugreek; problem of regrowth; vetch has a good coverage power)

- *Oat + horse bean*, classical mix.

Drawbacks are also present in the choice of cover crops and might justify the reluctance of some farmers in using them:

Seed cost is generally high and cannot be recovered through harvest. Only farmers in mixed crop-livestock can make profit from livestock.

The choice of cover crop most adapted to local conditions to benefit of frost destruction is not easy.

The date of destruction may not be optimal to soil types and climate thus delaying planting of spring crops.

The utilisation of herbicides as glyphosate is important for cover crop destruction when mechanical destruction is not used.

Furthermore, farmers interviewed highlighted that cover crops might penalize the next crop because in wet years water soil circulation is insufficient and the number of slugs generally increase. In dry years, vice-versa, cover crops may contribute to water shortages for the main crops as they pump water from the ground.

On grassland:

Hoving (2005) affirmed that grassland renovation is a relatively expensive activity, where the benefits largely involve the temporary increase in net grass production. Although an appropriate cost-benefit analysis is hard to perform since financial benefits are difficult to determine, a computer program named 'Grassland Renovation Guide' for simulating a cost-benefit analysis and a nitrogen balance is available from the Animal Science Group Institute at Wageningen University (the Netherlands).

The Lithuanian Agricultural Advisory Service (2001) agreed that cost-benefit analysis is not easy to perform for grassland improvement. The latter would only be justified if the costs involved were compensated by higher yields, better forage quality and easier working.

Grasslands of medium botanical quality (50-75 % good grasses and <25 % couch grass) can be improved through proper fertilisation, intensive mowing or grazing provided that the lower quality grass species are evenly distributed over the area. However, this implies embarking farmers in a 2-year, expensive process (Lithuanian Agricultural Advisory Service, 2001).

From the conservation point of view, Hodgson *et al.* (2005) found that, over a wide range of productivity scenarios, an induced increase of grassland soil fertility causes a large, apparently exponential, increase in livestock-carrying capacity and in marginal returns. However, high levels of biodiversity are usually confined to less productive conditions, with an inherently low carrying capacity for livestock and low marginal returns. Thus, management of grasslands to maintain high biodiversity is generally incompatible with management for maximum economic profit.

According to Kumm (2004), an increasing proportion of the remaining semi-natural pastures in the Swedish forest-dominated regions are losing their grazing (along with their biodiversity). This is caused by the high costs of grazing small pastures with cattle from generally small herds, and by the cessation of income support per head of cattle from the CAP.

The author suggested, based on calculations of economies of scale in beef production and opportunity cost of forest and arable land, that recreating extensive pasture-forest mosaics consisting of existing semi-natural pastures and adjacent arable fields and forests can secure economically sustainable grazing.

On crop rotation:

From SoCO case Studies reports

Bulgaria: Improvement of crop rotation and cultivation practices: Economic efficiency.

Despite the appropriate crop structure in the region, the economic efficiency of the rotations is comparatively low, yields of the main cereal crops are low mainly due to the unfavourable soil properties.

The experts' opinion is that the structure of the crops is suitable for the situation and can be only marginally improved.

Greece: Crop rotation: economic costs

The extra costs of legume incorporation are associated first, with the foregone in-come of not cultivating and second, with the cost of cultivating legumes and incorporating them in the soil. The aforementioned cost is significant in the light of the very small size and extreme fragmentation that prevail over many Greek farms. The economic efficiency of the measure prohibiting burning of cultivation residues is low because it accrues costs to the farm

UK:

As crop rotations are part of the farming system, costs to implement rotations are perceived to be low. Most of the crops in the rotation under conventional systems have an economic value, while some crops in organic systems are grown as a green manure, e.g. clover and mustard. Rotating crops has the advantage that the land is tilled relatively often and so compaction in the system is routinely removed as part of the rotation. Encouragement of well designed rotations that include break crops can reduce soil degradation and promote a more productive system.

2.2.2. *Nitrates Directive implementation*

Extract of FR implementation text of the directive as regards green cover:

"une mesure de couverture des sols pendant la période de risqué de lessivage: compte tenu de l'efficacité environnementale reconnue de la couverture des sols pour un cout de mise en œuvre relativement faible, il convient de rendre obligatoire cette mesure de couverture des sols dans les zones vulnérables."



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 2D

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**ANNEX 2D: GREENING - RESULTS OF PARTIAL ANALYSIS ON
IMPACT ON FARM INCOME USING FADN**

Executive summary

This note provides an overview of the impact of greening measures on farm costs and incomes.

For this purpose several greening options were analysed which differ with respect to the implementation of the greening measures (crop diversification, ecological set-aside, preservation of permanent grassland and green cover), the budget allocated for the greening measures and the redistribution of DP between MS.

Results show that the analysed greening measures would impact farms in different ways: increasing costs and thus negatively impacting on income, or creating a direct or a potential loss of income (an opportunity cost) as a consequence of compliance with the measures. Moreover, the greening measures, notably the crop diversification and the set-aside, could impact the prices of agricultural products and inputs, and therefore income.

Summary methodology and limitations

The assessment of greening is very challenging as natural conditions, level of cost and opportunities vary from one farm to another and these data are often not recorded in any EU-wide database. Efforts have been made to be as accurate as possible using Farm Accountancy Data Network (FADN) information. The assessment is made at the level of each individual farm. Indirect market effects on prices and yields of crop diversification and set-aside are also taken into account in the estimate of farm incomes. When estimating the impact of income, it is assumed that farmers fully comply with greening and receive their full direct payment amounts; hence, the impact on income is solely driven by the (direct or indirect) effect of greening.

The economic approach used in this analysis has some limitations that may lead to an under estimate of the benefits and costs of the greening measures. In addition to the absence of the economic quantification of the environmental benefits of these measures for society as a whole, we can mention:

- (1) except for permanent grassland and green cover, the costs of maintaining existing good practices such as crop diversification, especially in a context of an ever increasing economic pressure on farmers, is not taken into account,
- (2) the effect of greening is evaluated in the short term; it therefore does not take into account; the improvement of the productivity in the long term due to the adoption of more sustainable farming methods (for example by improving soil quality, by increasing the availability of pollinators, or by increasing resilience to face climate change).

Readers should also keep in mind that, in most cases, results presented in this note are average impacts aimed to compare various greening scenarios. The effect on individual farms may be significantly higher/lower and compounded with other impacts.

Cost of the greening component

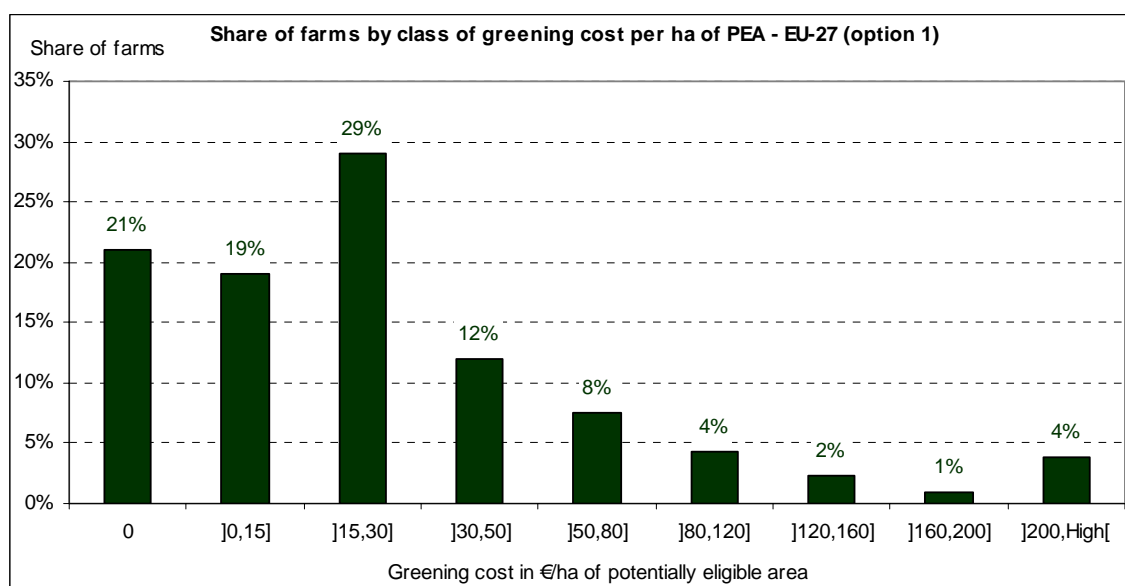
The cost implied by the greening varies a lot according to the specific situation of each farm. It depends on the level of cost of each measure, but also on the share of the potentially eligible area (PEA) which has to be adapted to respect the requirements. In total for the EU-27, it is estimated that 25 to 30% of the PEA would have to be adapted

(crop diversification, ecological set-aside and green cover) or would have an opportunity cost (maintaining permanent grassland).

The costs per ha of land to be adapted vary very much according to the regions and farming systems, reflecting differences in land use and profitability as well as in current environmental practices (and hence the area whose land use would need to be modified). They are in general higher for the maintenance of permanent grassland and the ecological set-aside. For instance, among regions, the cost of maintaining permanent grassland in areas where an alternative use of land exists varies between €4 and €620/ha, with an EU average of €216/ha of grassland. In a case of 5% of set-aside, the average cost of set-aside reaches €261/ha of land to be kept out of production, while it reaches more than €1 000 in some regions.

When the cost of greening is measured against the total PEA, the amounts are lower. In an entry scenario of greening, it is estimated that 29% of farms would have a cost between €15 and €30/ha of PEA, 4% would have a cost higher than €200/ha of PEA, and about 21% of farms would not have cost (Figure 1).

Figure 1



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

On average for the EU-27, the cost of greening would range from to €33 to €41/ha of PEA, depending on the option of greening, with up to half coming from the cost of maintaining permanent grassland (average €17/ha). In general, the highest average costs are estimated in countries for which maintaining large areas of permanent grassland is economically challenging due to pressure of substitution by fodder crops (the Netherlands, Slovenia and Belgium).

Impact on farm income

At EU level, the change in farm income due to the greening ranges between - 3.2% and - 1.4%, depending on the option adopted and the detailed requirements of the measures. In addition to increases in cost and/or loss of income, greening could also affect the price level of agricultural products.

Prices are affected differently depending on the area to be set-aside. In the entry scenario where 5% of the land has to be set-aside, farm income decreases on average by 2.8% against the basis while in the option with 10% ecological set-aside, farm income decreases by 1.4%. This is because the reduction of the production area leads to a decrease in supply of agricultural products that in turn increases their prices. In the case of the option with 10% ecological set-aside the corresponding increase in agricultural output prices compensates in some cases (for field crops farms) for the increase in farming costs due directly to greening and indirectly to the induced increase of feed prices.

In contrast the decrease of the maximum share of a single crop in the rotation from 70% of the area to 50% leads to a more pronounced drop in income (- 3.2% on average compared to - 2.8% in the entry scenario). Although the introduction of crop diversification also tends to increase the price level of some products, the effect on costs is much more pronounced.

It has to be emphasised, however, that the effect on farm income differs very much among farms depending on the type of production and their specific situation. For instance the increase of the level of market prices does not affect all farms in the same way. The largest negative impacts are observed for pig and poultry and milk farms due to the increase of fodder prices. Field crops farms may benefit of significant crop prices increased induced by some greening measures. Impact therefore varies also between regions depending mainly on their natural conditions and specialisation. For example in Spain, the impact of the first option of greening goes from -14% in *Asturias* (with a dominant grass-based milk production) to +3.5% in *Aragon* (more diversified agricultural sector with lower greening costs).

More important still is the farm specific situation as the impact of the greening on farm costs differs widely among farms.

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1. INTRODUCTION

The aim of this note is to analyse the effect of the introduction of greening measures as specified in the Communication on the CAP towards 2020, without taking into account other changes to the CAP.

In this partial analysis, various options for the greening are analysed, based mainly on data of the Farm Accountancy Data Network (FADN). These options and their underlying assumptions are briefly described in Chapter 2.

The focus of analysis is the estimation of any additional costs (or loss of income) which may stem from the implementation of greening measures on farms and their potential impact on farm income. The approaches to estimate the cost and the results in terms of costs are presented in Chapter 3. Details on the methodology used can be found in Annex 1. In Chapter 4, the change in market revenue due to the greening measures is discussed. The impacts on farm income of the various options is analysed in Chapter 5.

2. THE GREENING MEASURES AND THE OPTIONS OF THE PARTIAL ANALYSIS

2.1. The greening measures

The analysed options for the greening component consist of four measures, which in the analysis were defined as follows:

- (1) **Crop diversification:**
Aiming to support the diversity of crop production and to avoid monoculture, this option will oblige farms to cultivate at least 3 different crops, with no crop allowed to cover more than a certain share of the total arable land (with the exception of ecological set-aside).
- (2) **Ecological set-aside:**
A part of the land has to be taken out of production. In this analysis and as a simplification, horticulture land is exempted from this measure despite it is a highly intensive form of production with great risks for the environment¹. Current fallow land is considered as ecological set-aside².
- (3) **Green cover:**
During winter, farms have to apply green cover on 70% of their arable land and the area covered by permanent crops. The area of ecological set-aside is exempted from this provision.
- (4) **Preservation of permanent grassland:**
Farmers have to maintain their permanent grassland at farm level.

Organic farms are exempted from these specific requirements since they are supposed to respect similar principles already or to respect equivalent conditions contributing to the improvement of the environment.

¹ When covering also horticulture land, the assessment of the costs of set-aside appears more difficult as the profitability per hectare is very high in comparison with arable crops.

² Information on existing farm features is not available in FADN but GAEC obligations such as buffer strip are considered as fallow-land.

A certain share of the budget is allocated to greening. Farm receive a flat rate payment per ha of potential eligible area (PEA)³. Additionally, the greening component includes also a flat rate payment to support farms in Natura 2000 areas.

2.2. The options for the partial analysis for the greening measures

For all options, the basis of comparison is the scenario of DP distribution "MFF DP distribution" (flat rate set to decrease by one third the difference with the 90% of EU average based on the budget proposal for DP) without any greening measure. The options applied for the analysis of the greening measures are the following (Table 1):

- **Option 1** is an "entry" scenario: the budget attributed to the greening corresponds to 30% of the total DP budget⁴. Crop diversification foresees that a minimum of three crops is cultivated and that each crop must not cover more than 70% of the area. Ecological set-aside is fixed at 5% of utilised agricultural area (UAA). 70% of arable and permanent crops land should be covered during winter time. Permanent pasture must be preserved. Organic farms are eligible to the greening payment (they are supposed to respect the requirements).

For each of the following options, one measure is allowed to vary in sequence compared to option 1:

- **Option 2:** the maximum share of one single crop is decreased to 50%,
- **Option 3:** the **ecological set-aside** is increased to 10%,
- **Option 4:** the **budget for greening** is decreased to 25%,
- **Option 5:** the **budget** for DP is based on the DP scenario "90% of EU average and objective criteria".

Table 1: Options for the partial analysis of greening measures

Number of the options for the partial analysis of the greening	Base	1	2	3	4	5
Direct Payments (DP) scenario	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	90% of EU average and obj. criter.
Budget allocated to the greening component	-	30% DP	30% DP	30% DP	25% DP	30% DP
Greening measures	-	70% crop diversification, 5% ecological set-aside, 70% green cover, preservation permanent pasture, organic farming	50% crop diversification, 5% ecological set-aside, 70% green cover, preservation permanent pasture, organic farming	70% crop diversification, 10% ecological set-aside, 70% green cover, preservation permanent pasture, organic farming	70% crop diversification, 5% ecological set-aside, 70% green cover, preservation permanent pasture, organic farming	70% crop diversification, 5% ecological set-aside, 70% green cover, preservation permanent pasture, organic farming

³ In this analysis, **PEA** is based on IACS information from **2009**.

⁴ From this budget first the amount necessary to finance a flat rate payment of €20 per ha for farms in Natura 2000 areas is deducted. This flat rate payment is limited 5% of DP budget. The rest of this envelope is used for the flat rate payment aimed to finance the other greening measures.

3. THE COST OF THE GREENING MEASURES

3.1. Estimating the cost of greening measures

Greening measures may impact farm incomes in several different ways:

- by increasing costs, for instance due to the requirement to seed cover crops during winter time,
- by decreasing the level of production and revenue, for instance in the case of ecological set-aside,
- by impeding the shift to a more profitable production system, for example due to the "opportunity cost" of maintaining permanent pastures,
- by affecting individual production patterns in a way that leads to changes in the level of production which may have an impact on market prices, for instance in the case of ecological set-aside and crops diversification.

The assessment of the impact of such factors is very challenging as the natural conditions, the level of costs, the opportunities to alter the production system and the farmer's behaviour are of major importance but these data are not available in EU-wide. The assessment is particularly difficult in the case of the measures green cover and maintenance of permanent pastures.

The main features of the approach followed are⁵:

- The assessment is made for each individual farm depending on the situation on the farm,
- Estimates of additional costs or opportunity costs are done using the most precise information at regional level available (regions, LFA, type of farms, etc),
- Market effects (on prices and yields) of the measures crop diversification and set-aside are taken into account.

As a result, the model used to assess the impact of the greening is static. Additional costs and changes in market prices and yields are taken into account in the estimation of the income effects, but the production pattern and structure of individual farms is not adapted.

Cost of greening varies for options 1, 2 and 3. In options 4 and 5, which assess only different distribution of direct payments, the cost of greening is identical to option 1.

The method has some limitations that may lead to an underestimate of the benefits and costs, of the greening measures:

- (1) except for permanent grassland and green cover, the costs of maintaining existing good practices such as crop diversification, especially in a context of an ever increasing economic pressure on farmers, is not taken into account;

⁵ Various methods have been used. See detailed methodology in annex 1.

- (2) the effect of greening is evaluated in the short term; it therefore does not take into account; the improvement of the productivity in the long term due to the adoption of more sustainable farming methods;
- (3) there is no economic quantification of the environmental benefits of these measures made.

3.2. Method and results by greening measure

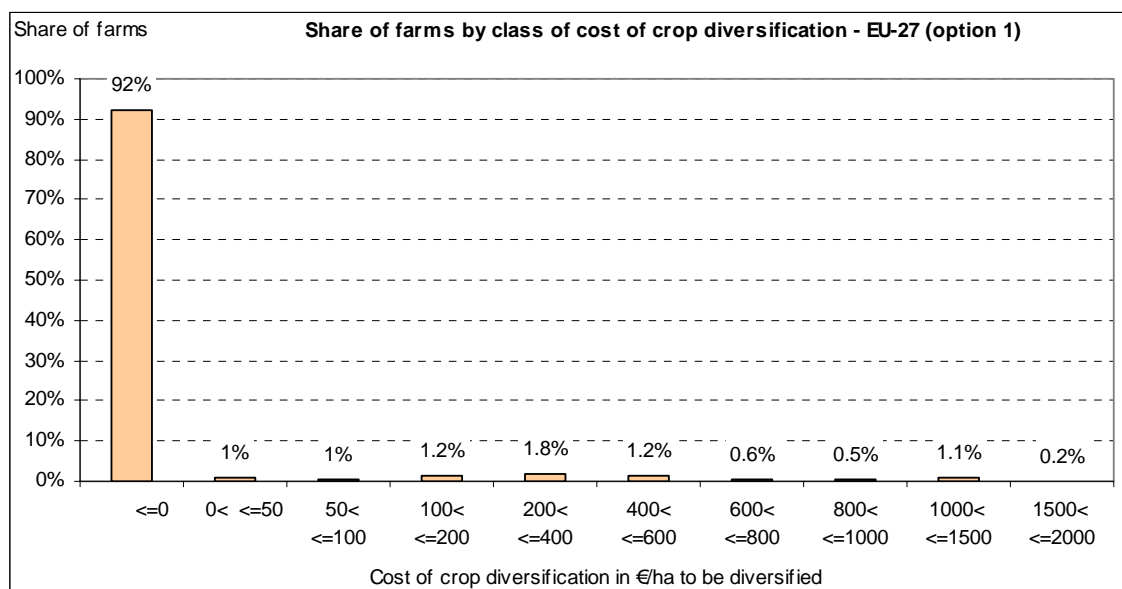
3.2.1. Crop diversification

Summary methodology

It is assumed that additional costs or loss of income arise in those farms where a single crop covers more than 70% (in option 2 the maximum is 50%) of the arable land as farms would have to cultivate other crops on this area. The cost is assumed to be equal to the difference between the farm's individual gross margin of arable land and the average regional gross margin of field crop farms whose set of arable cultures is diversified. In the cases where the farm individual gross margin is lower than this regional average no additional costs are assumed.

It is estimated that only a relatively small share of area would have to be adapted with the measure (1,4% of PEA in options 1, 3, 4, 5 and 3,9% in option 2). 92% of farms would not have additional cost with the measure (Figure 2). However, for the remaining farms, the cost per hectare to be diversified may vary a lot and can be very high. About 7% of farms would have a cost for crop diversification higher than €100/ha to be diversified and more than 1% would have a cost higher than €1000/ha.

Figure 2



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

However, when divided by the total PEA, the costs of crop diversification are relatively low, averaging only €4/ha of PEA in options 1, 3, 4, 5 (Table 2). In Option 2, where the maximum share of a single crop is reduced from 70% to 50%, the average cost per ha of

PEA more than doubles to about €9/ha mainly because the share of affected land nearly triples.

Table 2: Estimated cost of crop diversification by Member State

			Option 1				Option 2			
	Potential Eligible Area (PEA)	Area covered*	Area forced to be "diversified"		Costs per ha to be "diversified"	Costs per ha of PEA	Area forced to be "diversified"		Costs per ha to be "diversified"	Costs per ha of PEA
	Average ha	Average ha	Share in total arable land	Share in PEA	€per ha	€per ha	Share in total arable land	Share in PEA	€per ha	€per ha
Belgium	43.5	22.4	1.7%	0.9%	268	2.3	5.0%	2.6%	191	4.9
Bulgaria	25.3	20.1	1.3%	1.1%	518	5.5	4.6%	3.7%	297	10.9
Cyprus	7.2	5.1	5.0%	3.5%	467	16.4	11.6%	8.1%	375	30.4
Czech Republic	236.9	171.0	0.2%	0.1%	133	0.2	1.3%	1.0%	187	1.8
Denmark	80.7	64.5	1.6%	1.2%	72	0.9	6.3%	5.1%	131	6.6
Germany	84.3	59.3	0.4%	0.3%	624	1.8	1.9%	1.4%	416	5.7
Greece	10.2	4.4	5.8%	2.5%	239	6.0	14.8%	6.4%	256	16.4
Spain	29.5	15.6	3.8%	2.0%	399	8.0	11.3%	6.0%	302	18.1
Estonia	123.5	58.0	0.7%	0.3%	336	1.1	3.3%	1.6%	162	2.5
France	77.3	41.6	0.7%	0.4%	225	0.9	3.0%	1.6%	154	2.5
Hungary	54.1	42.9	1.2%	0.9%	278	2.6	4.0%	3.1%	283	8.9
Ireland	47.9	3.2	8.1%	0.5%	27	0.1	18.8%	1.2%	115	1.4
Italy	16.8	7.2	8.6%	3.7%	364	13.4	18.5%	7.9%	439	34.8
Lithuania	51.4	30.6	0.9%	0.5%	178	0.9	4.1%	2.5%	150	3.7
Luxembourg	80.2	38.5	0.1%	0.0%	0	0.0	0.8%	0.4%	6	0.0
Latvia	61.3	31.1	0.8%	0.4%	164	0.6	4.5%	2.3%	135	3.1
Malta	3.4	1.6	2.7%	1.3%	***6989	***90.5	5.5%	2.6%	***6894	***181.4
Netherlands	31.7	13.1	6.4%	2.6%	59	1.6	13.1%	5.4%	161	8.7
Austria	33.5	17.2	0.3%	0.2%	429	0.7	1.5%	0.8%	352	2.7
Poland	17.3	12.7	0.5%	0.4%	311	1.2	2.3%	1.7%	227	3.8
Portugal	28.4	14.4	1.4%	0.7%	921	6.6	2.9%	1.5%	924	13.8
Romania	10.2	7.6	3.1%	2.3%	380	8.9	8.7%	6.5%	332	21.6
Finland	51.6	33.9	2.3%	1.5%	84	1.3	7.7%	5.1%	120	6.1
Sweden	96.6	52.6	0.7%	0.4%	109	0.4	2.6%	1.4%	123	1.8
Slovakia	581.7	370.4	0.2%	0.1%	66	0.1	0.5%	0.3%	81	0.2
Slovenia	11.6	3.0	2.5%	0.6%	417	2.7	7.8%	2.0%	640	13.0
United Kingdom	164.2	53.4	1.6%	0.5%	117	0.6	6.1%	2.0%	140	2.8
EU-27	31.2	17.5	2.0%	1.1%	330	3.6	5.8%	3.3%	289	9.5

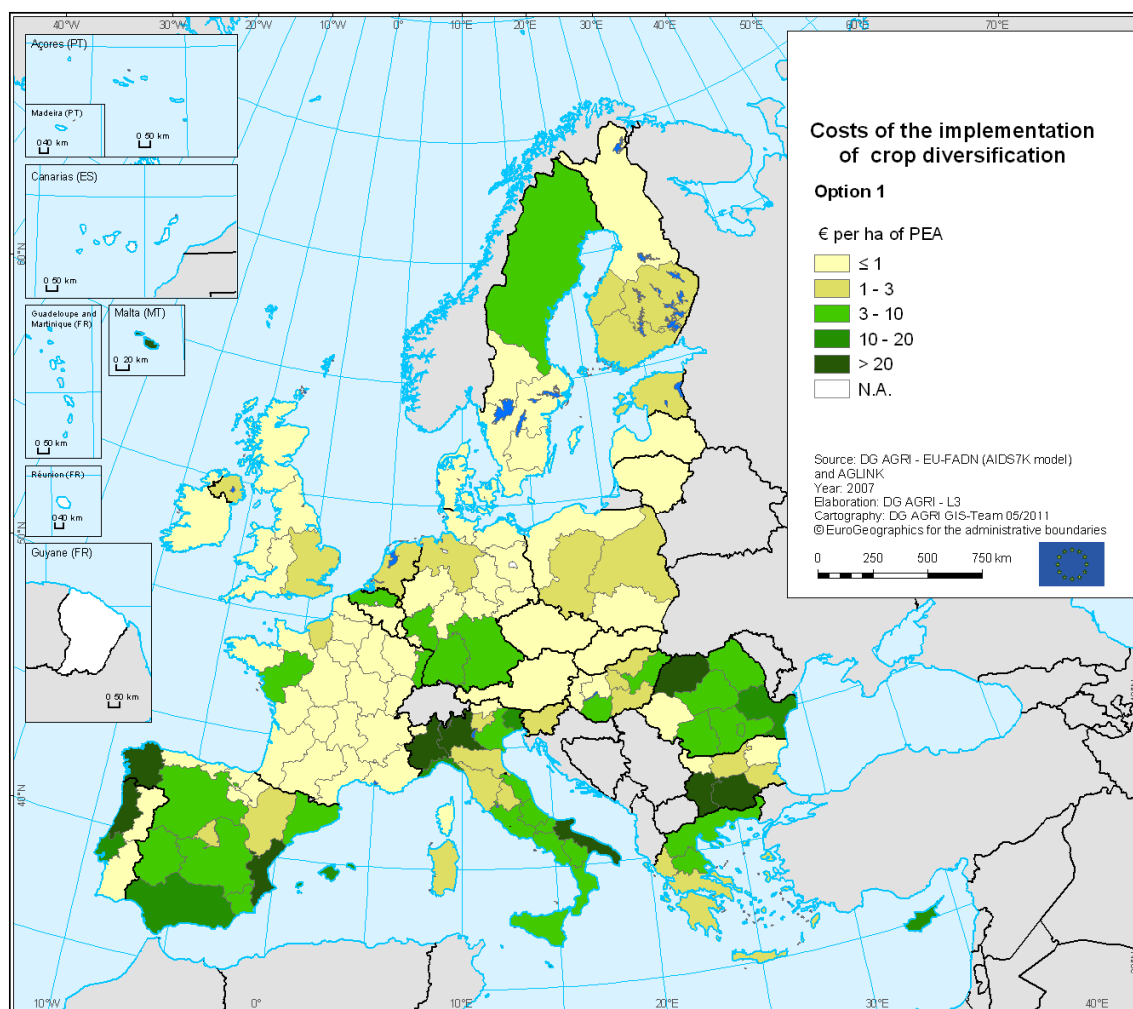
Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

*** For Malta, the opportunity cost is overestimated.

But in farms which are heavily affected by the measure, such as highly specialised farms that realise a high gross margin per ha, the corresponding cost per ha of PEA is often higher than the greening payment or total direct payments. A large share of these farms is located in southern Spain, Portugal, northern and southern Italy, northern Greece, Cyprus, southern Bulgaria and northern Romania (Map 1). In the case of Malta, the method used resulted in an overestimation of opportunity cost. Therefore it should not be considered as a reliable measurement of the opportunity costs of crops diversification⁶.

⁶ In Malta, crops production is almost exclusively based on vegetables with very high margins per hectare. It was not possible to find an appropriate benchmark of margins of "diversified" field crops farms in Malta or in neighbouring countries and regions. In the results presented, the EU-average was used as a benchmark.

Map 1: Estimated cost for crop diversification – option 1



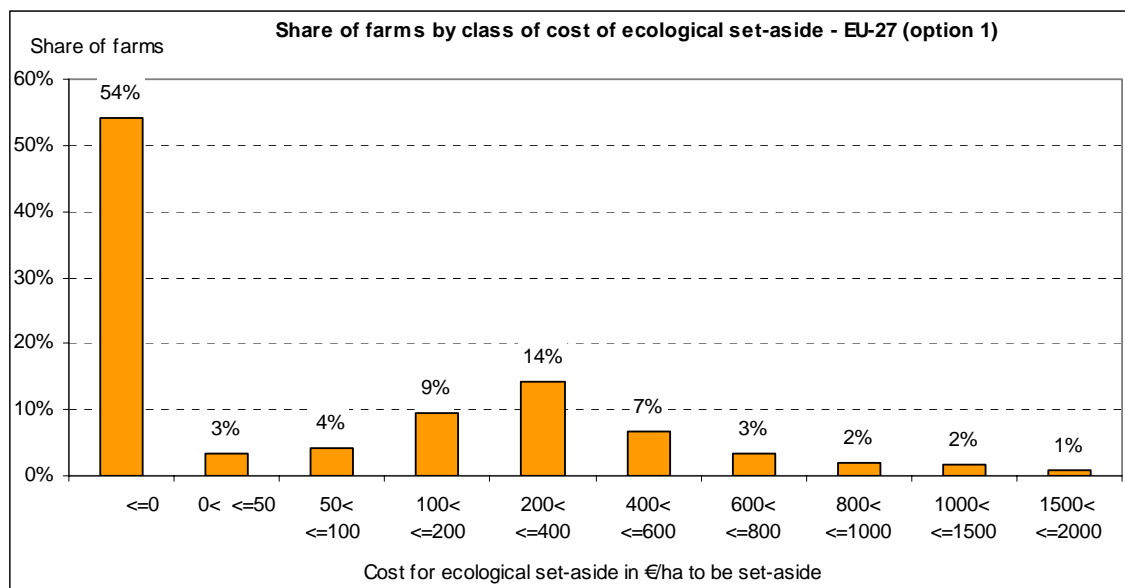
3.2.2. Ecological set-aside

Summary methodology

Additional costs for the implementation of the measure arise only if the amount of fallow land on the farm is lower than the area to be set-aside (5% of the PEA in option 1, 2, 4 and 5 and 10% in option 3). For each additional ha it is assumed that the costs equal 2/3 of the farm individual gross margin of arable land. The assumption is that the farmers will set-aside the less productive areas (with the assumption that they reach 2/3 of the average farm gross margin).

Similarly as for crop diversification, only a relatively small share of area would have to be additionally set-aside (2,3% of PEA in options 1, 2, 4, 5 and 4,6% in option 3). However a higher share of farms would have a cost (46% against 8% for crop diversification) (Figure 3). The cost per ha to be set-aside varies widely: 14% of farms have a cost between €200 and €400/ha, but it can be higher than €1500/ha in 1% of farms.

Figure 3



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

After divided by the total PEA, the cost for ecological set-aside amounts on average to €6/ha of PEA, similar to the costs of the implementation of crop diversification (Table 3). In option 3 where the requirement of ecological set-aside is doubled (10% of the PEA) the average cost more than doubles to about €14 /ha. The increase in costs is more pronounced than the increase of the share of set-aside because the increase in set-aside leads to a drop in production triggering a rise in market prices. Due to this effect, the gross margins and thus the opportunity costs of the land to be set-aside increase.

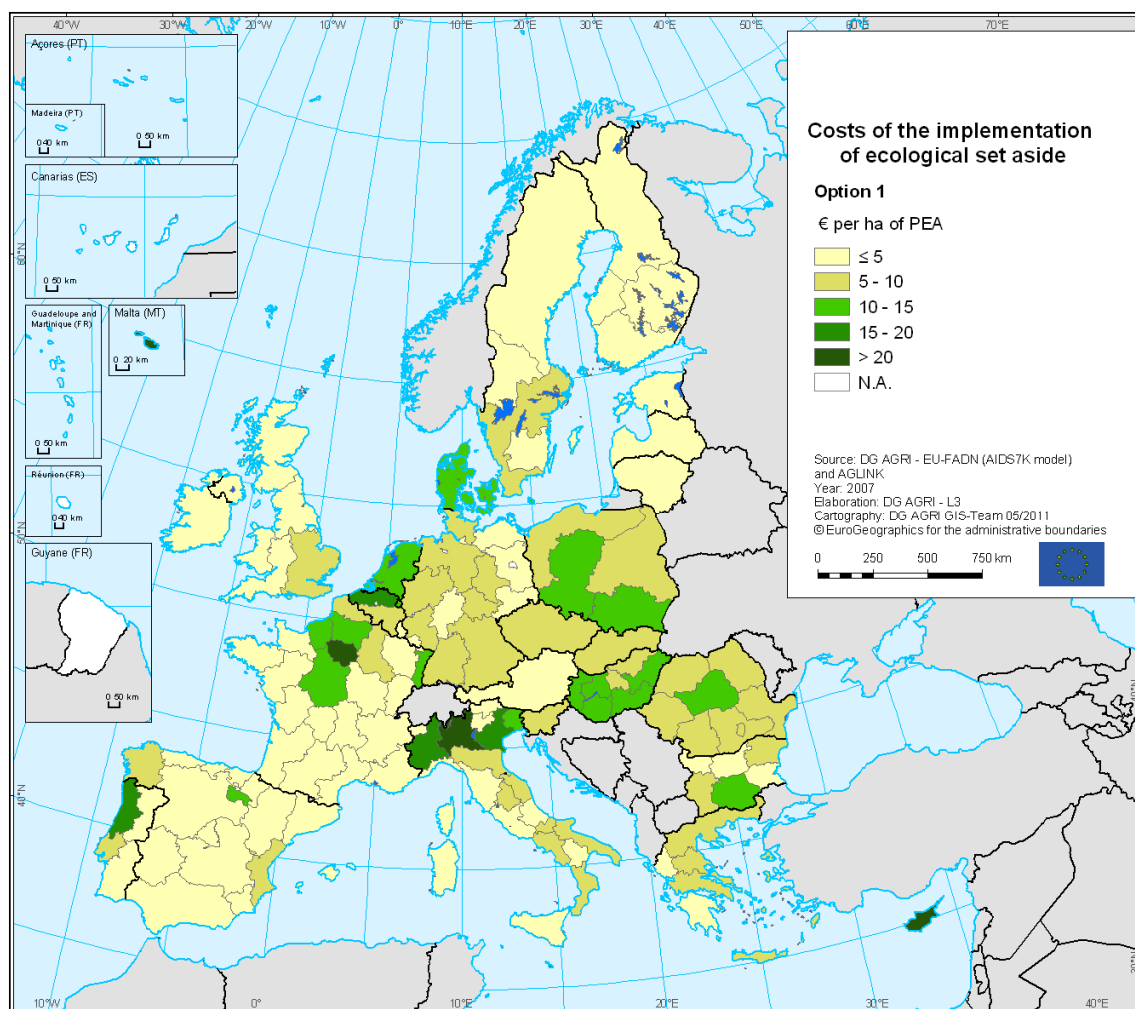
Table 3: Estimated cost of ecological set-aside by Member State

Potential Eligible Area (PEA)	Option 1				Option 3				
	Area to be set aside after deduction of existing fallow land		Costs per ha set aside	Costs per ha of PEA	Area to be set aside after deduction of existing fallow land		Costs per ha set aside	Costs per ha of PEA	
	Average ha	Share in PEA	€ per ha	€ per ha	Average ha	Share in PEA	€ per ha	€ per ha	
Belgium	43.5	1.1	2.5%	515	13	2.2	5.1%	561	28
Bulgaria	25.3	1.0	3.9%	157	6	2.0	8.0%	172	14
Cyprus	7.2	0.3	3.5%	658	23	0.5	7.1%	656	46
Czech Republic	236.9	8.4	3.5%	221	8	16.9	7.2%	261	19
Denmark	80.7	3.3	4.1%	351	14	6.5	8.1%	401	33
Germany	84.3	2.8	3.3%	194	6	5.7	6.8%	231	16
Greece	10.2	0.2	1.5%	459	7	0.3	3.1%	484	15
Spain	29.5	0.2	0.6%	497	3	0.4	1.3%	496	7
Estonia	123.5	2.9	2.3%	166	4	5.7	4.6%	194	9
France	77.3	2.1	2.7%	195	5	4.2	5.4%	229	12
Hungary	54.1	2.2	4.1%	280	11	4.4	8.1%	319	26
Ireland	47.9	0.2	0.3%	363	1	0.3	0.7%	424	3
Italy	16.8	0.3	1.7%	486	8	0.6	3.4%	544	18
Lithuania	51.4	0.8	1.6%	228	4	1.9	3.6%	263	10
Luxembourg	80.2	2.0	2.4%	124	3	3.9	4.9%	142	7
Latvia	61.3	0.6	1.0%	165	2	1.3	2.2%	187	4
Malta	3.4	0.1	1.9%	2 204	42	0.1	3.9%	2 391	93
Netherlands	31.7	0.5	1.4%	754	11	1.0	3.1%	800	25
Austria	33.5	0.7	2.1%	220	5	1.5	4.3%	250	11
Poland	17.3	0.6	3.6%	273	10	1.3	7.3%	308	22
Portugal	28.4	0.1	0.5%	435	2	0.3	1.1%	437	5
Romania	10.2	0.4	3.5%	193	7	0.7	7.0%	213	15
Finland	51.6	1.2	2.3%	110	3	2.6	5.0%	143	7
Sweden	96.6	1.9	2.0%	215	4	4.0	4.1%	257	11
Slovakia	581.7	16.4	2.8%	204	6	33.6	5.8%	238	14
Slovenia	11.6	0.2	1.3%	603	8	0.3	2.6%	645	17
United Kingdom	164.2	1.7	1.0%	359	4	3.8	2.3%	419	10
EU-27	31.2	0.7	2.3%	261	6	1.4	4.6%	297	14

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

Compared to crop diversification the costs of ecological set-aside are more evenly spread throughout EU. This is because in all regions the same share of land has to be set-aside (Map 2).

Map 2: Estimated cost for ecological set-aside – option 1



The differences in cost are due to three factors: the amount of land which is already fallow, the level of the gross margin and the share of grassland in the total PEA. For instance in Spain and Portugal costs are low because the amount of land to be additionally set-aside is low. There is indeed already a lot of fallow land in those countries. In Ireland, average costs are low because the share of area concerned by the measure is low (high share of grassland, which is not in arable land, in the total PEA).

3.2.3. Green cover

Summary methodology

The cost of green cover is estimated based on assumptions on the affected area and the costs per ha. Green cover has to be applied on 70% of the arable land and area of permanent crops. The area of ecological set-aside is excluded. As there is no information on green cover available in EU-wide database, several assumptions had to be made: first, it was assumed that a large part of the area covered by cereals is covered during the winter, as in most cases a large share of the cereals are winter crops. As the information is not differentiated between winter and summer crops in FADN, it was assumed that on each farm the share is equal to the national shares of winter and summer varieties published by EUROSTAT. Furthermore, it was assumed that 30% of the area of permanent crops is already covered. The costs per ha of land to be additionally covered in order to meet the requirement are assumed to be equal to 50€

It is estimated that around 13% of PEA would have to be adapted to respect the green cover measure. 29% of farms would respect already the requirements and 71% would have a cost (€50/ha to be covered according to the assumptions). Divided by the total PEA, to cost of the green cover would be on average €6/ha of PEA (Table 4). Basically, this cost stays rather identical among the options.

Table 4: Estimated cost of green cover by Member State

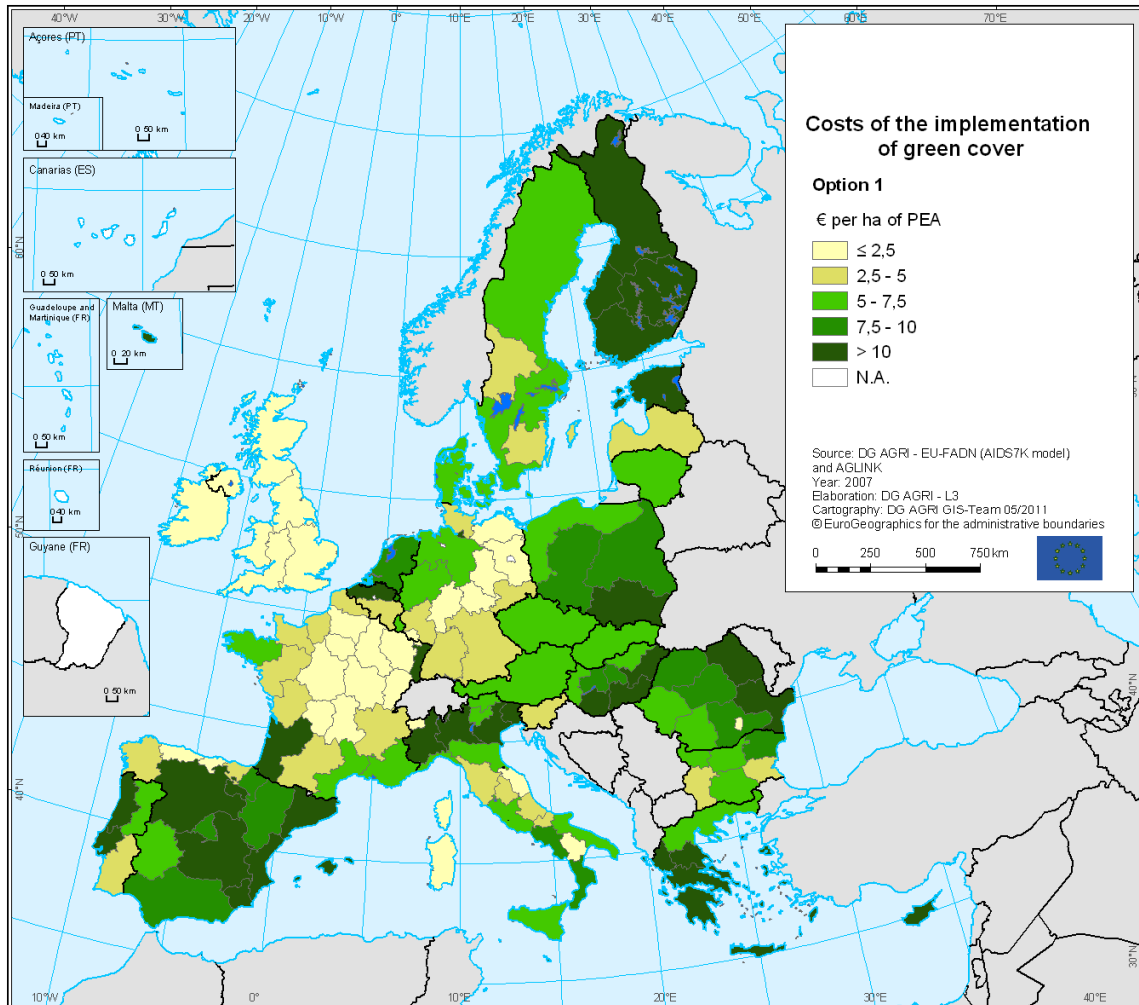
	Potential Eligible Area (PEA)		Option 1				Option 2			Option 3		
			Area to be covered		Costs per ha of PEA	Area to be covered		Costs per ha of PEA	Area to be covered		Costs per ha of PEA	
	Average ha	€per ha	Average ha	Share in PEA	€per ha	Average ha	Share in PEA	€per ha	Average ha	Share in PEA	€per ha	
Belgium	43.5	50	7.4	16.9%	8	7.4	16.9%	8	7.4	17%	8	
Bulgaria	25.3	50	3.2	12.7%	6	3.2	12.7%	6	3.2	13%	6	
Cyprus	7.2	50	1.8	24.8%	12	1.8	24.8%	12	1.8	25%	12	
Czech Republic	236.9	50	31.5	13.3%	7	31.5	13.3%	7	31.5	13%	7	
Denmark	80.7	50	8.6	10.7%	5	8.6	10.7%	5	8.6	11%	5	
Germany	84.3	50	6.3	7.5%	4	6.3	7.5%	4	6.3	8%	4	
Greece	10.2	50	1.9	18.5%	9	1.9	18.5%	9	1.9	18%	9	
Spain	29.5	50	6.4	21.6%	11	6.4	21.6%	11	6.4	22%	11	
Estonia	123.5	50	27.3	22.1%	11	27.3	22.1%	11	27.3	22%	11	
France	77.3	50	5.8	7.5%	4	5.8	7.5%	4	5.8	8%	4	
Hungary	54.1	50	11.3	21.0%	10	11.3	21.0%	10	11.3	21%	10	
Ireland	47.9	50	1.3	2.6%	1	1.3	2.6%	1	1.3	3%	1	
Italy	16.8	50	2.4	14.5%	7	2.4	14.5%	7	2.4	14%	7	
Lithuania	51.4	50	7.3	14.2%	7	7.3	14.2%	7	7.3	14%	7	
Luxembourg	80.2	50	10.3	12.9%	6	10.3	12.9%	6	10.3	13%	6	
Latvia	61.3	50	5.6	9.1%	5	5.6	9.1%	5	5.6	9%	5	
Malta	3.4	50	1.3	37.4%	19	1.3	37.4%	19	1.3	37%	19	
Netherlands	31.7	50	6.3	19.9%	10	6.3	19.9%	10	6.3	20%	10	
Austria	33.5	50	4.2	12.6%	6	4.2	12.6%	6	4.2	13%	6	
Poland	17.3	50	2.9	16.9%	8	2.9	16.9%	8	2.9	17%	8	
Portugal	28.4	50	3.9	13.8%	7	3.9	13.8%	7	3.9	14%	7	
Romania	10.2	50	1.9	18.2%	9	1.9	18.2%	9	1.9	18%	9	
Finland	51.6	50	16.9	32.7%	16	16.9	32.7%	16	16.9	33%	16	
Sweden	96.6	50	11.1	11.5%	6	11.1	11.5%	6	11.1	12%	6	
Slovakia	581.7	50	85.8	14.7%	7	85.8	14.7%	7	85.8	15%	7	
Slovenia	11.6	50	1.1	9.8%	5	1.1	9.8%	5	1.1	10%	5	
United Kingdom	164.2	50	3.9	2.4%	1	3.9	2.4%	1	3.9	2%	1	
EU-27	31.2	50	4.0	12.9%	6	4.0	12.9%	6	4.0	13%	6	

Source: DG AGRI L3 calculations based on EU FADN and the AIDS7K model.

However, the average costs differ significantly between regions (Map 3). The estimate of cost of green cover heavily depends on the assumptions made in the framework of the analysis. Due to the use of an universal cost estimate of €50/ha to be covered and the lack of details on the actual application of green cover by the farms, the differences in the level of costs are determined by the share of winter cereals in the Member States and the share of arable land and permanent crops in the total PEA. In Member States with a high share of winter cereals the average level of costs is low because the area of winter cereals is counted as covered area. Similarly, in Member States with a low share of arable land and a low share of permanent crops, the costs are low because the amount of land on

which the measure has to be applied is lower. It should be underlined that in the Nordic countries maintaining a crop during winter time is, in most cases, not feasible and that the land is covered by snow. The calculated high cost is therefore rather theoretical.

Map 3: Estimated cost for green cover



3.2.4. Maintaining permanent grassland

Summary methodology

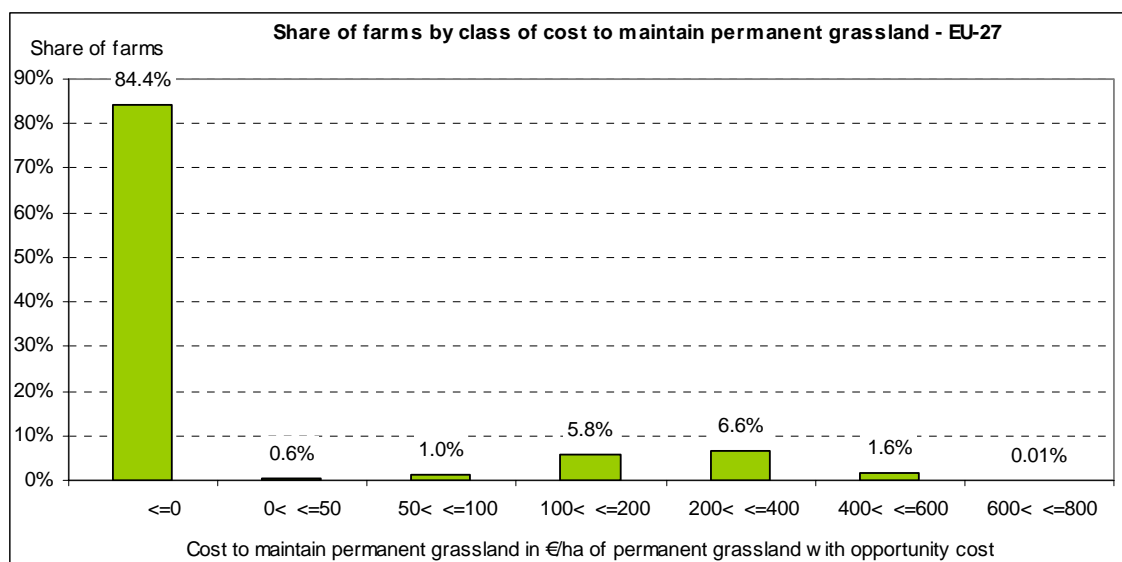
There will be little or no opportunity to convert grassland in farms with poor soil quality. For the simulation it is assumed that this is the case on farms with a low share of arable land (less than 5%) and on farms where sheep and goats represent more than 70% of grazing livestock units. Furthermore, it is assumed that rough grazing and 10% of the permanent pastures have no alternative use. For the permanent pasture thus having an opportunity to convert, it is assumed that the opportunity costs are 2/3 of the difference in gross margins between permanent grassland based dairy and beef production systems and alternative systems at regional level.

For the calculation of the difference in gross margins at regional level, it is considered that there is no opportunity costs in regions where permanent grassland is not relevant or where there is no alternative identified (no cattle production). Otherwise, in regions where grass-based and forage crops based feeding systems co-exist in specialised farms, it is assumed that the first alternative to cattle production based on grass is to continue production with adapting the feeding systems by ploughing the grassland to produce forage crops. Finally, in the remaining regions, where cattle production takes place in mixed cropping-livestock farms, the farm gross margins per hectare of utilised agricultural area in mixed and specialised cropping farms are compared.

The existing CAP limit of 10% on ploughing up permanent grassland, applied at MS or regional level, was not taken into account in the calculations and there is no assumption concerning possible flexibility provided to individual farmers on ploughing up permanent grassland.

It is estimated that the area with opportunity cost to maintain grassland corresponds to 8% of total PEA. 84% of farms would not have any opportunity cost to maintain permanent grassland (when there is no permanent grassland or when no alternative is detected) (Figure 4). However, for the remaining 16% farms, the opportunity cost per ha of permanent grassland may vary a lot and can be high: it is between €200 and €400/ha for 6,6% of farms and between €100 and €200/ha for 5,9% of farms.

Figure 4



Source: DG AGRI L3 calculations based on EU FADN and the AIDS7K model.

When divided by total PEA, the average cost would amount to €17/ha of PEA (Table 5), which is the highest among the analysed measures. The cost per ha of PEA depends on the estimated cost per ha of permanent grassland and on the share of permanent grassland with opportunity cost in total PEA. The Member States with the highest cost per ha of

PEA are Belgium (€78/ha), the Netherlands (€98/ha) and Slovenia (€99/ha). In these Member States, it is explained mainly by high cost per ha of permanent grassland: Slovenia (€402/ha), the Netherlands (€358/ha) and the United Kingdom (€341/ha). Indeed, both cattle systems based on permanent pasture and based on other fodders coexist at regional level in these Member States, and the difference in gross margins could encourage farmers to plough permanent pasture in favour of other fodders.

Table 5: Estimated cost to maintain permanent grassland by Member State

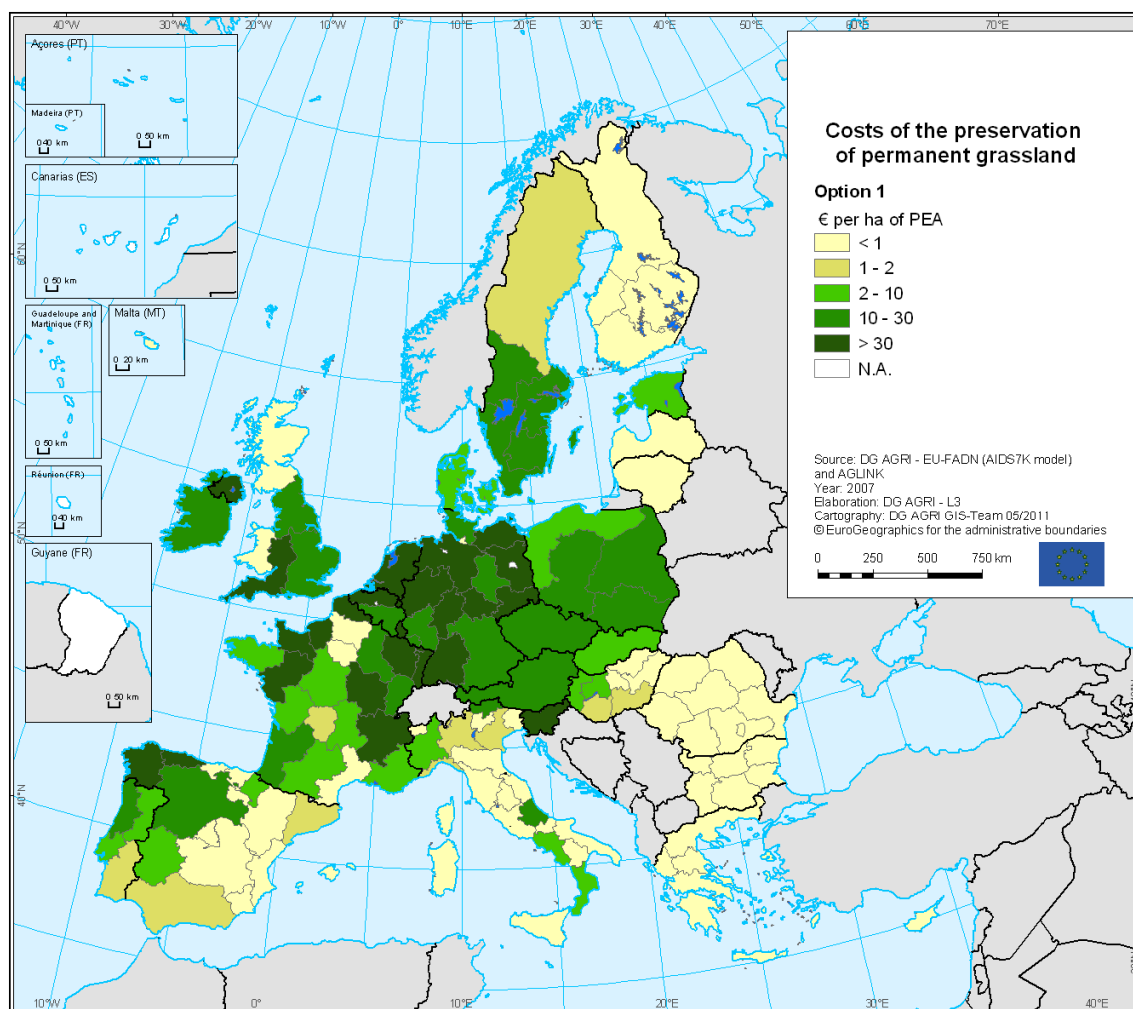
	Potential Eligible Area (PEA)	Permanent pasture (PP)	Area with opportunity costs	Costs per ha PP	Costs per ha of PEA
	Average ha	Share in PEA	Share in PEA	€/per ha	€/per ha
Belgium	43.5	39%	27%	295	78
Bulgaria	25.3	11%	1%	8	0
Cyprus	7.2	0%	0%		0
Czech Republic	236.9	23%	12%	202	24
Denmark	80.7	5%	3%	124	3
Germany	84.3	24%	15%	251	37
Greece	10.2	2%	0%	0	0
Spain	29.5	24%	3%	326	9
Estonia	123.5	20%	6%	56	3
France	77.3	26%	13%	170	22
Hungary	54.1	13%	2%	74	2
Ireland	47.9	82%	9%	224	20
Italy	16.8	8%	0%	327	2
Lithuania	51.4	12%	5%	15	1
Luxembourg	80.2	49%	42%	113	47
Latvia	61.3	27%	5%	4	0
Malta	3.4	0%	0%		0
Netherlands	31.7	53%	27%	358	98
Austria	33.5	43%	10%	230	22
Poland	17.3	17%	11%	176	20
Portugal	28.4	16%	4%	107	4
Romania	10.2	18%	3%	0	0
Finland	51.6	2%	0%	173	1
Sweden	96.6	15%	6%	274	17
Slovakia	581.7	30%	18%	34	6
Slovenia	11.6	65%	25%	402	99
United Kingdom	164.2	53%	8%	341	27
EU-27	31.2	25%	8%	216	17

Source: DG AGRI L3 calculations based on EU FADN and the AIDS7K model.

In several Member States, the share of permanent pastures is very low (Finland, Denmark, Italy, Bulgaria) or a large share of the permanent pastures are estimated with no alternative (Ireland, Spain, United Kingdom), and therefore the cost is low. The extreme situation is observed in Romania, Greece, Malta and Cyprus where it leads to an estimate of no opportunity costs for the country.

The average cost differs also significantly between regions (Map 4).

Map 4: Estimated cost for maintaining permanent grassland



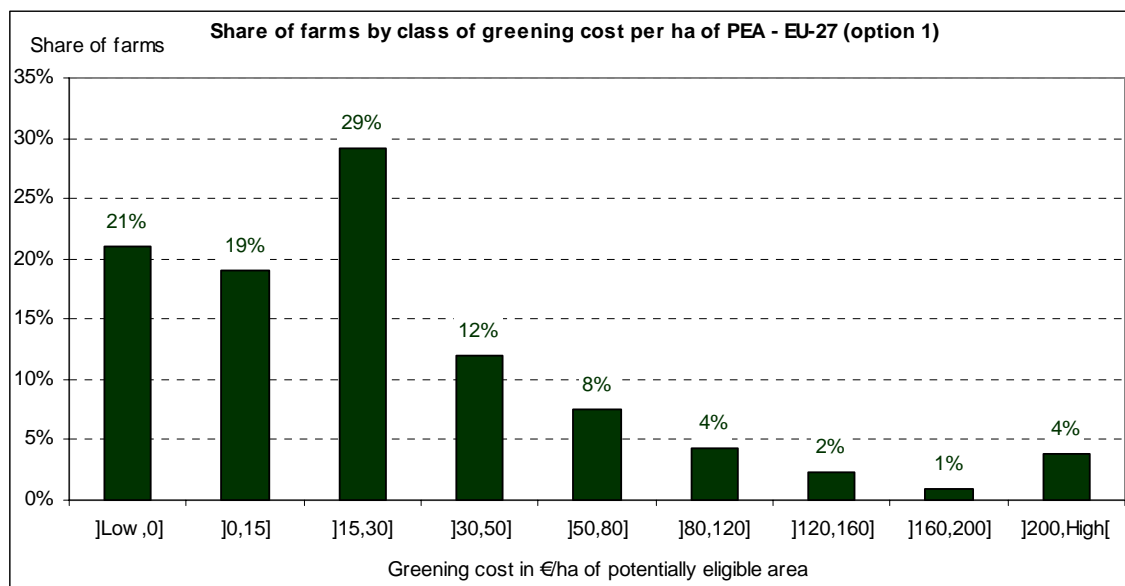
3.3. Total greening cost

The total greening cost depends on the level of cost of each measure, but also on the share of the potentially eligible area (PEA) which has to be adapted to respect the requirements. In total for the EU-27, it is estimated that 25% to 30% of the PEA would have to be adapted (crop diversification, ecological set-aside and green cover) or would have an opportunity cost for maintaining permanent grassland⁷.

Based on the assumptions described above, the total greening cost would amount on average for the EU-27 between €1041/farm and €1280/farm depending on the option of greening. When the cost of greening is divided to the total PEA, the amounts are lower. In option 1, it is estimated that 29% of farms would have a cost between €15 and €30/ha of PEA, 4% would have a cost higher than €200/ha of PEA, and about 21% of farms would not have cost (Figure 5). The share of farms with greening costs varies significantly between MS ranging from 17% in Ireland to 96% in Luxemburg (Figure 6).

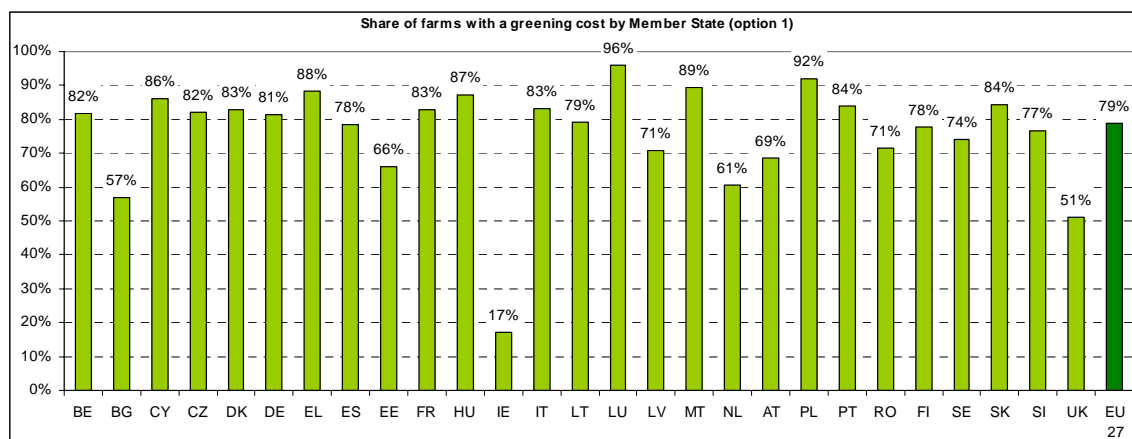
⁷ It should be kept in mind that the cost of greening is underestimated as, except for permanent grassland, the costs of maintaining good practices in a context of an increasing economic pressure on farmers, is not taken into account.

Figure 5



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

Figure 6

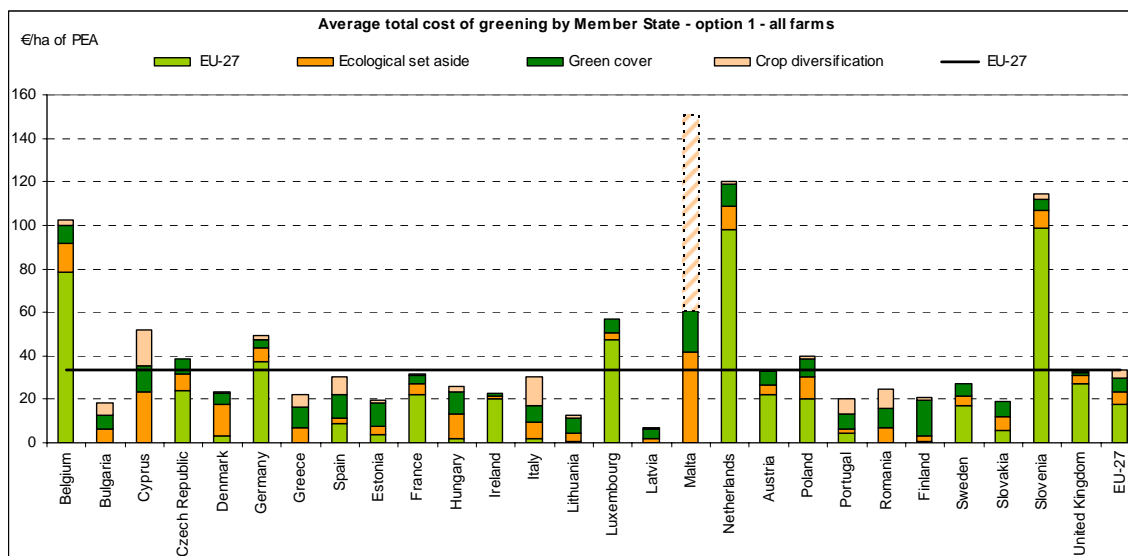


Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

On average for the EU-27 and option 1, the cost of greening would be €33/ha of PEA. Up to half of the total cost comes from the cost of maintaining permanent grassland (average €17/ha of PEA) (Figure 7

, Table 6). The rest is approximately evenly distributed among the three remain greening measures. However, the cost varies a lot between Member States and regions (from €7/ha in Latvia to €151/ha in Malta). The highest total costs are estimated for Malta, the Netherlands, Slovenia and Belgium.

Figure 7



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

*** For Malta, the opportunity cost is overestimated. Total cost of greening should therefore be used with utmost caution.

The average total greening cost by Member State or region depends on (Figure 7

, Table 6, Map 5):

- the main types of farming: cattle farms have on average higher cost to maintain permanent pasture, and horticulture and granivores farms have on average higher costs for crop diversification and ecological set-aside,
- the importance of less favoured areas: the opportunity cost to maintain permanent grassland are indeed often much lower than in other areas because there is less alternative in LFA areas,
- the usual agricultural practices or natural conditions allowing or not to respect already the requirements of the green cover, the ecological set-aside and the crop diversification.

Results show that costs of greening would be relatively higher due to:

- crop diversification in southern Member States (MT, IT, CY, ES, EL, RO, PT),
- set-aside in Member States with high area productivity, for instance due to importance of horticulture production (MT, CY),
- green cover in some southern countries or Baltic countries (MT, FI, CY, ES, EE, EL),
- permanent pastures in Member States where milk and beef production are important and based on both intensive and extensive systems (SI, NL, BE, LU, DE, UK, CZ).

Table 6: Greening cost in option 1

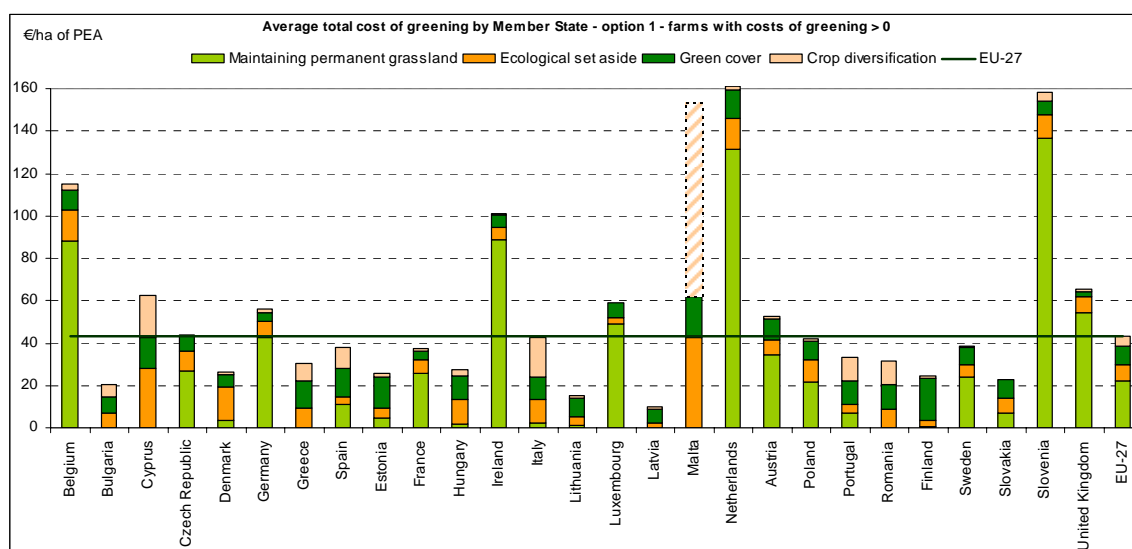
	Average costs for greening measures per ha of Potential Eligible Area (€/ ha)									
	All farms					Farms with greening costs > 0				
	Crop diversification	Ecological set aside	Green cover	Maintaining permanent grassland	Total measures	Crop diversification	Ecological set aside	Green cover	Maintaining permanent grassland	Total measures
Belgium	2	13	8	78	102	3	15	10	88	115
Bulgaria	5	6	6	0	18	6	7	7	0	21
Cyprus	16	23	12	0	52	20	28	15	0	62
Czech Republic	0	8	7	24	38	0	9	8	27	44
Denmark	1	14	5	3	24	1	16	6	4	26
Germany	2	6	4	37	49	2	7	4	43	56
Greece	6	7	9	0	22	8	10	13	0	31
Spain	8	3	11	9	30	10	3	14	11	38
Estonia	1	4	11	3	20	1	5	14	5	25
France	1	5	4	22	32	1	6	4	26	38
Hungary	3	11	10	2	26	3	12	11	2	27
Ireland	0	1	1	20	23	1	5	6	89	101
Italy	13	8	7	2	30	19	11	10	2	43
Lithuania	1	4	7	1	12	1	5	9	1	15
Luxembourg	0	3	6	47	57	0	3	7	49	59
Latvia	1	2	5	0	7	1	2	6	0	10
Malta	***90	42	19	0	***151	***92	43	19	0	***154
Netherlands	2	11	10	98	120	2	14	13	131	161
Austria	1	5	6	22	34	1	7	10	34	53
Poland	1	10	8	20	40	1	11	9	21	42
Portugal	7	2	7	4	20	11	4	11	7	33
Romania	9	7	9	0	25	11	9	12	0	32
Finland	1	3	16	1	21	1	3	19	1	25
Sweden	0	4	6	17	28	1	6	8	24	39
Slovakia	0	6	7	6	19	0	7	9	7	23
Slovenia	3	8	5	99	114	4	11	7	137	158
United Kingdom	1	4	1	27	33	1	7	2	55	65
EU-27	4	6	6	17	33	5	8	8	22	43

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

*** For Malta, the opportunity cost is overestimated. Total cost of greening should therefore be used with utmost caution.

Of course, when considering only farms with costs, the average cost of greening is higher (Table 6 and Figure 8). It is mainly coming from the measure proposed to maintain permanent pastures. It changes significantly the relative situation in Ireland (average cost multiplied by more than 4), in the United-Kingdom and in The Netherlands.

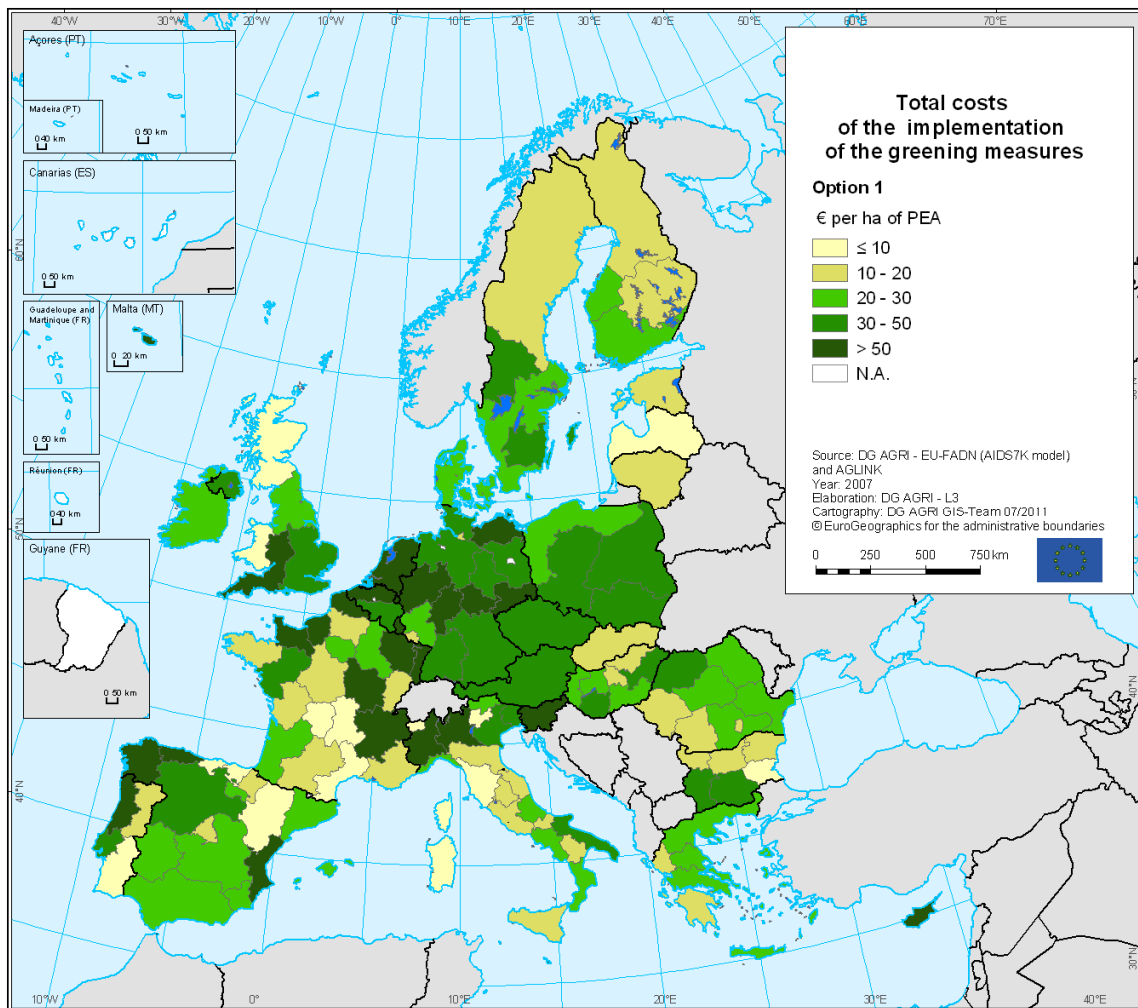
Figure 8



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

*** For Malta, the opportunity cost is overestimated. Total cost of greening should therefore be used with utmost caution.

Map 5: Total cost for greening – option 1



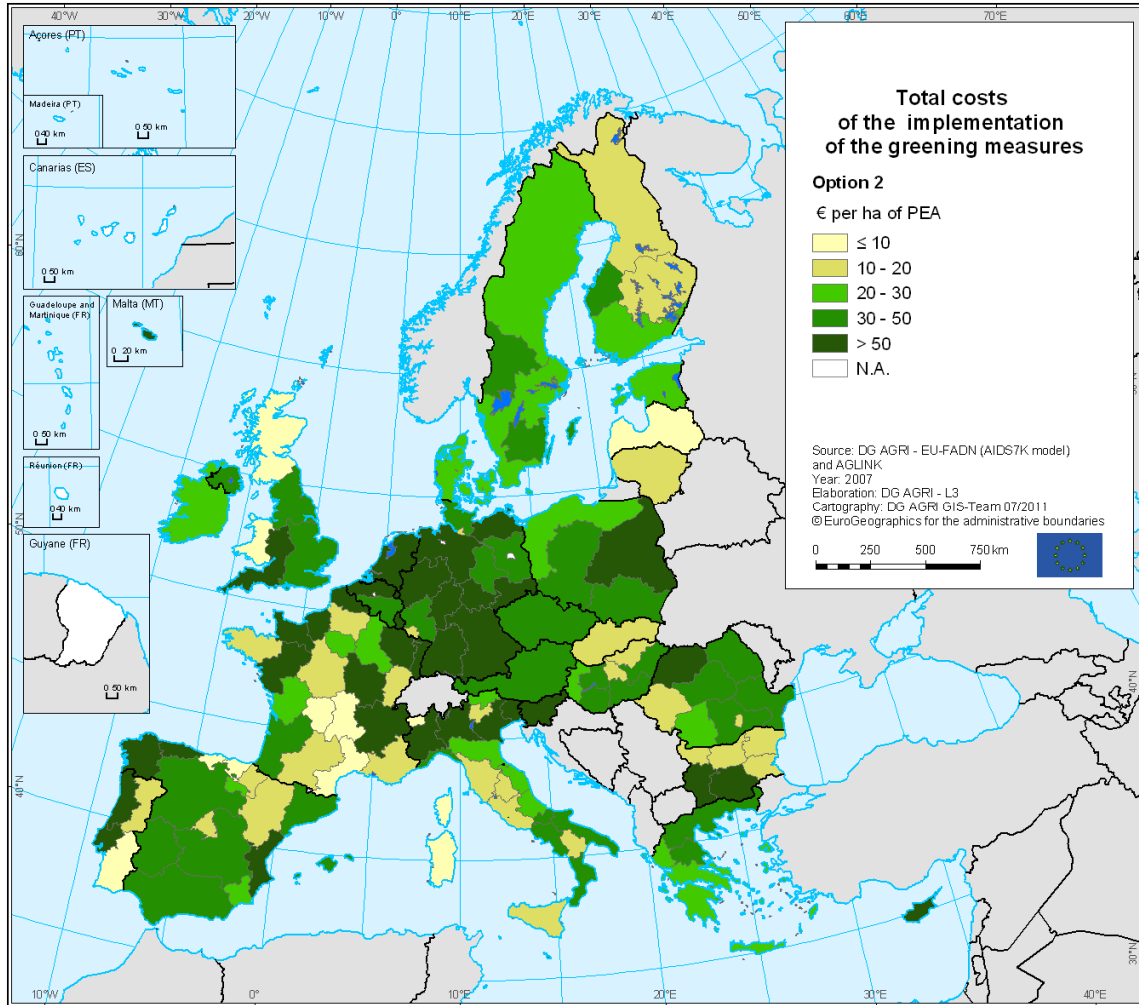
In option 2, which is more demanding in terms of crop diversification, the total cost rises to €39/ha of PEA due to the increase of the crop diversification cost from 4 to €9/ha (Table 7 and Map 6). This option increases significantly the total cost especially in Italy (+73%), Malta (+60%) and Romania (+51%) and Greece (+48%).

Table 7: Total cost of greening for the 3 alternatives

	Total cost of greening		
	Option 1	Option 2	Option 3
	70% crop diversification	50% crop diversification	70% crop diversification
	5% ecological set-aside	5% ecological set-aside	10% ecological set-aside
Belgium	102	105	117
Bulgaria	18	23	25
Cyprus	52	66	73
Czech Republic	38	40	49
Denmark	24	30	42
Germany	49	53	58
Greece	22	33	30
Spain	30	41	34
Estonia	20	21	24
France	32	33	39
Hungary	26	32	40
Ireland	23	24	25
Italy	30	52	41
Lithuania	12	15	18
Luxembourg	57	57	60
Latvia	7	9	9
Malta	151	242	194
Netherlands	120	127	134
Austria	34	36	39
Poland	40	42	52
Portugal	20	27	19
Romania	25	38	32
Finland	21	26	25
Sweden	28	29	34
Slovakia	19	19	27
Slovenia	114	125	123
United Kingdom	33	35	39
EU-27	33	39	41

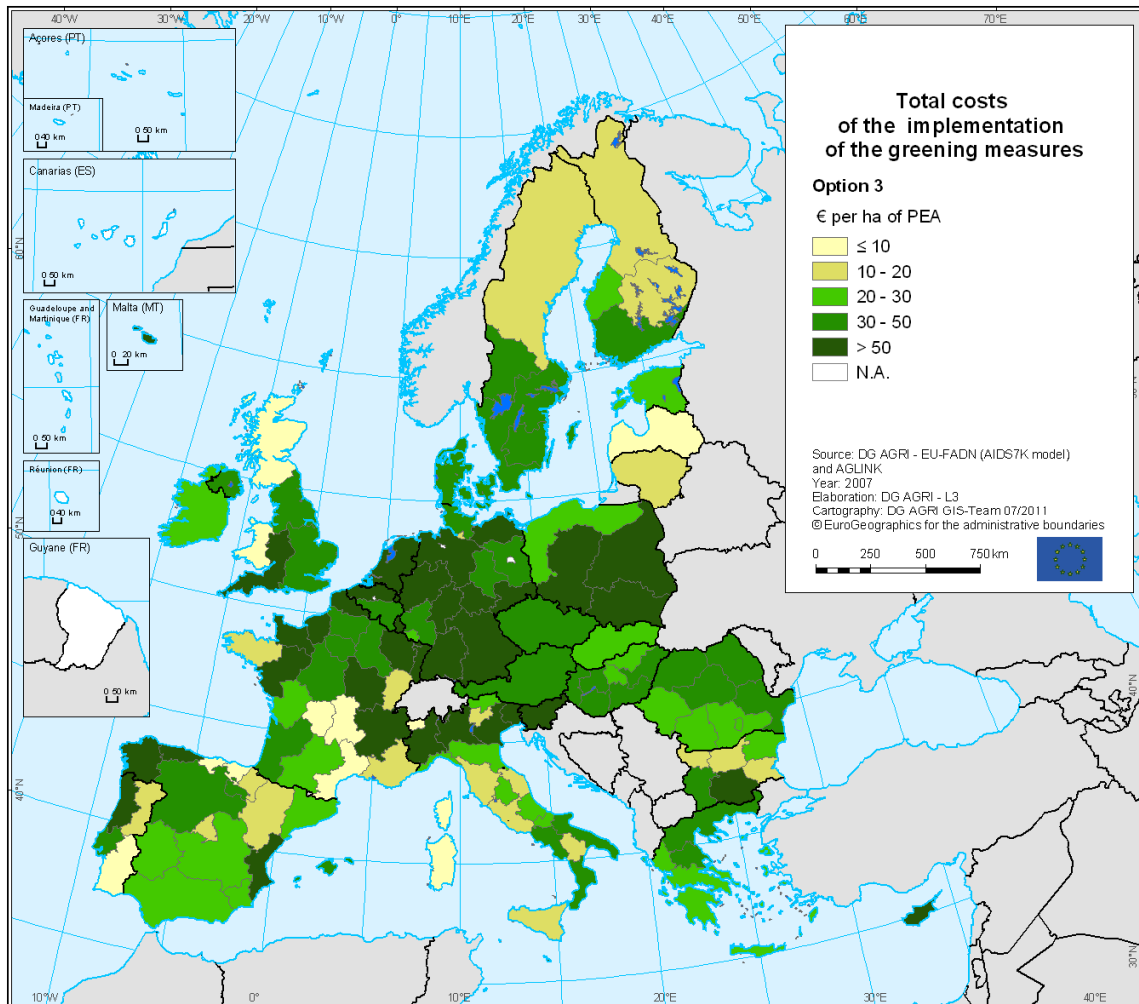
Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

Map 6: Total cost for greening – option 2



Option 3, which is more demanding in terms of ecological set-aside, the total cost reaches approximately the same level as in option 2 (€41/ha of PEA) (Table 7 and Map 7). It has an impact on the total greening mainly in Denmark (+76%) and Hungary (+54%).

Map 7: Total cost for greening – option 3



4. THE IMPACT OF CROP DIVERSIFICATION AND ECOLOGICAL SET-ASIDE ON AGRICULTURAL MARKETS

Summary methodology

To estimate the impact of the crop diversification rules on individual farms of EU-FADN, it is assumed that a farm will adapt land allocation among different crops by rebalancing the existing crops by order of importance (favouring the most important ones) or, when necessary, by introducing the most common profitable crops of the region. This allowed estimating the change of area for the arable crops due to crop diversification at EU level. This information, together with the rate of set-aside has been used as inputs in the AGLINK market model to estimate the impact in terms of changes in prices and yields for the productions and the costs. These results have then been implemented as inputs in the AIDS7K model of EU-FADN to incorporate these market effects of the crop diversification and ecological set-aside in the estimate of the impact of greening measure on farm incomes.

Results reveal that introducing crops diversification rules has a bigger impact on land allocation in EU-15 than in EU-12 (Table 8) due to the higher production specialisation in EU-15.

With a rule of maximum of 70% of the area for the main crop, in EU-15, the area would decrease for rice, durum wheat and barley and would increase for sunflower, soya and sugar beet. In EU-12, the area would decrease for grain maize and rice and be replaced by sunflower, durum wheat and sugar beet.

A more ambitious rule in terms of diversification (maximum 50% of the area for the main crop), does not change the above pattern, but results in higher impacts per crop.

Table 8: Changes in area of various crops due to 2 options of crops diversification

	70% max for the main crop and minimum 3 crops and minimum 5% of the area for the third crop			50% max for the main crop and minimum 3 crops and minimum 5% of the area for the third crop		
	EU-15	EU-12	EU-27	EU-15	EU-12	EU-27
Wheat	1.7%	0.7%	1.3%	1.2%	-1.5%	0.1%
Durum Wheat	-3.8%	1.9%	-3.6%	-9.2%	5.9%	-8.8%
Rye	1.2%	-0.8%	0.1%	3.5%	-1.3%	0.9%
Barley	-3.6%	0.1%	-2.7%	-8.3%	1.1%	-6.0%
Oats	1.1%	-1.0%	0.4%	4.2%	-0.8%	2.4%
Summer mix and other cereals	-2.2%	-0.3%	-0.7%	-0.4%	-0.6%	-0.6%
Grain Maize	-0.1%	-2.0%	-1.1%	-3.5%	-3.9%	-3.7%
Rice	-7.5%	-1.3%	-7.2%	-17.4%	-2.7%	-16.7%
Rapeseed	1.7%	-0.1%	1.0%	7.8%	2.6%	5.8%
Sunflower	13.4%	2.9%	7.1%	30.9%	7.9%	17.1%
Soya	5.1%	-0.1%	2.3%	16.5%	1.1%	8.1%
Sugar beet	2.3%	0.7%	1.9%	11.1%	5.0%	9.6%
Other	0.1%	-0.6%	-0.1%	1.9%	0.1%	1.4%

Source: DG AGRI L3 calculations based on EU FADN and AGLINK COSIMO.

In terms of market effects, for most of the products, the impact of introducing crops diversification and set-aside induce an increase in prices (Table 9). In the crop sector, it concerns mainly rice and barley while sunflower price decrease as production increase

due to crop diversification. In the animal sector, the market receipts would increase significantly for beef, rise in a limited way for sheep, pig and poultry meats but decrease for eggs. However, except for the beef sector, the feed cost increases more than production prices.

As expected following the land allocation changes, crop diversifications rules push prices up for rice, barley and durum wheat and down for sunflowers, rapeseed and sugar beet. In general, prices are increasing more when ecological set aside area is expanded than when crops are more diversified, as in the later case a more limited area is concerned.

Table 9: Output and costs changes in EU market due to various options of greening

	Differences with the baseline level					
	70% max one crop - 5% set-aside		50% max one crop - 5% set-aside		70% max one crop - 10% set-aside	
	EU-15	EU-12	EU-15	EU-12	EU-15	EU-12
OUTPUT						
Wheat	1%	1%	2%	2%	7%	8%
Durum Wheat	3%	4%	6%	7%	8%	10%
Rye	1%	1%	-1%	-1%	9%	7%
Barley	7%	8%	13%	14%	19%	22%
Oats	4%	5%	4%	5%	18%	21%
Summer mix and other cereals	4%	4%	5%	4%	14%	13%
Grain Maize	3%	5%	5%	9%	8%	16%
Rice	32%	41%	72%	95%	55%	72%
Rapeseed	1%	1%	-4%	-4%	6%	6%
Sunflower	-4%	-6%	-10%	-16%	0%	1%
soya	0%	0%	0%	0%	1%	2%
Sugar beet	1%	1%	-6%	-6%	9%	8%
Milk	0%	0%	0%	1%	0%	2%
Beef & Veal	4%	4%	6%	6%	12%	14%
Sheep	0%	0%	1%	1%	2%	2%
Pig	0%	0%	0%	0%	3%	3%
Poultry	1%	1%	2%	2%	4%	4%
Eggs	-1%	-1%	-2%	-2%	-4%	-4%
Vegetables and flowers	0%	0%	0%	0%	0%	0%
Quality Wine	0%	0%	0%	0%	0%	0%
Table Wine	0%	0%	0%	0%	0%	0%
Olives and olive oil	0%	0%	0%	0%	0%	0%
Home-grown fodder	4%	4%	6%	6%	15%	13%
Home-grown seeds and plants	4%	3%	7%	5%	12%	11%
For other outputs:	0%	0%	0%	0%	0%	0%
COSTS						
Seeds & plants (coarse grain price)	4%	3%	7%	5%	12%	11%
Feed	4%	4%	6%	6%	15%	13%
Energy and fertiliser	0%	0%	0%	0%	0%	0%
Rest of intermediate consumption	0%	-2%	0%	-2%	-1%	-4%

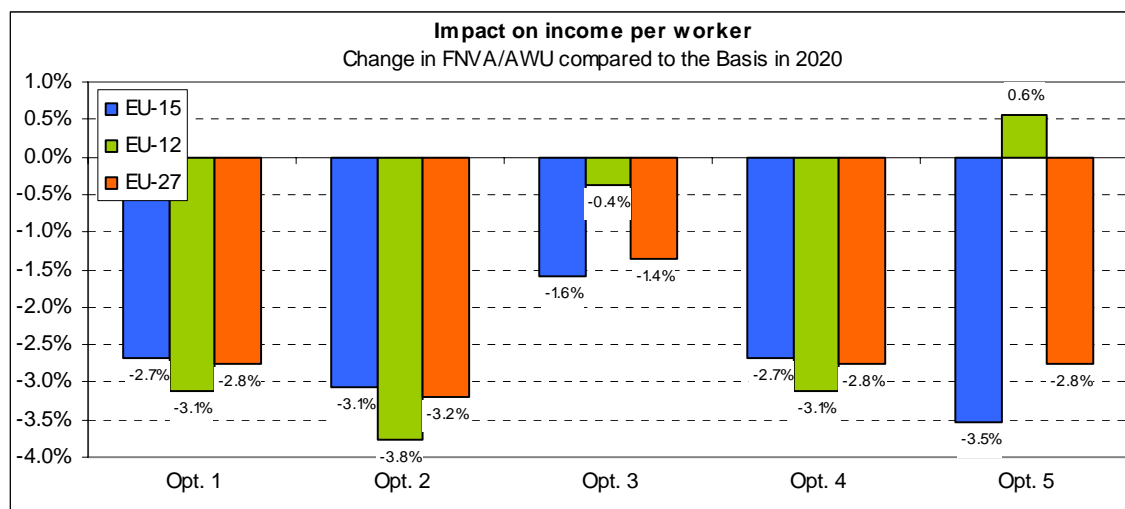
Source: DG AGRI L2 calculations based on AGLINK COSIMO model and EU FADN.

5. THE IMPACT OF GREENING ON FARM INCOME

5.1. EU aggregates

On average for the EU-27, greening would decrease income per worker between -3.2% and -1.4% (Figure 9). In the EU-15, depending on the option, the greening would change the average income between -3.1% and -1.6%. In the EU-12, it would be between -3.7% and -0.4%. In option 5, the assumptions of greening are identical as in option 1 but the distribution of DP between MS is different:

Figure 9



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK.

The increase in market margin (market output minus intermediate consumption) would only partially compensate the estimated cost of the greening measures (around €1042/farm on average for the EU-27 for options 1, 4 and 5, see Table 12 in annex). The implementation of crop diversification and set-aside would indeed have an impact on the market by increasing agricultural prices. The intermediate consumptions would also increase (higher prices for agricultural inputs as well), but not to the same extent (see previous chapter)⁸. It results that on average for the EU groups, the market margin would increase slightly. Moreover with or without greening, the total amount of Pillar 1 payments would not change (only the share dedicated to greening changes), except in option 5 when the payment are also redistributed (Min 90% and objective criteria) in comparison with the basis (MFF DP distribution).

In option 1, the increase in the market margin is not sufficient to fully compensate the estimated cost for greening, which is why we observe a decrease in income around -3% (see Table 12 in annex). Option 2 (the maximum share of one single crop is decreased to 50% in crop diversification) has a slightly more negative impact because the increase in market margin compensates a lower share of greening costs. These costs are a bit higher (€1228/farm on average for the EU-27) than in option 1 due to the greater constraint concerning the crop diversification.

⁸ As a reminder, there would also be an (unquantifiable and sometimes longer term) economic benefit for farmers resulting from improved soil quality, improved pollination services, improved resilience to climate change, etc.

Option 3 (ecological set-aside increased to 10%) would have a less negative impact on income since the higher rate of set-aside allows higher increase in market margins which offset a higher share of the greening cost (€1280/farm on average for the EU-27, see Table 12 in annex). The impacts on income of options 1 and 4 are the same for all EU groups since the definition of the greening measures is the same (only the proportion of budget dedicated to the greening changes), and therefore the cost for the greening and the market impacts are the same. The only difference is the allocation of the direct payments to each component.

Option 5 has also the same definition of the greening measures as in option 1, so the result on income is the same for the EU-27. But since the redistribution of direct payments between Member States is not identical in the two options (MFF DP distribution in option 1 and Minimum 90% of EU-average and objective criteria in option 5), the impact on income in EU-15 and EU-12 differs significantly in the two options. With option 5 income would increase by 0.6% in EU-12 while it would decrease by 3.1% with option 1. On the contrary, for EU-15, the drop of income would further decrease from -2.7% in option 1 to -3.5% in option 5.

The impacts do not differ much between EU-12 and EU-15, except for option 3 (ecological set-aside increased to 10%), where the decrease is relatively smaller for EU-12. In this option, EU-12 benefits from the significant increase in cereals prices (stemming from the increased set-aside), which results in a more significant increase in the average market margin (cereals represent indeed around one fourth of the EU-12 agricultural production). This increase compensates a higher share of the greening cost.

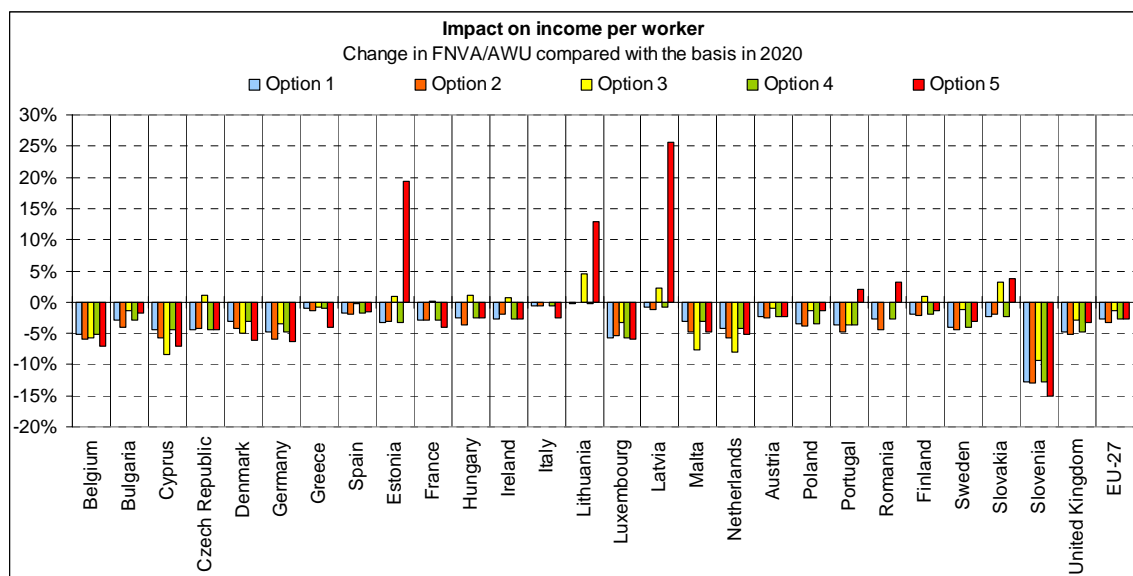
5.2. Member States

As previously mentioned, the market effect induced by crop diversification and the ecological set-aside plays a major role in the impact of the greening on farm income. The market effect is positive for all Member States except the Netherlands, Denmark, Malta, Belgium, Cyprus and Portugal (see Table 15 in annex). It is explained by the large shares of animal production, in particular pigs and poultry production, and fruits and vegetables production in these Member States. For these sectors, market prices developments are not positive while increased feed costs represent a major part of the intermediate consumption. For Portugal, the impact is more limited as pigs & poultry production is less developed.

In most of the cases, greening leads to a decrease of farm income (Figure 10 and Table 10), as the cost of greening is balanced by a positive market effect only in few cases. Slovenia is particularly impacted by the greening. Its agricultural sector is dominated by the milk and beef production and therefore benefits from the increase of beef prices but the costs of greening is particularly high as it is estimated that there are good alternative for permanent pastures⁹. Indeed, in Slovenia, the difference in margins per hectare between grass-based farms and more intensive systems is higher than in other countries such as Austria.

⁹ It should be mentioned that the estimate of the opportunity costs for permanent pastures is differentiated by Less Favoured Areas in Slovenia and therefore does not mix production conditions in mountains and in plains.

Figure 10



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Table 10: Impact on income per worker by Member State

	FNVA/AWU (€/AWU)	FNVA/AWU - comparison with the Basis in 2020					
		MFF € per AWU	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
		Basis	1	2	3	4	5
		-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Belgium	61 583	-5.1%	-5.9%	-5.7%	-5.1%	-7.2%	
Bulgaria	9 470	-2.8%	-4.0%	-1.4%	-2.8%	-1.8%	
Cyprus	15 064	-4.3%	-5.7%	-8.4%	-4.3%	-7.1%	
Czech Republic	23 372	-4.5%	-4.2%	1.0%	-4.5%	-4.5%	
Denmark	71 177	-3.1%	-4.3%	-4.9%	-3.1%	-6.2%	
Germany	44 364	-4.8%	-5.9%	-3.5%	-4.8%	-6.2%	
Greece	15 413	-1.0%	-1.3%	-0.7%	-1.0%	-4.0%	
Spain	29 192	-1.8%	-2.0%	-0.3%	-1.8%	-1.6%	
Estonia	24 949	-3.2%	-3.1%	1.0%	-3.2%	19.3%	
France	38 466	-2.9%	-2.9%	0.1%	-2.9%	-4.0%	
Hungary	27 795	-2.6%	-3.6%	1.1%	-2.6%	-2.6%	
Ireland	27 237	-2.7%	-1.9%	0.8%	-2.7%	-2.7%	
Italy	35 189	-0.5%	-0.6%	0.1%	-0.5%	-2.4%	
Lithuania	19 345	-0.3%	-0.1%	4.4%	-0.3%	12.9%	
Luxembourg	50 691	-5.6%	-5.3%	-3.2%	-5.6%	-6.0%	
Latvia	14 786	-0.7%	-1.1%	2.2%	-0.7%	25.7%	
Malta	31 121	-3.1%	-4.8%	-7.7%	-3.1%	-4.9%	
Netherlands	67 857	-4.3%	-5.6%	-8.0%	-4.3%	-5.1%	
Austria	32 384	-2.3%	-2.5%	-0.9%	-2.3%	-2.3%	
Poland	12 991	-3.5%	-3.8%	-1.3%	-3.5%	-1.4%	
Portugal	11 357	-3.6%	-4.8%	-3.6%	-3.6%	2.1%	
Romania	4 882	-2.7%	-4.4%	0.0%	-2.7%	3.3%	
Finland	28 456	-1.9%	-2.2%	0.9%	-1.9%	-1.3%	
Sweden	43 959	-4.0%	-4.4%	-1.1%	-4.0%	-3.1%	
Slovakia	20 563	-2.3%	-1.9%	3.2%	-2.3%	3.8%	
Slovenia	7 727	-12.7%	-13.0%	-9.4%	-12.7%	-15.2%	
United Kingdom	50 363	-4.8%	-5.1%	-2.9%	-4.8%	-3.3%	
EU-27	23 717	-2.8%	-3.2%	-1.4%	-2.8%	-2.8%	

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Option 2 is the less favourable scenario for the majority of Member States. The strengthening of crop diversification rules leads to a generally higher decrease of income than in option 1 for nearly all Member States. Only 6 Member States (Slovakia, Czech Republic, Estonia, Lithuania, Luxemburg and Ireland) have a lower drop of income due to production systems benefiting more from crops and beef price increases.

In contrast, for 10 Member States, a higher ecological set-aside of 10% has a positive effect due to the increase of market prices and, for a large majority of Member States, **option 3** least decreases farm income. The exceptions are 5 countries (Belgium, Denmark, The Netherlands, Cyprus and Malta) where animal production is important and where animal feed costs play a large role in the intermediate consumption. For these countries except Belgium it is the worst option.

In **option 5**, the effect is more differentiated as Member States are differently affected by the distribution of DP with the “Minimum 90% and objective criteria” scenario than with the “MFF DP distribution” scenario. It provides very significant increases of farm income in Latvia, Estonia and Lithuania, slight improvements in Slovakia, Romania and Portugal but is the worst option for the income of farmers in 6 MS, especially in Slovenia, Belgium, Greece and Italy.

5.3. Analysis by type of farming

The impacts on income are very different according to the type of farming (Table 11). Granivores farms would suffer a significant loss of income, from -10% to -26%, depending on the option of greening. This loss stems mainly from the market impacts of greening (Table 16 in annex). The crop diversification and ecological set-aside would indeed result in increased feed price, which is a main cost item for granivores (input). At the same time the greening would generate only low increase in pig and poultry prices and even a decrease in eggs price (output). The effect is bigger in option 3 when the ecological set-aside is set at 10%.

Table 11: Impact on income per worker by type of farming

	FNVA/AWU (€/AWU)	FNVA/AWU - comparison with the Basis in 2020					
		MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
		Basis	1	2	3	4	5
	-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	
Fieldcrops	24 404	-1.4%	-1.9%	4.0%	-1.4%	-1.2%	
Horticulture	36 293	-0.8%	-1.3%	-2.0%	-0.8%	-0.8%	
Wine	35 023	-0.2%	-0.1%	0.4%	-0.2%	-0.4%	
Other permanent crops	20 896	-0.6%	-0.6%	-0.5%	-0.6%	-1.0%	
Milk	29 141	-5.3%	-5.6%	-5.7%	-5.3%	-5.3%	
Other grazing livestock	22 771	-3.9%	-3.4%	-1.4%	-3.7%	-4.2%	
Granivores	23 210	-10.1%	-15.2%	-25.4%	-10.1%	-10.2%	
Mixed	14 789	-5.6%	-6.1%	-3.7%	-5.6%	-5.0%	
Total	23 717	-2.8%	-3.2%	-1.4%	-2.8%	-2.8%	

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

The income of milk farms would decrease between -5.3% and -5.7%, depending on the option. This is mainly caused by a higher cost of greening for this farm type: €2 117/milk farm compared to €1 042/farm on average for the EU-27 (options 1, 4 and 5). Even though the greening payment would compensate for the cost, in comparison

with the basis without greening requirements and with the same total amount of direct payments, the income would decrease. Moreover, the indirect market effects would not be favourable on average for milk farms: the low milk price increase would not compensate the increases in inputs prices.

Mixed farms would have their income decreasing by -3.7% to -6.1%, depending on the option. It is driven by the cost of greening (€1 169/mixed farm), a modest positive market impact and a relatively lower level of income (€14 789/AWU in comparison with €23 717/AWU for all types), which makes any change relatively higher than for other farm types.

For other grazing livestock and especially field crops farms, the positive market effects compensate a higher share of the greening cost, allowing lowest decreases in income. In option 3, the higher rate of ecological set-aside would even create cereals and crops price increases allowing to obtain an increase in income for field crops farms. But as highlighted before, this would mean higher prices for feed, driving significant drop in income for livestock sectors, especially granivores.

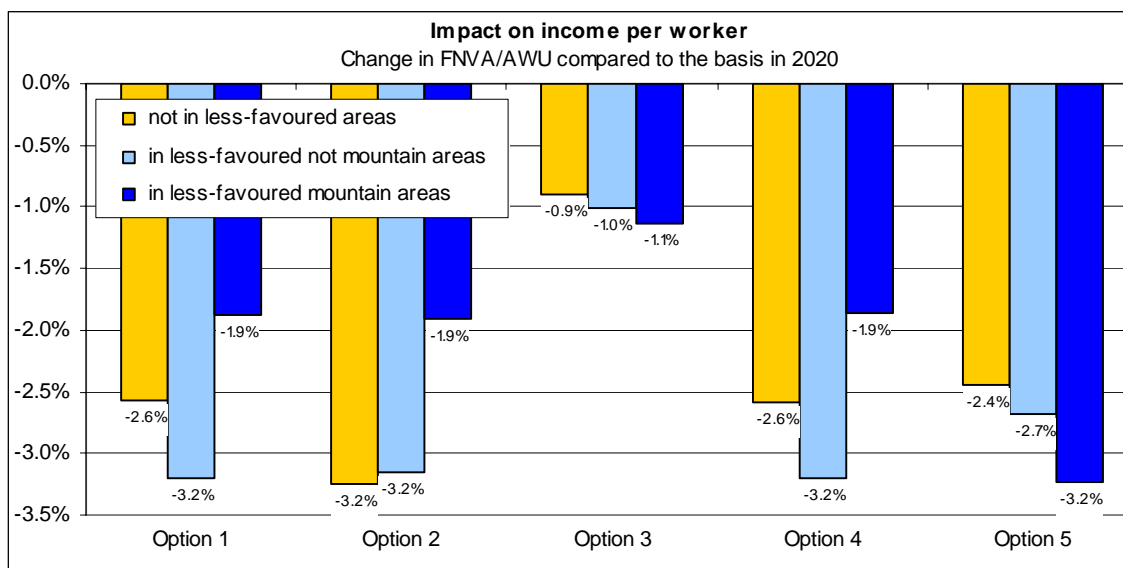
The impact on income is more moderate for wine farms, other permanent crops and horticulture farms, because the cost of greening is lower for them (€254/wine farm, €154/other permanent crops farm and €153/horticulture farm).

5.4. Analysis by LFA

On average for the EU-27, the impact of greening on income would vary between -3.2% and -0.9% depending on the LFA class and the option (Figure 11 and Table 17).

It can be noticed that, except for options 3 and 5, the impact on income for LFA Mountain is more attenuated than for the other classes. This is mainly thanks to a lower cost for greening: it is €576/farm in LFA Mountain and €1045/farm in not LFA (for options 1, 4 and 5). In LFA Mountain, the opportunity cost to maintain permanent pasture is indeed much lower than in other areas (there is often no alternative) and farms in LFA may respect already the other greening requirements. In option 3, the impact is slightly bigger for LFA Mountains because they do not benefit from as much positive market impacts as in other areas (they produce less cereals and more milk, sheep and goat with less advantageous developments).

Figure 11



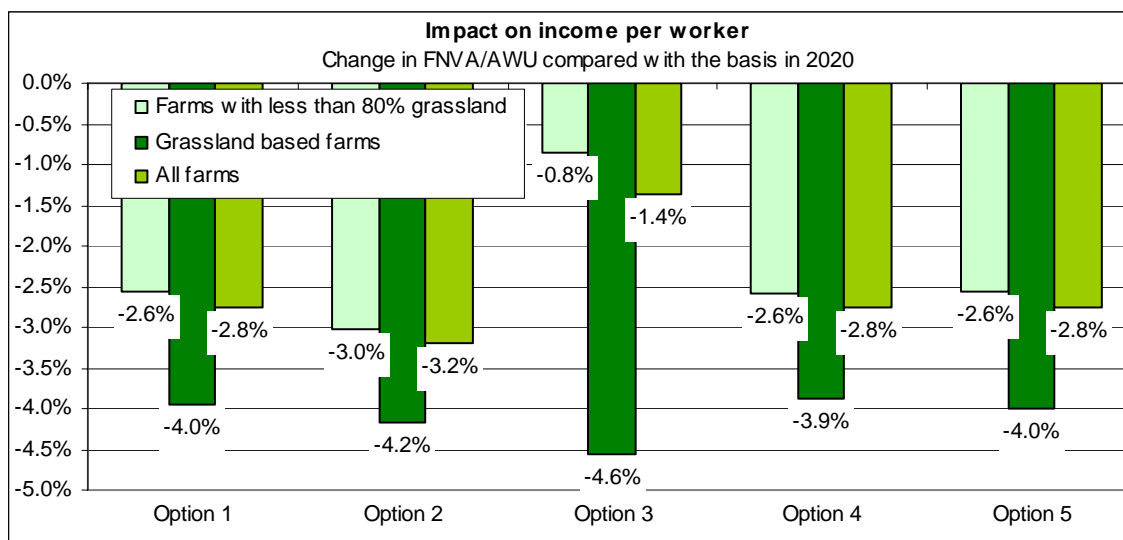
Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

In option 5, farm income is negatively impacted in LFA Mountain mainly because of the decrease in the total amount of direct payments in the "Minimum 90% and objective criteria" scenario than in the "MFF DP distribution".

5.5. Grassland-based farms

Grassland-based farms, where temporary, permanent grassland and rough grazing represent more than 80% of the utilised agricultural area, would suffer relatively more than other farms (Figure 12). Their income would decrease between -3.9% and -4.6%, depending on the option. This is not due to the cost of greening, which is similar in the two classes of farms (around €1 034/grass-based farms and €1 042/other farm, respectively in options 1, 4 and 5). This is mainly driven by the different market impacts (see Table 18 in annex). Grassland-based farms are mainly milk and other grazing livestock farms, which are relatively more affected than field crops and permanent crops, which constitute the bulk of farms with less than 80% of grassland. It should be underlined that to select grassland-based farms, temporary grass, i.e. grassland grown for less than five years on arable land, is also taken into account.

Figure 12



Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

The cost of greening increases for all farms in options 2 and 3, only slightly for grassland based farms but much more for the other farms.

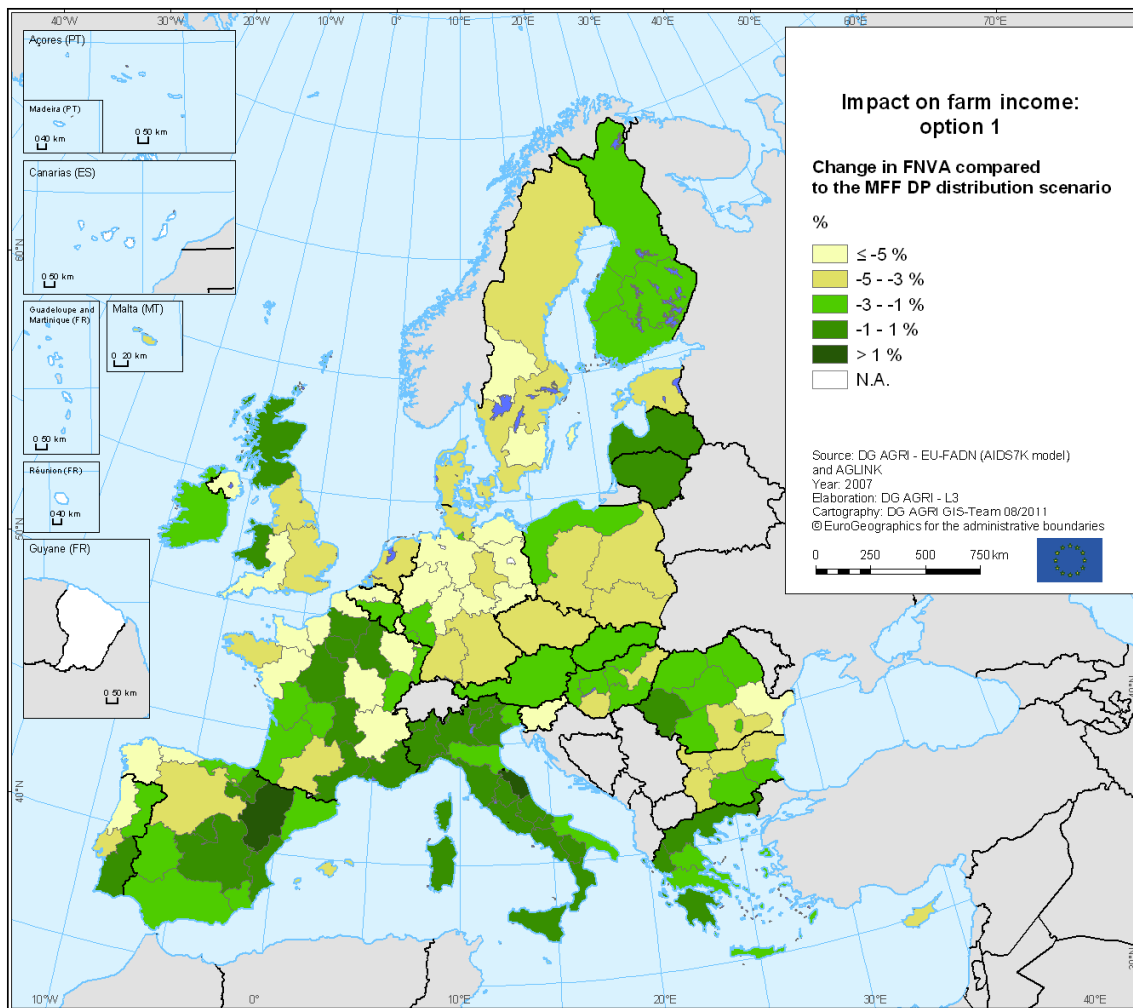
Therefore, for grassland based farms, the higher drops of income in options 2 and 3, in comparisons with option 1, are coming from the increasing negative market effect. For the other farms, the market effect is positive but does not totally offset the significant increase of the costs of greening, in particular for option 2. Option 2 is then the worst option as regards farm income for this type of farms.

5.6. Analysis by regions

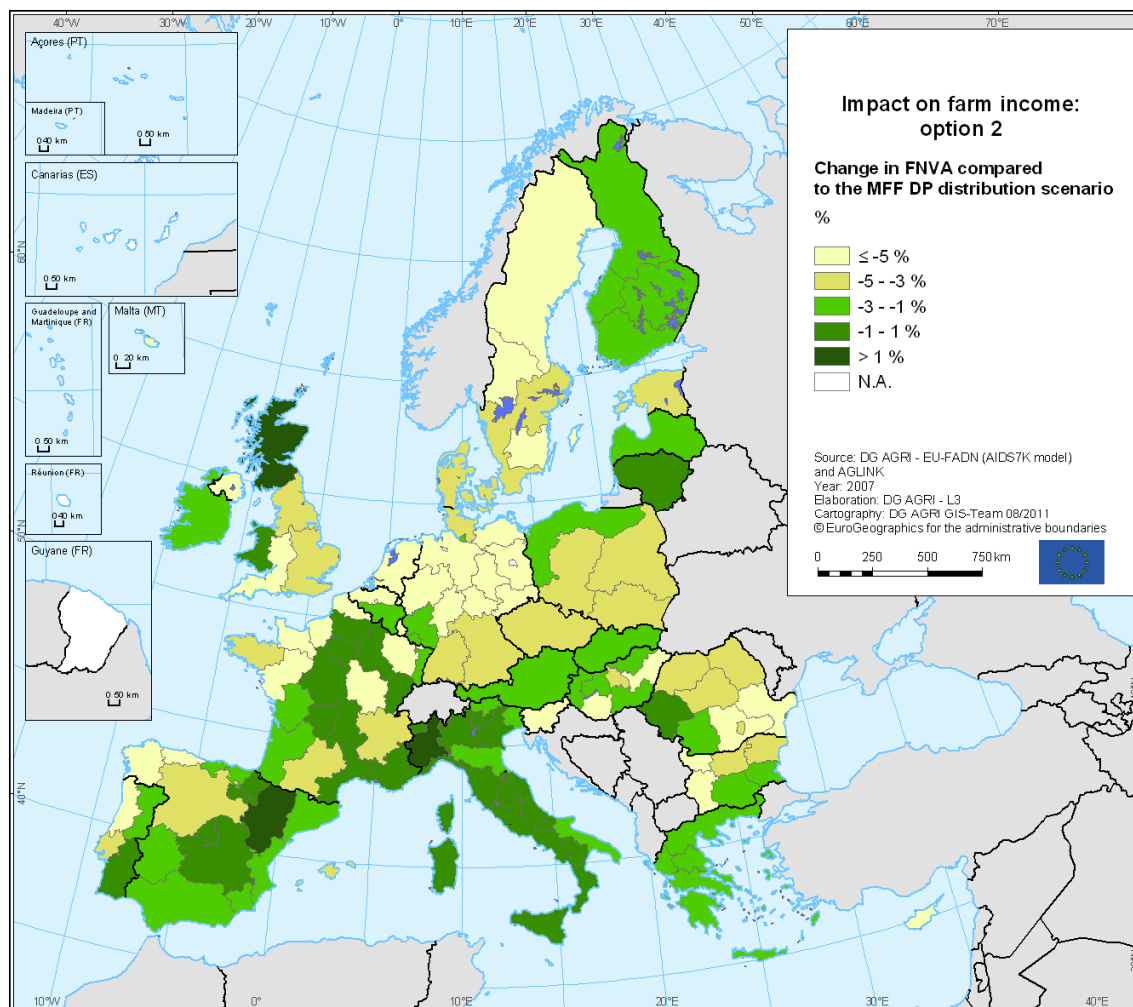
The following maps illustrate the diversity of impact in EU regions. Within one Member State, the impact can be significantly negative in some regions and positive in others.

For example in Spain, the impact of the first option of greening goes from -14% in *Asturias* to +3% in *Aragon* (Map 8). In *Asturias*, the negative impact is driven by the high total greening cost (Map 5) coming mainly from the permanent grassland requirement (Map 4) and the indirect market effects which are not favourable for milk and other grazing livestock farms (main activities in the region). In *Aragon*, greening cost is relatively low and the region is more diversified in terms of agricultural activities, especially fieldcrops, horticulture, wine, other permanent crops, which benefit from better market effects (see chapter 5.3). In option 1, the most negative impacts are observed in *Basse-Normandie*, *Lorraine*, *England-West*, *Northern Ireland*, *Entre Douro e Minho/Beira litoral*, *Slovenia* and *Asturias*. In general, the opportunity cost to maintain permanent grassland plays a major role, combined with disadvantageous market effects.

Map 8: Impact of greening on farm income – option 1

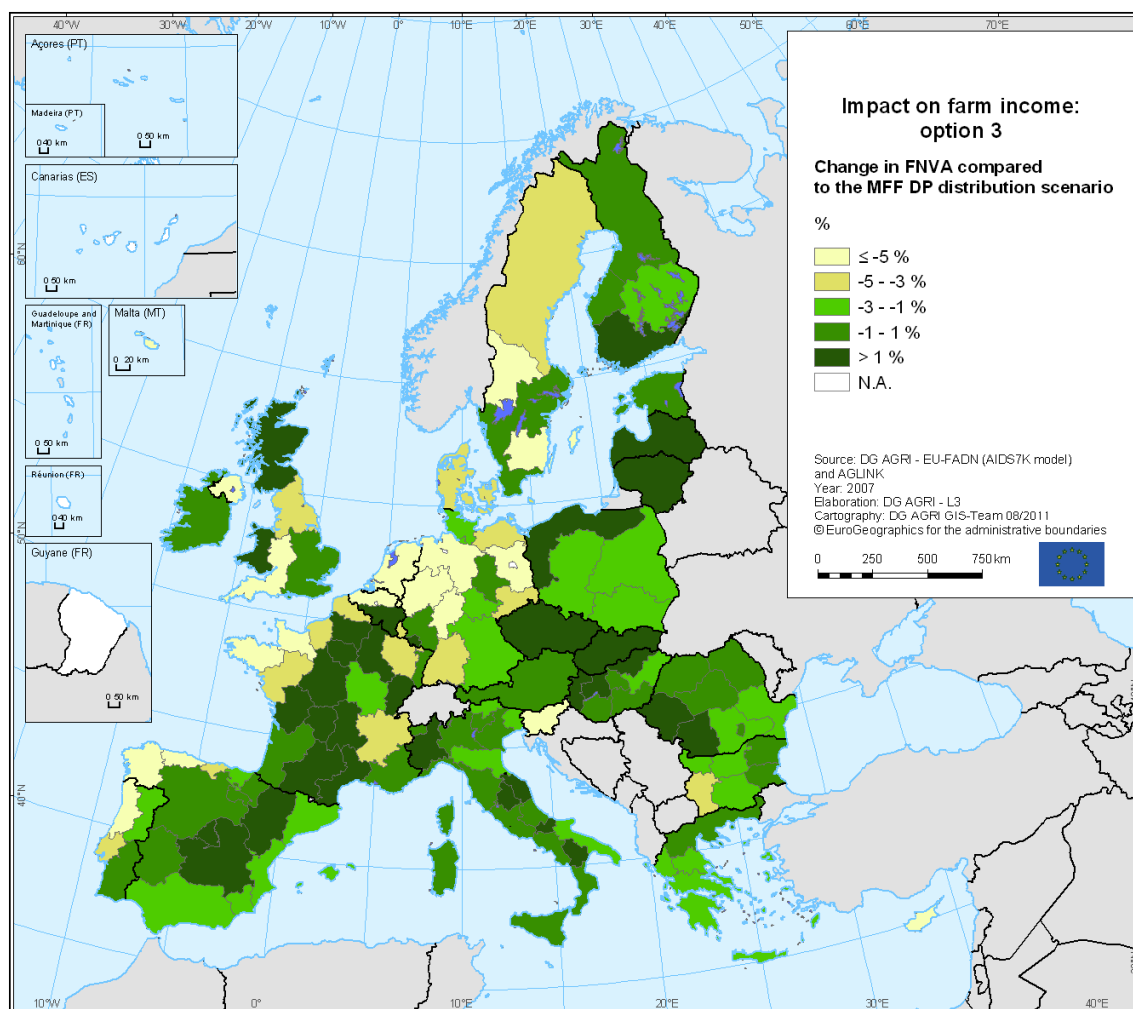


Map 9: Impact of greening on farm income – option 2



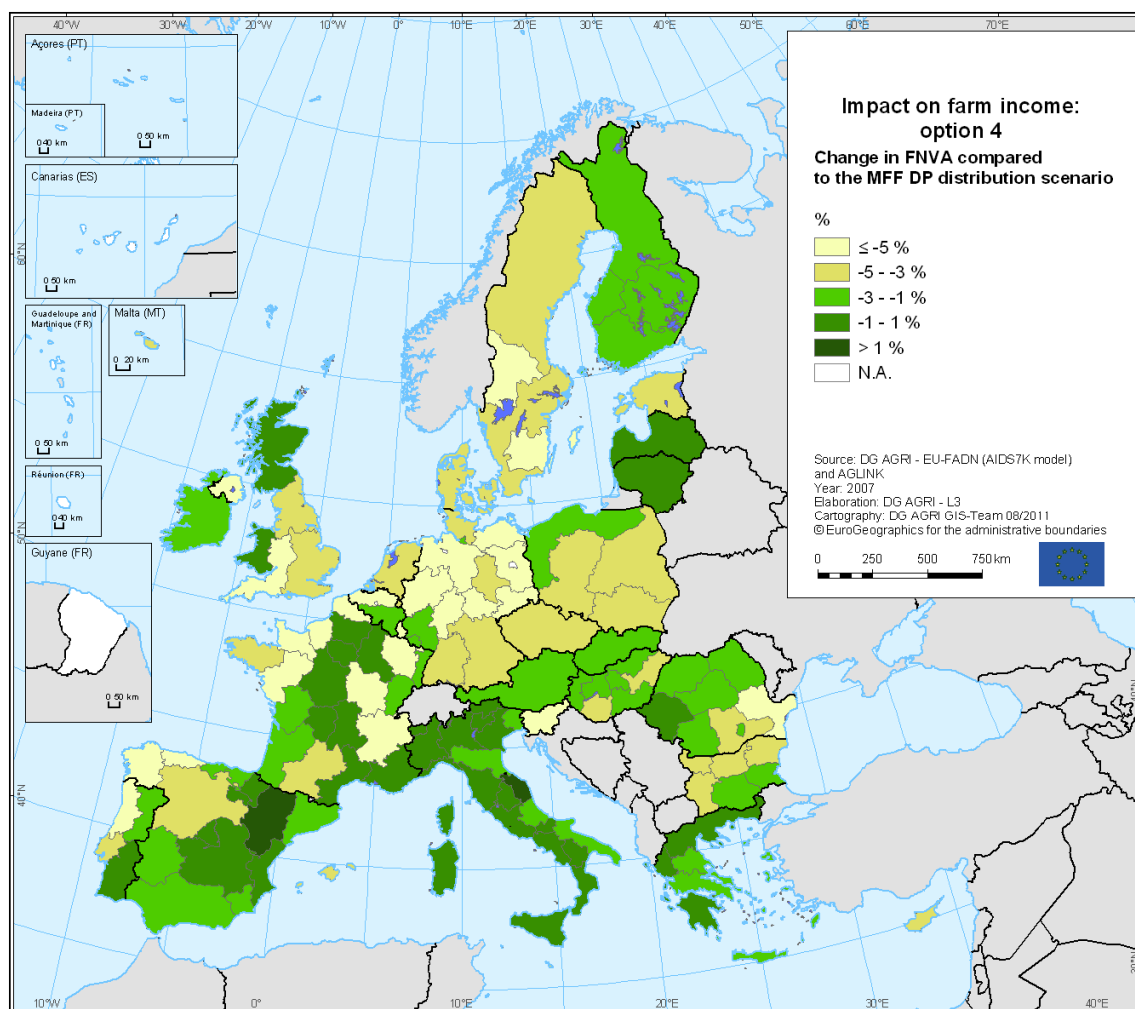
The picture in option 2, more demanding in terms of crop diversification, does not change much in comparison with option 1. Some regions are better off (like *Scotland* and *Limousin*), because they are less concerned by crop diversification (arable crops are not major production), and thanks to advantageous market developments driven by the indirect effects of the implementation of crop diversification such as beef price increases (Map 9). But in general regions switch to a more negative impact (*Entre Douro e Minho/Beira litoral*, the Netherlands, *Niedersachsen*, *Sachsen-Anhalt*, northern Romanian regions and northern Greek regions).

Map 10: Impact of greening on farm income – option 3



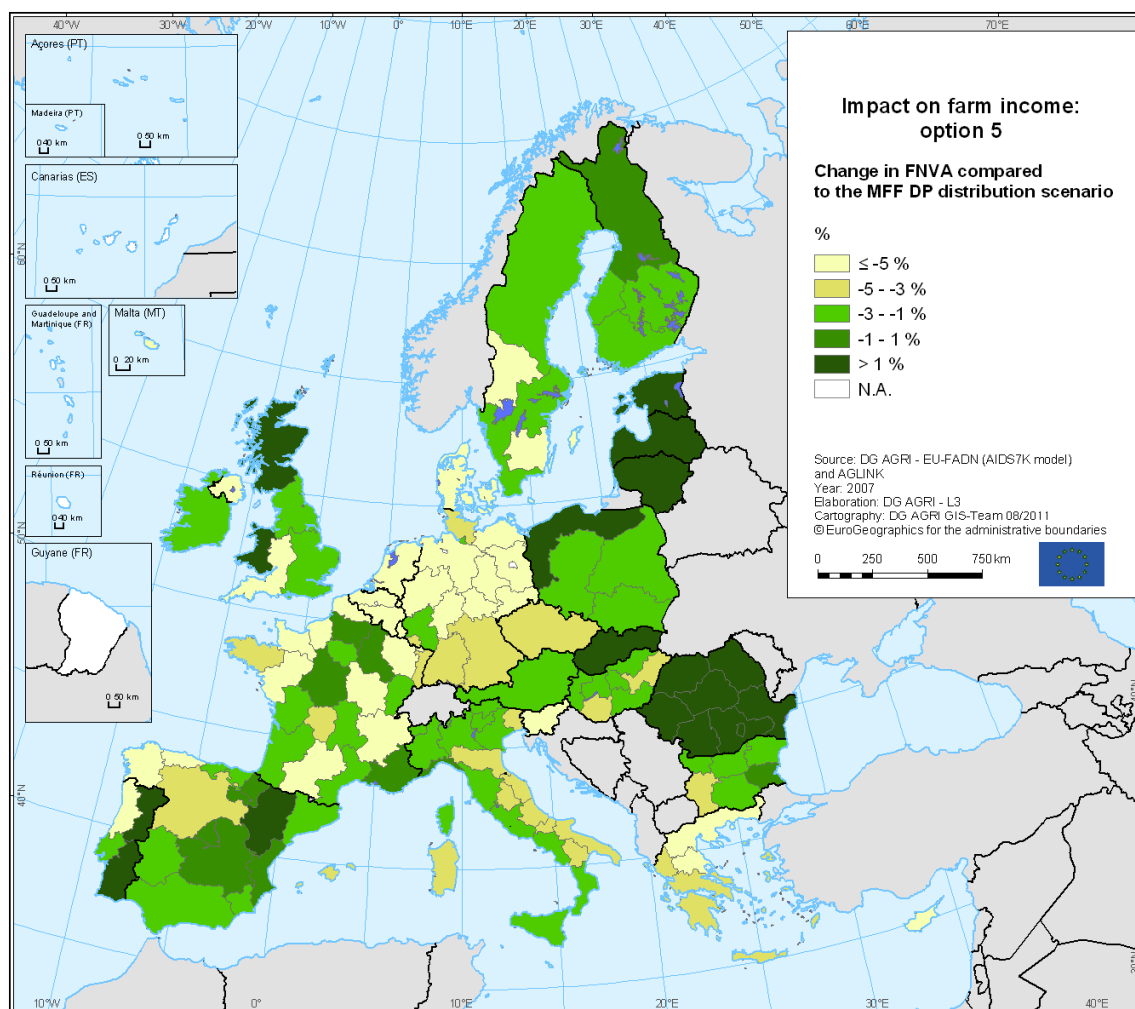
In option 3, although more demanding in terms of ecological set-aside, the impact is in general less negative than in option 1, with some regions even benefiting from the measure (for example the Center and North of France, *Mecklenburg-Vorpommern*, *Castilla-León*, *Sud-Vest* in Romania, Eastern regions of Hungary, the Czech republic, Slovakia, *Etela-Suomi* in southern Finland etc.) (Map 10). This is thanks to increased output prices generated by a higher rate of set-aside. But it is not systematic: the impact is for example more negative for *Bretagne* (France) and the Netherlands.

Map 11: Impact of greening on farm income – option 4



As explained before (see chapter 5.1), the impacts on income of options 1 and 4 are the same since the definition of the greening measures is the same (only the proportion of budget dedicated to the greening changes), and therefore the cost for the greening and the market impacts are the same. The only difference is the allocation of the direct payments to each component. Therefore Map 11 is identical to the one corresponding to option 1.

Map 12: Impact of greening on farm income – option 5



For option 5, the differences of impacts in comparison with option 1 come from the different distribution of direct payments between the two options: MFF DP distribution in option 1 and Minimum 90% and objective criteria in option 5. It leads to significant increases of income in Baltic countries, *Alentejo e Algarve* and *Tras-os-Montes/Beira interior* in Portugal, southern regions in Romania and Slovakia (Map 12). On the contrary, income decreases further in particular in eastern side of Italy, Greece, *Wallonie* (Belgium) and Denmark.

Annexes

Annex 1 – Methodology on the estimate of costs of greening measures

Crop diversification

Summary methodology

It is assumed that additional costs arise in those farms where a single crop covers more than 70% (in option 2 the maximum is 50%) of the arable land as farms would have to cultivate other crops on this area. Additional costs or loss of income are assumed to be equal to the difference of the farm individual gross margin of arable land and the average regional gross margin of field crop farms whose set of arable cultures is diversified. In the cases where the farm individual gross margin is lower than this regional average no additional costs are assumed.

Ecological set-aside

Summary methodology

Additional costs for the implementation of the measure arise only if the amount of fallow land on the farm is lower than the area to be set-aside (5% of the PEA in option 1, 2, 4 and 5 and 10% in option 3). For each additional ha it is assumed that the costs equal 2/3 of the farm individual gross margin of arable land. The idea is that the farmers will set-aside the less productive areas (with the assumption that they reach 2/3 of the average farm gross margin).

Green cover

Summary methodology

The costs for the implementation of green cover are estimated based on assumptions on the affected area and the costs per ha. It was assumed that green cover would have to be applied on 70% of the arable land less the area of ecological set-aside + the area of permanent crops. As there is a no information on green cover available in the FADN farm accounts, several assumptions had to be made: first, it was assumed that a large part of the area covered by cereals is covered during the winter, as in most cases a large share of the cereals are winter crops. As in the FADN it is not differentiated between winter and summer crops it was assumed that on each farm the share is equal to the national figures published by EUROSTAT. Furthermore, it was assumed that 30% of the area of permanent crops is already covered. The costs per ha of land to be additionally covered are assumed to be equal to 50€

Preservation of permanent grassland

Summary methodology

At farm level, it is assumed that:

- there is no opportunity cost, and therefore no economic cost, of the measure in farms where there are less than 5% of arable land. Indeed, if there is no arable land on the farm, it means that at local level, the natural conditions probably do not allow to convert permanent grassland into arable land. Moreover, if there is no arable land on the farm, to convert permanent grassland in arable land would have a high "entry cost", because),
- there is no opportunity where sheep and goats represent more than 70% of grazing livestock units,
- there is no opportunity for rough grazing and for 10% of permanent pastures.

Otherwise, the opportunity cost is estimated to be 2/3 of the difference in gross margins (if positive) between permanent grassland based systems and alternative systems at regional level. Only a fraction of the difference is kept in order to take into account the investment that the farmer needs to do to convert grassland into arable land. The opportunity cost is therefore less than the difference in gross margins that assume identical level of fixed costs. Moreover the newly converted grassland would probably not have a level of productivity as high as land already in fodder crops (the most productive areas have been converted into arable crops before). Therefore the gross margin of the newly converted grassland is probably lower. If the difference is negative, the opportunity cost is null.

The existing CAP limit of 10% on ploughing up permanent grassland, applied at MS or regional level, was not taken into account in the calculations and there is no assumption concerning possible flexibility provided to individual farmers on ploughing up permanent grassland.

The regional opportunity cost is based on the difference in gross margins (if positive) between permanent grassland based systems and alternative systems in the region considered. If the difference is negative, the opportunity cost is null. European regions have been divided into three groups:

- Regions for which there are enough specialised cattle farms in both systems "permanent grass-based" and "forage crops-based". In those regions, it is considered that the first alternative to cattle production based on grass is to continue production with adapting the feeding systems by ploughing the grassland to produce forage crops. The gross margins of cattle production (milk and beef) per hectare of forage area are compared between the two systems (permanent pasture and other fodders), where possible with differentiating by Less Favoured Area (LFA) status. Those regions represent on average 84% of total permanent pasture in the EU-27 and 54% of rough grazing.
- Regions where permanent pasture is not relevant or where there is no alternative identified. Those regions cover around 3% of total permanent pasture and 9% of rough grazing.
- In the remaining regions, where cattle production takes place in mixed cropping-livestock farms, it is assumed that the alternative is to give up cattle production and to specialise towards field cropping. The farm gross margins per hectare of utilised agricultural area in mixed and specialised cropping farms are compared. Those regions represent on average 13% of total permanent pasture in the EU-27 and 36% of rough grazing.

The methodology applied is detailed below for each group of regions. For all groups average FADN data 2005-2006-2007 have been used.

For the **first group of regions**, specialised cattle farms¹⁰ have been classified into 4 categories:

(1) Farms with very low fodder area (less than 5 ha): to exclude very intensive farms and very extensive farms based mainly on common land.

(2) Farms based on permanent pasture: farms not in (1), where grassland (temporary grassland + permanent grassland + rough grazing) represents more than 75% of fodder area, where permanent pasture and rough grazing represent more than 50% of fodder area and where permanent pasture is greater than 0.

(3) Farms based on rough grazing: farms not in (1), where grassland (temporary grassland + permanent grassland + rough grazing) represents more than 75% of fodder area, where permanent pasture and rough grazing represent more than 50% of fodder area and where permanent pasture = 0.

(4) Farms based on other fodder: farms not in the previous categories.

Using the model to allocate cost for milk and beef, the gross margins¹¹ for milk and beef have been calculated for categories (2) and (4) by region and when possible by distinguishing by LFA area. The difference between the gross margin per hectare in category (4) and the one in category (2) is supposed to be the basis to estimate the regional opportunity cost for permanent pasture.

The **second group of regions** was identified applying a series of criteria:

- regions where there is no permanent pasture
- or where the share of grassland in total agricultural area is greater than 90%
- or where the share of rough grazing in grassland is greater than 90%.

In the **remaining regions**, farms have been classified into 4 categories:

- (1) Field crops: farms in the types of farming (TF) 'specialist COP' or 'general field cropping' (TF 13 and 14),
- (2) Grazing mixed: when the type of farming is in grazing livestock and mixed livestock farms (TF 41, 42, 43, 44, 71, 81), when fodder area is strictly positive, when permanent pasture is strictly positive, and when permanent pasture plus rough grazing represent more than 50% of fodder area,
- (3) Other grazing: when the type of farming is in grazing livestock and mixed livestock farms (TF 41, 42, 43, 44, 71, 81), and not in the previous class
- (4) Other: other types of farming

In those regions, we compared the farm gross margin (total output minus intermediate consumption) minus wages paid per hectare of utilised agriculture area in the categories (1) and (2). The basis to estimate the regional opportunity cost is supposed to be the difference in farm gross margin per ha between (1) and (2).

¹⁰ Specialised cattle farms: farms where milk and beef represent more than 50% of the total output (value of the production).

¹¹ Milk and beef market margin (possible coupled payments are not included) per hectare of fodder area.

Annex 2 – Detailed results

Table 12

EU-27	MFF DP distribution	MFF DP distribution		MFF DP distribution			MFF DP distribution			MFF DP distribution			Min 90% and obj. crit.		
	Basis	1		2			3			4			5		
	-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF		30% DP, 50% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 10% set-as, 70% GC, PP, OF			25% DP, 70% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 5% set-as, 70% GC, PP, OF		
	2020	2020	/Basis	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1
MARKET															
Output - €/farm	66 678	67 311	1%	67 604	1%	0%	69 069	4%	3%	67 311	1%	0%	67 311	1%	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES															
Total Pillar 1 payments - €/farm	8 382	8 381	0%	8 381	0%	0%	8 381	0%	0%	8 381	0%	0%	8 381	0%	0%
Basic rate / decoupled - €/farm	8 073	5 650	-30%	5 650	-30%	0%	5 650	-30%	0%	6 054	-25%	7%	5 650	-30%	0%
Coupled payments - €/farm	309	231	-25%	231	-25%	0%	231	-25%	0%	244	-21%	6%	231	-25%	0%
Greening - €/farm	0	2 499	-	2 499	-	0%	2 499	-	0%	2 083	-	-17%	2 499	-	0%
Natural handicap - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
Small beneficiaries - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
Total Pillar 1 and 2 payments - €/farm	10 035	10 035	0%	10 035	0%	0%	10 035	0%	0%	10 035	0%	0%	10 034	0%	0%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
COSTS															
Total operating costs, depreciation and taxes	45 729	47 215	3%	47 643	4%	1%	48 539	6%	3%	47 215	3%	0%	47 215	3%	0%
Intermediate consumptions - €/farm	38 864	39 309	1%	39 550	2%	1%	40 394	4%	3%	39 309	1%	0%	39 309	1%	0%
Depreciation and taxes - €/farm	8 030	8 030	0%	8 030	0%	0%	8 030	0%	0%	8 030	0%	0%	8 030	0%	0%
Estimated costs for greening - €/farm	0	1 041	-	1 228	-	18%	1 280	-	23%	1 042	-	0%	1 042	-	0%
Total external factors, own capital and investment aids	15 255	15 255	0%	15 255	0%	0%	15 255	0%	0%	15 255	0%	0%	15 256	0%	0%
External factor costs - €/farm	10 220	10 221	0%	10 221	0%	0%	10 221	0%	0%	10 221	0%	0%	10 217	0%	0%
Own capital - €/farm	5 030	5 030	0%	5 030	0%	0%	5 030	0%	0%	5 030	0%	0%	5 034	0%	0%
INCOME ESTIMATORS															
Farm Net Value Added - €/farm	30 984	30 130	-3%	29 995	-3%	0%	30 564	-1%	1%	30 130	-3%	0%	30 130	-3%	0%
Farm Net Value Added per AWU - €/AWU	23 717	23 064	-3%	22 960	-3%	0%	23 396	-1%	1%	23 063	-3%	0%	23 063	-3%	0%
Remuneration for family labour - €/farm	15 729	14 875	-5%	14 739	-6%	-1%	15 309	-3%	3%	14 874	-5%	0%	14 873	-5%	0%
Remuneration for family labour - €/FWU	15 535	14 753	-5%	14 626	-6%	-1%	15 109	-3%	2%	14 753	-5%	0%	14 712	-5%	0%
Share of Pillar 1 payments in FNVA	27%	28%	3%	28%	3%	0%	27%	1%	-1%	28%	3%	0%	28%	3%	0%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Table 13

EU15	MFF DP distribution	MFF DP distribution		MFF DP distribution			MFF DP distribution			MFF DP distribution			Min 90% and obj. crit.		
	Basis	1		2			3			4			5		
	-	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF		30% DP, 50% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 10% set-as, 70% GC, PP, OF			25% DP, 70% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 5% set-as, 70% GC, PP, OF		
	2020	2020	/Basis	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1
MARKET															
Output - €/farm	93 890	94 745	1%	95 181	1%	0%	97 053	3%	2%	94 745	1%	0%	94 745	1%	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES															
Total Pillar 1 payments - €/farm	11 284	11 284	0%	11 284	0%	0%	11 284	0%	0%	11 284	0%	0%	10 917	-3%	-3%
Basic rate / decoupled - €/farm	10 754	7 527	-30%	7 527	-30%	0%	7 527	-30%	0%	8 065	-25%	7%	7 271	-32%	-3%
Coupled payments - €/farm	531	397	-25%	397	-25%	0%	397	-25%	0%	419	-21%	6%	397	-25%	0%
Greening - €/farm	0	3 359	-	3 359	-	0%	3 359	-	0%	2 800	-	-17%	3 250	-	-3%
Natural handicap - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
Small beneficiaries - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
Total Pillar 1 and 2 payments - €/farm	13 513	13 512	0%	13 512	0%	0%	13 512	0%	0%	13 512	0%	0%	13 146	-3%	-3%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-
COSTS															
Total operating costs, depreciation and taxes	63 878	65 897	3%	66 499	4%	1%	67 731	6%	3%	65 898	3%	0%	65 898	3%	0%
Intermediate consumptions - €/farm	54 056	54 710	1%	55 070	2%	1%	56 273	4%	3%	54 710	1%	0%	54 710	1%	0%
Depreciation and taxes - €/farm	11 464	11 464	0%	11 464	0%	0%	11 464	0%	0%	11 464	0%	0%	11 464	0%	0%
Estimated costs for greening - €/farm	0	1 366	-	1 608	-	18%	1 637	-	20%	1 366	-	0%	1 366	-	0%
Total external factors, own capital and investment aids	22 287	22 287	0%	22 287	0%	0%	22 287	0%	0%	22 287	0%	0%	22 218	0%	0%
External factor costs - €/farm	15 054	15 056	0%	15 056	0%	0%	15 056	0%	0%	15 056	0%	0%	15 015	0%	0%
Own capital - €/farm	7 189	7 188	0%	7 188	0%	0%	7 188	0%	0%	7 188	0%	0%	7 159	0%	0%
INCOME ESTIMATORS															
Farm Net Value Added - €/farm	43 525	42 360	-3%	42 193	-3%	0%	42 834	-2%	1%	42 359	-3%	0%	41 993	-4%	-1%
Farm Net Value Added per AWU - €/AWU	34 058	33 146	-3%	33 016	-3%	0%	33 517	-2%	1%	33 146	-3%	0%	32 859	-4%	-1%
Remuneration for family labour - €/farm	21 237	20 072	-5%	19 906	-6%	-1%	20 547	-3%	2%	20 072	-5%	0%	19 775	-7%	-1%
Remuneration for family labour - €/FWU	21 810	20 688	-5%	20 522	-6%	-1%	21 138	-3%	2%	20 688	-5%	0%	20 400	-6%	-1%
Share of Pillar 1 payments in FNVA	26%	27%	3%	27%	3%	0%	26%	2%	-1%	27%	3%	0%	26%	0%	-2%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Table 14

EU12	MFF DP distribution			MFF DP distribution			MFF DP distribution			MFF DP distribution			Min 90% and obj. crit.					
	Basis			1			2			3			4			5		
	-			30% DP, 70% diver, 5% set-as, 70% GC, PP, OF			30% DP, 50% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 10% set-as, 70% GC, PP, OF			25% DP, 70% diver, 5% set-as, 70% GC, PP, OF			30% DP, 70% diver, 5% set-as, 70% GC, PP, OF		
	2020	2020	/Basis	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1	2020	/Basis	/Scenario 1
MARKET																		
Output - €/farm	29 202	29 528	1%	29 626	1%	0%	30 529	5%	3%	29 528	1%	0%	29 528	1%	0%	29 528	1%	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES																		
Total Pillar 1 payments - €/farm	4 384	4 383	0%	4 383	0%	0%	4 383	0%	0%	4 383	0%	0%	4 887	11%	12%	4 887	11%	12%
Basic rate / decoupled - €/farm	4 380	3 065	-30%	3 065	-30%	0%	3 065	-30%	0%	3 284	-25%	7%	3 418	-22%	12%	3 418	-22%	12%
Coupled payments - €/farm	4	3	-30%	3	-30%	0%	3	-30%	0%	3	-25%	7%	3	-30%	0%	3	-30%	0%
Greening - €/farm	0	1 315	-	1 315	-	0%	1 315	-	0%	1 096	-	-17%	1 466	-	12%	1 466	-	12%
Natural handicap - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
Small beneficiaries - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
Total Pillar 1 and 2 payments - €/farm	5 246	5 245	0%	5 245	0%	0%	5 245	0%	0%	5 245	0%	0%	5 749	10%	10%	5 749	10%	10%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
COSTS																		
Total operating costs, depreciation and taxes	20 736	21 487	4%	21 676	5%	1%	22 110	7%	3%	21 487	4%	0%	21 487	4%	0%	21 487	4%	0%
Intermediate consumptions - €/farm	17 941	18 097	1%	18 177	1%	0%	18 526	3%	2%	18 097	1%	0%	18 097	1%	0%	18 097	1%	0%
Depreciation and taxes - €/farm	3 303	3 303	0%	3 303	0%	0%	3 303	0%	0%	3 303	0%	0%	3 303	0%	0%	3 303	0%	0%
Estimated costs for greening - €/farm	0	595	-	705	-	19%	789	-	33%	595	-	0%	595	-	0%	595	-	0%
Total external factors, own capital and investment aids	5 571	5 571	0%	5 571	0%	0%	5 571	0%	0%	5 571	0%	0%	5 668	2%	2%	5 668	2%	2%
External factor costs - €/farm	3 563	3 562	0%	3 562	0%	0%	3 562	0%	0%	3 562	0%	0%	3 609	1%	1%	3 609	1%	1%
Own capital - €/farm	2 057	2 057	0%	2 057	0%	0%	2 057	0%	0%	2 057	0%	0%	2 108	2%	2%	2 108	2%	2%
INCOME ESTIMATORS																		
Farm Net Value Added - €/farm	13 713	13 287	-3%	13 195	-4%	-1%	13 665	0%	3%	13 287	-3%	0%	13 791	1%	4%	13 791	1%	4%
Farm Net Value Added per AWU - €/AWU	10 191	9 875	-3%	9 807	-4%	-1%	10 156	0%	3%	9 875	-3%	0%	10 250	1%	4%	10 250	1%	4%
Remuneration for family labour - €/farm	8 142	7 716	-5%	7 624	-6%	-1%	8 094	-1%	5%	7 716	-5%	0%	8 123	0%	5%	8 123	0%	5%
Remuneration for family labour - €/FWU	7 206	6 875	-5%	6 799	-6%	-1%	7 105	-1%	3%	6 875	-5%	0%	7 162	-1%	4%	7 162	-1%	4%
Share of Pillar 1 payments in FNVA	32%	33%	3%	33%	4%	1%	32%	0%	-3%	33%	3%	0%	35%	11%	7%	35%	11%	7%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Table 15: Decomposition of the impact of greening on farm income in the market effect and the “direct payment”^(*) effect – by Member States

	Market Effect of greening - per farm					DP Effect of greening (including costs of greening) - per farm					Full Effect of greening - per farm				
	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Belgium	-593	-1 273	-570	-593	-593	-4 448	-4 551	-5 090	-4 448	-6 509	-5 041	-5 825	-5 661	-5 683	-7 102
Bulgaria	28	-21	414	28	28	-459	-595	-633	-459	-298	-431	-616	-219	-605	-270
Cyprus	-145	-205	-478	-145	-145	-373	-475	-524	-373	-705	-518	-679	-1 002	-669	-850
Czech Republic	3 374	4 126	12 938	3 374	3 374	-9 127	-9 533	-11 620	-9 127	-9 127	-5 753	-5 408	1 318	-8 246	-5 753
Denmark	-949	-1 582	-1 167	-949	-949	-1 916	-2 411	-3 373	-1 916	-4 787	-2 865	-3 994	-4 540	-4 322	-5 736
Germany	56	-539	1 968	56	56	-4 151	-4 478	-4 906	-4 157	-5 347	-4 095	-5 017	-2 938	-4 850	-5 291
Greece	74	143	198	74	74	-226	-335	-308	-226	-670	-153	-192	-110	-234	-597
Spain	303	557	920	303	303	-893	-1 195	-1 009	-893	-822	-590	-638	-89	-706	-519
Estonia	935	1 176	3 400	935	935	-2 414	-2 597	-2 962	-2 414	7 894	-1 479	-1 420	438	-2 027	8 829
France	668	786	3 093	668	668	-2 462	-2 592	-3 002	-2 462	-3 105	-1 794	-1 806	91	-2 333	-2 437
Hungary	516	525	2 555	516	516	-1 418	-1 761	-2 178	-1 418	-1 418	-902	-1 236	378	-1 662	-902
Ireland	416	688	1 384	416	416	-1 106	-1 172	-1 181	-1 106	-1 119	-690	-484	203	-765	-703
Italy	287	617	712	287	287	-509	-879	-691	-509	-1 292	-222	-262	22	-404	-1 004
Lithuania	565	763	2 071	565	565	-636	-781	-929	-636	2 743	-71	-18	1 142	-364	3 308
Luxembourg	613	878	2 599	613	613	-4 568	-4 572	-4 857	-4 568	-4 793	-3 955	-3 694	-2 258	-4 244	-4 180
Latvia	267	324	1 096	267	267	-431	-582	-584	-431	5 585	-165	-259	512	-317	5 852
Malta	-713	-1 063	-2 357	-713	-713	-508	-813	-651	-508	-1 194	-1 221	-1 876	-3 008	-1 364	-1 907
Netherlands	-2 939	-4 817	-8 273	-2 939	-2 939	-3 809	-4 028	-4 233	-3 809	-5 103	-6 748	-8 845	-12 506	-7 172	-8 042
Austria	137	105	920	137	137	-1 125	-1 193	-1 324	-1 125	-1 125	-988	-1 087	-404	-1 187	-988
Poland	164	166	695	164	164	-687	-734	-897	-687	-370	-523	-568	-202	-733	-206
Portugal	-8	20	-42	-8	-8	-570	-774	-530	-570	348	-578	-754	-572	-538	340
Romania	72	88	328	72	72	-253	-383	-331	-253	148	-181	-295	-3	-258	220
Finland	406	587	1 604	406	406	-1 074	-1 333	-1 284	-1 074	-866	-668	-746	320	-878	-460
Sweden	434	359	2 622	434	434	-2 656	-2 792	-3 245	-2 656	-2 157	-2 222	-2 433	-623	-2 811	-1 723
Slovakia	5 669	6 842	23 029	5 669	5 669	-11 117	-11 266	-15 552	-11 117	3 234	-5 448	-4 424	7 477	-9 883	8 903
Slovenia	173	267	570	173	173	-1 321	-1 441	-1 419	-1 321	-1 538	-1 148	-1 174	-849	-1 246	-1 365
United Kingdom	673	705	3 555	673	673	-5 402	-5 768	-6 399	-5 402	-3 900	-4 729	-5 063	-2 843	-5 726	-3 227
EU-27	188	240	861	188	188	-1 042	-1 229	-1 281	-1 043	-1 043	-854	-989	-420	-1 093	-854

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

(*) it corresponds only to the cost of greening except for option 5 where there is another distribution of direct payments than in the base scenario

Table 16: Decomposition of the impact of greening on farm income in the market effect and the “direct payment”^(*) effect – by Type of Farming

	Market Effect of greening - per farm					DP Effect of greening (including costs of greening) - per farm					Full Effect of greening - per farm					
	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Fieldcrops	782	1 083	2 897	782	782	-1 184	-1 657	-1 720	-1 195	-1 126	-402	-574	1 178	-413	-344	
Horticulture	-540	-896	-1 544	-540	-540	-149	-240	-215	-151	-181	-689	-1 136	-1 759	-691	-722	
Wine	120	189	433	120	120	-206	-226	-242	-216	-356	-86	-36	191	-96	-236	
Other permanent crops	7	12	38	7	7	-138	-161	-153	-142	-246	-131	-149	-116	-135	-239	
Milk	-107	-173	-203	-107	-107	-2 072	-2 134	-2 154	-2 080	-2 086	-2 180	-2 306	-2 357	-2 187	-2 194	
Other grazing livestock	332	526	1 114	332	332	-1 468	-1 517	-1 523	-1 428	-1 560	-1 136	-992	-409	-1 096	-1 228	
Granivores	-2 938	-4 489	-8 004	-2 938	-2 938	-573	-795	-856	-577	-611	-3 511	-5 285	-8 859	-3 514	-3 549	
Mixed	118	113	714	118	118	-1 182	-1 268	-1 422	-1 180	-1 071	-1 064	-1 156	-708	-1 063	-954	
Total	188	240	861	188	188	-1 042	-1 229	-1 281	-1 043	-1 043	-854	-989	-420	-854	-854	

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

(*) it corresponds only to the cost of greening except for option 5 where there is another distribution of direct payments than in the base scenario

Table 17: Decomposition of the impact of greening on farm income in the market effect and the “direct payment”^(*) effect – by LFA

	Market Effect of greening - per farm					DP Effect of greening (including costs of greening) - per farm					Full Effect of greening - per farm				
	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
not in less-favoured areas	230	281	1 067	230	230	-1 025	-1 286	-1 342	-1 029	-986	-795	-1 005	-276	-799	-756
in less-favoured not mountain areas	270	388	1 057	270	270	-1 166	-1 272	-1 339	-1 163	-1 020	-896	-884	-282	-893	-750
in less-favoured mountain areas	100	167	371	100	100	-622	-697	-684	-615	-991	-522	-530	-313	-514	-891
Total	188	240	861	188	188	-1 042	-1 229	-1 281	-1 043	-1 043	-854	-989	-420	-854	-854

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

(*) it corresponds only to the cost of greening except for option 5 where there is another distribution of direct payments than in the base scenario

Table 18: Decomposition of the impact of greening on farm income in the market effect and the “direct payment”^(*) effect – for grassland based farms

	Market Effect of greening - per farm					DP Effect of greening (including costs of greening) - per farm					Full Effect of greening - per farm				
	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.	MFF DP distribution	MFF DP distribution	MFF DP distribution	MFF DP distribution	Min 90% and obj. crit.
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 50% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 10% set-as, 70% GC, PP, OF	25% DP, 70% diver, 5% set-as, 70% GC, PP, OF	30% DP, 70% diver, 5% set-as, 70% GC, PP, OF
Farms with less than 80% grassland	234	300	1 036	234	234	-1 021	-1 233	-1 295	-1 025	-1 020	-787	-932	-259	-791	-785
Grassland based farms	-115	-157	-295	-115	-115	-1 182	-1 206	-1 191	-1 156	-1 196	-1 297	-1 364	-1 486	-1 270	-1 311
All farms	188	240	861	188	188	-1 042	-1 229	-1 281	-1 043	-1 043	-854	-989	-420	-854	-854

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

(*) it corresponds only to the cost of greening except for option 5 where there is another distribution of direct payments than in the base scenario



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Common Agricultural Policy towards 2020

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ANNEX 2E: TECHNICAL ANNEX ON CROSS COMPLIANCE

1. BACKGROUND

CAP payments are linked to the respect of basic requirements for agricultural activity through the so called system of cross compliance. These basic requirements stem from some EU legislation taken from a wider body of EU legislation on environment, food safety, animal and plant health and animal welfare (Statutory Management Requirements - SMRs), but also include standards on keeping land in Good Agricultural and Environmental Conditions (GAEC) which are specific to cross compliance.

In the case of SMRs, the legal obligations applying at farm level stem from Directives and Regulations developed at EU level. These legal acts apply to all concerned physical or legal persons whether they receive or not CAP support. These legal instruments have their own sanctions systems to deal with infringements, and Member States implement management and control systems for them as provided for in the legal acts.

It has to be stressed that regardless of whether EU environmental or other legislation is included in cross compliance, it is nevertheless applicable and automatically forms part of the baseline for the payment of agri-environmental support as soon as they have been implemented by Member States. Cross compliance does not substitute either the legal source of obligations for farmers for SMRs or the obligations for Member States to implement a management, control and sanctions system. What cross compliance adds is that, if a farmer benefiting from CAP payments does not respect the listed basic requirements on all his land, his CAP 1st pillar payments and some RD measures can be reduced or, in exceptional cases, entirely cancelled. The purpose of cross compliance is two-fold: first to raise farmers' awareness of their legal obligations, in particular through a higher financial risk; and secondly to meet society's expectations, by not providing full public support to beneficiaries who do not fully respect the law. For cross compliance to usefully complement the implementation by Member States of the Directives and Regulations, the legal provisions chosen for inclusion in cross compliance should result in clear and controllable obligations for farmers. These should also be underpinned by effective management and control systems.

In the context of an in-depth review of the cross compliance system with the perspective of the discussion on the post 2013 CAP one must reflect on a possible evolution of the scope of cross compliance (SMRs and GAECs). This reflection should be carried out with a view that both certain provisions could be withdrawn from the scope of cross compliance if they proved not to be adapted to this scope in the light of experience and other provisions could be added if they appear necessary to face new challenges, in particular climate change. DG AGRI established a Joint Working Group with other relevant Commission Services for initiating the reflection on this field.

2. STREAMLINING/SIMPLIFICATION OF CROSS COMPLIANCE

It is important to carefully consider the scope of cross compliance, including to what extent it focussed on the most important provisions applying to farmers in the areas of environment, public health, animal health, plant health, animal welfare and good agricultural and environmental condition of land. The focus on important legislation was justified by the fact that the inclusion into the scope of cross compliance of provisions stemming from the sectoral legislation (Directives or Regulations) implies a certain supplementary degree of administration since cross compliance is a CAP instrument managed in the Integrated Administration and Control System (IACS). For instance the inclusion of these provisions into cross compliance implies to set up an exchange of information and coordination between the specific management and control bodies (e.g. veterinary services, environmental services, etc) and the Paying Agencies responsible for CAP payments. Moreover the provisions under the sectoral legislation must be controllable to be included in the scope of cross compliance. Indeed, since there are financial consequences to take on the payment of the year in case of possible infringement, it is important that the farmer knows at any time when he/she complies with this provision and the controller must be able to take a decision without delay after any control in which a failure to apply the rules is detected.

In this respect the provisions under the sectoral legislation must fulfil certain criteria to be included in the scope of cross compliance should this inclusion bring a real added value. These criteria are the following:

- (1) The provisions must be relevant and with high priority relative to the objectives of cross compliance.
- (2) The provisions must have a direct link with the agricultural activity and/or the agricultural land.
- (3) The provisions must only relate to actions or omissions directly attributable to individual farmers.
- (4) The provisions must be controllable at reasonable costs and quantifiable (or at least allowing to define reduction rates).
- (5) The provisions must not create undue discrepancies between concerned farmers, beyond what is required to take into account local needs. However, in certain cases, the implementation in different ways by Member States of a provision in a Directive does not in itself constitute an ‘undue discrepancy’ between farmers if it is appropriate and duly justified by the local circumstances.

Moreover the following other elements should also be taken into consideration for the inclusion into the scope of cross compliance of SMRs:

- The definition of clear requirements at farm level is a prerequisite for correctly applying the cross compliance system. Therefore it is important to assess the various provisions of Directives and Regulations for their ability to be translated into clear obligations for farmers and to assess the way Member States have implemented these legal acts at farm level.
- The implementation of effective controls and sanctions on the basis of the sectoral legislation is also important to ensure that cross compliance will bring its

own added value. These legal acts must have indeed their own enforcement tools and cross compliance does not aim at providing an alternative to these tools. Instead cross compliance relies primarily on existing sectoral enforcement tools. Finally it is important to take account, where this was possible without undermining the policy objectives, of the Council's conclusion on the 2007 Commission report on cross-compliance that "the overall administrative burden for farmers and public administration should not be increased and where possible, should be reduced".

In this respect a number of provisions currently under the scope of cross compliance are being reviewed against these criteria, including the following:

Natura 2000: SMR 1 (Birds Directive¹) and SMR 5 (Habitats Directive²)

Certain provisions raise questions in term of control in the context of cross compliance. This is the case of measures for which an infringement may be found only if the farmer is caught "red handed". The controls under cross compliance, by nature systematic, are not necessarily always adapted to this kind of infringement,

Certain other provisions refer to obligations applying to the Member State, e.g. impact assessment and by nature do not necessarily concern cross compliance which concern farmers.

Pesticides: SMR 9 (Regulation on placing on the market of pesticides³)

Directive 91/414/EC has been repealed and its Article 9 has been replaced by Article 55 of Regulation (EC) N° 1107/2009. This latter Article makes a link with Directive 209/128/EC on the sustainable use of pesticides. The main obligations for farmers under this later Directive will be implemented gradually in the future, including the principles of Integrated Pest management to be implemented at farm level as from 2014 at the latest. It is therefore not possible to assess the clarity of farmers' obligations as applied by Member States and the efficiency of control systems before the implementation of the various provisions of the Directive. The situation will be carefully monitored in the meantime in view of a smooth integration of these provisions under the scope of cross compliance. In this regards more details will be brought by the national action plans for the sustainable use of pesticides that Member States will communicate to the Commission by December 2012.

Hormones: SMR 10 (Directive on hormone ban)

Provisions on hormone ban raise questions in term of control in the context of cross compliance. The fact that these provisions are included in the systematic

¹ Directive 79/409/EEC

² Directive 92/43/EEC

³ Regulation (EC) N° 1107/2009

cross compliance control scheme implies extra efforts and costs, while very few or no infringement cases are found. .

Animal diseases: SMR 13, 14 and 15 (Directives on notifications of animal diseases⁴)

Provisions on notifications of animal diseases raise also questions in term of control in the context of cross compliance. For these measures an infringement may be found at farm level only if the farmer is caught "red handed". In the absence of outbreaks of animal diseases, the systematic cross compliance controls are not relevant. Against this background it could be considered to withdraw these Directives from the scope of cross compliance.

The Good Agricultural and Environmental Condition (GAEC) framework

The Council discussions on GAEC standards made during the Health Check resulted in certain standards being classified as optional. Certain limitations were introduced to this optional nature (no backward changes relative to the pre-Health Check situation, and a link with national legislation). This increased the heterogeneity of national standards implemented by MSs because the difference of constraints faced by farmers could reflect more the ambition of national authorities rather than real local needs.

In order to promote a more even implementation of GAEC by Member States, a possibility could be to abolish the optional nature of certain standards. The current optional standards could be withdrawn from the framework or be made compulsory. Another possibility could be to further specify the content of the standard by quantifying or qualifying it.

The development of the eligibility conditions for direct payments, and in particular the direct payments linked to environmental purposes ('1st Pillar greening'), entails also that certain adaptations need to be brought to the GAEC so that the consistency between these various instruments is ensured. This concerns, inter alia, the issue of protection of permanent pastures and grasslands and the issue of the minimum level of maintenance of agricultural land. Once the final shape of the 1st pillar 'green' criteria is determined, it will be necessary to ensure the GAEC rules are adapted to fit this new framework.

3. TAKING NEW CHALLENGES INTO ACCOUNT IN CROSS COMPLIANCE

3.1. Strengthening of the Good agricultural and Environmental Condition (GAEC) framework

There is no plan of short term evolution of the EU sectoral legislation in the area of climate change. Therefore any statutory measure to propose under cross compliance in the context of the post 2013 CAP should be worked out through the GAEC instrument. The Commission services are currently reflecting on proposals which could be made in this respect. There is a clear

⁴ Directives 85/511/EC, 92/119/EC and 2000/75/EC

case for a better protection of valuable (biodiverse) grassland, wetlands and carbon rich soils, a general minimum cover obligation and measures aiming at maintaining the soil organic matter level and the management of stubble and vegetation residues. This evolution of the GAEC instrument should however be considered in a broader context, in conjunction with the development of the environmental legislation and concerns as biodiversity and with the definition of green direct payments. Some GAEC have been reported to have unintended environmental negative effects and should be better defined.

3.2. Inclusion of the Water Framework Directive

Pursuant to the Water Framework Directive (WFD) the measures must be implemented by Member States through River Basin Management Plans, to be defined at the latest in 2009 (article 13.6 of the WFD) and operational at farmers level at the latest in January 2013 (article 11.7 of the WFD). Moreover the WFD foresees that Member States shall implement administrative arrangements for the management and controls and a penalties system in order to allow a proper application of this Directive. The Commission shall submit a report on the implementation of the WFD by December 2012. This report will present the result of the assessment of the River Basin Management Plans delivered by the Member States and contribute to the 2012 Blueprint to safeguard Europe's waters.

The inclusion of the WFD into the scope of cross compliance is being considered since a number of measures under this Directive will apply to farming activity. The precise nature of the requirements defined by Member States is unknown at the time of finalising this document since the deadline for defining the measures at farm level is December 2012. The same is true for the details of the management, control and penalty systems to be set up by Member States. The assessment of these elements of the WFD will be of paramount importance for the inclusion of the WFD into the scope of cross compliance. Indeed, obligations must be clear at farm level since under cross compliance a decision must be taken to reduce CAP support if the obligations are not met. Moreover cross compliance by principle relies on the management and control systems established by Member States to implement the sectoral legislation. The systems must therefore be established before the provisions are introduced into the scope of cross compliance.

The inclusion of the Water Framework Directive into the scope of cross compliance will be considered once the Directive has been implemented and the operational obligations for farmers have been identified.

4. ANALYSIS OF OPTIONS

Two options could be considered as regards the evolution of the cross compliance system in the post 2013 CAP.

4.1. Option 1: Focus on streamlining/simplifying the scope of cross compliance while however increasing its contribution to climate change mitigation as well as to biodiversity objectives

This option includes a significant withdrawal of provisions from the scope of cross compliance to concentrate this scope to the essential elements of farming activity. The mitigation of climate change in a some extend biodiversity concerns are addressed by a certain degree of strengthening of the GAEC however leaving a significant leeway to define green direct payments commitments going beyond this baseline.

Pros:

- The request by certain stakeholders for simplification of cross compliance will be met. More farmers may be willing to take ownership of the system, which would facilitate its implementation.
- The cross compliance system will be able to demonstrate that it takes climate change concerns into account.
- The key role of farmers with respect to biodiversity, water quality and use will be better defined ensuring that farmers take more account of these areas which are vital to their long-term survival.
- The balance will be respected between increasing the scope for fulfilling the society expectations and the need to keep cross compliance as simple as possible.

Cons:

- Withdrawing certain provisions currently under the scope of cross compliance could send a negative signal to farmers, suggesting that these areas are not a priority, and could therefore lead to environmental damage and animal health and welfare problems.
- Withdrawing these provisions could lead to a perception that cross compliance is being downgraded.
- The public at large could see this withdrawal as a signal that the CAP takes less into consideration the concerns for environment, public health, animal health and animal welfare. However this could be counterbalanced by the introductions of the green component of direct payments.

4.2. Option 2:

Focus on increasing the scope of cross compliance to address climate change and biodiversity issues in priority through this instrument and to respond to the reality that the full implementation of the Water Framework Directive is obligatory and has been carried out since 2012.

In this option climate change and biodiversity issues will be in priority dealt with under cross compliance through a strengthening of the GAEC and the of

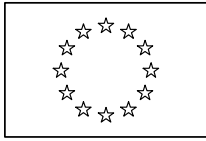
the inclusion of the Water Framework Directive into the scope of cross compliance will take place after its full implementation in 2012.

Pros:

- The signal will be very positive towards the environmental stakeholders and wider public concerned by environment. This will give to the taxpayers a serious justification that farmers are paid to produce public goods.
- The fact that cross compliance obligations apply broadly throughout the EU territory would enhance the impact of the measures.
- The impact of these measures would be enhanced by the implementation of the management and control system of cross compliance.
- The gradual improvement of water, biodiversity and climate protection aspects of the CAP standards would allow the dedication of rural funds to very high level environmental gains.

Cons:

- The cross compliance system would be likely to be more criticised than at present e.g. on the grounds of complexity. This could jeopardise the system as a whole in the long run but would also jeopardise public acceptance of direct payments.
- There would not be a lot of room left to define the green direct payments, which must go beyond the cross compliance requirements but may be complemented by rural development measures.
- The cross compliance system might be perceived as the enforcement tool of the Water Framework Directive.



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Common Agricultural Policy towards 2020

**ANNEX 3,
SUB-ANNEX 3A, SUB-ANNEX 3B, SUB-ANNEX 3C, SUB-ANNEX 3D**

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**Annex 3, sub-annex 3A, sub-annex 3B, sub-annex 3C,
sub-annex 3D:
Direct payments**

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LIST OF ACRONYMS AND ABBREVIATIONS

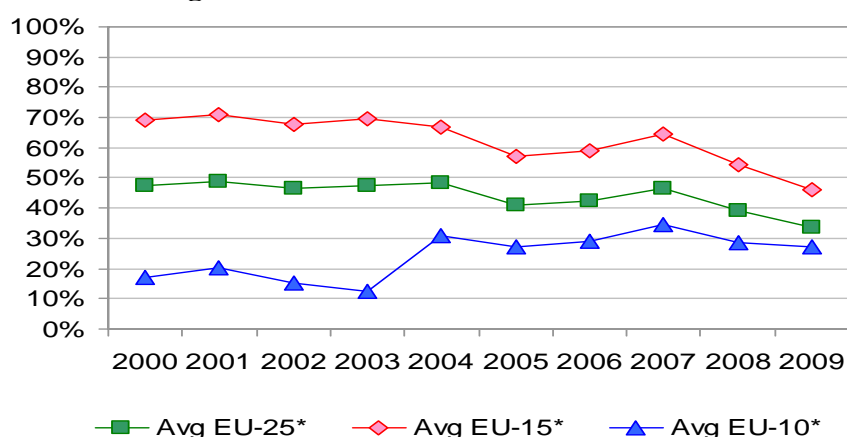
AWU	Annual working units
CAP	Common Agricultural Policy
CAPRI	Common Agricultural Policy Regionalised Impact model
CATS	Clearance Audit Trail System
DG AGRI	Directorate-General for Agriculture and Rural Development
DP	Direct Payments
EAGF	European Agricultural Guarantee Fund
ECA	European Court of Auditors
EU	European Union
EU-27	European Union after the enlargement on January, 1 st 2007
EU-10	Member States that joined the European Union on May, 1 st
EU-2	Bulgaria and Romania
EU-12	All Member States that have joined the EU since May, 1 st 2004
EU-15	Member States of the European Union before May, 1 st 2004
EUR	Euro
Eurostat	Statistical Office of the European Communities
FADN	Farm Accountancy Data Network
FNVA	Farm Net Value Added
GAEC	Good Agricultural and Environmental Conditions
GDP	Gross Domestic Product
ha	Hectare
IACS	Integrated Administration and Control System
LFA	Less Favoured Area
NHA	Naturally Handicapped Areas
NUTS	Nomenclature of Territorial Units for Statistics
PEA	Potentially Eligible Area
PPS	Purchasing Power Standard
SAPS	Single Area Payment Scheme
SPS	Single Payment Scheme
UAA	Utilised Agricultural Area
WTO	World Trade Organisation
YFS	Young Farmer Scheme

1. BACKGROUND AND STATE OF PLAY

Direct payments have been one of the main¹ support instruments to the agricultural sector in the EU since the early 1990s, but their nature has changed significantly over the years. With the 1992 reform, they were introduced as coupled payments, linked to production based on area or animals and compensating farmers for cuts in price support. From 2003, direct payments were gradually decoupled from farmers' production decisions. In order to decide the rate of payment each farmer was eligible for, previous support receipts (linked to either the individual farmers' or the regions' production history) were used as reference. The introduction of direct payments helped to steer the CAP towards consistent market oriented reforms for the past two decades.

The design of the payments, de-coupled from production, has encouraged farmers to become more market oriented, thereby enhancing the competitiveness of the agricultural sector. The income support function of direct payments has contributed to ensure the longer term economic viability, and a smooth structural adjustment of the farming sector. This is particularly important given the relatively low level of income in the agricultural sector², which on average remains below 50 % of the average salary in the total economy in the EU-27 (see Figure 1 below).

Figure 1: Evolution of agricultural income as a % of ave. income in the economy³



¹ In budget year 2009, direct payments amounted to EUR 39 billion, which is 84 % of the EAGF expenditure for that year (with 50 % phasing in EU-10 and 30 % in EU-2).

² The analysis in this Impact Assessment focuses on farms and the agricultural sector as unit of analysis, not on agricultural households. The reason for this is that the objectives of the CAP (see chapter 3 of the main IA report) are linked to the operation, competitiveness and performance of the sector/farm as an economic unit and not the economic survival of a household. Analysis in other sectors of the economy would also not consider the incomes of spouse or children gained in other sectors in order to measure the economic viability of a certain activity. Furthermore, there is little available data on incomes at the farm household level that could be used for analysis.

³ The figures in the graph reflect the agricultural entrepreneurial income/AWU as a percentage of wages and salaries/AWU in the total economy. Note that these figures should be interpreted with care owing to conceptual differences between the measurement of farmer's income from agricultural activities and average wages in the economy, and that, due to the lack of reliable data on full-time equivalent labour statistics for the total economy for some Member States, only some of them have been considered to calculate the averages (EU-15*: EL, ES, FR, IT, NL, AT, PT; EU-10*: CZ, EE, HU, PL, SK; EU-25* = EU-15* + EU-10* countries).

With the structural adjustment of EU agriculture ongoing, there remains today structural diversity across Member States and regions in income developments owing to a variety of factors, some historical others linked to natural and economic conditions (such as climatic conditions and differences in the functioning of land, labour and capital markets).

In addition to its role as income support for farmers, direct payments play a crucial role in the delivery of basic public goods through sustainable land management, due to the link between direct payments and the fulfilment of cross compliance⁴ requirements. This link is crucial, as there is evidence⁵ of undersupply of most important public goods, for which certain forms of land management are particularly beneficial (such as extensive livestock and mixed systems). The public goods concerned are mostly environmental and relate for example to maintaining agricultural landscapes, farm-land biodiversity, water availability, soil functionality, climate stability and air quality. Direct payments also contribute to public goods which are not related to the environment, such as rural vitality.

The support provided by direct payments, especially by enabling the continuation of farming in more economically marginal areas, is a precondition for being able to provide more specific public goods throughout the EU territory, e.g. through rural development measures. Therefore, the two elements, income support and basic public goods, are complementary objectives of the direct payments.

2. ACHIEVEMENTS AND CHALLENGES

2.1. Role of direct payment in supporting agricultural income

Over the previous fifteen years, agricultural income in the EU-15, measured as real factor income per full-time worker (annual working unit, or AWU), have shown very modest developments⁶ (see Figure 2). On the other hand, agricultural income in the EU-12 has increased considerably over the last decade, supported by the gradual phasing in of direct payments following EU accession. The medium-term outlook for EU agricultural income under a constant policy assumption displays a similar pattern, with EU-15 exhibiting only a moderate increase, but the EU-12 is expected to grow at a faster pace driven by

⁴ Cross compliance links the payments to the respect of basic rules related to environment, health and animal welfare. For instance, GAEC (Good Agricultural and Environmental Conditions) obligations are related to preserving landscape features, permanent grassland conservation, water courses and soil conservation. Farmers' direct payments are reduced when cross compliance obligations are not fulfilled.

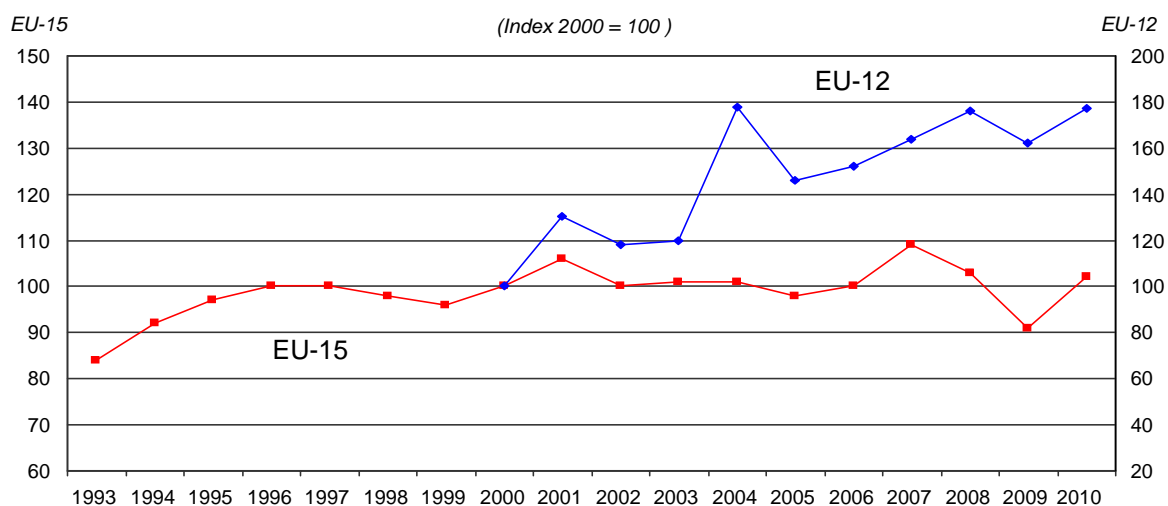
⁵ See "The Provision of Public Goods Through Agriculture in the European Union", Report for DG AGRI, Cooper, T., Hart, K. and Baldock, D. (2009) Contract No 30-CE-0233091/00-28, Institute for European Environmental Policy, London.

⁶ See "Developments in the income situation of the EU agricultural sector", December 2010, DG AGRI-FADN, http://ec.europa.eu/agriculture/rica/pdf/hc0301_income.pdf

the full phasing in of direct payments, as well as a higher value of production and assumed decline in farm labour⁷.

Recent developments have also shown (or served as a reminder) that agricultural income is highly volatile. During the period 1993-2010, the annual variation of farm income exceeded the preceding three year averages by more than 30 % in about 54 % of agricultural holdings. Figure 2 also highlights that income volatility has been exacerbated by the recent commodity price boom, economic crisis and subsequent economic recovery.

Figure 2: EU developments in agricultural income (income per AWU in real terms)

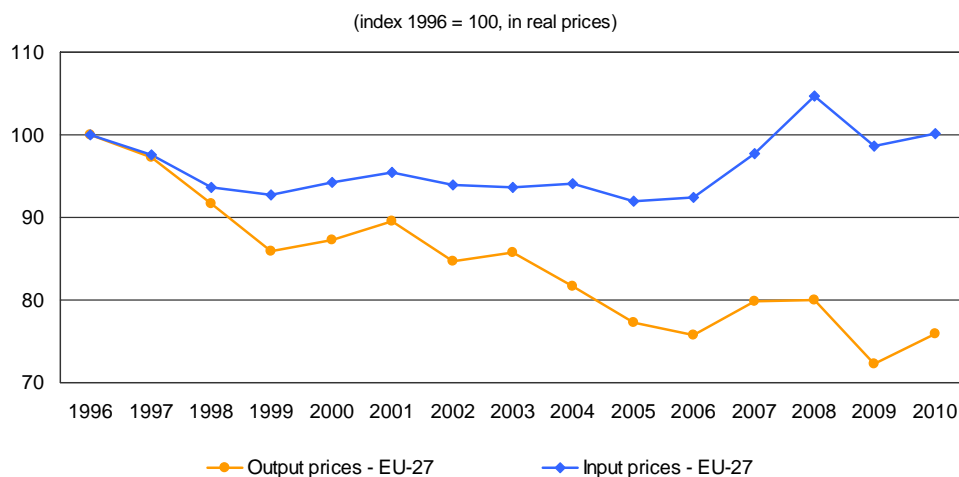


Source: DG AGRI, Eurostat

Income variability is mostly due to the volatility of input and output prices as well as changes in production levels (e.g. due to yield variability). Income variability is particularly critical for small farms, since when income is generally low, small changes can have a relatively large impact. In addition, the farm sector has shown a steady deterioration in its terms of trade since 1996, driven by the diverging dynamics of input and output prices (cf. Figure 3 below). This divergence between output and input prices constitutes the main factor behind the drop in income at sector level.

⁷ The outlook for agricultural income is presented in Annex 1 on the *Situation and prospects for EU agriculture and rural areas*.

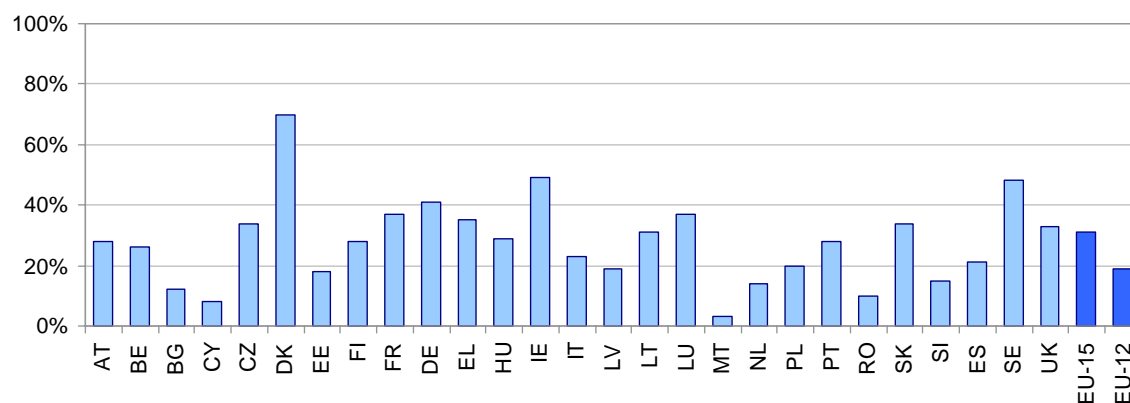
Figure 3: Recent evolution of agricultural input and output prices



Source: Eurostat

While the EU agricultural sector has displayed a rapid increase in farm size and a significant improvement of productivity, many farms still depend heavily on direct payments due to the low profitability of agricultural activities. Direct payments represented on average 29 % of agricultural income in the period 2007-2009 (with total subsidies coming close to 40 % of agricultural income). This needs to be seen against the background of important variations in agricultural income across Member States, regions and sectors, with sectors such as pig and poultry, milk and horticulture having on average higher income levels than grazing livestock or field crops. The share of direct payments in agricultural income in the different Member States is shown in Figure 4.

Figure 4: Share of direct payments (expenditure) in agricultural factor income (avg. 2007-2009)⁸:



Source: DG AGRI, Eurostat

As an evaluation of the income effects of direct support⁹ has underlined, direct payments have proven to be an effective tool for enhancing the income of farmers and have made a

⁸ During this period direct payments in EU12 are not yet fully phased-in.

⁹ See "Evaluation of income effects of direct support", May 2011, Agrosynergie for the European Commission, DG AGRI, http://ec.europa.eu/agriculture/eval/reports/income/index_en.htm

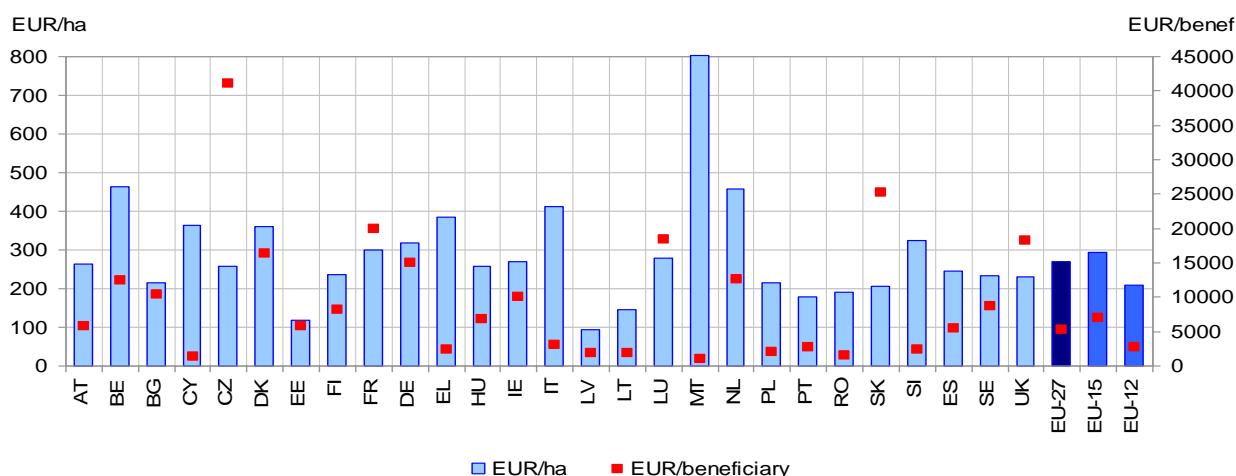
positive and robust contribution to the stability of these incomes (see [sub-annex 3A](#) for a summary of the evaluation report). It has also been shown that direct payments contribute to keeping sustainable farming in place throughout the EU territory, as well as providing a basis for the provision of public goods through agriculture⁵. However, there remain a number of concerns as regards their distribution, targeting and environmental performance. In particular, considerations have to be made with respect to a more equitable distribution between Member States and between farmers as well as a strengthened role in the provision of income support and public goods.

Distributional concerns stem from the current dissimilar distribution of support between individual farms and Member States. The latter issue is especially emphasized in the inter-institutional and public debate (as presented below) and by many of the new Member States (EU-12) that feel disadvantaged compared to EU-15 countries, because their average levels of direct payments per hectare are lower. Targeting relates to the idea of better linking payments to farmers to specific objectives related to the provision of public goods (e.g. the fulfilment of environmental objectives), or better adjusting income support to the need of different farms or areas. Furthermore, it is often felt that the increased policy emphasis on green growth, environmental and climate change issues could be better reflected in the design of direct payments.

2.2. Distribution between Member States

Figure 5 below illustrates the significant differences between Member States as regards the average direct payments per hectare and per beneficiary based on the current distribution.

Figure 5: Average direct payments per beneficiary and per hectare in each Member State



Source: DG AGRI

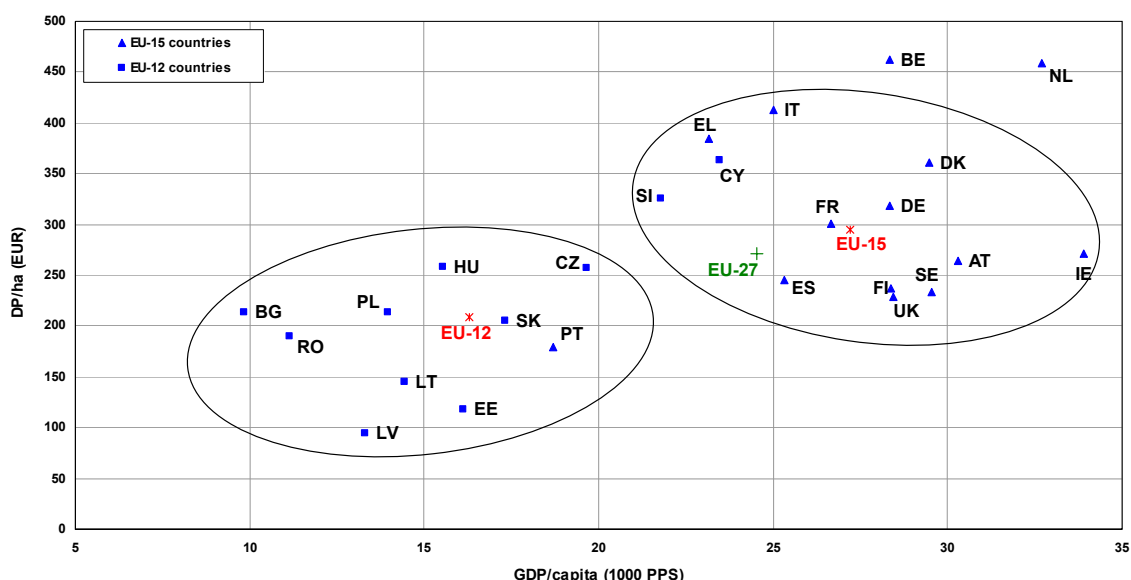
Note: simplified calculation of average direct payments based on the national envelopes of Member States after full phasing-in of direct payments in the EU-12 and the number of potentially eligible hectares communicated by MS in the Integrated Administration and Control System (IACS) for 2008 claim year.

In the previous reforms, the decoupling of direct payments linked to historical support values was considered to be the most neutral design of support in terms of impact on farms' asset values. Using historical production as a basis for defining payment levels had the advantage that it reflected, to some extent, the conditions for agricultural

production in a specific region. It was therefore politically realistic at the time to allow for the link between decoupled payment levels and historical support levels, especially since not all sectors were reformed at the same time. Today, as adjustments in all sectors have taken place and as twelve more Member States have joined the European Union with a substantially different production and support history, differences in support levels based on historical references cannot be justified on a long term. Even more so because farm structures and production pattern have of course changed since the reference periods. Moreover, direct payments based on historical production patterns do not reflect the fact that important environmental public goods tend to be provided by farms with lower yields. Those farms also tend to be more economically vulnerable and so in need of greater support.

However, the current level of direct payments is not just reflecting past production of the supported sectors, but also to a significant degree differences in the economic situation of Member States (see Figure 6 below). It is indeed important to remember that agricultural producers face very different economic and natural conditions across the EU.

Figure 6: Average direct payments per hectare after full phasing in each Member State and GDP per capita (2007-2009 average)



Source: DG AGRI (IACS statistics) and Eurostat (GDP/capita)

Note: ha = potentially eligible area from IACS statistics as communicated by MS, LU = 280 EUR/ha and 67 500 PPS/capita; MT = 802 EUR/ha and 18 800 PPS/capita. PPS = Purchasing Power Standard

2.3. Distribution between farmers within Member States

At present there are several models of implementation of the Single Payment Scheme (SPS) in Member States:

- The SPS can be implemented on the basis of a historical model or a regional model or a combination of both (so-called 'hybrid' model). In the historical model, farmers were given payment entitlements based on their eligible hectares and payments received in a reference period (2000-2002). The regional model is based on a uniform value of payment entitlements within a region based on average references of support at

regional level, while the hybrid model is a combination that can be either static or dynamic in time.

As regards the yearly activation of entitlements, it can only be done on the basis of an equivalent number of eligible agricultural land.

Since its implementation, SPS has evolved a lot including progressive decoupling in several sectors (cotton, olive oil, fruits and vegetables, etc.) and extending the eligible agricultural land to all types of agricultural lands that are at least maintained in good agricultural and environmental conditions.

- As a temporary derogation to the SPS, due to the absence of historical references, EU-12 Member States were allowed to apply a simplified model without entitlements called Single Area Payment Scheme (SAPS). In SAPS, the payment level is uniform over the entire Member State and calculated by dividing the direct payment envelope by the base area or, where it is bigger, the claimed area maintained in good agricultural conditions in 2003.

Sub-annex 3B of this note provides an overview of the implementation of direct payments in the EU-27. The variety of models of implementation and the discretion left to the Member States was deemed necessary at the time of the 2003 reform in order to better take into account Member State specificities in view of achieving the common goal of full decoupling and better market-orientation. However, with time, those differences are becoming less and less justified. For instance, certain eligible agricultural areas have been granted entitlements in regional models whereas not in historical models (e.g. fruit and vegetables). In addition, the use of past individual references to grant direct payments to farmers in Member States with historical models and the resulting wide range of the values of entitlements is also becoming hard to justify.

In addition, the flexibility left to the Member States in the choice of their direct payment model (historic, regional, hybrid), which was crucial for achieving almost full decoupling within few years, has led to large variations in the level of aid per hectare received by the farmers, depending on the region they are located in. For instance, in the Member States applying the historical model and also, to a lower extent, in Member States applying the regional model, using individual past references of production for determining the entitlements led to a lower level of direct payments¹⁰ in areas with natural handicaps that are less productive while income needs and provision of public goods in these areas are important.

2.4. Distribution between smaller and larger farms

The extreme ends of the distribution curve of direct payments per beneficiary (smallest and largest beneficiaries) are also often mentioned as problematic whereas it is the mere result of the support policy (area-based payment) and the structure of the farm sector. Indeed according to CATS¹¹ data for financial year 2009, around 80 % of the

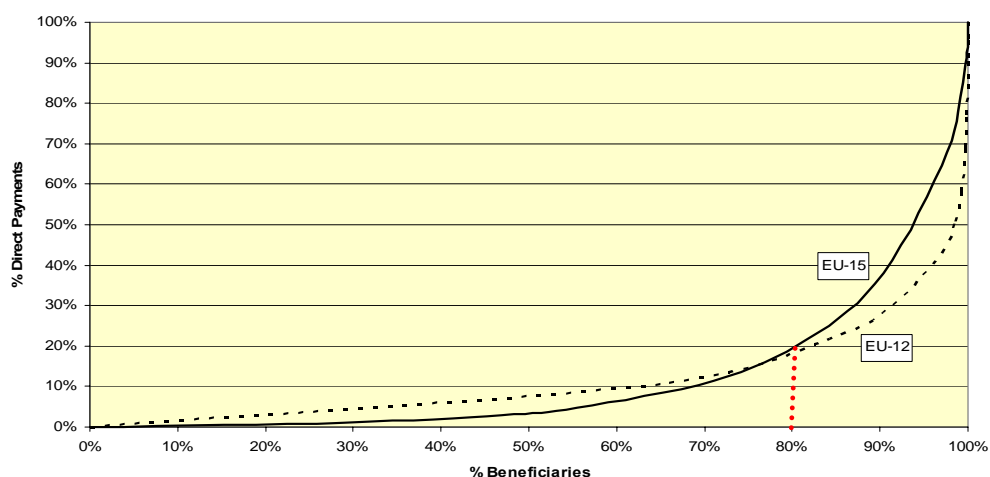
¹⁰ Note that this statement refers only to direct payments while the total level of aids under the CAP (including support to LFA under Pillar II) can be higher in areas with natural handicaps.

¹¹ The Clearance Audit Trail System (CATS) manages the computerized data on payments under the CAP.

beneficiaries received EUR 5 000 or less representing around 20 % of the total amount of direct payments and around 0.5% of the beneficiaries received EUR 100 000 or more representing 16 % of the total amount of direct payments (see Figure 7).

The high level of aid received by some beneficiaries (despite the modulation mechanism introduced in the 2003 reform) is seen as too high to be justified as income support as it can be reasonably assumed that large farms benefit from economies of scale and therefore their income support needs may not be proportional to the farm size. At the same time, small farmers who can make a very important contribution to the vitality of many rural areas and may have higher needs for income support often face a disproportionately high administrative burden for access to support in relation to the payment amount they receive.

Figure 7: Distribution of direct payments between beneficiaries in EU-15 and in EU-12:



Source: CATS data (2009 financial year corresponding mainly to claim year 2008), DG AGRI calculation

2.5. Age structure in the farming sector

The farming community is ageing. Farm holders under 40 years of age make up only 14% of the population of farmers in the EU-27 and hold 20% of the potentially eligible area. The CAP has recognized this situation as a problem and addresses it in various ways, most importantly through the rural development measure “Setting-up of young farmers” and through the possibility to address young farmers indirectly under the SPS when allocating payment entitlements (provisions for farmers commencing their agricultural activity between the reference period and the first year of the SPS and later on by using the national reserve). However, as these approaches are not applied across the board in the EU-27, there is no generalised approach to improving the age structure in the farming community.

2.6. Non genuine farmers

Further criticism (e.g. from the European Court of Auditors) has focussed on the fact that some beneficiaries of direct support seem to carry out no or only very limited agricultural activity which should not entitle them to be supported as 'active farmers'. This is a consequence of decoupling where production activity is not a condition to be eligible to

the aid. This problem was already addressed in the Health Check of the CAP where optional rules for excluding persons whose principal business/activity is non-agricultural from receiving aid have been included in the legal framework. However, it can be argued that these rules have not adequately contributed to solving the problem as no Member State has made use of them.

2.7. Full decoupling in the context of regional or sectoral specificities

Full decoupling has allowed obtaining more market orientation of EU agriculture while providing farmers a basic income support and thus a certain level of stability. However for some sectors and regions, the possibility to maintain some direct payments coupled to production was deemed necessary for economic, social and/or environmental reasons. Indeed, for instance, the maintenance of coupled support in the livestock sector, which could have been at risk of disappearing in some regions in case of full decoupling, contributed also to the maintenance of agricultural activity in these areas.

2.8. Environmental performance of direct payments

As the current amount and distribution of direct payments is based on historical criteria and references of production, they tend to be concentrated in the most productive regions (mostly in the historic model but the same applies, albeit to a lower extent, in the regional model) without being adjusted to environmental and climate-related objectives beyond the link to basic standards of cross compliance.

The way entitlements have been allocated when decoupling was put in place did not envisage a specific targeting e.g. to farms that operate in more environmentally valuable areas. However, production adjustments following decoupling have generally been in the direction of less intensive production with related environmental benefits. Furthermore, one may argue that the decrease in permanent grassland area has been mitigated¹² by the granting of coupled aids for livestock¹³ (beef, sheep and goat) and by the requirements of cross compliance which concern permanent grassland (minimum management requirements for permanent pasture and maintenance of the ratio of permanent pasture – see Article 6 of R. 73/2009).

The link of direct payments to cross compliance (together with farm advisory services) has increased the awareness¹⁴ of farmers about existing environmental standards and about good environmental and agricultural practices such as preservation of landscape features, crop rotation, etc. Although not designed directly to that purpose, cross compliance has contributed to climate change mitigation (by reducing greenhouse gas emissions and by increasing carbon sequestration in soils) at farm level in the EU.

¹² Reflecting environmental land use needs into EU policy: preserving and enhancing the environmental benefits of “land services”: soil sealing, biodiversity corridors, intensification / marginalisation of land use and permanent grassland. Final report to the European Commission, DG Environment on Contract ENV.B.1/ETU/2008/0030. IEEP and Alterra (2010).

¹³ Evaluation of direct aids in the beef and veal sectors, October 2010

¹⁴ Evaluation of the application of cross compliance as foreseen under Regulation 1782/2003 (July 2007)

However, the cross compliance system is still often perceived by farmers as an additional administrative burden¹⁵. In addition, some of the actions or good management practices required from farmers under cross compliance system (above the regulatory requirements) may have a certain cost which is not specifically compensated, given that it is considered to fall below the 'baseline'. This does not contribute to the acceptability of the actions by farmers.

For a detailed analysis of environmental aspects see Annex 2 of the Impact Assessment on "Greening of the CAP".

2.9. Simplification aspects

The CAP Health Check brought some simplification at Member State and farm levels in the management of the direct support scheme in particular for the SPS (transfer rules, types of entitlements, etc.) and cross compliance. See detailed information in Annex 8 of the Impact Assessment on 'Simplification of the CAP'.

Maintaining the current well established rules would be easy for the Member States applying SPS. However, the coexistence of different SPS models (historic, regional, hybrid) which makes the policy framework more complex at EU level would also persist. Member States applying SPS will have in any case to set up a new system of entitlements when shifting to SPS (planned for 2014 at the latest), implying significant administrative burden for the national authorities as well as for farmers. Farmers would however also benefit from the flexibility offered by entitlements, i.e. the possibility to sell, lend or activate the entitlement on different hectares.

Complexity in the current policy framework stems also from the fact that supports for coupled production and supports to agri-environmental measures of Pillar II may be paid via Article 68 of Council Regulation 73/2009. This creates 'grey zones' of support and additional administrative burden in particular for Member States due to the necessity of defining consistent rules which do not lead to duplication of payment for the same operation.

In addition, there is a clear case for simplification of CAP rules for the smallest beneficiaries whose level of red tape compared to the level of their subsidies is rather disproportionate.

2.10. Results of consultation process as regards direct payments

The Public Consultation, by which the Commission Services solicited input from interested parties on the broad policy options presented in the Communication on the CAP towards 2020¹⁶ (referred to as the 'Communication' from here onwards), revealed that direct payments constitute an area of great concern for many stakeholders. There was little consensus on exactly what the impacts of redistributing direct payments would be, and many contributions related strongly to the geographic area/region/Member State the respondents originated from. Still, many argued for a more equitable distribution of

¹⁵ See Annex 8 of the Impact Assessment on 'Simplification of the CAP'

¹⁶ Communication on the CAP towards 2020: meeting the food, natural resources and territorial challenges of the future, COM(2010) 672/5

payments, and stressed the importance of a transition which is smooth and takes into consideration short- and long term effects.

The introduction of capping to direct payments received mainly negative reactions, with references made to competitiveness, the functioning of markets and farmers' incomes. Targeting payments towards small farmers was more welcomed; although a few organizations feared that structural adjustment might be hindered, affecting the long-term competitiveness of EU agriculture. There seems to be agreement on the fact that those receiving payments should ideally be active farmers, but how this should be defined is a concern for many responding parties.

Many organisations emphasized the need for continued support to less favoured areas, and stressed its importance for agricultural production as well as for viable and economically sustainable rural areas. Some respondents pointed towards various benefits of keeping these payments in Pillar II.

Greening Pillar I was mentioned by many as an appropriate way to reach better environmental quality, increasing the delivery of public goods and creating opportunities for sustainable agriculture. Meanwhile, a substantial number of respondents (many of whom farmers) were against greening Pillar I, or concerned with the effects it would have on the competitiveness of EU farmers. Some respondents were also concerned that the proposed Pillar I measures may not be as efficient or cost-effective as targeted measures in Pillar II.

3. OBJECTIVES AND POLICY OPTIONS

The previous chapter has highlighted that, while the role of direct payments as a basic income support and as a propagator of public goods remains important for EU agriculture, the environment and the vitality of rural areas in general, there is room to improve the equitability and targeting of this policy instrument.

In line with the objectives of the CAP of contributing to a viable, market oriented food production throughout the EU, ensuring the sustainable management of natural resources and the provision of environmental public goods, and contributing to the balanced territorial development and thriving rural areas (as elaborated in chapter 3 of the main Impact Assessment report), and based on the various elements identified during the public debate on the future of the CAP and the stakeholder consultation on the Communication as well as the additional issues described in the previous chapter, the following objectives for reforming the direct payment scheme can be established:

- A more equitable distribution of decoupled payments among Member States and among farmers in order to enhance direct payments effectiveness in supporting farmers' income and contributing to the provision of basic public goods;
- Better targeting of direct payments to the provision of public goods by:
 - providing incentives for simple, well-identified agri-environmental actions which have positive effects on the environment and climate change mitigation and adaptation and are applicable across the whole of EU territory;
 - simplifying/streamlining cross compliance requirements without watering down the system itself;

- Better targeting of direct payments to needs for income support by:
 - Supporting the maintenance of sustainable agriculture in areas with specific natural constraints and in areas where particular types of farming are considered particularly important for economic and/or social reasons;
 - Improving the definition of who should be considered an "active farmer";
 - Better taking into account the diversity of EU agriculture, notably through addressing the needs of small scale farmers and taking into account possible economies of scale of large farms.

In order to assess how these objectives can be achieved, the following chapters look at options for the development of direct payments in all areas identified as challenges in chapter 2 and assess their impacts. In chapter 11, at the end of this annex, the options in the different areas are assembled into the three policy scenarios analysed in the Impact Assessment, "adjustment", "integration" and "re-focus".

4. REDISTRIBUTION OF DIRECT PAYMENTS

The future distribution of direct payments should better reflect the dual role of direct payments for income support and provision of public goods by ensuring a better fit between these policy objectives and the budgetary means available. At the same time, the current distribution will need to be taken into account to avoid major disruptions. Several options for redistribution of direct payments envelopes between Member States can be foreseen:

- An “EU flat rate”: direct payments are distributed on the total potentially eligible hectares across Member States;
- A pragmatic approach: limited adjustment of the existing distribution in order to avoid major disruptions to current DP levels, while setting an EU wide minimum level of per ha payment based on a share of the EU average.
- The use of objective criteria: the EU flat rate is adjusted by objective criteria based on economic, physical and/or or environmental indicators.
- A combination of a pragmatic approach and objective criteria.

These options are elaborated in details in section 4.1 and their impacts at micro level are presented in the subsequent sections. It should be noted that the simulations do not address the issue of the length and modalities of a possible transition to the new distribution which will also depend on the final level of redistribution involved. The calibration of the transition period would not only be of importance for the Member States which would see their national direct payments envelope decreasing but also for the Member States which will benefit from an increase. Indeed, the sometimes important gains on direct payments per hectare in the following options could not only drive up land prices but also prove to be an impediment to structural changes as they could prevent farmers from restructuring, growing and improving the profitability of their farms.

The starting point of simulations is the current level of direct payments per hectare, which is calculated by dividing the total direct payment envelope for each Member State (with phasing in completed for EU12 and modulation taken into account at the level of 2013) with the total potentially eligible area¹⁷ for SPS/SAPS as declared by farmers and communicated by MS to the Commission in the frame of the IACS (claim year 2008).

All simulations on the redistribution of direct payments assume the budget set out in the proposal for the Multi-Annual Financial Framework (MFF)¹⁸ for direct payments. Results of the different options are presented in comparison to the existing national envelopes based on the current distribution of direct payments.

4.1. Redistribution between Member States

EU flat rate

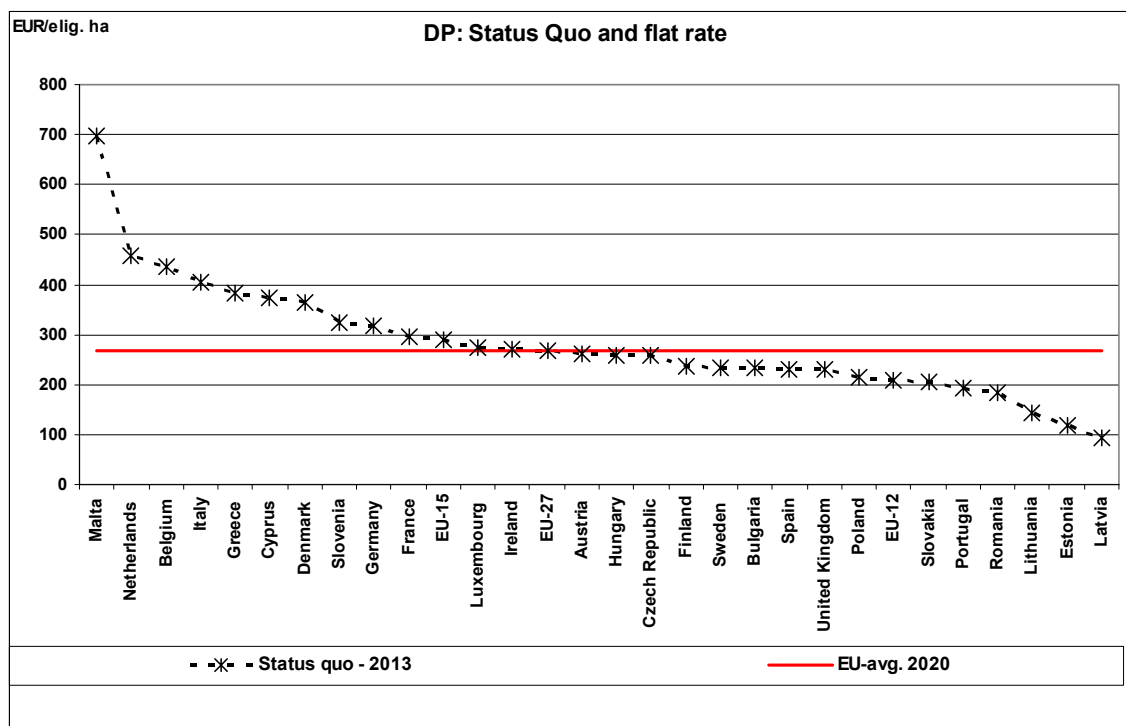
One option arising from the public debate would be to move away from historical references towards an EU wide 'flat rate' (or 'EU average') with the same level of aid per hectare to all farmers in the EU (option called **EU flat rate** in the rest of the annex). For the EU-27 the average level of direct payments, i.e. the EU flat rate would be EUR 267/ha of potentially eligible area (PEA).

Figure 8 illustrates the level of direct payment in each Member State in terms of €/ha in the Status Quo after the Health Check of the CAP is fully implemented, in contrast to the EU flat rate. It is apparent that existing levels of direct payments in MT, BE, NL, IT, EL, CY, DK and SI are considerably higher, while payments in LV, EE, LT, PT, RO, SK, BG and PL (i.e. mostly new Member States) are considerably lower.

¹⁷ In Member States using historic model, the agricultural area that is eligible to SPS is higher than the number of entitlements. Thus, all the potentially eligible areas registered in IACS have been taken into account for the calculation presented in the impact assessment.

¹⁸ Communication "A budget for Europe 2020" – Part I and Part II, http://ec.europa.eu/budget/library/biblio/documents/fin_fwk1420/MFF_COM-2011-500_Part_I_en.pdf, http://ec.europa.eu/budget/library/biblio/documents/fin_fwk1420/MFF_COM-2011-500_Part_II_en.pdf

Figure 8: Redistribution between MS - EU flat rate



Source: DG AGRI

Accordingly, this option would produce significant losses for MT, BE, NL, IT, CY and DK, and substantial gains for LV, EE, LT, PT and RO. In absolute terms, the biggest winners would be RO, PL and ES, while the biggest losers would be IT, DE and FR. The total amount redistributed would reach EUR 4,394 million.

However, as explained in the Communication, a flat rate payment across the EU would fail to reflect differences in the economic and environmental situation in the Member States, since a given level of payment does not have the same effect on income and each hectare does not equally contribute to the provision of environmental public goods. Moreover, the change from current levels of support to the flat rate could be very disruptive in certain cases as indicated above.

Finally, it has to be kept in mind that land is distributed unevenly between farms: in the EU-25 almost 90 % of the land is concentrated in 20 % of the holdings¹⁹. Therefore a move to an EU flat rate with an even rate of direct payments per hectare would not solve the problem of an uneven distribution of direct payments between farms as this is based on the structural reality of farming in the EU.

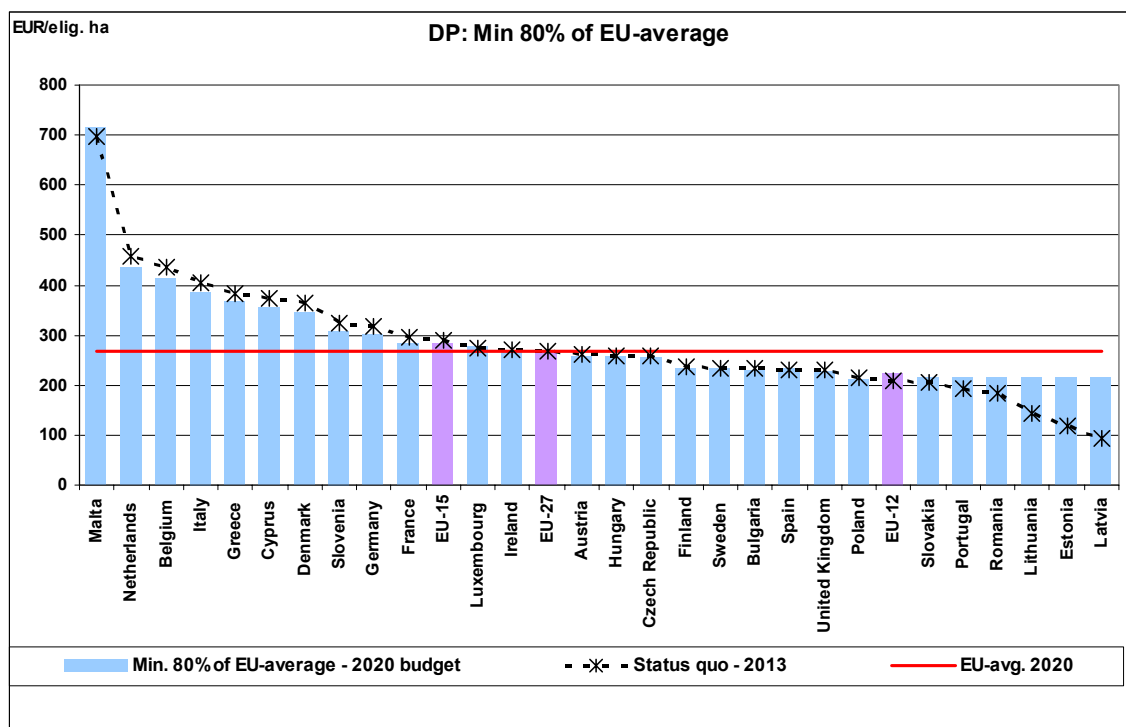
Pragmatic approach

Another option mentioned in the Communication is to adopt a pragmatic approach, by providing for instance that all Member States get at least 80% of the EU average per

¹⁹ Annex F of the Health Check, I. Impact of a change towards flatter rates of direct payments, Dec. 2007 http://ec.europa.eu/agriculture/rica/pdf/hc0301_impact_flatter.pdf

hectare. The impact of this option (referred to as 'Min80%' in the rest of the annex) is displayed in Figure 9 below.

Figure 9: Redistribution between MS - Pragmatic approach with minimum 80% of EU average



Source: DG AGRI

In the Status Quo distribution, eight Member States are below the 80 % threshold, while eleven Member States are above the EU average. The cost of lifting the per hectare payments of these Member States to 80 % of the EU average (i.e. EUR 213/ha) would be covered on a proportional basis by the eleven Member States that are above the EU average. This would require a reduction of their envelopes, while the envelopes of those Member States who fall between 80 % and 100 % of the EU average would remain unchanged.

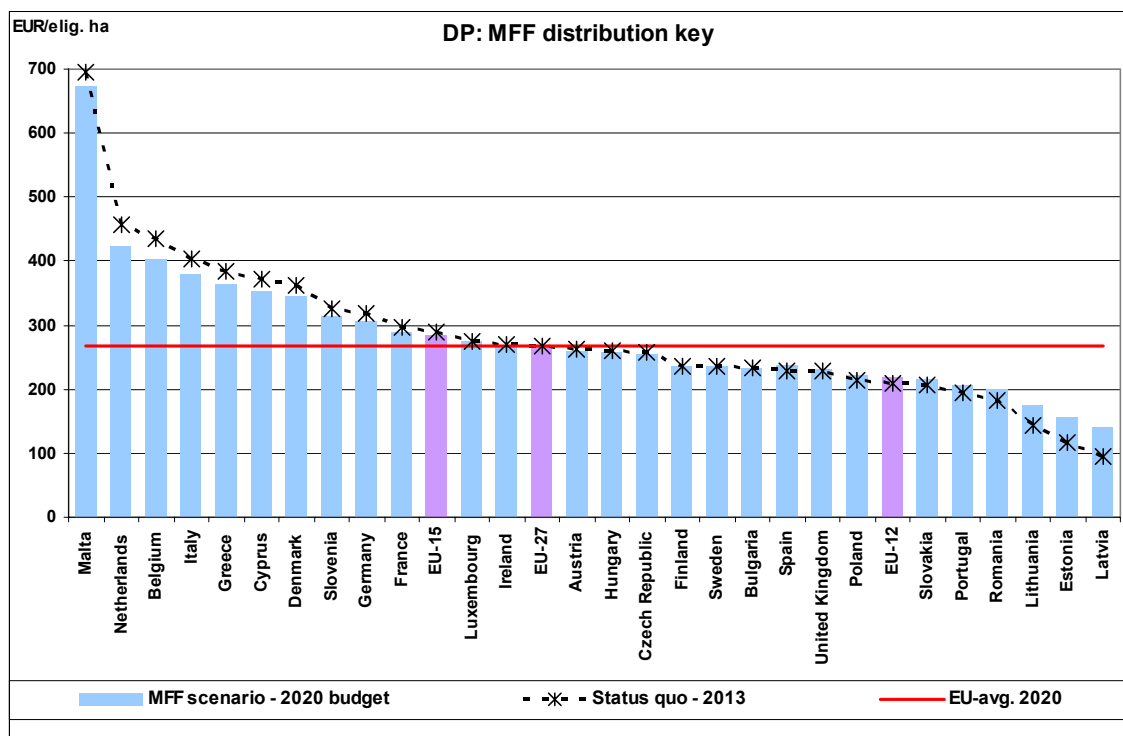
This option would allow addressing the situation of Member States which are significantly below the EU average while mitigating the impact of redistribution on those above the EU average. In absolute terms, the biggest winners would be RO, LV and LT, and the biggest losers FR, DE and IT. The total amount redistributed would come to EUR 847 million.

It could also be envisaged to provide that Member States that currently have direct payments below the level of 90% of the average will close 1/3 of the gap between their current level and the 90% level (option called "**MFF distribution key**" in the rest of the annex as it is the distribution used in the proposal for the MFF), as shown in Figure 10.

This option would provide less convergence for the Member States below 90% of the EU average. Consequently, the cost of convergence to be borne by Member States above the EU average would also be more limited. In absolute terms, the biggest winners would be

again RO, PL and ES, while the biggest losers would be IT, DE and FR. The total amount redistributed would come to EUR 738 million.

Figure 10: Redistribution between MS - Pragmatic approach with MFF distribution key

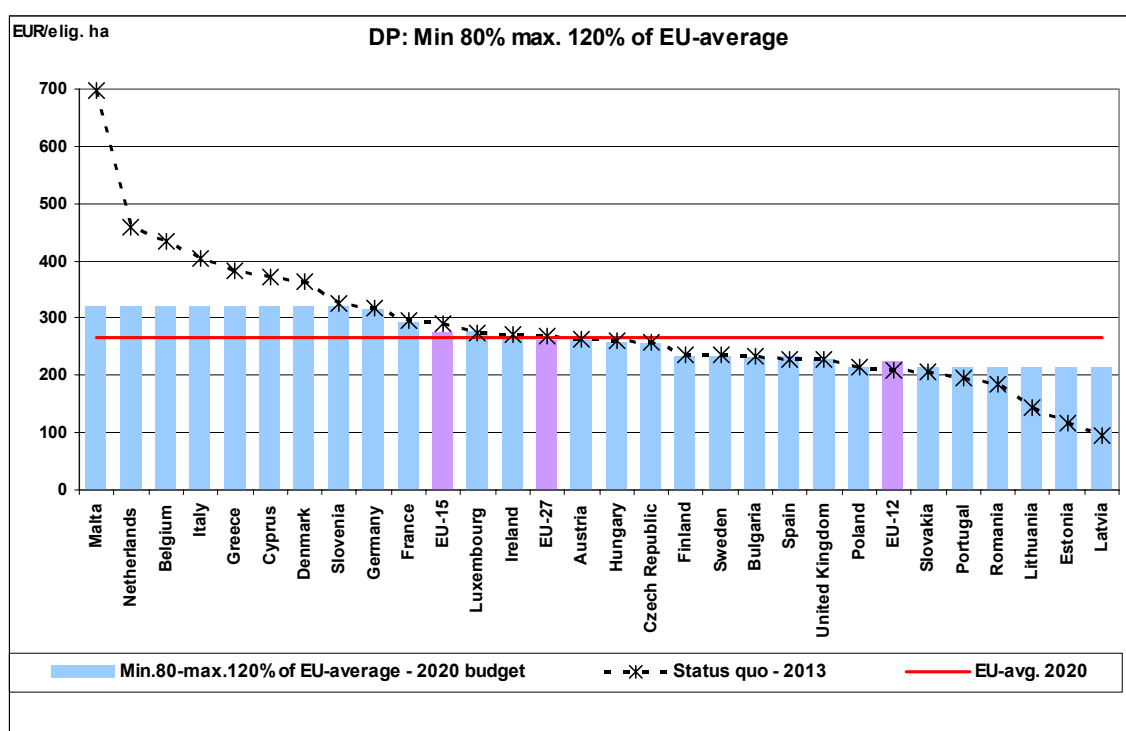


Source: DG AGRI

Alternatively, it may be envisaged to provide that all Member States get at least 80% and that no Member State gets more than 120% of the flat rate (option called "**Tunnel80%-120%**" in the rest of the annex), as shown in Figure 11.

This option would provide a more substantial convergence around the flat rate. However, the cost of convergence would be borne by a more limited number of Member States that would face significant reductions in their envelopes. In absolute terms, the biggest winners would be again RO, LV and LT, while the biggest losers would be IT, EL and the NL. The total amount redistributed would come to EUR 847 million.

Figure 11: Redistribution between MS - Pragmatic approach with minimum 80% - maximum 120% of EU average



Source: DG AGRI

Use of objective criteria

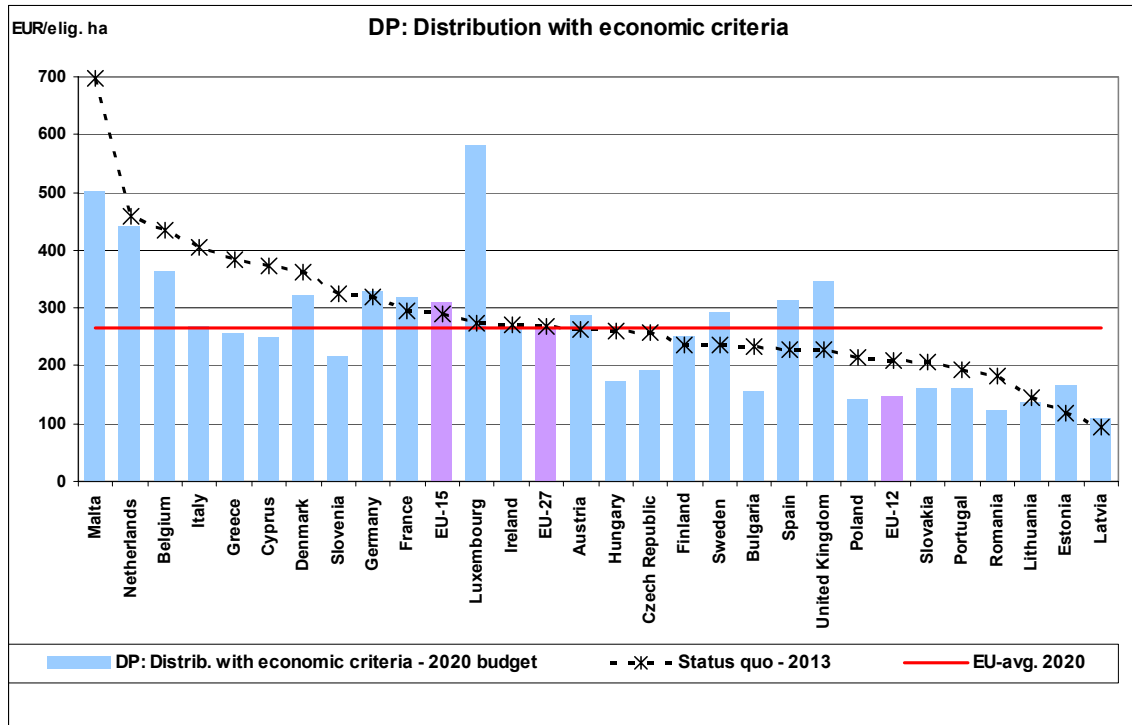
Another option would be to base the distribution on objective criteria that reflect the dual role of direct payments in providing income support and public goods and would thus ensure a more equitable and efficient use of budgetary resources.

Possible objective criteria are very diverse in nature and may provide a very different outcome in terms of redistribution of direct payments on account of the specific economic and environmental situation of each country. The difficulties with reaching agreement on such objective criteria should not be underestimated. A selection of the criteria which have been most discussed in the institutional and public debate is given below:

- For general economic criteria, PPS (purchasing power standard) and GDP/cap: an index is used for the adjustment in relation to the EU average with the Member States with higher GDP/capita (expressed in PPS) receiving higher direct payments/ha. These criteria would reflect disparities in the costs of living between Member States.
- For economic criteria related to agriculture, AWU (annual working unit) and GVA/AWU (gross value added per AWU): comparison to the EU average with the Member States with higher GVA/AWU receiving higher direct payments/ha. These criteria would reflect differences in productivity in the agricultural sectors of Member States.

The result of a redistribution based on a combination of general and agricultural economic criteria is presented in Figure 12.

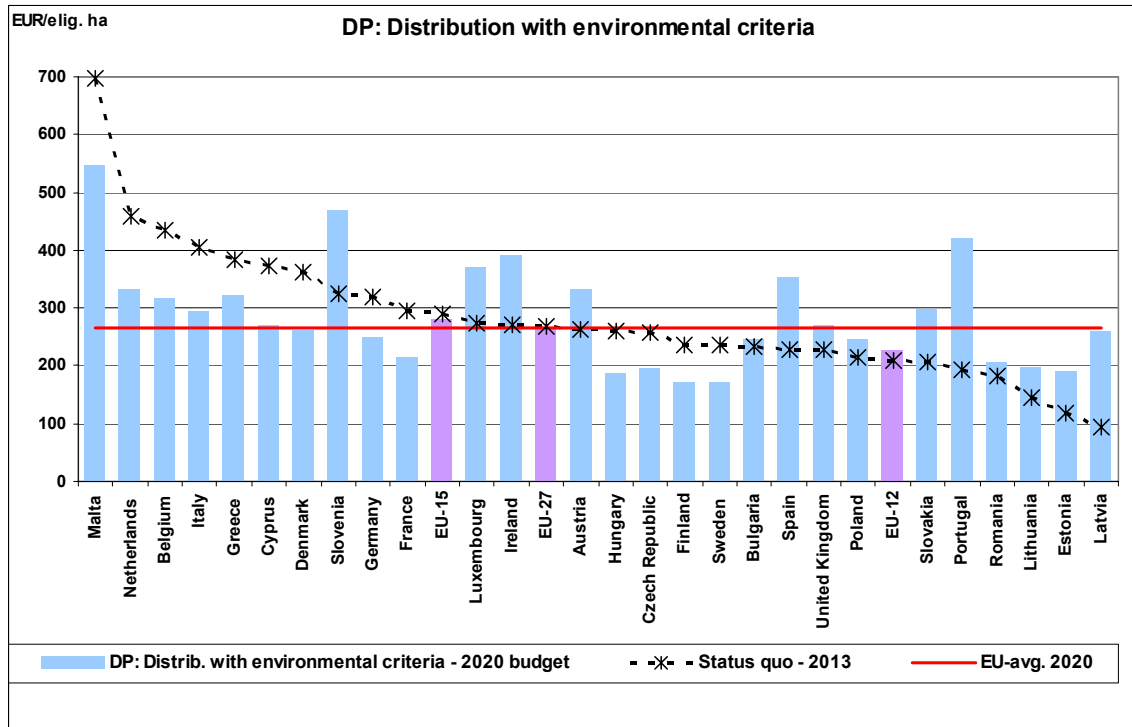
Figure 12: Redistribution between MS - Economic objective criteria



Source: DG AGRI

- For the environmental criteria, areas in less favoured areas (LFA), Natura 2000 zones and permanent pasture: The index compares the share of the relevant area in the Member State's total utilised agricultural area (UAA) to the EU average. Thus Member States with a higher share of these types of areas get higher direct payments/ha (see Figure 13). These criteria would reflect disadvantages in particular areas or areas that are particularly important for the provision of public goods.

Figure 13: Redistribution between MS - Environmental objective criteria



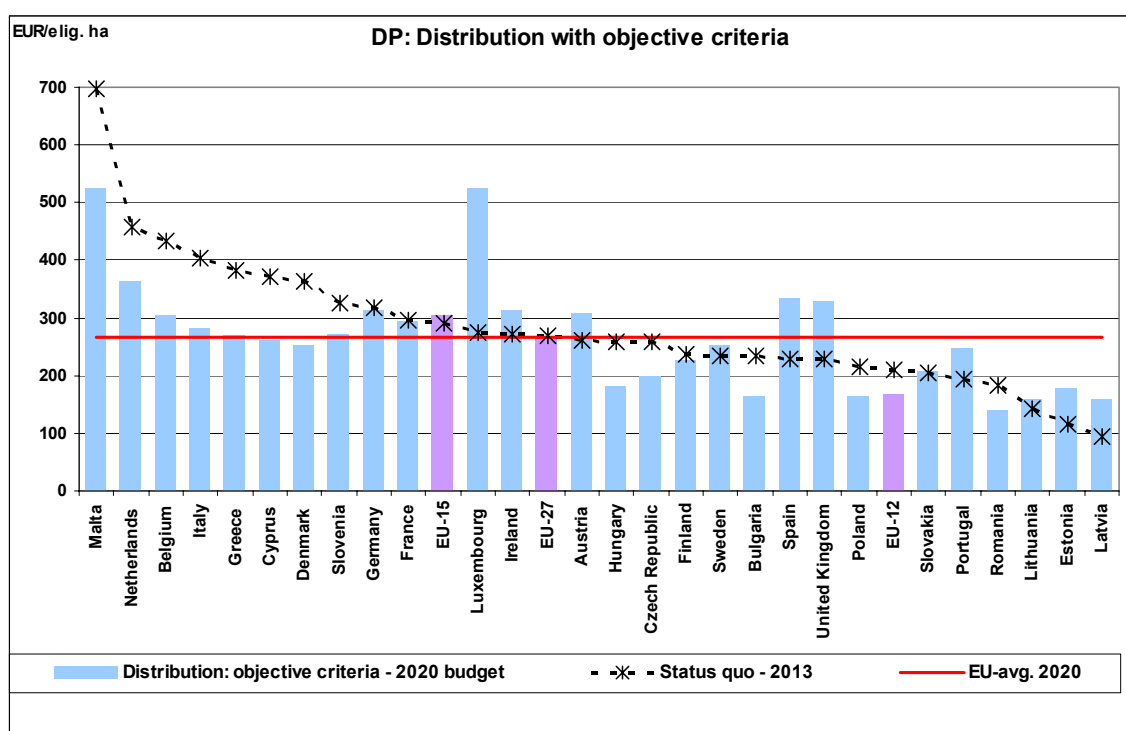
Source: DG AGRI

Another approach would be the combination of economic and environmental objective criteria to adjust the EU flat rate, based on the following formula (using a weight of 2/3 for economic and 1/3 for environmental criteria):

$$\text{Flat rate} \times \left[\frac{2}{3} \times \left[\left(\frac{2}{3} \text{ GDP/cap} + \frac{1}{3} \text{ GVA/AWU} \right) \right] + \frac{1}{3} \left(\frac{1}{3} \text{ LFA} + \frac{1}{3} \text{ Permanent grassland} + \frac{1}{3} \text{ Natura 2000 area} \right) \right]$$

The results of using this formula to adjust the flat rate are shown in Figure 14.

Figure 14: Redistribution between MS - Economic and environmental objective criteria



Source: DG AGRI

The use of objective criteria giving more weight to economic criteria would accentuate the gap between EU-15 and EU-12 and EU-15 Member States (UK, ES and FR) would most improve their situation in absolute terms. With environmental criteria ES, UK and PT would profit most. With a combination of economic and environmental criteria ES, UK and IE would be the greatest winners while in addition to IT and EL also PL would be among the biggest losers. For the smaller Member States (MT and LU) an *ad hoc* solution would be most likely in any case when using objective criteria, given the extremity of the impact for these Member States.

The main problem with this option is the fact that it would entail massive redistributions (e.g. with the latter formula combining economic and environmental objectives the total amount redistributed comes to EUR 4,516 million which could, however, vary depending on the exact weighting of the different objective criteria taken into account) which is likely to make it politically unacceptable for many Member States to agree to such a redistribution.

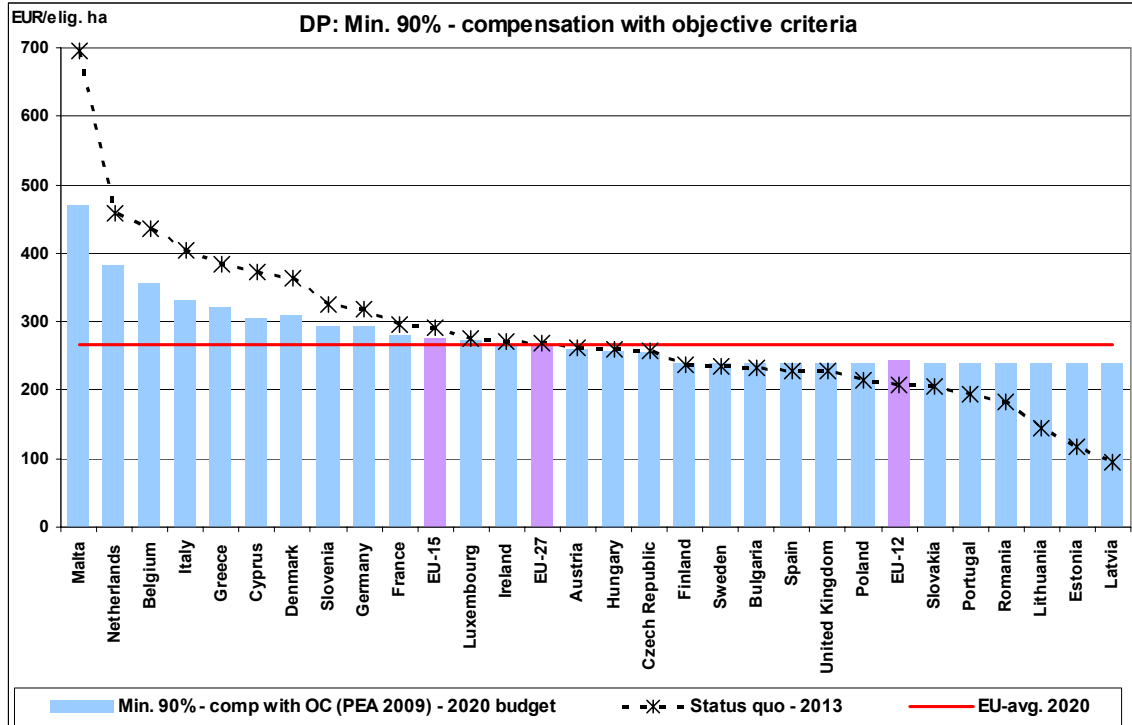
Combination of a pragmatic approach with objective criteria

Obviously, there are different ways to combine objective criteria. There are also different ways of combining objective criteria while taking into account the convergence objective and the current distribution, such as:

- to ensure a minimum level of convergence (e.g. that all Member States get at least 90% of the EU average) while using objective criteria to define the level of Member States currently above the EU average (option called "**Min90% with**

objective criteria" in the rest of the annex) as shown in Figure 15. The total amount redistributed would be EUR 2,164 million.

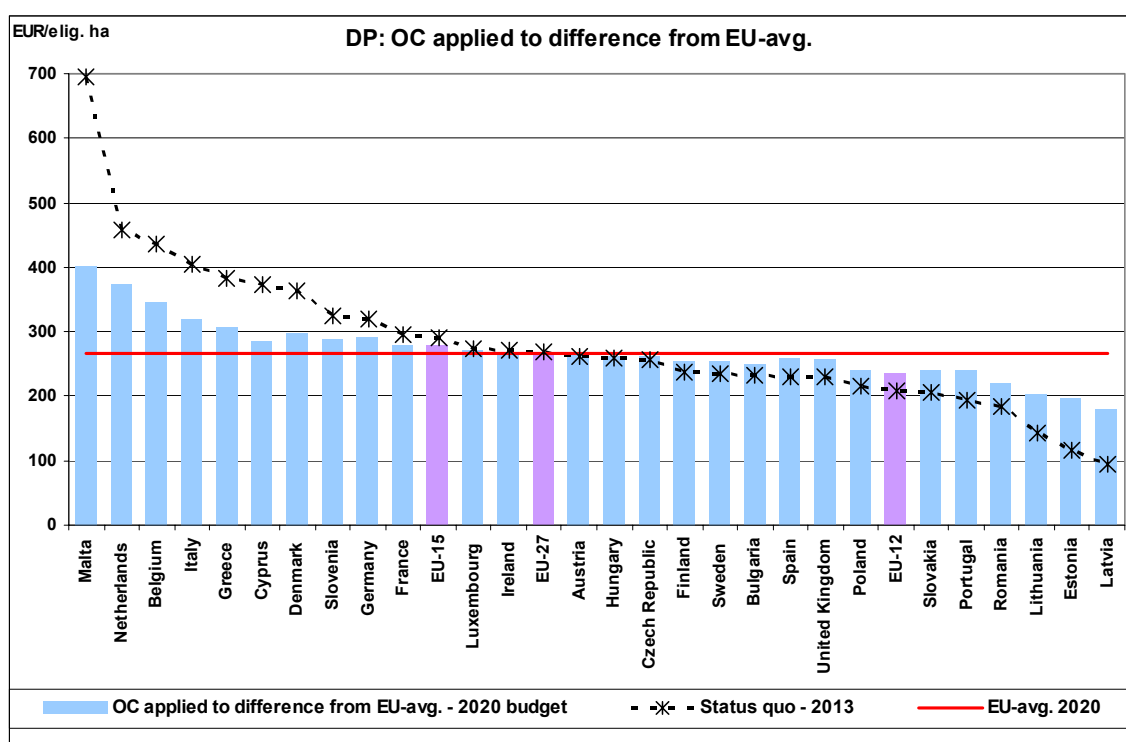
Figure 15: Redistribution between MS - Pragmatic approach (minimum 90%) with objective criteria



Source: DG AGRI

- to apply the objective criteria to the difference between the current distribution and the EU average so as to ensure that all Member States that are above the flat rate will be reducing their direct payments but still remain above the flat rate and those that are below the flat rate will be increasing their direct payments but still remain below the flat rate (Figure 16). The total amount redistributed would be EUR 2,534 million.

Figure 16: Redistribution between MS - Objective criteria applied to difference between Status quo and EU average



Source: DG AGRI

4.2. Move toward flat rate within Member States or regions

The impact from the redistribution among Member States is further compounded at the level of the farmer with the impact of redistribution within Member States. In this respect, the Communication foresees a uniform rate within each Member State or region, in line with the current regional SPS model.

A region may be defined in accordance with objective and non-discriminatory criteria such as institutional or administrative structure and regional agricultural potential. Any further differentiation for instance based on production types within the region linked to current parameters could cause problems with respect to WTO compatibility.

The move towards a uniform regional model, independently of the options chosen for redistributing the envelopes between Member States, would redistribute direct payments between farmers at least in those Member States which are currently applying an historic model. Indeed, within a region, entitlements would then be spread over all eligible hectares declared in a reference year, including eligible agricultural lands that are currently not covered by entitlements (so-called "naked land") at farmer's level and rebalancing the existing disparities between Member States according to the model of implementation of the SPS chosen.

This implies that the amount of support received at farm level would change considerably compared to the current situation. Farms with a currently high payment level per ha would lose a considerable share of direct payments and farms with comparatively low payment levels would gain substantially. In terms of the impact on different farm types, field crop, mixed and milk farms would lose payments compared to the status quo while payments would increase in grazing livestock, wine and horticulture

farms. As a general matter, a uniform flat rate would reduce support in more productive regions and sectors in favour of more marginal regions.

In addition, the move to a regional model in all Member States is likely to increase the rate of capitalisation of support in land prices. The flexibility for activating entitlements with additional eligible land is reduced due to the existence of only a very limited amount of “naked” land (i.e. eligible land without corresponding entitlements) and the absence of differences in the entitlement level in the regional model²⁰. Thus, substantial changes in the payments per hectare, inherent in the "EU flat rate" option and, albeit to a lesser extent, in the other options, may have an impact on farms' asset values (especially land) and affect the profitability of farms, which would in turn influence their access to credit and ability to address existing liabilities.

Whatever the options, the distribution of support between individual farms would remain uneven despite a uniform regional flat rate, as the difference in support per farm would still be determined by the farm areas (number of eligible hectares which would determine the number of entitlements).

4.3. Impacts on farm income

The impact of redistribution of direct payments on farm income has been analysed using FADN data. For the impact assessment at farms' level it has been considered that the entire country is one single region. The following options (see section 4.1 above for details) have been assessed quantitatively in terms of the effects they could have on the income of farms:

- 1) **EU flat rate**
- 2) **Min80%**
- 3) **Min90% with objective criteria**
- 4) **MFF distribution key**

Results are given in percentage of farm income defined as FNVA/AWU compared to a projected Status quo baseline in 2020. Detailed results of simulations of options based on FADN are presented in sub-annex 3C.

4.3.1. Impact at EU level and at MS level

As shown in Figure 17 and Table 1, whatever the option for redistribution, Member States benefiting from an increase of their national envelope for direct payments see their average farm income increasing. It is the case for EE, LT, LV, PT, RO and SK. The Member States with a current relatively high DP envelope compared to the EU average (BE, IT, DK, GR) see their average farm income decreasing.

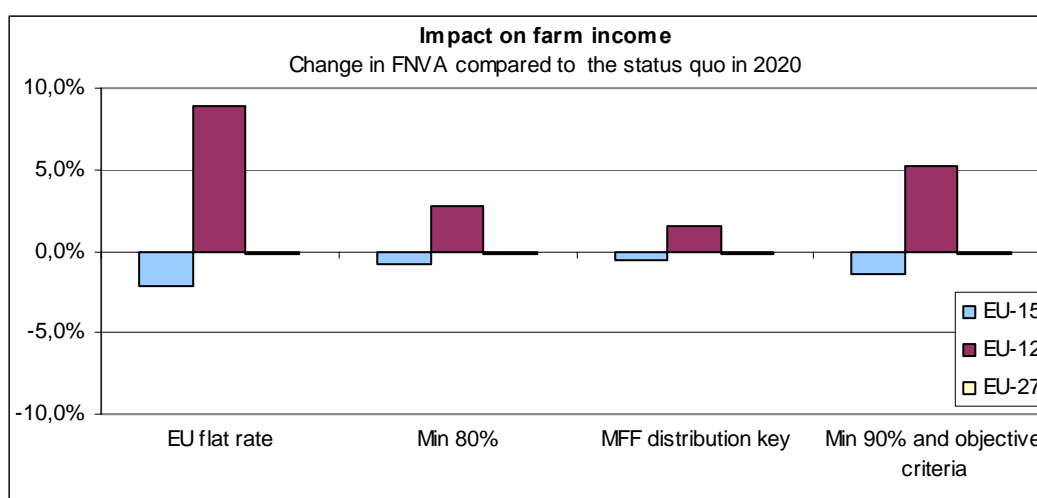
An '**EU flat rate**' would lead to massive changes in farmers' incomes in many Member States in both directions. The FADN analysis shows that there would be an increase of

²⁰ See Study on the functioning of land markets in the EU Member States under the influence of measures applied under the CAP, CEPS, Swinnen, Ciaian & Kancs, November 2008

8.6 % of farm income in EU-12 and a decrease of 2.1 % in EU-15 compared to the baseline level in 2020. The most affected countries would be DK, GR, BE, SL, DE, IT and CY (between -8 and -5 %), while farm income in EE, LT, LV will benefit the most (by 45 %, 26 % and 53 % respectively) and also PT, RO and SK to a lower extent (between 13% and 16%).

Results for the two alternative options of '**Min 80%**' and '**Min90% with objective criteria**' are quite similar with regard to the winners (mainly EE, LT, LV and to a lower extent PT, RO, SK) and losers whereby impacts are slightly higher in the '**Min90% with objective criteria**' option. With the '**MFF distribution key**' the gains for the Member States profiting most from redistribution are substantially reduced as only a part of the difference between their current level of direct payments and 90% of the EU average is covered.

Figure 17: Redistribution - Impact on farm income per EU aggregates



Source: DG AGRI, FADN

Table 1: Redistribution - Impact on farm income per MS

	Change in FNVA per AWU in comparison with the status quo in 2020				
	Base	1	2	3	4
	Status quo €per AWU	EU flat rate	Min 80%	MFF	90% and objective criteria
Belgium	62.429	-7%	-1%	-1%	-3%
Bulgaria	9.465	6%	0%	0%	1%
Cyprus	15.251	-6%	-1%	-1%	-4%
Czech Republic	23.473	2%	0%	0%	0%
Denmark	72.352	-8%	-1%	-2%	-5%
Germany	44.864	-5%	-2%	-1%	-3%
Greece	15.597	-8%	-1%	-1%	-4%
Spain	28.953	4%	0%	1%	1%
Estonia	22.281	45%	29%	12%	37%
France	38.819	-4%	-2%	-1%	-2%
Hungary	27.898	-1%	0%	0%	0%
Ireland	27.383	-1%	0%	-1%	-1%
Italy	35.561	-5%	-1%	-1%	-3%
Lithuania	18.162	26%	15%	7%	21%
Luxembourg	50.620	-1%	0%	0%	0%
Latvia	12.912	53%	37%	15%	45%
Malta	31.180	-4%	0%	0%	-2%
Netherlands	68.346	-4%	0%	-1%	-2%
Austria	32.445	0%	0%	0%	0%
Poland	12.893	6%	0%	1%	3%
Portugal	11.077	13%	4%	3%	8%
Romania	4.757	13%	5%	3%	9%
Finland	28.483	4%	0%	0%	1%
Sweden	43.966	6%	0%	0%	1%
Slovakia	20.060	16%	2%	3%	9%
Slovenia	7.849	-7%	-2%	-2%	-4%
United Kingdom	50.196	6%	0%	0%	2%
EU-27	23.751	0%	0%	0%	0%

Source: DG AGRI, FADN

4.3.2. *Impact per type of farming at EU level*

The impact on income per type of farming is mainly driven by the move toward a flat rate (regional model). Table 2 shows that whatever the option of redistribution, grazing livestock farms (+9.7 % to +10.1 %) and to a lower extent wine farms (+3.1 % to +3.6 %) and horticulture (+0.2 % to +0.3 %) would benefit the most compared to the baseline level. For grazing livestock farming, this is due to the fact that the subsidy level per hectare in this sector is generally rather low in the status quo and will increase with the move to a flat rate especially on the extensive farms with a large area. Wine farms would start receiving direct payments in all Member States whereas it was not the case in the status quo. The impact on farm income is limited, however, because the acreage of wine farms is low in comparison with their output and absolute income level. The same is true for horticulture farms.

Table 2: Redistribution - Impact per type of farming at EU level

	Change in FNVA per AWU in comparison with the status quo in 2020				
	Base	1	2	3	4
	Status quo € per AWU	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
Fieldcrops	25.162	-2,5%	-2,9%	-3,0%	-2,8%
Horticulture	36.197	0,2%	0,3%	0,3%	0,2%
Wine	33.811	3,1%	3,5%	3,6%	3,3%
Other permanent crops	21.006	-1,3%	-0,5%	-0,5%	-1,0%
Milk	29.899	-3,1%	-2,4%	-2,5%	-2,6%
Other grazing livestock	20.688	9,9%	9,9%	10,1%	9,7%
Granivores	23.347	-0,8%	-0,7%	-0,6%	-0,7%
Mixed	14.909	0,2%	-0,9%	-0,8%	-0,2%

Source: DG AGRI, FADN

In the contrary, field crop farms (-2.5 % to -3 %) and milk farms (-2.4 % to -3.1 %) would see a significant decrease in their income.

The income impact on farming system based mainly on grassland would considerably benefit (+11.1 % to +11.4%) from the move to a flat rate whatever the redistribution option as shown in table 3 below.

Table 3: Redistribution - Impact on grassland based and non-grassland based farms

	Change in FNVA per AWU in comparison with the status quo in 2020			
	1	2	3	4
	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
Farms with less than 80% grassland	-1,8%	-1,7%	-1,7%	-1,7%
Grassland based farms	11,5%	11,2%	11,2%	11,1%
Total	-0,1%	-0,1%	-0,1%	-0,1%

Source: DG AGRI, FADN

4.3.3. Impact in each Member State per farming type

Table 4 to table 8 below display the double effect of the move toward a flat rate at regional or national level and the redistribution of direct payments between Member States. This effect is expected to be particularly important in Member States with an historical model. In those Member States entitlements have been allocated only to a share of eligible hectares that supported certain production in the reference periods. Thus, irrespective of the method to redistribute direct payments between Member States, moving to a distribution of entitlements to all eligible hectares will have strong negative impacts in particular on those sectors that benefited from the historical models, all the more so in Member States which currently have a high level of direct payments per hectare and which will be affected negatively by the redistribution of direct payments between Member States (e.g. FR). However the effects strongly depend on the main sectors of each Member State.

Table 4: Redistribution - Impact on fieldcrop farms per MS

			Change in FNVA per AWU in comparison with the status quo in 2020				
Base			1	2	3	4	
Status quo € per AWU			EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria	
H	Belgium	Fieldcrops	74.095	-12%	-3%	-3%	-6%
SAPS	Bulgaria	Fieldcrops	18.008	8%	0%	1%	2%
SAPS	Cyprus	Fieldcrops	24.953	-6%	-1%	-1%	-3%
SAPS	Czech Republic	Fieldcrops	29.237	0%	-2%	-2%	-2%
R	Denmark	Fieldcrops	76.312	-10%	-2%	-2%	-6%
R	Germany	Fieldcrops	51.648	-7%	-2%	-1%	-3%
H	Greece	Fieldcrops	16.689	-13%	-5%	-5%	-9%
H	Spain	Fieldcrops	33.945	5%	0%	1%	1%
SAPS	Estonia	Fieldcrops	27.712	50%	32%	13%	41%
H	France	Fieldcrops	45.497	-15%	-12%	-11%	-13%
SAPS	Hungary	Fieldcrops	44.248	1%	0%	0%	0%
H	Ireland	Fieldcrops	69.740	-8%	-8%	-8%	-8%
H	Italy	Fieldcrops	33.203	-12%	-5%	-5%	-8%
SAPS	Lithuania	Fieldcrops	25.832	28%	16%	7%	22%
R	Luxembourg	Fieldcrops		-	-	-	-
SAPS	Latvia	Fieldcrops	19.576	55%	38%	15%	46%
R	Malta	Fieldcrops	26.375	-1%	5%	4%	1%
H	Netherlands	Fieldcrops	86.618	-2%	4%	4%	2%
H	Austria	Fieldcrops	48.428	-6%	-7%	-7%	-7%
SAPS	Poland	Fieldcrops	14.727	6%	-1%	0%	3%
H	Portugal	Fieldcrops	11.596	-15%	-21%	-21%	-18%
SAPS	Romania	Fieldcrops	6.413	16%	6%	4%	11%
R	Finland	Fieldcrops	41.321	7%	-1%	0%	1%
R	Sweden	Fieldcrops	54.587	9%	2%	3%	4%
SAPS	Slovakia	Fieldcrops	27.471	13%	1%	1%	7%
R	Slovenia	Fieldcrops	8.964	-12%	-7%	-7%	-9%
H/R	United Kingdom	Fieldcrops	69.717	-3%	-8%	-8%	-6%
	EU-27	Fieldcrops	25.162	-3%	-3%	-3%	-3%

Source: DG AGRI, FADN

H =historic model R = regional/hybrid model H/R = historic or regional/hybrid model depending on regions

Table 5: Redistribution - Impact on mixed farms per MS

			Change in FNVA per AWU in comparison with the status quo in 2020				
			Base	1	2	3	4
			Status quo € per AWU	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
H	Belgium	Mixed	67.743	-10%	-3%	-3%	-6%
SAPS	Bulgaria	Mixed	6.211	4%	-2%	-1%	0%
SAPS	Cyprus	Mixed	-	-	-	-	-
SAPS	Czech Republic	Mixed	22.034	3%	1%	1%	1%
R	Denmark	Mixed	63.407	-11%	-2%	-2%	-6%
R	Germany	Mixed	38.262	-7%	-2%	-1%	-3%
H	Greece	Mixed	16.312	-5%	1%	1%	-1%
H	Spain	Mixed	41.130	7%	3%	3%	3%
SAPS	Estonia	Mixed	21.914	50%	32%	13%	41%
H	France	Mixed	34.760	-11%	-8%	-7%	-8%
SAPS	Hungary	Mixed	22.962	2%	0%	0%	0%
H	Ireland	Mixed	34.353	-12%	-12%	-12%	-12%
H	Italy	Mixed	33.557	-7%	0%	0%	-3%
SAPS	Lithuania	Mixed	14.087	27%	16%	7%	21%
R	Luxembourg	Mixed	39.551	2%	3%	3%	3%
SAPS	Latvia	Mixed	10.043	56%	38%	15%	47%
R	Malta	Mixed	15.631	-11%	-6%	-6%	-9%
H	Netherlands	Mixed	36.239	-14%	-3%	-4%	-6%
H	Austria	Mixed	34.827	-4%	-4%	-4%	-4%
SAPS	Poland	Mixed	8.251	9%	-1%	1%	4%
H	Portugal	Mixed	7.945	33%	15%	13%	24%
SAPS	Romania	Mixed	2.708	12%	4%	2%	8%
R	Finland	Mixed	23.265	7%	0%	0%	1%
R	Sweden	Mixed	38.170	8%	1%	1%	2%
SAPS	Slovakia	Mixed	15.805	17%	2%	3%	10%
R	Slovenia	Mixed	5.486	-10%	-3%	-2%	-5%
H/R	United Kingdom	Mixed	44.028	-2%	-10%	-9%	-7%
	EU-27	Mixed	14.909	0%	-1%	-1%	0%

Source: DG AGRI, FADN

H = historic model R = regional/hybrid model H/R = historic or regional/hybrid model depending on regions

Table 6: Redistribution - Impact on other grazing livestock per MS

		Change in FNVA per AWU in comparison with the status quo in 2020					
		Base	1	2	3	4	
		Status quo € per AWU	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria	
H	Belgium	Other grazing livestock	51.878	-12%	0%	-1%	-5%
SAPS	Bulgaria	Other grazing livestock	4.667	3%	-2%	-2%	-1%
SAPS	Cyprus	Other grazing livestock	17.463	-9%	-1%	-2%	-6%
SAPS	Czech Republic	Other grazing livestock	25.917	6%	2%	2%	2%
R	Denmark	Other grazing livestock		-	-	-	-
R	Germany	Other grazing livestock	34.138	-8%	-3%	-2%	-4%
H	Greece	Other grazing livestock	17.166	14%	29%	28%	22%
H	Spain	Other grazing livestock	38.349	6%	1%	1%	2%
SAPS	Estonia	Other grazing livestock	14.156	85%	54%	22%	70%
H	France	Other grazing livestock	24.875	18%	22%	24%	22%
SAPS	Hungary	Other grazing livestock	15.083	3%	-2%	-2%	-2%
H	Ireland	Other grazing livestock	15.674	6%	6%	6%	6%
H	Italy	Other grazing livestock	39.671	-3%	6%	5%	2%
SAPS	Lithuania	Other grazing livestock	10.849	38%	22%	10%	30%
R	Luxembourg	Other grazing livestock	47.014	-4%	-3%	-3%	-3%
SAPS	Latvia	Other grazing livestock	14.536	61%	42%	16%	51%
R	Malta	Other grazing livestock		-	-	-	-
H	Netherlands	Other grazing livestock	29.716	-16%	-3%	-4%	-7%
H	Austria	Other grazing livestock	26.522	3%	2%	2%	2%
SAPS	Poland	Other grazing livestock	18.304	5%	0%	1%	3%
H	Portugal	Other grazing livestock	15.936	52%	31%	28%	41%
SAPS	Romania	Other grazing livestock	4.342	12%	4%	2%	8%
R	Finland	Other grazing livestock	15.922	10%	1%	2%	3%
R	Sweden	Other grazing livestock	22.593	15%	1%	2%	4%
SAPS	Slovakia	Other grazing livestock	19.273	20%	4%	5%	12%
R	Slovenia	Other grazing livestock	4.557	-5%	6%	7%	2%
H/R	United Kingdom	Other grazing livestock	27.909	65%	41%	43%	49%
	EU-27	Other grazing livestock	20.688	10%	10%	10%	10%

Source: DG AGRI, FADN

H = historic model R = regional/hybrid model H/R = historic or regional/hybrid model depending on regions

Table 7: Redistribution - Impact on milk farms per MS

			Change in FNVA per AWU in comparison with the status quo in 2020				
Base			1	2	3	4	
Status quo € per AWU			EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria	
H	Belgium	Milk	70.337	-10%	-3%	-3%	-6%
SAPS	Bulgaria	Milk	6.932	2%	-1%	-1%	-1%
SAPS	Cyprus	Milk		-	-	-	-
SAPS	Czech Republic	Milk	21.372	3%	1%	1%	1%
R	Denmark	Milk	90.265	-7%	-1%	-1%	-4%
R	Germany	Milk	52.719	-5%	-2%	-2%	-3%
H	Greece	Milk		-	-	-	-
H	Spain	Milk	45.890	-8%	-9%	-9%	-9%
SAPS	Estonia	Milk	22.276	35%	23%	10%	29%
H	France	Milk	30.748	-5%	-2%	-1%	-3%
SAPS	Hungary	Milk	24.211	1%	0%	0%	0%
H	Ireland	Milk	52.797	-3%	-3%	-3%	-3%
H	Italy	Milk	54.609	-10%	-6%	-7%	-8%
SAPS	Lithuania	Milk	15.025	23%	13%	6%	18%
R	Luxembourg	Milk	56.929	-1%	0%	0%	-1%
SAPS	Latvia	Milk	10.924	54%	37%	14%	45%
R	Malta	Milk	49.620	-19%	-16%	-16%	-17%
H	Netherlands	Milk	83.731	-12%	-5%	-6%	-7%
H	Austria	Milk	29.663	3%	3%	3%	3%
SAPS	Poland	Milk	16.393	6%	0%	1%	3%
H	Portugal	Milk	16.343	-28%	-31%	-31%	-29%
SAPS	Romania	Milk	4.892	7%	2%	1%	5%
R	Finland	Milk	20.712	4%	0%	0%	0%
R	Sweden	Milk	35.930	0%	-5%	-5%	-4%
SAPS	Slovakia	Milk	17.121	17%	3%	4%	10%
R	Slovenia	Milk	10.224	-13%	-9%	-9%	-11%
H/R	United Kingdom	Milk	56.545	-1%	-5%	-5%	-4%
	EU-27	Milk	29.899	-3%	-2%	-3%	-3%

Source: DG AGRI, FADN

H = historic model R = regional/hybrid model H/R = historic or regional/hybrid model depending on regions

Table 8: Redistribution - Impact on wine farms per MS

			Change in FNVA per AWU in comparison with the status quo in 2020				
			Base	1	2	3	4
			Status quo € per AWU	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
SAPS	Bulgaria	Wine	4.013	5%	-1%	0%	1%
SAPS	Cyprus	Wine	-	-	-	-	-
SAPS	Czech Republic	Wine	17.627	1%	0%	0%	0%
R	Germany	Wine	44.546	0%	0%	0%	0%
H	Greece	Wine	16.097	-2%	6%	5%	2%
H	Spain	Wine	25.603	5%	2%	3%	3%
H	France	Wine	53.567	3%	3%	4%	3%
SAPS	Hungary	Wine	934	-6%	-11%	-11%	-11%
H	Italy	Wine	34.649	3%	5%	5%	4%
R	Luxembourg	Wine	48.572	2%	2%	2%	2%
R	Malta	Wine	-	-	-	-	-
H	Austria	Wine	31.508	2%	1%	1%	1%
H	Portugal	Wine	8.455	14%	10%	10%	12%
SAPS	Romania	Wine	9.764	3%	1%	1%	2%
SAPS	Slovakia	Wine	-	-	-	-	-
R	Slovenia	Wine	18.321	4%	5%	5%	5%
	EU-27	Wine	33.811	3%	4%	4%	3%

Source: DG AGRI, FADN

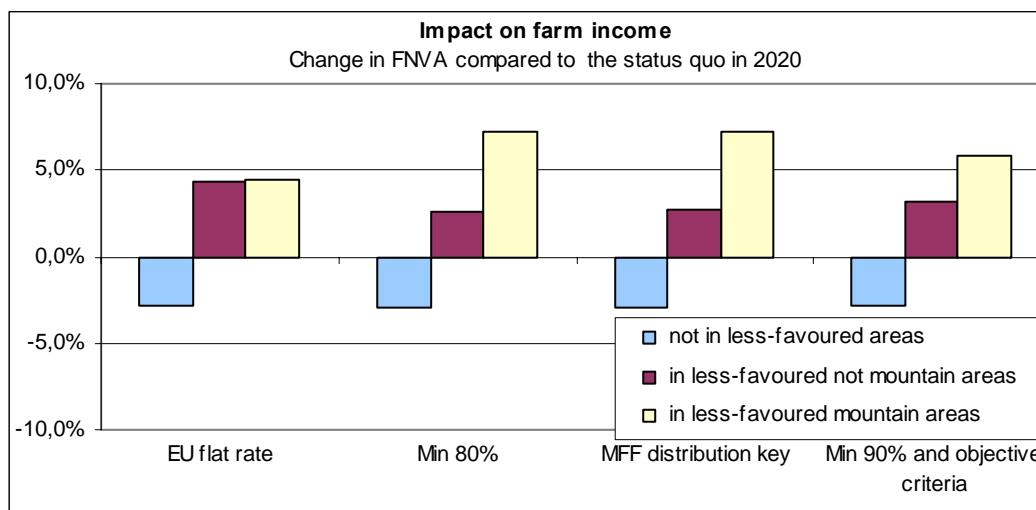
H =historic model *R* = regional/hybrid model *H/R* = historic or regional/hybrid model depending on regions

4.3.4. Impact per LFA/non LFA zones

The impact on income of farms located in less favoured areas (see Figure 18) is mainly driven by the move toward a flat rate (regional model)²¹. Simulations show that farm incomes increase in both mountainous and not mountainous LFA and decrease elsewhere. Indeed, past references of production which served as a basis to calculate the value of entitlements are quite low in less favoured areas and in particular in mountain areas where farm size is smaller. The move to a flat rate in each Member States would lead logically to a redistribution of direct payments towards those areas.

²¹ It has to be noted that the income increase in mountain areas is higher for the options "Min80%", "Min90% with objective criteria" and "MFF distribution key" (around 7%) than for the "EU flat rate" (around 4.5%). This is due to the fact the "EU flat rate" redistribution option favours Member States where the share of mountain LFA is lower than average.

Figure 18: Redistribution - Impact per LFA/non LFA zones



Source: DG AGRI, FADN

4.4. Production and price impacts of move toward flat rate at regional, Member States and EU levels

A recent study²² based on the partial equilibrium CAPRI model together with a specific tailed farm group component called CAPRI farm type (CAPRI FT) analyzes the impact of a flat rate for direct payments at regional (NUTS 1), Member State and EU levels (with the level of redistribution and potential impacts increasing in moving to an EU flat rate).

The study shows relatively small production and price impacts. In the EU flat rate scenario, which is the most price responsive, the maximum price increase was for cereals by 1.5 % for the EU-15 and 2.9 % for the EU-10. The small magnitude of the impact is also due to the role of entitlements in limiting land use expansion while allowing for some substitution between grassland and arable land.

Given the small price and production changes, income effects were mainly driven by the redistribution of decoupled payments and to a lesser extent by land use changes.

4.5. Environmental and climate change impacts

According to the assessment done on FADN data, grazing livestock farms and more generally grassland based types of farming and farms located in LFA would benefit from the move to a flat rate whatever the redistribution option. This would be a favourable outcome for the maintenance of permanent grasslands and the environmental benefits they provide²³, as well as for the continuation of farming in areas with a high risk of land abandonment, which is in turn positive for biodiversity.

²² Farm level policy scenario analysis, Final report, 15 March 2011 (IPTS contract no 151582-2009 A08-DE)

²³ See annex 2 on Greening of the CAP and its sub-annexes on "the environmental benefits of permanent grassland" and on "climate change mitigation and adaptation in EU agriculture under the CAP towards 2020 – outline and assessment of policy options to countervail pending hotspots"

As regards the distribution of direct payments envelopes between Member States, only the "**Min90% with objective criteria**" option considers objective criteria of environmental nature in the distribution of support between Member States, which would adjust the payments better to the objective of supporting the delivery of basic public goods in those areas where continuation of farming may be at stake. However, exact effects would depend strongly on the implementation, e.g. the distribution of direct payments between regions in Member States. If no additional environmental performance criteria were linked to direct payments (or at least to a part of the direct payments), the targeting of additional amounts to environmentally sensitive regions could be suboptimal.

4.6. International impacts

The redistribution of direct payments between Member States and farmers would not affect the classification of EU support at WTO provided that any direct effect on production level is avoided.

4.7. Administrative impacts

In case the new direct payments system is limited to a uniform regional rate, whatever the options for redistribution, the policy framework would be very much simplified because of the existence of one single model: the SPS regional one.

In the first year of implementation of the new system, there would be administrative burden associated with the redistribution (possibly new distribution of entitlements and/or recalculation of their value) and possibly transition (defining steps for progressive modifications in following years for each farmer). For those Member States currently applying SAPS, the administrative burden associated with the transition to regional SPS would be significant in the first year and is related to the establishment and allocation of entitlements.

5. ADDITIONAL INCOME SUPPORT IN AREAS WITH SPECIFIC NATURAL CONSTRAINTS

The Communication foresees that in order to promote the sustainable development of agriculture in areas with specific natural constraints, the new CAP could provide an additional income support to farmers in such areas in the form of a decoupled area-based payment as a complement to the support given under the Pillar II. This has been confirmed during the consultation process where the respondents have largely expressed that all parts of the EU, including areas with natural handicaps (NHA²⁴), shall be part of future growth and development.

As past references of production are used for determining the value of the entitlements there is, on average, a lower level of aid in areas with natural handicaps that are less productive while income needs and provision of public goods in these areas are important.

However, a new payment for farms in areas with natural constraints in Pillar I should not be a duplication of the current NHA scheme in rural development. Indeed, the main

²⁴ NHA is often also called LFA (less favoured areas)

purpose of the new Pillar I scheme for areas with specific natural constraints would be to allow Member States to achieve a more equitable distribution of income throughout their agricultural area by targeting a part of income support to farmers whose farming activity and the income derived from it is permanently limited by natural constraints.

While NHA support under the Pillar II (see sub-annex 3D for the current state of play) is only granted to a small percentage of farmers in these areas, the new Pillar I scheme for NHA would be compulsory for Member States and generalised to all farmers located in those areas. In addition, as the risk of land abandonment is extremely diversified throughout the EU and may be of particular relevance in mountain areas, the possibility to mobilise support from different sources will allow Member States to better calibrate the support needed to address this challenge.

An exercise of new delimitation of certain LFA/NHA zones is ongoing. However, the assessment of the potential impacts of the scheme in this Impact Assessment exercise has been based on current LFA/NHA delimitation, not pre-judging the new delimitation mechanisms of LFA/NHA to be used in the future. A qualitative assessment of the main changes between current and future LFA/NHA is done in section 5.2.

It has been shown previously (see section 4.1) that the move to a regional flat rate would already benefit to farms located in LFA/NHA whatever the option of redistribution of direct payments envelopes between Member States. In order to capture the effect of additional income support in NHA through a Pillar I scheme, the assessment in the current section is based on the redistribution option "**MFF distribution key**".

The 2 following two options for implementing additional support in NHA have been assessed:

- 1) EUR 100 for each hectare located in the current LFA;
- 2) EUR 50 for each hectare located in mountain areas and EUR 25 for each hectare located in other LFA areas.

The level of payments for those options have been established taking into account the current maximum level of LFA/NHA payment in Pillar II (maximum is EUR 250/ha in mountain areas and EUR 150/ha in other areas and minimum is EUR 25/ha).

In both options, a maximum of 5% of the national direct payments envelope redistributed as in "**MFF distribution key**" is dedicated to payments to specific natural constraints in Pillar I which means that if the sum of payments is above 5% of the national direct payments envelope the rate per hectare is reduced accordingly.

In addition, in view of assessing the impacts of the redistribution options in a kind of sensitivity analysis, **option 2** above has been applied on two others distribution scenarios of direct payments:

- 3) Status Quo 2020
- 4) Min 90% with objective criteria

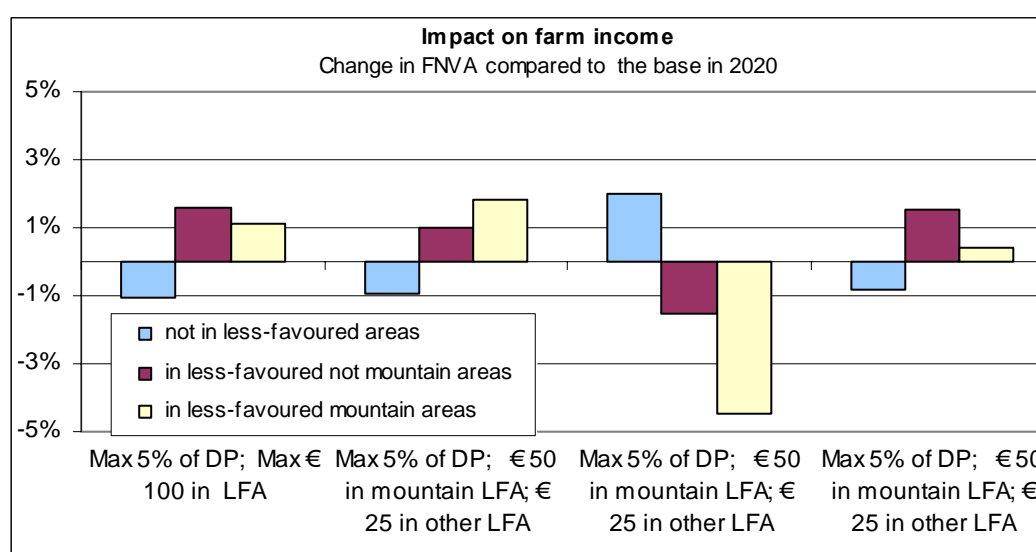
All comparisons are done with the redistribution option "**MFF distribution key**". Details of simulations are in sub-annex 3C.

5.1. Impacts on farm income

5.1.1. Impact in LFA/non LFA zones

As shown in Figure 19, farms located in LFA/NHA see their income increasing with options 1 (+1.1 % in mountains, +1.6 % in other LFA) and 2 (+1.9 % in mountains, +1% in other LFA) and also with option 4 (+0.4 % in mountains, +1.5 % in other LFA). They are better-off with the "MFF distribution key" or the "Min 90% with objective criteria" redistribution options than with the **Status quo 2020**. Also the increase in income for mountains is higher in option 2 (compared to option 1) as the rate per hectare in mountains is higher than for other LFA.

Figure 19: Additional income support in areas with specific natural constraints - Impact in LFA/non LFA zones



Source: DG AGRI, FADN

It is important to mention that the limitation to 5 % of the national DP envelope dedicated to payments to specific natural constraints in Pillar I leads to a rather small redistribution effect. However, for some Member States depending on their share of agricultural land in LFA/NHA and of the 'new' envelope, 5 % of the envelope may not be enough to apply to full rates per hectare proposed for *option 1* (EUR 100/ha) and *option 2* (EUR 50/ha in mountains and EUR 25/ha in other LFA) in all their LFA/NHA zones. In the simulations done with FADN data, rates of aid have been reduced accordingly but in practice, given the choice left to Member States of narrowing the areas covered by this payment, a solution may be to target zones inside LFA/NHA, where the needs for income support are the highest. Ongoing new delimitation of LFA/NHA may also have an impact.

5.1.2. Impacts per farming type

The analysis per farm type reveals that grazing livestock farms and more generally grassland based types of farming (including certain milk farms) would benefit from this new type of aid in addition of the positive effect of the redistribution ("MFF distribution key" or "Min 90% with objective criteria") and of the move toward a flat

rate (see Table 9 and Table 10). This is due to the high share of grassland based farms located in LFA/NHA and particularly in mountains.

Table 9: Additional income support in areas with specific natural constraints - Impact per farm type

		FNVA per AWU - comparison with the scenario based on the MFF distribution key in 2020			
Base		Option 1	Option 2	Option 3	Option 4
MFF distribution key		MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria
		Max 5% of DP; Max € 100 in LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA
Fieldcrops					
Horticulture	36.293	0,0%	0,0%	-0,3%	-0,1%
Wine	35.023	-0,1%	-0,1%	-3,4%	-0,4%
Other permanent crops	20.896	-0,1%	0,0%	0,5%	-0,5%
Milk	29.141	0,3%	0,3%	2,8%	0,3%
Other grazing livestock	22.771	1,1%	1,2%	-7,4%	0,9%
Granivores	23.210	-0,1%	-0,1%	0,5%	-0,2%
Mixed	14.789	0,0%	0,0%	0,7%	0,5%

Source: DG AGRI, FADN

Table 10: Additional income support in areas with specific natural constraints - Impacts on grassland based and non-grassland based farms

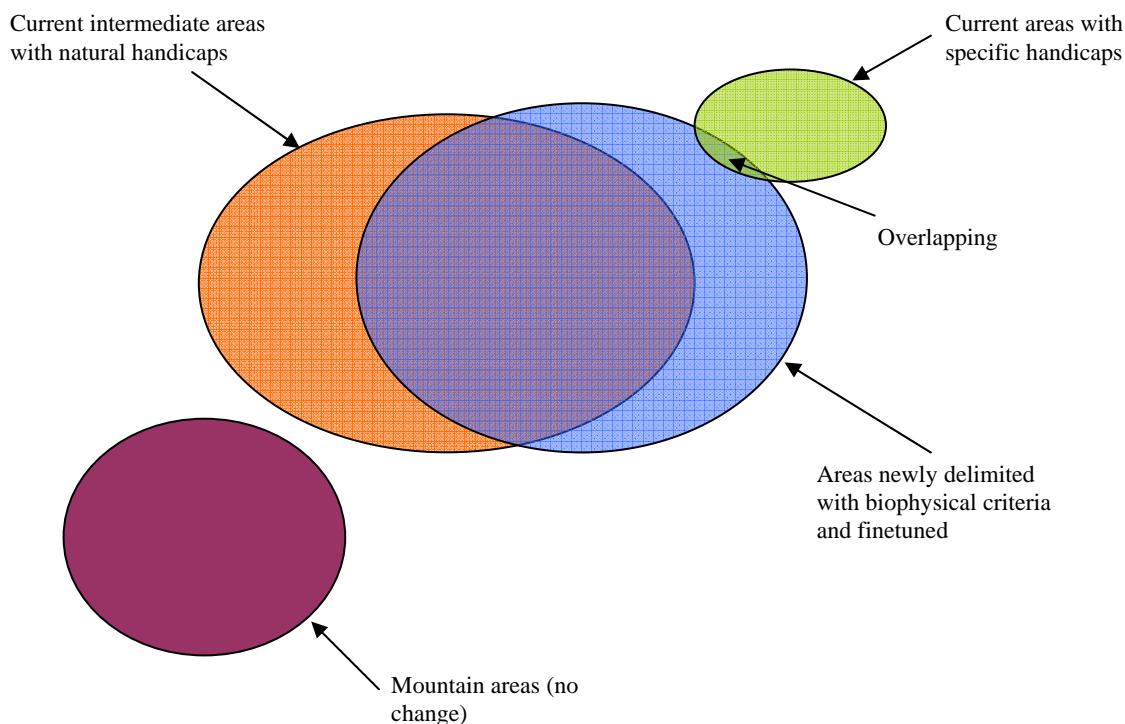
FNVA per AWU - comparison with the scenario based on the MFF distribution key in 2020				
	Option 1	Option 2	Option 3	Option 4
	MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria
	Max 5% of DP; Max € 100 in LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA
Farms with less than 80% grassland	-0,2%	-0,2%	1,5%	-0,2%
Grassland based farms	1,1%	1,2%	-8,3%	1,2%
Total	0,0%	0,0%	0,1%	0,0%

Source: DG AGRI, FADN

5.2. Impacts of new delimitation of LFA/NHA

The exercise of new delimitation of LFA/NHA with biophysical criteria has only concerned the intermediate LFA/NHA (thus mountainous LFA will not change). Figure 20 illustrates the outcome of the exercise at EU level.

Figure 20: Impacts of new delimitation of LFA/NHA



The purely orange colour represents intermediate LFA which would leave the delimitation, purely blue areas represent areas which would be newly delimited. The results show that globally the size of the areas in LFA/NHA will not considerably change at EU level but particular situations may arise in some Member States where the changes may affect large zones. However at this stage it is not possible to assess those impacts quantitatively.

5.3. Environmental and climate change impacts

Farms located in LFA/NHA would benefit from both the additional income support to areas with specific natural constraints in Pillar I and the move to a flat rate whatever the redistribution option. This would be favourable for the continuation of farming in areas with a high risk of land abandonment, which is in turn positive for biodiversity. In addition, farms in LFA/NHA have generally a high share of permanent pasture. Keeping the distribution of direct payments as in Status quo 2020 would miss the opportunity of addressing the specific needs of LFA areas in Pillar I.

In addition, the possibility to mobilise support from different sources (Pillar I and Pillar II) together with maintenance of lands in Good Agricultural and Environmental Conditions (GAEC) would allow Member States to better calibrate the support needed against risk of land abandonment.

5.4. International impacts

As a decoupled lump sum per hectare payment, support to areas with specific natural constraints in Pillar I would be WTO Green Box compatible.

5.5. Administrative impacts

A new regulation scheme would require monitoring and controls to the new direct payment in Pillar I, in addition to the existing one in Pillar II. However the additional burden would be limited for national administrations if the implementation is based on the existing implementation and control system in place for the Pillar II NHA aid. A management through annual payments would be less administrative burdensome than through entitlements.

6. CAPPING OF DIRECT PAYMENTS PER BENEFICIARY

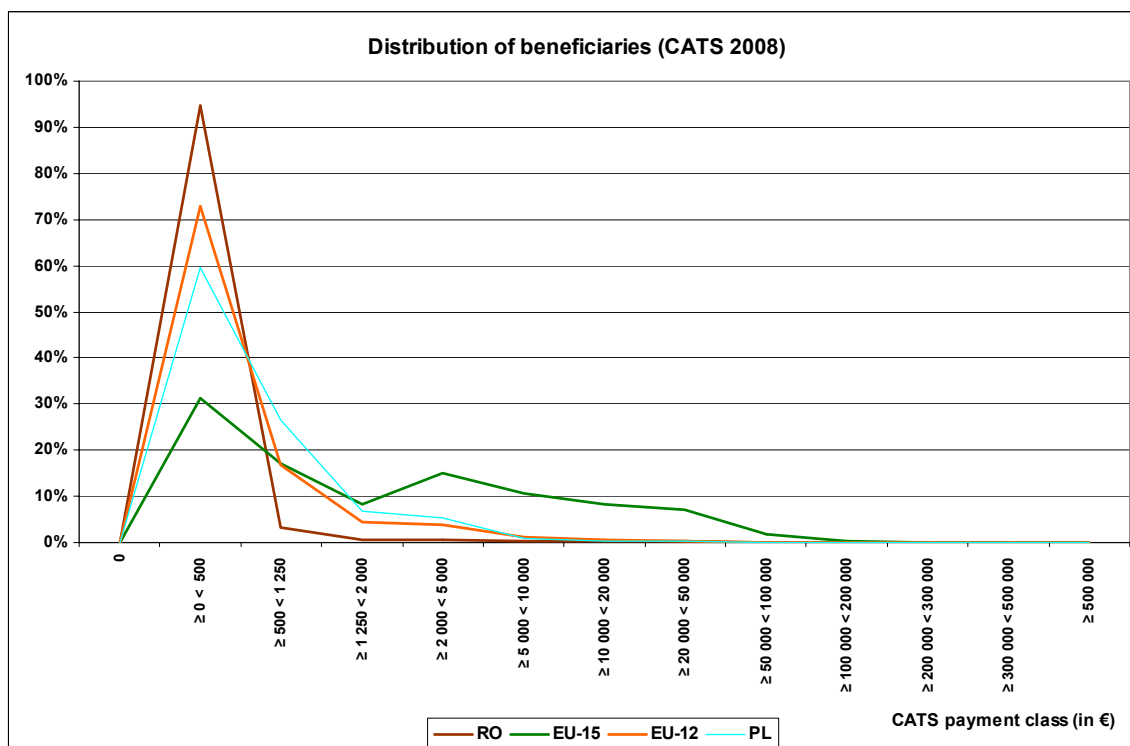
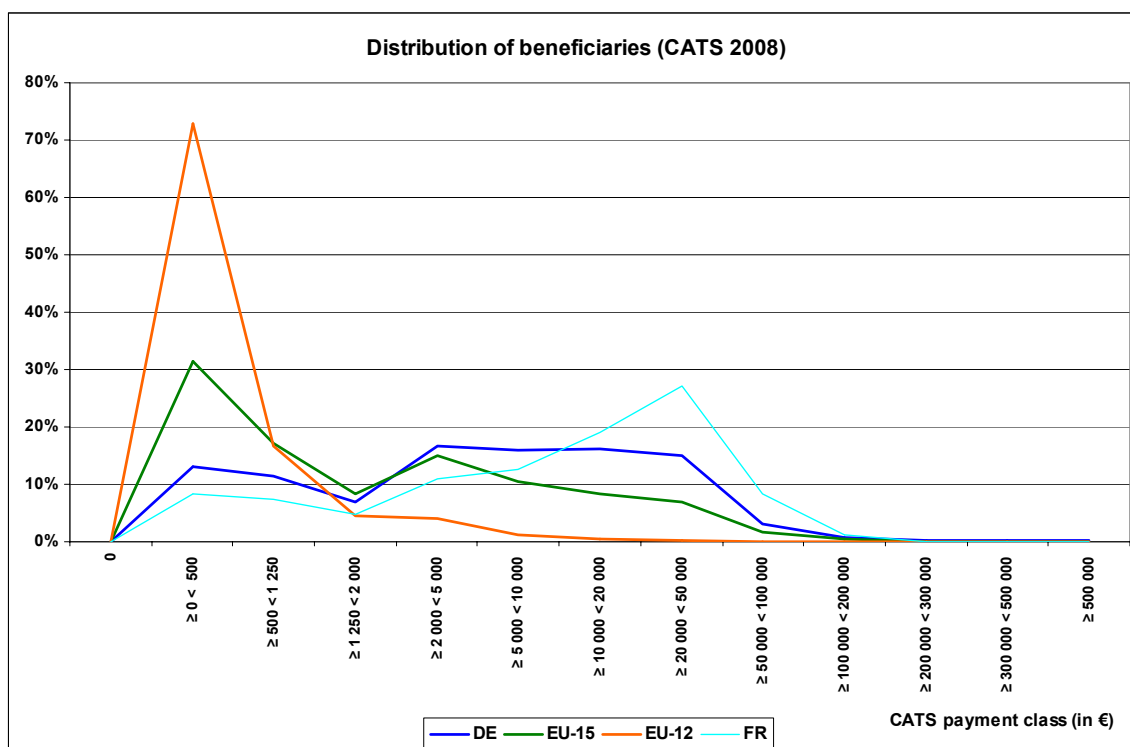
The issue of distribution of direct payments to the very large and the very small farms have both been mentioned in various ways in the public debate about the CAP and in the consultation process. Indeed, as direct payments are based on areas²⁵, larger farms get more direct payments. One can consider that due to economies of scale, granting a level of support per hectare to large farms similar to that received by small farms is not necessarily justified. Introducing some sort of upper ceiling or limitation/reduction for direct payments received by large individual farms could thus be considered in order to improve the distribution of payments between farmers.

Introducing a fixed ceiling on payments established at EU level can affect the capacity of large farms to employ and invest. Impacts on employment levels in large farm co-operatives, often located in the EU12, could be substantial.

With capping, the capacity of generating funds for other elements of direct payments, as well as the number of farms and Member States affected, depends on where the limits are set, in what form they are fixed and what is the distribution curve of direct payments between farms in the different Member States. As a general rule, the higher the limits, the fewer farms are affected and the effects become concentrated only on the few Member States with large farm structures. To illustrate the wide range of variations between Member States, see Figure 21 on the distribution curves of some selected Member States.

²⁵ In fact DP are based on entitlements accompanied with a corresponding number of eligible hectares.

Figure 21: Distribution of beneficiaries across CATS categories (in % of the respective total number of beneficiaries)



Source: DG AGRI, CATS data, budget year 2008

A payment cap set at Member States level could better reflect the structure of farms in a given Member States (for instance by taking a multiple of the average amount of direct payments per beneficiary).

The funding released by capping of direct payments should remain in the respective Member State where it could be spent on measures fostering innovation such as knowledge transfer, pilot projects or business development. Thus, capping money would reinforce the comprehensive efforts in favour of promoting innovation as envisaged for the Rural Development Policy. The selection of eligible measures and the approach towards implementation should be consistent with the provision laid down for Rural Development Programmes.

In general, fixed limits for direct payments bear the danger of an artificial “splitting” of farms to circumvent limits. Various legal responses to these problems were addressed. Taking account of different farm structures and ownership arrangements (e.g. co-operatives) would require adjustment to the definition of the "legal person" claiming the payment, which would in itself open the door to circumvention. Preventing any circumvention of the ceilings by the transfer of entitlements or the splitting of holdings would be difficult to implement, require a definition of splitting and would lay the burden of proof on Member State administrations.

Another way of addressing these difficulties would be to attenuate the effect of fixed ceilings by gradually reducing the support level as overall payments to the individual farmer increase, while retaining some support even at high overall payment levels.

A further possibility to mitigate the effects of capping in general on large farms with high employment levels is to foresee an increase of the threshold (or to put it differently, a decrease of the capped amount) for salaried labour intensity (e.g. by increasing the threshold for capping by wages actually paid or by a lump sum of e.g. EUR 15 000/AWU). Such mitigation could be foreseen both for a fixed or a progressive cap, as mentioned in the Communication on the future CAP.

The concept of capping has been addressed in the impact assessment for the Health Check²⁶. Whereas the options of fixed individual limits (e.g. no direct payment above EUR 200 000 or EUR 300 000) and progressive ceilings (e.g. payments per beneficiary above EUR 150 000 are reduced by 20 %, above EUR 200 000 by 40 %, and above EUR 250 000 by 75 %; no payment occurs above EUR 300 000 per beneficiary) remain unchanged, the assessment of capping concerning the CAP post-2013 needs to take into account the aforementioned options of redistribution of DP envelopes between Member States.

To assess the effects of the above-mentioned elements, the following options were assessed:

- 1a) Based on redistribution option "**MFF distribution key**", progressive capping with mitigation by 100% wages
- 1b) Based on redistribution option "**MFF distribution key**", progressive capping with mitigation by 50% wages
- 1c) Based on redistribution option "**MFF distribution key**", progressive capping with mitigation by EUR 15 000/AWU

²⁶ See Impact assessment note of the Health Check on individual limits for direct payments, http://ec.europa.eu/agriculture/healthcheck/ia_annex/c4_en.pdf

- 2) Based on redistribution option "**MFF distribution key**", fixed ceiling of EUR 200 000 with mitigation by 100% wages
- 3) Based on redistribution option "**MFF distribution key**", fixed ceiling of EUR 300 000 with mitigation by 100% wages
- 4) Based on redistribution option "**Status quo 2020**", progressive capping with mitigation by 100% wages (comparable to 1a)
- 5) Based on redistribution option "**Min 90% with objective criteria**", progressive capping with mitigation by 100% wages (comparable to 1a)

The quantitative impacts assessed are twofold: the amount generated by capping and the impact on farm income.

6.1. Amounts resulting from capping

6.1.1. Per Member State

Table 11 displays the amounts resulting from capping in the different options as a percentage of full national DP envelope following redistribution at Member State and aggregate EU-27 level, and the amount resulting from capping in absolute value at the EU level.

The results indicate that capping would release for the EU-27 between EUR 278 million for *option 4* (capping with **Status Quo** redistribution) and EUR 835 million for *option 1b* (capping with **MFF distribution key** redistribution). This represents between 0.6% and 1.9% of the total amount of direct payments at EU level which is quite low compared to the current amount resulting from modulation (around EUR 3 billions for budget year 2013). This is due to the thresholds of capping which affect only a limited number of farms in comparison to the modulation as only farms with very high direct payment levels are concerned. As a consequence capping would really affect very few countries where large farms play a big role²⁷: mainly BG and UK and to a lower extent HU, SK and RO while some Member States would not be affected at all like BE, CY, IE, LU, MT, AT, FI, SL, FR or almost not affected like PL, SE, PT.

The different mitigation options influence the capping quite differently depending on the level of wages in the different Member States. Thus, mitigation by a lump sum of EUR 15 000/AWU is more favorable in BG, RO and SK and to a lower extent in LT and LV where it is assumed that the lump sum of EUR 15 000/AWU is quite high compared to the real wages. In the contrary, using 100 % wages is more favorable in DK, DE, and to a lower extent in UK where it is assumed that the wages are quite high. The use of 50 % wages as a mitigation factor is increasing the capped amounts in all Member States compared to the two alternative mitigation factors.

²⁷ The FADN is a sample survey. As the capping concerns only a very limited number of very large farms it cannot be always guaranteed that this type of large farms is well represented in all Member States. Thus, the figures provided should be considered as indicative. This could explain the fact that GR is among the Member States strongly affected.

Note, in this respect, that these amounts are calculated in a simulated 2020 situation while the application of capping during the transition period for convergence of direct payments may affect farms differently.

Table 11: Amounts capped per Member State

Share of amounts capped in total pillar 1 payments (total before capping) - %							
MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria	
1a	1b	1c	2	3	4	5	
Progressive capping with mitigation by 100% wages	Progressive capping with mitigation by 50% wages	Progressive capping with mitigation by 15000€/AWU	fixed ceiling of 200 thousands € with mitigation by 100% wages	fixed ceiling of 300 thousands € with mitigation by 100% wages	1a with status quo	1a with Min 90% and objective criteria	
Belgium	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Bulgaria	9,8%	13,1%	1,9%	11,9%	5,4%	8,9%	10,4%
Cyprus	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Czech Republic	0,4%	4,2%	0,5%	0,5%	0,1%	0,5%	0,4%
Denmark	0,2%	0,6%	0,7%	0,2%	0,0%	0,2%	0,1%
Germany	0,2%	1,7%	2,1%	0,3%	0,1%	0,1%	0,2%
Greece	4,0%	4,1%	4,0%	4,7%	2,8%	0,0%	3,4%
Spain	1,5%	1,6%	1,5%	1,7%	0,7%	0,3%	1,5%
Estonia	0,0%	0,3%	0,0%	0,0%	0,0%	0,0%	0,8%
France	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Hungary	2,6%	5,9%	2,3%	2,9%	1,8%	2,3%	2,6%
Ireland	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Italy	0,1%	0,3%	0,2%	0,1%	0,0%	2,3%	0,1%
Lithuania	0,4%	0,7%	0,0%	0,5%	0,2%	0,2%	0,9%
Luxembourg	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Latvia	0,0%	1,0%	0,1%	0,0%	0,0%	0,0%	1,8%
Malta	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Netherlands	0,0%	0,0%	0,0%	0,0%	0,0%	0,1%	0,0%
Austria	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Poland	0,1%	0,5%	0,1%	0,1%	0,0%	0,1%	0,2%
Portugal	0,1%	0,2%	0,1%	0,1%	0,0%	0,2%	0,2%
Romania	2,9%	4,1%	1,0%	3,3%	1,7%	1,9%	4,2%
Finland	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Sweden	0,0%	0,1%	0,1%	0,0%	0,0%	0,0%	0,0%
Slovakia	3,1%	9,0%	1,8%	3,7%	1,7%	2,4%	4,3%
Slovenia	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
United Kingdom	5,2%	5,4%	5,5%	5,7%	3,8%	0,1%	5,4%
EU-27	1,3%	1,9%	1,3%	1,5%	0,8%	0,6%	1,4%

Source: DG AGRI, FADN

6.1.2. Per farming type

Table 12 shows which farming types are the most affected by capping. It expresses for each farming type the amounts resulting from capping in the different options as a percentage of total direct payment envelope at EU level (% in the table are comparable with each other).

Unsurprisingly, field crop farms which receive the bulk of direct payment are affected by capping in all scenarios.

Grazing livestock specialized farms which currently receive little subsidies compared to their large area will benefit from the move toward a flat rate at regional or national level and get a higher share of direct payments while labour will stay the same. Thus it is quite logical that these farms will be affected the most by capping in all options based on

'MFF distribution key' or 'Min 90% with objective criteria' but much less in the Status Quo.

Table 12: Amounts capped per farming type

	Share of amounts capped in total pillar 1 payments (total before capping) - %						
	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria
	1a	1b	1c	2	3	4	5
	Progressive capping with mitigation by 100% wages	Progressive capping with mitigation by 50% wages	Progressive capping with mitigation by 15000€/AWU	fixed ceiling of 200 thousands € with mitigation by 100% wages	fixed ceiling of 300 thousands € with mitigation by 100% wages	1a with status quo	1a with Min 90% and objective criteria
(1) Fieldcrops	0,50%	0,98%	0,48%	0,59%	0,27%	0,43%	0,65%
(2) Horticulture	0,00%	0,01%	0,00%	0,00%	0,00%	0,03%	0,00%
(3) Wine	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
(4) Other permanent crops	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
(5) Milk	0,00%	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%
(6) Other grazing livestock	0,77%	0,80%	0,78%	0,87%	0,53%	0,13%	0,76%
(7) Granivores	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
(8) Mixed	0,03%	0,12%	0,06%	0,04%	0,02%	0,04%	0,04%
All types	1,31%	1,93%	1,32%	1,49%	0,82%	0,64%	1,45%

Source: DG AGRI, FADN

6.2. Impact of capping on income

6.2.1. Per Member States

Table 13 expresses at Member States level the impact of capping on farm income (FNVA/AWU). All options are compared to the farm income in a redistribution scenario "MFF distribution key" without capping.

On average for the EU27 average income per unit of work would be little affected (between -0 % and -0.5 %), but there are important variations for some Member States depending on the options.

In option 1b where the mitigation by labor is the lowest (50% wages), countries most affected would be SK and BG but also CZ, HU, RO which is not surprising at they have a high share of large farms, cooperatives, etc.

Options 4 and 5 differ from option 1a because of the redistribution options used. In option 4, with the current distribution of direct payments between Member States (**Status Quo**), simulations show that some countries would lose much in terms of average income (EE, LV, LT, PT, RO, SK), but this is mainly due to the absence of redistribution of direct payments in that option (**Status quo**) and not to capping.

Table 13: Capping – Impacts on income per Member State

	Income 2020 FNVA/AWU	% of change of 2020 income in comparison with scenario 0							
IA scenario	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria
Capping scenario - number	0	1a	1b	1c	2	3		4	5
Capping scenario - description	no capping	Progressive capping with mitigation by 100%wages	Progressive capping with mitigation by 50%wages	Progressive capping with mitigation by 15000€AWU	fixed ceiling of 200 thousands € with mitigation by 100%wages	fixed ceiling of 300 thousands € with mitigation by 100%wages		1a with status quo	1a with Min 90% and objective criteria
Belgium	61.583	0,0%	0,0%	0,0%	0,0%	0,0%		1,4%	-2,1%
Bulgaria	9.470	-3,8%	-5,1%	-0,7%	-4,6%	-2,1%		-3,5%	-3,1%
Cyprus	15.064	0,0%	0,0%	0,0%	0,0%	0,0%		1,2%	-2,8%
Czech Republic	23.372	-0,2%	-2,0%	-0,2%	-0,2%	-0,1%		0,2%	-0,2%
Denmark	71.177	0,0%	-0,2%	-0,2%	-0,2%	-0,1%		0,0%	-3,1%
Germany	44.364	-0,1%	-0,5%	-0,6%	-0,1%	0,0%		1,1%	-1,4%
Greece	15.413	-1,1%	-1,1%	-1,1%	-1,3%	-0,8%		1,2%	-3,8%
Spain	29.192	-0,3%	-0,3%	-0,3%	-0,4%	-0,2%		-0,9%	-0,1%
Estonia	24.949	0,0%	-0,1%	0,0%	0,0%	0,0%		-10,7%	22,0%
France	38.466	0,0%	0,0%	0,0%	0,0%	0,0%		0,9%	-1,1%
Hungary	27.795	-1,0%	-2,3%	-0,9%	-1,2%	-0,7%		-0,5%	-1,0%
Ireland	27.237	0,0%	0,0%	0,0%	0,0%	0,0%		0,5%	-0,1%
Italy	35.189	0,0%	0,0%	0,0%	0,0%	0,0%		0,7%	-1,9%
Lithuania	19.345	-0,1%	-0,2%	0,0%	-0,2%	-0,1%		-6,2%	12,7%
Luxembourg	50.691	0,0%	0,0%	0,0%	0,0%	0,0%		-0,1%	-0,3%
Latvia	14.786	0,0%	-0,4%	0,0%	0,0%	0,0%		-12,7%	25,3%
Malta	31.121	0,0%	0,0%	0,0%	0,0%	0,0%		0,2%	-1,7%
Netherlands	67.857	0,0%	0,0%	0,0%	0,0%	0,0%		0,7%	-0,8%
Austria	32.384	0,0%	0,0%	0,0%	0,0%	0,0%		0,2%	0,0%
Poland	12.991	0,0%	-0,1%	0,0%	0,0%	0,0%		-0,8%	2,1%
Portugal	11.357	0,0%	-0,1%	0,0%	0,0%	0,0%		-2,5%	5,7%
Romania	4.882	-0,9%	-1,2%	-0,3%	-1,0%	-0,5%		-3,1%	4,4%
Finland	28.456	0,0%	0,0%	0,0%	0,0%	0,0%		0,1%	0,6%
Sweden	43.959	0,0%	0,0%	0,0%	0,0%	0,0%		0,0%	0,9%
Slovakia	20.563	-1,6%	-4,9%	-1,0%	-2,0%	-0,9%		-3,7%	3,6%
Slovenia	7.727	0,0%	0,0%	0,0%	0,0%	0,0%		1,6%	-2,4%
United Kingdom	50.363	-2,0%	-2,1%	-2,1%	-2,2%	-1,4%		-0,4%	-0,6%
EU-27	23.717	-0,4%	-0,5%	-0,4%	-0,4%	-0,2%		0,0%	-0,4%

Source: DG AGRI, FADN

6.2.2. Per farming type

Table 14 displays the impact on farm types. In all options, the most affected farming type as regards farm income would be grazing livestock. This has to be seen in the context of the redistribution of direct payments which leads to an increase in direct payments for this type of farms.

In option 4, with the status quo, some farming types would lose much in terms of average income (wine, grazing livestock), but this is mainly due to the absence of redistribution of direct payments in that option (**Status quo**) than to capping.

Table 14: Capping – Impacts of income on farm types

	Income 2020 FNVA/AWU	% of change of 2020 income in comparison with scenario 0						
IA scenario	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key	Status quo	Min 90% and objective criteria
Capping scenario - number	0	1a	1b	1c	2	3	4	5
Capping scenario - description	no capping	Progressive capping with mitigation by 100%wages	Progressive capping with mitigation by 50%wages	Progressive capping with mitigation by 15000€/AWU	fixed ceiling of 200 thousands € with mitigation by 100%wages	fixed ceiling of 300 thousands € with mitigation by 100%wages	1a with status quo	1a with Min 90% and objective criteria
(1) Fieldcrops	24.404	-0,5%	-0,9%	-0,4%	-0,5%	-0,2%	2,7%	-0,4%
(2) Horticulture	36.293	0,0%	0,0%	0,0%	0,0%	0,0%	-0,3%	0,0%
(3) Wine	35.023	0,0%	0,0%	0,0%	0,0%	0,0%	-3,5%	-0,3%
(4) Other permanent cr	20.896	0,0%	0,0%	0,0%	0,0%	0,0%	0,5%	-0,5%
(5) Milk	29.141	0,0%	0,0%	0,0%	0,0%	0,0%	2,6%	0,0%
(6) Other grazing livest	22.771	-1,8%	-1,9%	-1,9%	-2,1%	-1,3%	-9,5%	-2,1%
(7) Granivores	23.210	0,0%	0,0%	0,0%	0,0%	0,0%	0,6%	-0,1%
(8) Mixed	14.789	-0,1%	-0,3%	-0,1%	-0,1%	-0,1%	0,7%	0,5%
All types	23.717	-0,4%	-0,5%	-0,4%	-0,4%	-0,2%	0,0%	-0,4%

Source: DG AGRI, FADN

6.3. Environmental and climate change impacts

Whatever the option, capping has no direct effect on the environment and on climate change. It is more the use of capped funds which may have an impact.

6.4. International impact

Capping would be neutral as regards WTO aspects.

6.5. Administrative impacts

Provisions on capping, especially those providing for mitigation of capping for large farmers with high employment and those related to the artificial conditions created to avoid capping (artificial "splitting") will be complex to draft and to implement/control or enforce by Member States. For the farmers, the capping system will be burdensome as more information and supporting documents will be required to "prove" the right to mitigation.

7. SPECIFIC SUPPORT SCHEME FOR SMALL FARMERS

The EU agricultural sector is characterised by a very high number of small farms (more than 70 % of farms have less than 5 ha). These farms are heterogeneous with respect to socio-economic characteristics of farm holders, the farm asset base, the availability of non-farm incomes, and therefore their capacity to stay or become viable and flourish.

Many small farms may be unprofitable and uncompetitive from an economic perspective. Yet, they are of crucial social importance in certain Member States and rural regions where they make a significant contribution to employment, to the maintenance of viable areas and to cultural heritage.

Furthermore, small farms are important for the provision of public goods. Practices applied by small-scale farmers vary a lot across the EU but generally small farms play an important role in maintaining a varied landscape with a diverse pattern of perennial,

natural and planted vegetation. This variety, when accompanied by the presence of retained landscape features such as field margins, hedgerows, stonewalls, meadows, small woods and watercourses, is valuable for biodiversity through ensuring connectivity between semi-natural habitats and cultivated areas. It also contributes to the resilience of the landscape in the face of climate change.

In a context of globalisation and liberalisation, with volatile commodity prices, affecting both input costs and output revenues, small farmers have come under renewed pressure, including limited financial resources for investments and difficulties with access to credit as well as high transaction costs and poor bargaining power, resulting in limited market access.

In the face of these pressures on the one hand, and the important contribution of small farms to social and environmental objectives on the other, support structures need to be in place that allow small farms to survive and develop. Although at present, there are already some rules aimed at relieving smaller structures and Member States administrations from some administrative costs related to cross compliance (e.g. with respect to the *de minimis* rule or hygiene regulation), the administrative burden on small farmers is in general disproportionately high in relation to the amount of support they receive.

A specific scheme for supporting small farmers would acknowledge the contribution such farms make to rural areas and the environment. It could allow small farms to restructure, diversify and increase their competitiveness, e.g. by exploring new local market opportunities and providing specific regional products. To achieve this, the scheme would have to be designed in a way to either promote competitiveness, development and structural change or allow small farmers to choose their development path (e.g. maintaining local small-scale production) in order to narrow the income gap with larger structures. This specific scheme would also make it possible to cut red tape by simplifying administrative procedures for farmers as well as for national administrations.

However, a support scheme for small farmers within the first pillar would only offer limited possibilities of targeting or imposing requirements in terms of e.g. development capacity, investments, or the commitment to continue farming. This is why it is important to grant it in combination with more targeted support through Rural Development policy, focusing on the competitiveness of farms.

The purpose of a small farmer scheme in the first pillar would thus be to provide for general support to small farms in the form of a higher level of direct payments while simplifying the management of the scheme at farm and at Member States level (without imposing any specific request on the development strategy of the farm). This could be done by introducing a single payment at farm level that replaces all other elements of the direct payment (i.e. the basic rate, the payment for natural constraints, coupled payments and the greening component). This higher payment could either consist in:

- The attribution of a fixed EU-wide support (lump-sum) in addition to the "normal" payment to farmers below a threshold. In that case, there is a risk that farmers just below the threshold may receive a higher level of direct payment compared to the ones just above the threshold who would not be entitled to the specific lump-sum for small farmers.

- The granting of a lump-sum payment corresponding to a pre-determined threshold. However, this could lead to grant a high "bonus" to those with the lowest payments compared to the ones that are just below the threshold.
- An increase of direct payments by progressive percentages (the lower the payment below the threshold, the higher the percentage – possibility of bands). This would assume setting up bands under the threshold to the limit of which the payment of the farmers falling in the band would be completed. This option would mitigate the concerns of the above option by completing only to the limit of the band but it would be complicated to apply.

As regards the financing of the scheme, it should not put at risk the competitiveness of other farms by using a disproportionate share of the total direct payment envelope. Several options could be envisaged: either through a share (e.g. 5%) of the national envelope for direct payments of each Member States or through the results of capping generated in the same Member States. The latter could be an intuitively appealing solution as it would link the distribution problems at both end of the farm spectrum. However, this would result in a financial mismatch between the funds needed for the scheme and those generated owing to the unevenly distributed farm structures between Member States. There would be either too little financing available (in Member States with many small farms) or the scheme would be over-funded (in Member States with large farm structures).

Clearly, the budgetary needs for financing the small farmer scheme crucially depend on the definition of small farmers. Several options could be considered to define the small farmers:

- Option 1: A threshold fixed at EU level for all Member States (e.g. EUR 1 000 per beneficiary)
- Option 2: A threshold calculated at Member States level with an EU-wide formula (e.g. 15 % of the average amount of direct payment per beneficiary in each Member States)
- Option 3: A threshold defined at Member States level within an EU framework (e.g. maximum EUR 1 000 per beneficiary and maximum 5 % of the direct payments envelope in each Member States dedicated to the small farmers)

7.1. Economic impacts

The impacts of the three options in terms of number of beneficiaries and share of budget that would be dedicated to the scheme have been assessed on the basis of CATS data for financial year 2009 (mainly claim year 2008). CATS data gather direct payments really paid to farmers in a given year. Results have then been projected in the redistribution scenario "**MFF distribution key**". However, it was not possible to take into account structural adjustments that will certainly occur by 2020 as well as the redistribution of direct payments between beneficiaries due to the move to a flat rate at regional or national level.

The results would be the following:

- Option 1 would use 9.2 % of the EU DP envelope which would mean an additional 5.1% of DP dedicated to small farmers as compared to what they receive in the Status Quo. In CY, MT, RO, more than 40 % of the DP national envelopes would be used for more than 70% of beneficiaries. In IT, LT, EL, ES, PL, PT and SI, 8 to 23 % of national DP envelopes would be used for more than 40 % of beneficiaries. Detailed results are presented in Table 15.

Table 15: Small farmers - Impacts of option 1 (EUR 1 000 per beneficiary for all MS)

	Share of beneficiaries below the 1000 euros threshold	Share of budget necessary to grant 1000 euros to the beneficiaries below the 1000 euros threshold	Share of additional budget needed to finance these small farmers
AT	22%	3,7%	2,0%
BE	12%	0,9%	0,5%
BG	46%	4,5%	2,1%
CY	76%	57,7%	35,9%
CZ	17%	0,4%	0,2%
DE	23%	1,5%	0,9%
DK	23%	1,5%	0,9%
EE	36%	4,6%	2,2%
EL	55%	23,9%	15,1%
ES	44%	8,1%	4,9%
FI	9%	1,1%	0,3%
FR	15%	0,7%	0,4%
HU	43%	6,2%	3,1%
IR	8%	0,8%	0,4%
IT	62%	20,2%	12,3%
LT	59%	23,5%	11,3%
LU	9%	0,5%	0,2%
LV	48%	15,5%	7,0%
MT	85%	82,3%	66,3%
NL	24%	2,0%	1,2%
PL	50%	22,5%	10,6%
PT	70%	22,5%	15,2%
RO	79%	43,5%	21,9%
SE	27%	3,0%	1,4%
SI	45%	19,6%	9,5%
SK	48%	1,9%	1,0%
UK	18%	0,9%	0,4%
EU 27	50%	9,2%	5,1%

Source: CATS data, DG AGRI calculation

- Option 2 would use 4.8% of EU DP envelope which would mean an additional 2.8% of DP dedicated to small farmers as compared to what they receive in the Status Quo. The maximum share of national DP envelopes dedicated to small farmers would be 11% (in SK). The scheme would concern more than 40 % of beneficiaries in BG, CZ, EE, ES, HU, IT, MT, PT and SK. Detailed results are presented in Table 16.

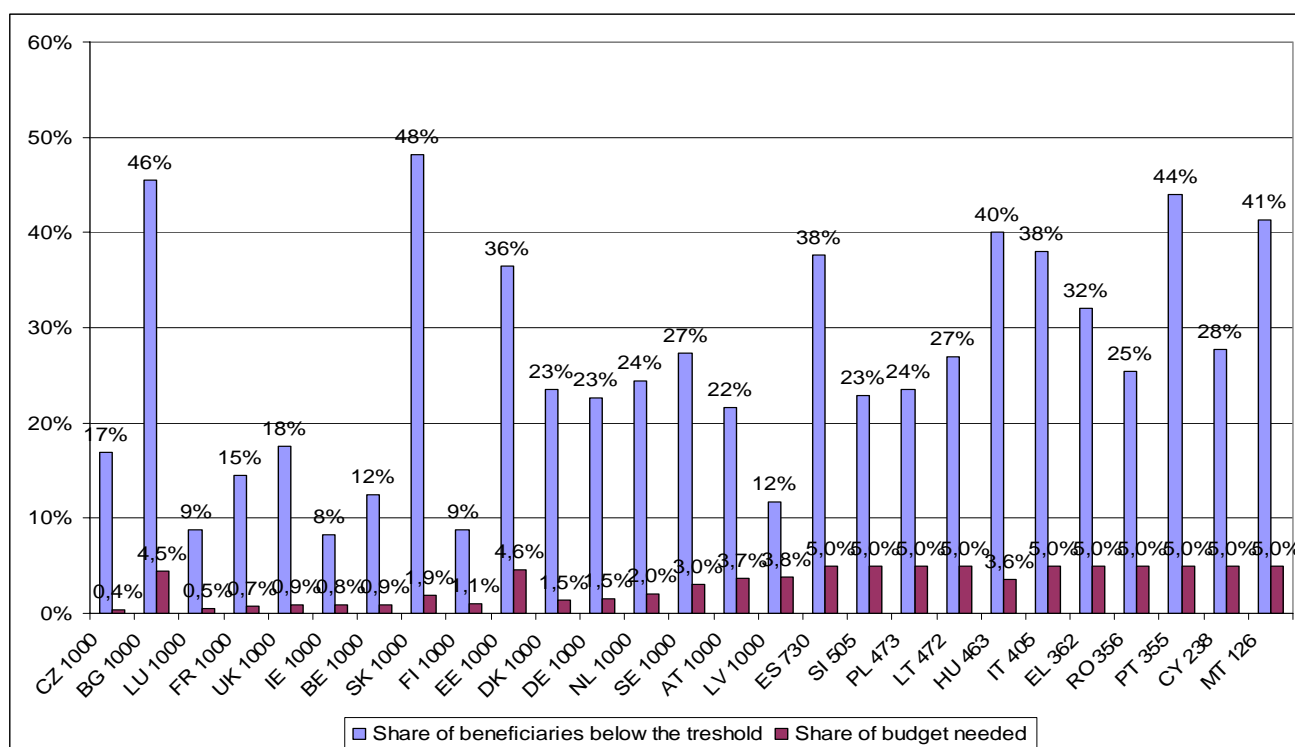
Table 16: Small farmers - Impacts of option 2 (15% of the average amount of direct payment per beneficiary in each MS)

	Threshold (15% of national avg) (in €)	% beneficiaries below threshold	Total amount needed to raise small farmers to the threshold set at 15% of nat.avg (in % of the DP envelope)	Share of additional budget needed to finance these small farmers
AT	868	20%	3,0%	1,6%
BE	2.070	22%	3,3%	1,8%
BG	1.524	66%	9,9%	6,3%
CY	198	21%	3,2%	0,8%
CZ	5.737	57%	8,6%	5,4%
DE	2.203	34%	5,1%	3,3%
DK	2.411	38%	5,8%	3,7%
EE	1.179	43%	6,4%	3,2%
EL	348	31%	4,7%	2,4%
ES	824	40%	6,1%	3,6%
FI	1.244	12%	1,8%	0,7%
FR	2.947	26%	3,9%	2,6%
HU	1.054	45%	6,8%	3,5%
IE	1.496	13%	2,0%	0,9%
IT	461	42%	6,3%	3,0%
LT	379	18%	2,8%	0,9%
LU	2.800	17%	2,5%	1,5%
LV	467	21%	3,1%	1,2%
MT	155	48%	7,2%	3,8%
NL	1.831	33%	4,9%	3,2%
PL	335	13%	1,9%	0,4%
PT	468	51%	7,7%	4,5%
RO	271	12%	1,8%	0,4%
SE	1.347	35%	5,2%	2,7%
SI	347	14%	2,1%	0,8%
SK	3.855	73%	11,0%	8,3%
UK	3.046	35%	5,3%	3,4%
UE27	819		4,8%	2,8%

Source: CATS data, DG AGRI calculation

- Option 3: In Figure 22, it is assumed that each Member States would try to maximise the threshold by reaching either EUR 1 000/beneficiary or the level of the threshold which allows to reach the maximum (5 %) share of national DP envelope. This limitation to 5 % of the national DP envelopes would reduce the EUR 1 000/beneficiary threshold in eleven Member States. The number of beneficiaries concerned still differs widely between Member States. This is due to the form of the distribution curves in each Member States that differs a lot (see for instance RO and BG). At EU level, it would represent 29% of all beneficiaries.

Figure 22: Small farmers - Impact of option 3 (maximum EUR 1 000 per beneficiary and maximum 5% of the DP envelope in each MS)



Source: CATS data for financial year 2009, DG AGRI calculation

Note: For those Member States in which a threshold of 1000€ per beneficiary will use more than 5% of the direct payments envelope for small farmers, the threshold has been reduced accordingly and its level appears after the initials of the Member States on the axe.

From an economic point of view, the scheme would result in an improvement of the position of smaller structures and to a consolidation of micro-size farms, thus contributing to vitality of rural areas, increasing the public acceptance of direct payments and having a positive impact on the income and purchasing power of small farmers. However, due to the lack of specific data there is no scope for additional quantitative assessment.

It has to be noted that, the risk of artificial splitting of holdings that are above the threshold to be considered a "small farm" would appear and legal provisions would have to be put in place to avoid this practice.

7.2. Impact on farm income

The impact of the small farmer scheme on the income of farms has been evaluated looking at the global impact on farm incomes as well as on the incomes of those farms that are the beneficiaries of the scheme. This was done on the basis of FADN data for the 'MFF distribution key' distribution option. It has to be noted, in this respect, that FADN only includes farms above a specific size threshold within Member States. As a result many small farmers which would benefit from this scheme are not covered by the survey. In some Member States the number of 'small farmers' (as defined under the 3 options) is too small to publish results (in that case, cells are left empty in the tables below). Nevertheless, the main advantage of using FADN data, contrary to CATS, is that the effects of the redistribution of DP at national/regional level can be taken into account.

Table 17 displays the share of farms per Member State included in the FADN that would be below the thresholds defined in the 3 options.

Table 17: Small farmer scheme - share of farms per MS that would be below the thresholds

	Total number of farms	option 1	option 2	option 3
		MFF distribution key	MFF distribution key	MFF distribution key
		Min € 1000	15% of the average DP in MS	Min € 1000 but Max 5%
Belgium	30.000	6,3%	8,0%	6,3%
Bulgaria	138.000	46,2%	53,2%	40,7%
Czech Republic	15.000	3,3%	20,0%	3,3%
Denmark	33.000	0,3%	1,2%	0,3%
Germany	200.000	1,5%	4,4%	1,5%
Estonia	7.000			
Ireland	97.000			
Greece	546.000	20,9%	1,1%	1,4%
Spain	713.000	30,5%	25,2%	19,2%
France	343.000	4,5%	10,0%	4,5%
Italy	609.000	21,1%	5,1%	4,1%
Cyprus	20.000	59,0%		9,0%
Latvia	25.000	4,0%		2,4%
Lithuania	51.000	2,5%		
Luxembourg	2.000			
Hungary	94.000	12,6%	14,9%	
Malta	2.000	20,0%		
Netherlands	57.000	4,7%	9,8%	4,7%
Austria	81.000	2,5%		2,5%
Poland	819.000	8,0%	0,7%	1,4%
Portugal	103.000	31,8%	10,6%	6,2%
Romania	956.000	63,9%	5,8%	11,5%
Slovenia	38.000	7,4%		
Slovakia	3.000			
Finland	44.000			
Sweden	32.000			
United Kingdom	97.000	1,2%	2,8%	1,2%
EU-27	5.155.000	25,0%	8,5%	7,5%

Source: DG AGRI- FADN

Note: The absence of figures for some option in some MS means that there is no farm below the threshold

The analysis shows that overall impacts on the income of the farm population, according to size units as in Table 18, are extremely low with detectable effects only in the smallest size units.

Table 18: Impact of a small farmer scheme on farm income according to size units (in % of change compared to an option 'MFF distribution key' without the small farmer scheme)

	MFF distribution key	MFF distribution key	MFF distribution key	MFF distribution key
		Min € 1000	15% of the average DP in MS	Min € 1000 but Max 5%
0 - <4 ESU	4.701	2,7%	0,9%	0,4%
4 - <8 ESU	11.255	0,5%	0,2%	0,1%
8 - <16 ESU	16.253	-0,3%	0,0%	0,0%
16 - <40 ESU	25.800	-0,2%	0,0%	-0,1%
40 - <100 ESU	40.690	-0,2%	-0,1%	-0,1%
>= 100 ESU	54.215	-0,2%	-0,1%	0,0%

Source: DG AGRI- FADN

On the other hand, when looking at the income effects for those farmers who are beneficiaries of the scheme, it becomes clear that, depending on the option, impacts can be very substantial reaching up to +21.8 % for the income of small farmers in BG under *option 2* (where the threshold is fixed at 15 % of national average of DP per beneficiary) as shown in Table 19.

Table 19: Impact of small farmer scheme on income for benefiting farms represented in FADN (in % of change compared to an option 'MFF distribution key' without the small farmer scheme)

	Change in income of farms benefiting from small farmer scheme		
	Option 1	Option 2	Option 3
	Min € 1000	15% of average DP in MS	Min € 1000 but max 5%
Belgium	0,4%	1,0%	0,4%
Bulgaria	13,6%	21,8%	7,6%
Czech Republic	2,5%	17,0%	2,5%
Denmark	0,0%	0,3%	0,0%
Germany	0,3%	1,0%	0,3%
Estonia			
Ireland			
Greece	2,6%	0,3%	0,3%
Spain	2,4%	1,6%	1,4%
France	0,5%	1,5%	0,5%
Italy	1,9%	0,5%	0,4%
Cyprus	9,2%		10,2%
Latvia	1,5%		1,9%
Lithuania	2,7%		
Luxembourg			
Hungary	4,4%	4,7%	
Malta	0,9%		
Netherlands	0,1%	0,2%	0,1%
Austria	1,6%		1,6%
Poland	2,2%	0,2%	0,6%
Portugal	6,7%	2,3%	1,8%
Romania	12,4%	1,7%	2,7%
Slovenia	8,9%		
Slovakia			
Finland			
Sweden			
United Kingdom	0,1%	0,7%	0,1%

Source: DG AGRI- FADN

Note: These results should not be considered as representative for all the "small farmers" of a given Member States. They serve merely as an illustration of the possible impacts on some small farms.

In summary, these estimated impacts on income demonstrate that a small farmer scheme could lead to considerable benefits for the farmers targeted by the measure while the impact on the farm population not benefiting from the scheme would be small.

7.3. Environmental and climate change impacts

By supporting the economic situation of small farmers, the small farmers scheme would allow to keep in place the varied field structures with diversity of crops, field margins and hedgerows and niches of unproductive land that often goes together with these types of farms. Furthermore, by providing some development opportunities, the scheme could also help to alleviate some of the environmental problems of small scale farms, for example the fact that small-scale farmers often lack the knowledge and machinery to handle inputs in the most efficient way and to handle and apply manure in a way that has the least negative environmental impact.

7.4. Administrative impacts

Depending on the share of farmers concerned and on the rules that would be simplified for the small farmers, the small farmer scheme could considerably simplify the overall management of the direct payments scheme for Member States. For the farmer, the application procedure for this approach can be very simple and would mean a much less burdensome access to support.

An approach built on the assumption that the direct payments for small farmers would be generally increased does not require any additional control but cross-reporting from existing controls.

However, provisions aimed at preventing artificial "splitting" of farms could be complex to draft.

8. SPECIFIC SUPPORT SCHEME FOR YOUNG FARMERS

Data on the age structure of farmers in the EU indicate the ageing of the farming community. As Table 20 shows, there are 1.8 mio young farmers (defined as farm holders "under 40 years of age") which make up 14% of the population of farmers in the EU-27 and hold 20% of the potentially eligible area (PEA)²⁸. The largest share in PEA held by young farmers is found in PL (29%), AT and FR (both 27%), while the smallest one in RO (12%), MT and CY (both 13%). The average farm size of young farmers in most Member States is larger than the average farm size. Other indicators also suggest that their performance is better compared to farmers above 45 years of age. However, the weight of this comparison might be biased by a higher share of small and unprofitable farms.

²⁸ The share of PEA held by young farmers has been calculated based on information from EUROSTAT on the share of utilised agricultural area (UAA) held by young farmers whereby the same share of PEA as for UAA has been assumed for YF.

Table 20: Importance of young farmers

	YF (farmers less than 40 yrs old*)		Hectares of PEA held by YF	
	N°	%	N°	%
BE	7.380	16,7%	278.606	21,3%
BG	37.805	7,7%	672.330	19,3%
CZ	6.745	18,5%	524.098	14,9%
DK	7.300	16,7%	541.021	20,4%
DE	80.010	21,9%	3.514.826	20,8%
EE	2.845	13,0%	200.716	23,2%
IE	20.220	15,8%	905.069	19,5%
GR	124.650	14,5%	1.257.560	22,6%
ES	110.260	11,2%	3.861.319	18,4%
FR	79.535	18,6%	7.183.943	27,1%
IT	134.410	8,1%	1.646.856	16,1%
CY	3.465	8,7%	18.599	12,9%
LV	17.460	16,2%	350.323	22,7%
LT	28.755	12,5%	509.308	19,3%
LU	360	15,9%	29.663	23,9%
HU	91.830	14,8%	821.250	16,2%
MT	1.000	9,1%	927	12,6%
NL	11.270	15,5%	314.547	17,3%
AT	38.785	24,0%	737.087	27,0%
PL	549.780	23,0%	4.106.957	29,0%
PT	15.365	5,7%	414.747	14,2%
RO	394.390	10,1%	1.158.933	11,9%
SI	7.875	10,5%	72.142	16,3%
SK	6.295	9,4%	285.412	15,2%
FI	13.755	20,5%	580.264	25,5%
SE	9.480	14,0%	534.687	17,5%
UK	24.820	8,8%	2.271.137	14,2%
EU-27	1.825.845	13,6%	32.445.877	20,1%
EU-15	677.600	12,4%	23.888.668	20,3%
EU-12	1.148.245	14,4%	8.564.459	19,7%

* age class 'less than 40 years old' has been estimated by assuming a uniform distribution of farmers in the age class 'from 35 to 44 years old' based on Eurostat data

Source: Eurostat data, DG AGRI calculation

The CAP has recognized the age structure in the farming sector as a problem years ago and has been addressing it by rural development measures, in particular by the measure “Setting-up of young farmers”. By contrast, direct support schemes up to now do not explicitly target young farmers. Within an overall aim to enhance the competitiveness of EU agriculture, direct support schemes serve as an income support for farmers and have to be granted in line with the principle of non-discrimination. Nevertheless, when allocating payment entitlements under the SPS, Member States have the possibility to address young farmers indirectly through provisions for farmers commencing their agricultural activity between the reference period and the first year of the SPS and later on by using the national reserve.

Farmers commencing their agricultural activity are defined as a natural or legal person that did not have any agricultural activity in her own name and at her own risk in the 5 years preceding the start of the new agricultural activity. It is highly likely that many of the newcomers who apply are young farmers. However, further narrowing down of

newcomers as only young farmers, e.g. on the basis of criteria used for rural development measures, risks to be challenged at the European Court of Justice because of being discriminatory.

While a majority of Member States uses the national reserve for newcomers, there are a few that do not (DK, NL, SE, MT, DE, UK), which means that their young farmers can get the access to direct support under the SPS only by transfers of entitlements (by buying, leasing or inheriting). As this can be, together with land, rather costly, young farmers may not be encouraged to start farming. This is particular the case when the support for setting-up (or for an early retirement) is not available under the rural development programme (MT, NL, SK). In terms of access to direct payments, young farmers in Member States applying SAPS benefit from a more favourable treatment as they can claim direct support any year provided that they have at their disposal eligible land.

In the light of this situation, a specific support scheme for young farmers in Pillar I could be envisioned that would encourage the setting-up of young farmers and/or support the operation of their farms in the first years. When designing such a new scheme, the objectives of the scheme should guide further decisions such as whether it is mandatory or voluntary, who are beneficiaries, the amount and the form of support, when and for how long to grant support and whether to set any budgetary limits.

A mandatory application would ensure that the often difficult situation for young newcomers would be equally taken into account in all MS. On the other hand, voluntary application could be argued as well since Member States are in the best position to decide if an additional measure is necessary in their case.

As defining beneficiaries on the basis of their age could be challenged at the European Court of Justice, an alternative could be to use the current definition of "newcomers", with the expectation that most of them would be young farmers, or to apply the definition foreseen under rural development measures²⁹. The justification could be that *"the creation and development of new economic activity by farmers commencing their agricultural activities (or young farmers) is financially challenging, in particular for young farmers, and this should be considered in the allocation and targeting of direct support"*. Besides legal implications, both targeted definitions also narrows down the number of potential beneficiaries, thus having more limited implications in terms of budgeting and administrative burden than if all farmers under 40 are granted support.

The following options for a specific support to young farmers could be envisaged:

- Option 1: Granting a fixed top-up payment per hectare to young farmers (less than 40 years of age)
- Option 2: Devoting a fixed percentage of the Member States' direct payment budget to a scheme for young farmers (less than 40 years of age)
- Option 3: Granting a top-up of a certain percentage of the basic rate for direct payments in each Member State to a scheme for young farmers (less than 40 years of age)

²⁹ Beneficiaries for RD measure "YF setting-up for the first time" are those who are less than 40 years of age, possess adequate occupational skills/competence and have submitted a business plan.

- Option 4: Granting a lump-sum support to starting-up farmers based on average farm size and average direct payments per ha in the Member State.

In all options, the support would be given for a limited number of years, e.g. 3 years or 5 years, or until a farmer reaches the age of more than 40 years.

8.1. Economic impacts

The impacts of the four options are assessed in terms of the level of the payment to young farmers and the share of budget that would have to be dedicated to the scheme in a given year. The analysis is done on the basis of Eurostat data on the number of young farmers and the size of their farms. Results have then been projected in the redistribution scenario "**MFF distribution key**".

The results would be the following:

- Option 1: The impact of a YFS with a fixed top-up amount per hectare for small farmers has been examined for three different amounts for the top-up of 100€/ha, 50€/ha and 20€/ha. Both a top-up of 100€/ha and a top-up of 50€/ha would require a considerable share of the direct payment budget for its financing (7.6 % and 3.8 % respectively at EU level) while these amounts would be reduced substantially for the top-up of 20€/ha (1.5 %). LV would be the Member State with the highest share of the national direct payment envelope going into the YFS, up to 16 % with a 100€/ha top-up due to the fact that its number of young farmers is relatively high and the budgetary envelope for direct payments relatively low (see Table 21).

Table 21: Impact of YFS with fixed top-up payment per hectare

	Budget for YFS with 100€/ha	Share of budget YFS with 100€/ha	Budget for YFS with 50€/ha	Share of budget YFS with 50€/ha	Budget for YFS with 20€/ha	Share of budget YFS with 20€/ha
	mio €	%	mio €	%	mio €	%
BE	27,9	5,3%	13,9	2,6%	5,6	1,1%
BG	67,2	8,2%	33,6	4,1%	13,4	1,6%
CZ	52,4	5,9%	26,2	2,9%	10,5	1,2%
DK	54,1	5,9%	27,1	3,0%	10,8	1,2%
DE	351,5	6,8%	175,7	3,4%	70,3	1,4%
EE	20,1	14,8%	10,0	7,4%	4,0	3,0%
IE	90,5	7,3%	45,3	3,6%	18,1	1,5%
GR	125,8	6,2%	62,9	3,1%	25,2	1,2%
ES	386,1	7,7%	193,1	3,9%	77,2	1,5%
FR	718,4	9,4%	359,2	4,7%	143,7	1,9%
IT	164,7	4,3%	82,3	2,1%	32,9	0,9%
CY	1,9	3,7%	0,9	1,8%	0,4	0,7%
LV	35,0	16,0%	17,5	8,0%	7,0	3,2%
LT	50,9	11,1%	25,5	5,5%	10,2	2,2%
LU	3,0	8,7%	1,5	4,3%	0,6	1,7%
HU	82,1	6,3%	41,1	3,2%	16,4	1,3%
MT	0,1	1,9%	0,0	0,9%	0,0	0,4%
NL	31,5	4,1%	15,7	2,1%	6,3	0,8%
AT	73,7	10,4%	36,9	5,2%	14,7	2,1%
PL	410,7	13,1%	205,3	6,5%	82,1	2,6%
PT	41,5	6,8%	20,7	3,4%	8,3	1,4%
RO	115,9	5,9%	57,9	3,0%	23,2	1,2%
SI	7,2	5,2%	3,6	2,6%	1,4	1,0%
SK	28,5	7,1%	14,3	3,5%	5,7	1,4%
FI	58,0	10,8%	29,0	5,4%	11,6	2,2%
SE	53,5	7,5%	26,7	3,7%	10,7	1,5%
UK	227,1	6,2%	113,6	3,1%	45,4	1,2%
EU-27	3.244,6	7,6%	1.622,3	3,8%	648,9	1,5%
EU-15	2.388,9	7,1%	1.194,4	3,6%	477,8	1,4%
EU-12	856,4	9,0%	428,2	4,5%	171,3	1,8%

* age class 'less than 40 years old' has been estimated by assuming a uniform distribution of farmers in the age class 'from 35 to 44 years old' based on Eurostat data

Source: Eurostat data, DG AGRI calculation

- Option 2: The impact of a YFS with a fixed percentage of the Member State overall direct payment budget devoted to the scheme was examined for two shares of the direct payment budget, i.e. 5 % and 2.5 %. At EU level, the per hectare top-up amounts resulting from the application of such a scheme would be 66€/ha for a 5% share of the budget and 33 €/ha for a 2.5% share of the budget. However, the amounts would vary substantially between Member States with, for example, MT going up to 266 €/ha in the 5% budget situation while LV would be at 31€/ha for the same setting (see Table 22).

Table 22: Impact of YFS with fixed percentage of direct payment budget

	Budget for YFS with 5% of MS envelope for YFS	€/ha for YF with 5% of MS budget for YFS	Budget for YFS with 2.5% of MS envelope for YFS	€/ha for YF with 2.5% of MS budget for YFS
	mio €	€/ha	mio €	€/ha
BE	26,4	94,7	13,2	47,4
BG	40,8	60,7	20,4	30,3
CZ	44,7	85,4	22,4	42,7
DK	45,7	84,5	22,8	42,2
DE	259,2	73,7	129,6	36,9
EE	6,8	33,7	3,4	16,9
IE	62,1	68,6	31,0	34,3
GR	101,2	80,5	50,6	40,2
ES	249,9	64,7	124,9	32,4
FR	382,7	53,3	191,4	26,6
IT	192,8	117,1	96,4	58,5
CY	2,5	135,9	1,3	67,9
LV	11,0	31,3	5,5	15,6
LT	23,0	45,2	11,5	22,6
LU	1,7	57,8	0,9	28,9
HU	65,1	79,2	32,5	39,6
MT	0,2	266,4	0,1	133,2
NL	38,3	121,8	19,2	60,9
AT	35,4	48,1	17,7	24,0
PL	156,9	38,2	78,4	19,1
PT	30,3	73,1	15,2	36,5
RO	97,5	84,1	48,7	42,0
SI	6,9	96,2	3,5	48,1
SK	20,2	70,8	10,1	35,4
FI	26,9	46,3	13,4	23,2
SE	35,9	67,1	17,9	33,5
UK	184,1	81,0	92,0	40,5
EU-27	2.148,2	66,2	1.074,1	33,1
EU-15	1.672,6	70,0	836,3	35,0
EU-12	475,6	55,5	237,8	27,8

* age class 'less than 40 years old' has been estimated by assuming a uniform distribution of farmers in the age class 'from 35 to 44 years old' based on Eurostat data

Source: Eurostat data, DG AGRI calculation

- Option 3: The impact of a YFS with a top-up for young farmers as a percentage of the basic payment rate was examined for a top-up percentage of 20 % and 25 %. Assuming a basic rate of 60 % of the overall direct payment envelope of a Member State, for the EU-27 the 20 % top-up would be 30€/ha leading to a basic rate of 179€/ha for young farmers (as compared to 149€/ha for other farmers) and 37€/ha for the 25% top-up leading to a basic rate of 186€/ha for young farmers. This would mean 2.3 % and 2.8 %, respectively, of the direct payment budget at EU level. The highest 25% top-up would be paid in GR (75€/ha) while the lowest would be in LV (19€/ha). The share of the direct payment budget devoted to the YFS would vary between 1.3 % in RO and MT and 4.6 % in GR with the 25% top-up (see Table 23).

Table 23: Impact of YFS with top-up of a certain percentage of the basic rate

	basic rate per ha	20% top-up to basic rate	basic rate per ha for YF with 20% top-up	Budget for YFS with 20% top-up for YF	Share of YFS in total budget with 20% top-up	25% top-up to basic rate	basic rate per ha for YF with 25% top-up	Budget for YFS with 25% top-up for YF	Share of YFS in total budget with 25% top-up
	€/ha	€/ha	€/ha	mio €	%	€/ha	€/ha	mio €	%
BE	230,5	46,1	276,5	12,8	2,4%	57,6	288,1	16,1	3,0%
BG	160,5	32,1	192,6	21,6	2,6%	40,1	200,7	27,0	3,3%
CZ	152,6	30,5	183,1	16,0	1,8%	38,1	190,7	20,0	2,2%
DK	206,0	41,2	247,2	22,3	2,4%	51,5	257,5	27,9	3,0%
DE	183,7	36,7	220,4	129,1	2,5%	45,9	229,6	161,4	3,1%
EE	89,6	17,9	107,5	3,6	2,7%	22,4	112,0	4,5	3,3%
IE	180,0	36,0	216,0	32,6	2,6%	45,0	225,0	40,7	3,3%
GR	298,0	59,6	357,6	74,9	3,7%	74,5	372,5	93,7	4,6%
ES	120,5	24,1	144,5	93,0	1,9%	30,1	150,6	116,3	2,3%
FR	167,2	33,4	200,6	240,2	3,1%	41,8	208,9	300,2	3,9%
IT	181,5	36,3	217,8	59,8	1,6%	45,4	226,9	74,7	1,9%
CY	207,7	41,5	249,3	0,8	1,5%	51,9	259,7	1,0	1,9%
LV	74,2	14,8	89,0	5,2	2,4%	18,5	92,7	6,5	3,0%
LT	104,3	20,9	125,2	10,6	2,3%	26,1	130,4	13,3	2,9%
LU	157,2	31,4	188,6	0,9	2,7%	39,3	196,5	1,2	3,4%
HU	184,6	36,9	221,5	30,3	2,3%	46,2	230,8	37,9	2,9%
MT	287,0	57,4	344,4	0,1	1,1%	71,8	358,8	0,1	1,3%
NL	240,2	48,0	288,3	15,1	2,0%	60,1	300,3	18,9	2,5%
AT	133,4	26,7	160,1	19,7	2,8%	33,3	166,7	24,6	3,5%
PL	121,6	24,3	145,9	99,9	3,2%	30,4	152,0	124,9	4,0%
PT	104,7	20,9	125,7	8,7	1,4%	26,2	130,9	10,9	1,8%
RO	85,0	17,0	102,0	19,7	1,0%	21,3	106,3	24,6	1,3%
SI	170,3	34,1	204,4	2,5	1,8%	42,6	212,9	3,1	2,2%
SK	125,2	25,0	150,2	7,1	1,8%	31,3	156,5	8,9	2,2%
FI	138,4	27,7	166,1	16,1	3,0%	34,6	173,1	20,1	3,7%
SE	137,8	27,6	165,3	14,7	2,1%	34,4	172,2	18,4	2,6%
UK	133,9	26,8	160,6	60,8	1,7%	33,5	167,3	76,0	2,1%
EU-27	149,1	29,8	178,9	967,5	2,3%	37,3	186,4	1.209,4	2,8%
EU-15	160,6	32,1	192,7	767,4	2,3%	40,2	200,8	959,2	2,9%
EU-12	119,0	23,8	142,9	203,9	2,1%	29,8	148,8	254,9	2,7%

* age class 'less than 40 years old' has been estimated by assuming a uniform distribution of farmers in the age class 'from 35 to 44 years old' based on Eurostat data

Source: Eurostat data, DG AGRI calculation

- Option 4: The impact of a lump-sum support to young farmers was analysed for a model that would give young farmers a payment at the level of 25 % of the average direct payment per ha in the Member State in which they are located times their farm size in hectare with a limit of 25 ha in Member States whose average size of holding is below 25 ha and a maximum comprised between 25 ha and the average size of holdings in the Member States where average holding size is equal to or higher than 25 ha. The results shown in Table 24³⁰ indicate that the overall budgetary impact at EU-27 level would be limited to 0.21 % of the total direct payment budget. In the different Member States, the amounts would lie between 0.1 % in the UK and 0.36 % in PL.

³⁰ Note that the calculations are based on a number of assumptions about the number of farmers that could profit from the scheme that are difficult to verify. Therefore, the figures should only be seen as indicative.

Table 24: Impact of YFS with a lump-sum support

	5% of farmers <40yrs**	average farm size of YF	average farm size in MS	number of hectares taken into account for YFS	average DP/ha PEA	YFS payment per farmer***	total payments to YFS	YFS in share of total DP budget
	N°	ha	ha	ha	DP/ha	€	€	%
BE	369	37,8	28,6	28,6	403,4	2.887	1.065.345	0,20%
BG	1.890	17,8	6,2	17,8	233,7	1.039	1.964.112	0,24%
CZ	337	77,7	89,3	77,7	254,8	4.950	1.669.390	0,19%
DK	365	74,1	59,7	59,7	344,2	5.135	1.874.111	0,21%
DE	4.001	43,9	45,7	43,9	307,3	3.375	13.503.337	0,26%
EE	142	70,6	38,9	38,9	156,6	1.521	216.314	0,16%
IE	1.011	44,8	32,3	32,3	267,8	2.161	2.185.040	0,18%
GR	6.233	10,1	4,7	10,1	363,9	918	5.720.039	0,28%
ES	5.513	35,0	23,8	25,0	237,7	1.485	8.188.837	0,16%
FR	3.977	90,3	52,1	52,1	288,9	3.763	14.965.404	0,20%
IT	6.721	12,3	7,6	12,3	378,0	1.158	7.782.255	0,20%
CY	173	5,4	3,6	5,4	351,7	472	81.777	0,16%
LV	873	20,1	16,5	20,1	141,8	711	620.911	0,28%
LT	1.438	17,7	11,5	17,7	174,4	772	1.110.348	0,24%
LU	18	82,4	56,9	56,9	275,7	3.922	70.593	0,21%
HU	4.592	8,9	6,8	8,9	257,3	575	2.641.290	0,20%
MT	50	0,9	0,9	0,9	673,7	156	7.803	0,16%
NL	564	27,9	24,9	25,0	422,1	2.638	1.486.754	0,19%
AT	1.939	19,0	19,3	19,0	259,8	1.234	2.393.323	0,34%
PL	27.489	7,5	6,5	7,5	221,7	414	11.381.403	0,36%
PT	768	27,0	12,6	25,0	207,7	1.298	997.349	0,16%
RO	19.720	2,9	3,5	2,9	200,5	147	2.904.727	0,15%
SI	394	9,2	6,5	9,2	312,6	716	281.911	0,20%
SK	315	45,3	28,1	28,1	215,4	1.512	475.785	0,12%
FI	688	42,2	33,6	33,6	236,0	1.983	1.363.523	0,25%
SE	474	56,4	42,9	42,9	234,9	2.522	1.195.325	0,17%
UK	1.241	91,5	53,8	53,8	230,9	3.106	3.854.291	0,10%
EU-27	91.292	17,8			266,7		90.001.296	0,21%
EU-15	33.880	35,3			284,4		66.645.526	0,20%
EU-12	57.412	7,5			218,9		23.355.770	0,25%

* age class 'less than 40 years old' has been estimated by assuming a uniform distribution of farmers in the age class 'from 35 to 44 years old' based on Eurostat data

** it was assumed (on the basis of the figures of farmers assisted in the RD programmes for YF) that the number of assisted farmers in the YFS could be around 5% of the farmers <40yrs

*** 25% of average DP/ha x average farm size of young farmers (with limit of 25 ha in MS whose average size of holding is below 25 ha and limit of average size of holdings in the MS where average holding size is more than 25 ha)

Source: Eurostat data, DG AGRI calculation

8.2. Social impacts

A specific support scheme for young farmers could encourage the entry of young farmers into the sector and thus improve the age structure in the farming sector. A setting-up aid (option 4) is likely to prove more efficient in this respect because it is targeted only to new entrants, not to those young farmers already in the sector.

However, an aid given to *all* new entrants - whether young farmers or not – would risk supporting some people who were not actually targeted by the measure. Furthermore, option 4 bears a certain risk of leading to double funding with the already existing aid for “Setting-up of young farmers” under rural development policy, which is based on similar criteria. However, if the young farmer scheme was designed in such a way as to bring additional income and lower the cost of capital it could actually be complementary to the support possible under Pillar II.

Options 1-3, which are not targeted as a start-up support but an income support to all farmers under a certain age – risk less of an overlap with existing rural development support as they are based on different criteria. On the other hand, due to the fact that they are based on age alone as the selection criterion they may be challenged at the European Court of Justice for being discriminatory.

8.3. Environmental impacts

It is unlikely that there would be substantial environmental impacts from the introduction of a young farmer scheme. However, it is possible that young farmers would have a particularly good awareness of environmental problems and the skills and knowledge to use modern technology that allows environmentally and climate friendly production methods.

8.4. International impacts

There would be no particular international impacts from a young farmer scheme.

8.5. Administrative impacts

The implementation of a scheme for young farmers would cause additional administrative burden but the costs would be limited as the number of farmers that could take part in such a scheme would not be extremely high. It is important that such a scheme would be designed not to double existing support possibilities under rural development.

9. BETTER DEFINITION OF "ACTIVE FARMERS"

The current definition of "farmer" ("*...a natural or legal person, or a group of natural or legal persons (...) who exercises an agricultural activity.*") acknowledges the fact that direct support is decoupled and, thus, not linked to production activity. However, the application of this definition has resulted in criticism from the European Court of Auditors (ECA), and also from the public at large, as certain cases have been reported where direct payments seem to have been granted to persons or companies that cannot be considered as genuine farmers as they are only to a very small extent engaged in agriculture or agriculture is not their main business activity.

This problem was already addressed in the Health Check of the CAP that provided for optional additional criteria for the exclusion of persons/companies from the aid whose agricultural activity is only an insignificant part of their overall activity and/or whose main business objects do not consist of exercising an agricultural activity. However, no Member State has made use of the possibility of setting up these additional criteria.

This is why a provision could be introduced that obliges Member States to define who is an "active farmer". However, the introduction of such a provision poses substantial practical difficulties:

- First, as there exists limited information on the exact dimension of the problem (number of beneficiaries now receiving direct support but not qualifying as "active farmers") it is rather difficult to make a quantitative analysis of impacts.
- Second, the definition needs to be fine-tuned to reliably exclude non-active farmers while at the same time not affecting the access to support of genuine farmers. The criteria to define 'active farmers' would have to ensure that part-time farmers are not excluded as it is clear that diversification of activities is a valuable alternative to limited growth opportunities within the farm sector and contributes to maintaining farming in areas where agriculture is socially and environmentally valuable.

- Third, the situations differ substantially between Member States with respect to how many beneficiaries could be affected and with respect to what kind of information is available in national statistics to be used as criteria to determine what is an "active farmer".

As for establishing the criteria to define who is an "active farmer" there are two approaches both of which, however, may create problems:

- Due to the differences between Member States mentioned above, it could be a promising approach to establish a list of criteria for the definition of "active farmers" at European level from which Member States could then choose those elements that best fit their national situation and the availability of information. The problem with this approach is that it could give rise to complaints about discrimination and unequal treatment between farmers.
- Alternatively, fixed and equal criteria could be set that all Member States would have to apply. This, however, would not leave flexibility to Member States and could create problems for those Member States that are not in a position to apply the selected elements.

Possible elements to be considered as criteria to determine who is an "active farmer" could be, for example:

- That the turnover (or income, or receipts) derived from an agricultural activity represents or represented at least X % of the total turnover (income, receipts) of a natural or legal person. This would mean that payments would be granted only to those natural and legal persons for whom agriculture forms a significant part of overall economic activities or whose principal business or company objects consists of exercising an agricultural activity. However, care would have to be taken not to exclude part time farmers with such a definition (most notably those engaged in diversification strategies).
- That farm animals or agricultural crops, or of farm machinery, or relevant facilities for an agricultural activity are present on the agricultural holding. However, these criteria could result in problems with the Green Box classification of support if they were not linked to a date in the past – which, in turn, would make them questionable for determining who is an active farmer today.
- That professional qualification and/or practical experience is properly credited or that the physical residence of the person is on the agricultural holding or close to it. However, while these criteria are not problematic from a WTO or discrimination point of view, they would also not suffice as the only criteria to determine who is an active farmer.
- Certain types of business (such as airports, railway companies, sport grounds, etc.) could be excluded from qualifying as active farmers ("negative list"). However, such a negative list could pose problems since it may not be exhaustive and thus may leave out certain companies which could lead to complaints about unequal treatment by the economical agents explicitly mentioned on the list.

- Farmers subscribing to rural development measures could be considered as active farmers. However, this criterion is, again, not sufficient as the sole determinant of who should be seen as an active farmer.

9.1. Economic and social impacts

The economic impacts of a better definition of "active farmers" would most likely not be substantial as the problem of granting direct payments to non-genuine farmers seems to be limited to particular cases and is not a widespread phenomenon. This having been said, a definition that guarantees that only active farmers receive support means, of course, a better targeting of payments to those who actually are the intended recipients. Thus, the approach would improve the use of public funds and increase the public acceptance of direct payments.

9.2. International impacts

It would have to be ensured that the list of criteria set up to define who is an "active farmer" contains only elements that respect WTO Green Box criteria. In particular, it would have to be avoided that any of the criteria would imply an obligation to produce in order to be classified as an "active farmer" as this would be against the principle of decoupling.

9.3. Environmental impacts

Care is needed not to exclude from support - and so from GAEC - land which is important for environmental reasons and/or which may also at some stage be needed for agriculture.

9.4. Administrative impacts

Improving the targeting of payments to active farmers would require careful fine tuning of definitions, possibly in cooperation with Member States, and selecting criteria to be integrated into the IACS register. This would generate substantial administrative effort for farmers who would have to prove eligibility by providing supplementary detailed information and possibly submitting accompanying documents with their application and for national/regional authorities who would have to control the received information. This could lead to a considerable increase of administrative burden for farmers and Member States.

10. COUPLED AID FOR SPECIFIC SECTORS AND REGIONS

Decoupling has been the principle of recent CAP reforms as it introduces flexibility in the choice of producers who continue to produce where it is profitable, and adapt their output to the market, like changing to alternative crops where it is adequate.. However, there are particular sectors and regions where the maintenance of a specific type of production is important to generate economic benefits and benefits in terms of the social fabric of areas and where, without coupled support, there is a danger of this production vanishing.

This is why the Communication on the future CAP foresees that coupled support may continue to be granted to take into account specific problems in certain regions where

particular type of farming are considered particularly important for economic and/or social reasons. The potential risks and benefits in the regions should be identified on a case-by-case basis before deciding to which extent and where a possibility for coupled support should remain.

To this end, the role of coupled payments on farmer's margins was assessed on the basis of FADN data (see details in sub-annex 3E "Impact of suppression of coupled support for beef, sheep and goat sectors based on FADN data"). As some current coupled payments will become decoupled in the coming years (sugar beet and cane, fruits and vegetables) and as some others are part of specific programmes (POSEI and Small Aegean Islands) or are guaranteed by the Treaty (cotton), the assessment was limited to the beef, sheep and goat sectors³¹. All types of coupled payments implemented during the analysed period were taken into account: "re-coupled" payment, specific support (Article 69 of Reg. 1782/2003), national aid or Complementary National Direct Payment.

The analysis is based on the principle consideration that, if all the payments are decoupled, it is assumed that a farmer continues producing only if the output covers the operating costs. Therefore the analysis compares the margin over operating costs with and without coupled payments and looks at the particular Member States, types of production systems and types of areas (LFA, mountain LFA, non-LFA) to assess the impacts.

10.1. Farm level impacts of keeping certain types of coupled supports

The impacts of withdrawing coupled payments on farmers' margins vary substantially across the analysed Member States and the different production systems and regions.

In the beef sector, in FI and SE direct payments (both EU and national coupled & decoupled payments – especially LFA and environmental payments) are so important that the farmers may not take their production decision solely on the basis of a margin analysis per enterprise. Specialist breeders especially in mountainous LFA are the most sensitive to the decoupling of any of the per head payments especially in FR, AT and PT where from 18 to 44 % of the suckler cow population could be affected. The payments per head represent a lower share of the margin of the specialist breeders and fatteners (B&F); therefore the impact of a total decoupling would be limited for these systems except in FR and PT where respectively 15 % and 36 % of the cows could be affected, especially in other LFA areas. Suppression of the coupled direct payments for fatteners affected estimated 86 % of FI fattening farms and 89 % of the total population of animals.

In the sheep and goat sector, effects likewise vary strongly between different production systems. For sheep milk producers, the impact of a total decoupling would be limited because of the high output they obtain from milk and cheese. The highest impact is estimated in PT (5 % of the ewes). For goat milk farms, 5 % of the she-goats in FR and ES are grazed on farms moving to a negative margin and 9 % in CY. On the contrary sheep meat specialists are more sensitive to any decoupling because coupled payments represent a high share of their margin. In FR 26 % of the 'meat' ewes may be affected, in

³¹ Coupled supports for rice and silk worms (possible under article 68) are also not covered in this impact assessment.

ES the impact may be limited to 5 % of the ewes. Despite the limitation due to small sample sizes, it seems plausible that the impact would be also significant in HU and PT.

10.2. Environmental and climate change impacts

The question of whether margins would turn negative without coupled support in the beef, sheep and goat sectors is of substantial importance from an environmental point of view as many of the producers are located in environmentally sensitive areas where little or no other agricultural activity is possible as production conditions are particularly challenging. The move to negative margins and, as a consequence, the termination of agricultural production in these areas could result in land abandonment with negative environmental and climate change consequences.

For example, 84 % of the EU-27 beef breeders are located in less favoured areas and gross margin is significantly lower in mountainous LFA as the lower value of output is not fully compensated by lower costs of production. In general, sheep and goat production is also located mainly in LFA where often no other production is possible.

10.3. Social impacts

In rural areas where little other agricultural or general economic activity takes place, beef, sheep and goat production can contribute to providing employment and keeping up the vitality and attractiveness of rural areas. As these types of farming are often located in disadvantaged regions, the continuation of production can be judged favourably from a social point of view in these cases.

10.4. International impacts

A precondition for maintaining some payments coupled to production is that these payments stay within strict limits to be fully compatible with WTO requirements.

10.5. Administrative impacts

Keeping the possibility for provision of coupled direct support in certain sectors and regions does imply that some administrative complexity remains as compared to a situation without coupled payments. However, the fact that this support would be restricted to particular situations where it is deemed necessary means that overall administrative impacts would be limited.

11. INCREASE IN DIRECT PAYMENTS' CONTRIBUTION TO ENVIRONMENT AND CLIMATE CHANGE MITIGATION AND ADAPTATION

As regards Pillar I's increase in environmental performance, the Communication of the future CAP mentions several elements:

- a mandatory greening component of direct payments which would support simple, annual, generalised and non contractual measures addressing both climate and environmental policy goals and applicable across the whole of the EU territory (e.g. permanent pasture, green cover, crop rotation, ecological set-aside);

- the enhancement of certain elements of Good Agricultural and Environmental Conditions (GAEC) within cross compliance.

The analysis in annex 2 "Greening of the CAP" shows that there is a place for a greening component of direct payments within this two pillar structure, which would - together with enhanced cross compliance and a stronger rural development - considerably enhance the environmental performance of the CAP throughout the EU territory.

To be effective, the design of such a greening component should strike the right balance between benefits for the environment and efforts required by the farming sector, while staying simple as befits the Pillar I and keeping administrative burden as low as possible.

12. COMBINATION OF OPTIONS FOR DIRECT PAYMENTS INTO SCENARIOS

This section discusses the overall impacts of the direct payment aspects of the three broad policy scenarios mentioned in the Communication on the CAP, i.e. the "adjustment", "integration" and "re-focus" scenario. As each scenario includes a different combination of the elements for direct payments discussed in chapters 4 to 10, the section draws strongly on the discussion earlier in this paper and only briefly recapitulates the effects that the combination of the options will produce.

12.1. Description of the combined options into scenarios for direct payments

12.1.1. "Adjustment" scenario

The "adjustment" scenario focuses on the redistribution of direct payments toward more equity between Member States and farmers. Different approaches to this redistribution are applied (such as convergence to **EU flat rate**, "**Min 80%**" or "**Min 90% with objective criteria**"). The redistribution would imply a move of all Member States towards a regional model for direct payments, independently of the options chosen for redistributing the envelopes (see chapter 4).

Additionally, cross compliance is streamlined while its contribution to the climate change objective is increased (see annex 2 to the Impact Assessment on "Greening of the CAP"). Some coupled payments (suckler cow, sheep and goat) remain for those countries which apply them (see chapter 10).

12.1.2. "Integration" scenario

The "integration" scenario focuses on better targeting of direct support by improving the balance of both economic and environmental concerns within Pillar I of the CAP. It consists in:

- Redistribution of the direct payments between Member States according to "**MFF distribution key**"
- The granting of direct payments as a combination of different components, consisting of:
 - a compulsory basic income support (at least 60% of national envelope in each Member States) distributed under the form of a regional flat rate based on entitlements (see section 4.2);

- a compulsory area-based payment for naturally handicapped areas of maximum 5% of national direct payments envelope (see chapter 5);
 - a compulsory green payment across the whole EU territory, composed of simple, generalized, annual and non-contractual environmental measures going beyond baseline standards of cross compliance (the green layer would represent 30% of national envelope in each Member States); the measures would concern permanent grassland, ecological set-aside, crop diversification and a Natura 2000 specific support as well as automatic granting of the payment to organic farming (see chapter 11 and annex 2 on "Greening of the CAP");
 - a voluntary coupled support component for specific sectors representing maximum 7.5% of the national direct payments envelope (see chapter 10)
- All layers but the greening are subject to progressive capping mitigated by salaried labour employed (see chapter 6)
 - Better targeting of support to active farmers in order to make sure that direct payments reach only persons genuinely engaged in agriculture including part-time farmers (see chapter 9)
 - A lump sum support to small farmers (defined as small beneficiaries below a certain threshold) replacing all the other components of direct payments in order to cut red tape, financed by a maximum 5% of direct payments national envelope (see chapter 7)
 - A support scheme for young farmers (defined as farmers starting-up an agricultural activity) based on farm size and average direct payments in a Member State, financed by a maximum of 2% of direct payments national envelope (see chapter 8)
 - Streamlining of cross compliance while increasing its contribution to climate change objective and ensuring consistency with the "green" layer (see annex 2 on "Greening of the CAP")

12.1.3. "Refocus" scenario

The "re-focus" scenario assumes the phasing out of direct payments between 2013 and 2020.

12.2. Description of impacts due to the combination of the different options

This part summarizes the impact of the three policy scenarios with respect to general and income impacts, environmental impacts, international impacts and administrative impacts.

12.2.1. Economic and social (income) impacts

Adjustment scenario:

The effects of the redistribution of direct payments would vary strongly depending on the option chosen. The option of granting flat rate direct payments across the EU would lead to massive redistributions of funds between Member States. The resulting substantial

impacts on incomes are likely to make it politically unacceptable for many Member States to agree to such a redistribution.

The options of ensuring a minimum level of convergence or of combining this pragmatic approach with the use of objective criteria in redistributing between Member States would reduce the effects on incomes while still leading to a more equitable distribution of direct payments among Member States.

The move towards a regional model for direct payments that is implied in the redistribution means that direct payments would be redistributed also between farmers within Member States, at least in those Member States currently applying a historic model.

The impact on income per type of farming is mainly driven by the move toward a regional model. Whatever the option for redistribution, grazing livestock farms and to a lower extent wine farms and horticulture would benefit. Field crop farms and milk farms, on the other hand, would see a significant decrease in their income. In general, farming systems based mainly on grassland would considerably benefit from the redistribution.

Integration scenario:

The impact of the redistribution of payments would go in the same direction as described for the adjustment scenario, albeit with a somewhat lower level of convergence of payment levels between Member States due to the fact that the increase in direct payment for Member States below 90% of the EU average is more limited. The extent of changes would also be influenced by:

- The fact that only a part of the national envelope would be devoted to the basic income support so that some farmers could see their basic income support substantially reduced. The impacts of this reduction may, of course, be mitigated by a transitional period in order to allow the adjustments of farm structures;
- The fact that largest beneficiaries would be capped. As regards capping, it would be counter-productive from an environmental point of view to cap the greening component of direct payments. Therefore, capping would only apply to a share of the direct payment received by the largest beneficiaries, which means that the amounts resulting from capping would be lower and the income effect lighter than described in chapter 6;
- The fact that for a share of farms, there will be costs associated to the environmental measures required to receive the greening component of the direct payments. Farm income would be affected to various extents. Those costs would depend on the measures themselves, on the technical orientation of the farms and on the existing environmental performance of the farmers (see Annex 2 on "Greening of the CAP").
- The new payment for farms located in areas with specific natural constraints. In LFA/NHA, farm incomes would benefit both from the move to a flat rate at national/regional level and from the new payment to areas with specific natural constraints. However this would strongly depend on the level of implementation of the flat rate and delimitation of regions by the Member States;

- The maintenance of coupled supports to livestock. The effect would depend on the allocation of budget to this component. If a reduction of the envelope of coupled aids occurs compared to the Status Quo, the most affected farms would be grazing livestock farms in certain regions. However, this is mitigated by the rest of the scheme (redistribution of direct payments) which is in general more favourable to grazing livestock farms;
- The fact that small farmers would see an increase in their direct payments, narrowing the income gap with bigger structures. This would allow them to choose the development path they wish, whether towards structural change or maintaining local small-scale production;
- The support scheme for young farmers which would increase the incomes of farmers starting-up agricultural activity for a limited number of years and thus encourage the entry of young farmers into the sector;
- The better targeting of support to active farmers, which would most likely not have substantial overall income effects for the sector but would increase the public acceptance of direct payments;
- The fact that there are farmers who can profit from many components of the system, e.g. being located in areas with specific natural constraints thus eligible to the LFA component of the direct payments and efficiently carrying out the environmental measures of the greening component. They would see their income increase as compared to farmers who can make use only of some components of the system.

Refocus scenario:

The end of direct support would result in structural changes by accelerating the move towards larger farm sizes and to more competitive production regions. Substantial reductions in farm incomes would force many producers out of business and could even endanger generally economically viable farms in years of difficult market situations as the role of direct payments in providing income support would be lost. Structural changes are likely to result in loss of employment in the farm sector and possibly also in up- and downstream sectors.

The main impacts would likely be not on the overall quantity of agricultural production in the EU but on the way this production is distributed over the EU territory. The lack of regional production in many areas could have negative consequences for local markets and products and could negatively affect certain up- and downstream enterprises and more generally the vitality of rural areas.

However, due to the fact that the phasing out would take place gradually, these changes would be spread out over time.

12.2.2. Environmental and climate change impacts

Adjustment scenario:

The effect of the redistribution of direct payments between farms would in itself have an important effect on the support to more environmentally sustainable and climate friendly farming. Grazing livestock farms and farms in least favoured areas would benefit from

the redistribution, which would to a certain extent be favourable for the maintenance of permanent grassland and all its environmental and climate action benefits, while more intensive crop production would be supported to a lesser degree.

Integration scenario:

Farms located in LFA/NHA would benefit both from the additional income support to areas with specific natural constraints in Pillar I and the move to a regional flat rate as well as the redistribution between Member States. This would be favourable for the continuation of farming in areas with a high risk of land abandonment, which is in turn positive for biodiversity.

The environmental effects of the "greening" component and streamlining of cross compliance, which would increase the environmental performance of the CAP as a whole in terms of soils, biodiversity, water balance, climate change mitigation and adaptation, and landscape amenities, are discussed in annex 2 on "Greening of the CAP")..

Refocus scenario:

The main environmental impacts of the end of direct support would be due to the changing territorial distribution of agricultural activity. Both the concentration of production in particularly productive areas and the abandonment of production and land in more marginal regions would have far reaching consequences for the environmental balance in these areas with, e.g. possible loss of biodiversity³². The extent of many of these impacts depends strongly also on whether and how policies of Pillar II would be adapted to mitigate the consequences.

With the end of direct payments, the enforcement and sanctioning mechanism of cross compliance would be lost to a large extent and the wide reach of the GAEC ensuring a minimum maintenance of land without economic use would be lost. However the gradual nature of phasing out of direct payments may make it possible to introduce over time other ways of contribution to a better enforcement of environmental legislation.

12.2.3. International impacts

Adjustment scenario:

The redistribution of direct payments between Member States and farmers should not affect the classification of EU support at WTO provided that it remains in line with WTO rules (in such a manner that farmer anticipation and effect on production level is avoided).

Integration scenario:

With respect to the targeting of direct payment, it will have to be ensured that all components of the payment are in line with WTO rules. This means in particular that the extent of coupled support would need to remain within clearly defined limits and the

³² See study "Scenar 2020; Scenario study on agriculture and the rural world" for European Commission – DG AGRI, December 2006, Contract No. 30 – CE – 0040087/00-08

elements used to define who is an "active farmer" need to respect WTO Green Box criteria, in particular they cannot imply an obligation to produce.

Re-focus scenario:

The WTO compatibility of CAP payments would not be affected.

12.2.4. Administrative impacts

Adjustment scenario:

In the first year of implementation of the new system, there would be an administrative burden associated with the redistribution (distribution of new entitlements and/or recalculation of the value of entitlements) and possibly transition (defining steps for progressive modifications in subsequent years for each farmer). However, this would be a one-off administrative impact.

Integration scenario:

In addition to the need of managing the redistribution in the first year of implementation of the new scheme, a number of the components for direct payments, such as capping, the definition of "active farmers" and the "greening" could be burdensome as additional control requirements could result from them.

On the other hand, the small farmer scheme would substantially reduce the administrative demands from the application for and granting of direct payments to such beneficiaries.

Refocus scenario:

In the long run, the phasing out of direct payments would bring administrative facilitation since the scheme would not have to be administered anymore.

12.3. Summary of overall impacts

Table 25 provides a qualitative assessment of the three policy scenarios with regard to their impact on income, environment, the international dimension and administrative burden. A scale of +2 to -2 is used to rate which impact is deemed very positive (+2) to very negative (-2).

Table 25: Overview of the impact of policy scenarios

		Adjustment				Integration							Refocus
		Flat rate	Min 80%	Min 90% + obj criteria	MFF distrib. key	Small farmers scheme	Young farmer scheme	Capping	Greening	Additional support for NC	Definition active farmers	Coupled support	
		Effects as compared to status quo				Effects of each component as compared to MFF distribution key without any components							Effects as comp. to status quo
Income effect													
	EU27	0	0	0	0				-1		+1		-2
	EU15	-2	-1	-2	-1				-1				-2
	EU12	+2	+1	+2	+1				-2				-2
	LFA	-1	-1	-1	-1				0	+1		+1	-2
	Non-LFA	+1	+1	+1	+1				-1	-1			-1
	Arable farms	-1	-1	-1	-1			-1	-1	0			-1
	Grazing livestock farms	+2	+2	+2	+2			-1	+1	+1		+1	-2
	Large farms							-1					-1
	Small farms					+2			+1				-2
	Young farmers						+2						
Environmental effects		0	0	0	0	0	0	0	+2	+1	0	+1	-2
International effects		0	0	0	0	0	0	0	0	0	0	-1	0
Admin. effects -simplification		+1	+1	+1	+1	+2	-1	-1	-1	-1	-2	-1	+2

SUB-ANNEX 3A – Evaluation of income effect of direct support – Main results

(1) SCOPE

The evaluation examines the effects of the direct support schemes laid down in Council Regulation (EC) No 1782/2003 on the income of farmers and answers how effective and efficient these schemes have been in ensuring a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture (Art. 39 of the Treaty of Lisbon). The evaluation also examines the coherence of direct payments with measures under the Single CMO and rural development measures with respect to the income objectives.

The evaluation covers the 27 EU Member States over the period since 1 January 2005 onwards, but it uses data going back to 2001.

(2) METHODOLOGY

The analysis was carried out:

- **At the macro-economic level**, based on agricultural statistics from EUROSTAT at regional level (NUTS II);
- **At the micro-economic level**, based on farm data from the FADN database (Source: EU-FADN-DG AGRIL-3).

The analysis distinguished between seven agricultural sectors, the choices of implementation of the direct payment schemes in different Member States/regions, farm size, type of organisation and geographical location.

The following table provides a synthesis of the main issues covered by the evaluation and the tools used for addressing them:

Issues \ Tools	Statistical analysis	Update of FADN data (BU and RO, 2008)	Ordinary least square models	Probit regression	Quantile regressions	Gini coefficient of concentration	Estimation of the effects of CMO measures	Literature Review	Panel of experts
Role of direct support in enhancing the farm business income of farmers	✓	✓	✓				✓		✓
Role of direct support in stabilising the income of farmers	✓			✓					✓
Role of direct support in improving the standard of living	✓	✓							
Role of direct support on the farm household total income								✓	✓

Issues \ Tools	Statistical analysis	Update of FADN data (BU and RO, 2008)	Ordinary least square models	Probit regression	Quantile regressions	Gini coefficient of concentration	Estimation of the effects of CMO measures	Literature Review	Panel of experts
Contribution to the economic viability of farms	✓	✓							✓
Efficiency in targeting the beneficiaries	✓	✓			✓	✓			✓
Relative income transfer efficiency			✓				✓		
Coherence between direct support and other CAP measures	✓		✓				✓		
Coherence between direct support and LFA compensatory allowance	✓	✓							

(3) MAIN CONCLUSIONS

Contribution of direct payments to achieving a fair standard of living for the agricultural community, by stabilising and enhancing the income of farmers

In terms of enhancing farmers' income, direct payments:

- Contribute to enhancing the income of farmers;
- Play a particularly important role in generating income in grazing livestock specialist farms, field crops, mixed farms and dairy farms;
- Play also a role in strengthening the cohesion between regions, in particular in the sectors of field crops, milk, other grazing livestock and mixed farms;
- Allow a reduction of the existing gap between the average income per labour unit of small and large farms.

In terms of stabilizing farmers' income, direct payments:

- Make a positive and robust contribution to the stability of income. The highest effect on income stability is shown in the sectors which are the most supported by direct payments (field crops, other grazing livestock and mixed farms);
- Have a larger role for income stability in small farms in comparison with medium and large farms.

In terms of ensuring a fair standard of living of the agricultural community, direct payments:

- Help improving the standard of living of the farming community.

Role of direct payments for farmers' income according to farm location and the type of organisational form of holding

Direct payments:

- Reduce the existing differences between farmers' income in non LFA areas and in LFA areas and the subgroup of mountain LFA areas;
- Have larger effects on income stability in LFA areas in comparison to non-LFA areas;
- Contribute to improving the standard of living of the agricultural communities in the LFA areas and in the subgroup of mountain LFA areas;
- Appear to have a larger income stabilizing effect in individual farms and farms organised as partnerships compared to farms having other types of organisational forms.

Direct payments and economic viability

- Direct payments are vital in ensuring the economic viability of farms in field crops, other grazing livestock, mixed farming and in part the milk sector;
- Farms in which the unpaid labour component is modest (FWU/AWU <30%) are relatively more efficient in the EU15 and less efficient in the EU12. This suggests that the strategic goals in these classes of farms are completely different: more targeted to economic results in the EU15 and more focused on social aspects in the EU12. In other words, maximisation of profit in the first case, and maximisation of employment in the second;
- The hybrid SPS model has probably contributed to a stronger growth of the return on investments (ROI) and of the return on assets (ROA) in the EU15 after the reform in comparison with the pre-reform period.

Efficiency of direct payments

- At global level, the efficiency of direct payments is quite high (The analysis indicates that in 2007, 82% of the expenditure is going to farms which, even with direct payments, do not reach the fair standard of living). However, at sector level, and even more at regional level, the system generates very uneven levels of efficiency. In a large number of regions the redistribution of surpluses (payments made to farmers whose income bypasses the benchmark) generated by large margins of inefficiency would make it possible to attain a fair standard of living for a lot more farmers in the same region and/or in other regions (In 36.4% of the EU27 regions, the surplus is under 10% of the total expenditure and in 16.4% of regions the surplus is above 30% of the total expenditure);
- Direct payments contribute to reducing the disparities among farmers' income across the EU, but an uneven income distribution persists in most sectors and in most geographical areas;
- Direct payments have a larger positive effect on income equality in the regions applying the hybrid and the regional SPS models than in the regions applying the historic SPS model;
- Coupled payments are not efficient in respect to the objective of reducing the disparities between farmers' income;

- Regarding the decoupled payments, the results of the modelling at the macro-economic and the micro-economic level are not completely similar. While the results of the regressions at macro-economic level allow us to conclude that this type of payments contribute to decreasing income disparities, the results of the regressions run at micro-economic level are less clear-cut.

Coherence of direct payments with other CAP measures: measures under the Single CMO and rural development measures

- Direct payments are coherent with the other measures in relation to the objective of enhancing farmers' income: the three types of support measures complement each other as they substitute each other over time in order to maintain the overall level of support roughly constant;
- Direct payments have been coherent with the measures under the Single CMO as farm income support tools;
- Concerning the rural development measures, the results of the regression estimates are less clear-cut;
- The three types of policy instruments are coherent with respect to contributing to more stable incomes. Coherence between direct payments and CMO support appears to be higher than between direct payments and rural development measures in most types of farming;
- Direct payments (at EU level considering all regions and all types of farming) are coherent with the compensatory allowance given to specific farms within a certain LFA area (i.e. the income of farmers receiving the compensatory allowance is lower or equal to the income of other farmers either not located in LFA or located in LFA but not receiving the compensatory allowance). However, the analysis by type of farming and by groups of regions according to the SPS implementation model indicates that there are also cases of overlap of direct payments with the compensatory allowance (the income of farmers receiving the compensatory allowance is higher than the income of other farmers);
- After the reform, in the groups of regions implementing the SPS hybrid model (with a prevalent regional component) and of regions implementing the regional model, the degree of coherence between direct payments and compensatory allowance increases.

(4) RECOMMENDATIONS

- The comparative analysis across types of farming shows that the lowest income levels per labour unit are found (besides the other grazing livestock sector) in the two sectors benefitting to a very limited extent or not at all from direct support, namely horticulture and other permanent crops. In the EU15 Member States, the average income per labour unit of these sectors (post-reform period) is about 22% lower than the EU15 average of all sectors. Furthermore, both sectors show the highest risk in terms of farm viability (in 37% and 21% of the regions, respectively for the horticultural and the other permanent crops sectors, average returns on assets are negative). In the light of these results, we recommend to extend direct payments to include farms operating in these sectors.
- The analysis has revealed that in the various regions the income of most farmers does not reach the reference benchmark (regional GDP per employee). This means that direct payments are basically granted to farmers who need them, therefore, efficiency of direct

payments' expenditure can be considered as good. However, the analysis has also revealed that margins of inefficiency exist (direct payments are granted to a certain share of farmers whose income is above the benchmark), especially in certain sectors (i.e. in the field crops sector) and in certain regions. Therefore, and taking into account also other objectives pursued with direct payments (e.g. public goods provision), it seems reasonable to recommend the identification of adequate assignment criteria and appropriate instruments able to redistribute at least part of the financial surplus generated by inefficiency to farmers who are most in need (i.e. for whom the current level of direct payments does not allow reaching the benchmark), regardless of the sector. A more efficient allocation of the expenditure would also contribute to re-aligning agricultural and other population income distribution curves.

- It was not possible to evaluate the role played by direct payments in farm household total income, in spite of noticeable interest in this matter. The analysis of the existing literature (studies and statistics) reveals the existence of heterogeneous definitions of agricultural households and, thus, of a variety of measurement criteria and data collection instruments (where they exist). In essence, therefore, the high heterogeneity of definitions and methods makes a combined reading of the existing information impossible. Consequently, it is recommended that a common definition of farm household and farm household total income is provided and that harmonised statistics are implemented with respect to both the official national and EU statistics and the FADN.

SUB-ANNEX 3B - Overview of the implementation of direct payments under the CAP in Member States in 2010 (Reg. 73/2009) (*)

November 2010

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
Belgium	2005	Zone Nord: Flanders + Brussels	SPS historical	100€	Suckler cow premium 100% Slaughter premium calves 100% Protein crops, Flax for Fibre	For a better quality—all sectors 68(1)(a)(ii)
	2005	Zone Sud: Wallonia	SPS historical	100€	Suckler cow premium 100% Protein Crops, Flax for Fibre	Grassland premium – breeding 68(1)(b)
Bulgaria			SAPS	0,5 ha 100 €	F&V: Transitional soft fruit payments 100%	In the dairy sector 68(1)(b)
Czech Republic			SAPS	1 ha	Separate sugar payments 100% F&V: Separate payment for tomatoes intended for processing 100%	Aid for dairy farmers 68(1)(b)
Denmark	2005	one region	SPS dynamic hybrid	2 ha 300 €Sp	Special male bovine premium 75% Sheep and goat premium 50% Starch Potato, Dried fodder, Flax for Fibre	Agri-environment Measures 68(1)(a)(v) Perennial Energy Crops 68(1)(a)(i)
Germany	2005	Bundesländer (Berlin included in Brandenburg, Bremen in Lower Saxony and Hamburg in Schleswig-Holstein)	SPS dynamic hybrid moving to a flat rate	1 ha	Protein Crops, Nuts, Starch Potato, Dried fodder, Flax for Fibre	Grassland premium in dairy sector 68(1)(b)
Estonia			SAPS	1 ha		In the dairy sector 68(1)(b)
Ireland	2005	-	SPS historical	100 €	Protein Crops, Dried Fodder	Grassland Sheep Scheme and Grassland Dairy Efficiency 68(1)(b) Conservation in the Burren 68(1)(a)(i)

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
Greece	2006	-	SPS historical	200 €	F&V: Until end 2010: 30% of the envelope for tomatoes intended for processing Cotton, Sugar, Dried fodder Small Aegean Islands 100%	Improvement of quality of olive oil, durum wheat 68(1)(a)(ii) LFA producers in meat sectors (beef, sheep and goat) 68(1)(b) Restructuring programmes in LFA Mountainous areas 68(1)(c)
Spain	2006	-	SPS historical	100 €	Suckler cow premium 100% Slaughter premium calves 100% Slaughter premium bovine adults 40% Seeds, Protein Crops, Rice, Nuts, Cotton 35%, Sugar, Dried fodder, Flax for Fibre, Starch Potato 60% Outermost regions 100% F&V: Until end 2010: 50% of the envelope for tomatoes intended for processing	Improving quality of legumes, tobacco sheep and goat farmers and milk products 68(1)(a)(ii) National programme crop rotation 68(1)(a)(v) Aid to sheep and goat producers and milk producers in LFA 68(1)(b) Ex article 69 measures (beef ,cotton, sugar, milk) 72(3)
France	2006	-	SPS historical	100 €	Suckler cow premium 75% Seeds (some species), Protein Crops, Rice, Nuts, Starch Potato, Dried fodder, Flax for Fibre Outermost regions 100% F&V: Until end 2011: 50% for tomatoes intended for processing Until end 2010: 98% of national envelope for orchards producing prunes, peaches, and pears intended for processing From 2011 until end 2012: 75% of national envelope for orchards producing prunes, peaches, and pears intended for processing	Additional aid for protein crops 68(1)(a)(i) Aid for quality of durum wheat 68(1)(a)(ii) To maintain organic farming 68(1)(a)(v) Diversification of crop rotation 68(1)(a)(v) Aid for calves from suckling cows and for organic labelled calves; aid for sheep and goat producers; aid for milk producers in mountain areas 68(1)(b) Crop harvest insurance 68(1)(d)

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
Italy	2005	-	SPS historical	100 €	Seeds, Protein Crops, Rice, Nuts, Sugar, Dried Fodder, Flax for Fibre F&V: Until end 2010: 50% for tomatoes intended for processing Until end 2010: 100% for pears, peaches and prunes intended for processing. From 2011 until end 2012: 75% of envelope for prunes	Improvement of quality (beef and veal; sheep and goat meat; olive oil; dairy products; tobacco; sugar; floricultural products) 68(1)(a)(ii) Crops rotation 68(1)(a)(v) Insurance payments for harvests, animals and plants 68(1)(d)
Cyprus			SAPS	0,3 ha	F&V: Until end 2010: 100% of national envelope for citrus fruits Until end 2012: 75% of national envelope for citrus fruits	
Latvia			SAPS	1 ha	Separate sugar payments 75% F&V: Transitional soft fruit payment 100%	In the dairy sector 68(1)(b)
Lithuania			SAPS	1 ha	Separate sugar payments 100% F&V: Transitional soft fruit payment 100%	
Luxemburg	2005	one region	SPS static hybrid	100 €	None	
Hungary			SAPS	1 ha 0,3 ha for orchards and vineyards	Separate sugar payments 100% F&V: Separate F&V payments (tomatoes and other fruits) 100% Transitional soft fruit payment 100%	In the dairy sector 68(1)(b) For tobacco and fresh fruit and vegetables growing areas subject to restructuring and development programmes 68(1)(c)
Malta	2007	one region	SPS regional	0,1 ha 100 €Sp	None	
Netherlands	2006	-	SPS historical	500 €	Seeds for fibre flax Starch Potato, Dried Fodder, Flax for Fibre	For transport over water 68(1)(a)(i) Animal welfare 68(1)(a)(iv) Electronic I&R for sheep 68(1)(b) Weather insurance 68(1)(d)

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
Austria	2005	-	SPS historical	100 €	Suckler cow premium 100% Nuts, Starch Potato, Dried Fodder, Flax for Fibre	Dairy cow premium 68(1)(b)
Poland			SAPS	1 ha	Separate sugar payments 100% F&V: Separate F&V payment for tomatoes 100% Transitional soft fruit payment 100%	For cultivating pulses and herbage legumes 68(1)(a)(i) For keeping cows in South-eastern Poland and sheep in Southern Poland 68(1)(b)
Portugal	2005	-	SPS historical	0,3 ha	Suckler cow premium 100% Slaughter premium calves 100% Slaughter premium bovine adults 40% Sheep and goat premium 50% Seeds 100% Protein Crops, Rice, Nuts, Cotton, Sugar, Dried Fodder Outermost regions 100% F&V: Until end 2011: 50% of envelope for tomatoes intended for processing	Maintaining of extensive farming systems based on native breeds (beef, sheep, goats) 68(1)(a)(i) Quality improvement of agricultural products (crops and animals) 68(1)(a)(ii) Agri-environmental measures for protection of olive national patrimony and support to extensive pasturing 68(1)(a)(v) To economic vulnerable types of agriculture in milk and sheep sectors 68(1)(b)
Romania			SAPS	1 ha	Separate sugar payments 100% F&V: Until end 2011: 50% of envelope for tomatoes intended for processing	For improving quality in the organic farming sector 68(1)(a)(ii) To the milk sector in LFA 68(1)(b)
Slovenia	2007	one region	SPS regional	0,3 ha / 100€Sp	Special male bovine premium 65% Protein Crops, Nuts	For extensive rearing of female bovine animals and dairy payment for farmers in mountain areas and on steep hills 68(1)(b) Preserving animal rearing on farms with permanent pastures 68(1)(c)
Slovakia			SAPS	1 ha	Separate sugar payments 50 % F&V: Separate F&V payment: 67% (Art.127of Reg. 73/2009) Separate transitional F&V payment: 33% of envelope for tomatoes intended for processing (Art. 128 of Reg. 73/2009).	In the dairy sector 68(1)(b)

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
Finland	2006	three regions (based on reference yield)	SPS dynamic hybrid moving to a flat rate	200 €	Sheep and goat premium 50% Seeds (timothy seed), Protein Crops, Starch Potato, Dried Fodder; Flax for Fibre	Supporting beef and veal production; dairy cow premium 68(1)(b) Ex-Art 69 measures (arable crops) 72(3)
Sweden	2005	five regions (based on reference yield)	SPS static hybrid	4 ha 100 €Sp	Special male bovine premium 74.55% Starch Potato, Dried Fodder	Ex-Art 69 measures: Improving quality and marketing (all sectors) 72(3)

Member States	Start SPS	Regions	Model SPS / SAPS	Min. Requirements	Sectors remaining coupled and transitional coupled payments of the Fruit & Vegetables sector	Specific Support under Articles 68 - 72
United Kingdom	2005	England normal	SPS dynamic hybrid moving to a flat rate	1 ha 200€Sp	Protein Crops, Nuts Dried Fodder, Flax for Fibre	
	2005	England - moorland	SPS dynamic hybrid moving to a flat rate	1 ha 200€Sp	Protein Crops, Nuts Dried Fodder, Flax for Fibre	
	2005	England - SDA minus moorland	SPS dynamic hybrid moving to a flat rate	1 ha 200€Sp	Protein Crops, Nuts Dried Fodder, Flax for Fibre	
	2005	Scotland	SPS historical	3 ha 100€Sp	Dried Fodder, Flax for Fibre	Ex-art 69 measures: High quality beef 72(3)
	2005	Wales	SPS historical	1 ha 100€Sp	Dried Fodder, Flax for Fibre	
	2005	Northern Ireland	SPS static hybrid	100 €	Dried Fodder, Flax for Fibre	

Abbreviations: SPS Single Payment Scheme SAPS Single Area Payment Scheme F&V Fruit and Vegetables Sp Special entitlements

(*) For the statutory dates and amounts of decoupling please see Annex XI and XII of Regulation (EC) No 73/2009

N.B.: Hybrid model consists of elements from the regional and the historical model

SUB-ANNEX 3C – Detailed results on income and methodology for simulations based on FADN data

Assumptions and methodology of partial analysis based on FADN

General

The simulation is conducted with the model AIDS7K, which has been developed in DG AGRI. The analysis is based on 2007 FADN data. The model is able to simulate the impact of the change of DP schemes on farm income and DP for the approximately 81 000 sample farms included in FADN. The impact on the sector level e.g. EU-27 is measured by aggregating the individual data using the FADN weighting scheme. The model is static. This means that the structure of farms and the allocation of land do not change in different scenarios. Outmost regions are not covered in this analysis because it is difficult to separate the POSEI payments from the rest of the EU DP received by the farmers in these regions.

For the calculation of farm income both changes in output and intermediate consumption and DP are taken into account at individual farm level. The coefficients for agricultural outputs and inputs are mainly derived from medium term projections of DG AGRI using from AGLINK COSIMO, assuming the removal of sugar beet quotas. For certain agricultural outputs not covered by AGLINK (vegetable, flowers, olive and wine), the coefficients were set based on the analysis of long historical price series.

For the purpose of the analysis it was necessary to calibrate the model in several ways in order ensure comparability of the results between the policy scenarios.

First, the weighting coefficients in the FADN were adjusted in order to adjust the eligible area in the FADN to the one reported by IACS. This was necessary because the DP levels in the scenarios were calculated based on the information on eligible area in IACS and, thus, differences in the representation of the area would have lead to distorted results. Secondly, the aggregated amount of DP in the status quo scenario was adjusted proportionally in order to be in line with the forecasted budget in the year 2020 on which the calculation of the DP level in the scenarios is based.

Partial analysis

In the frame work of the impact assessment a large number of partial analyses assessing the effect of different options for the re-distribution of DP, the capping of DP, the support of farmers in areas with specific natural constrains and small farmers were conducted.

For all partial analyses with the exception of the options for the capping it is made sure that the total amount of DP is approximately the same for all options. For this purpose the level of the area payments and the level coupled payments are reduced taking into account the amount of payments distributed via the schemes to be assessed (payments to small farmers, payment to farmers in areas with specific natural constraints). In the case of the options for the capping of DP it was assumed that the capped amounts are not re-distributed to the other farmers. Thus, in this case the total amount of DP differs among the options depending on the amount capped.

Redistribution options

All comparisons are done to the **Status quo** in 2020. Options of redistribution are described in section 4.1.

Impact per EU group and per Member States

	Change in FNVA per AWU in comparison with the status quo in 2020			
	1	2	3	4
	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
EU-15	-2,1%	-0,7%	-0,5%	-1,3%
EU-12	8,6%	2,4%	1,5%	5,2%
EU-27	-0,1%	-0,1%	-0,1%	-0,1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

EU12	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	29.202	29.202	0%	29.202	0%	29.202	0%	29.202	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	4.182	5.342	27,7%	4.500	8%	4.384	5%	4.888	17%
Basic rate / decoupled - €/farm	4.178	5.338	28%	4.496	8%	4.380	5%	4.884	17%
Coupled payments - €/farm	4	4	1%	4	-5%	4	-5%	4	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	5.044	6.205	23%	5.362	6%	5.246	4%	5.750	14%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	20.736	20.736	0%	20.736	0%	20.736	0%	20.736	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	5.533	5.756	4%	5.593	1%	5.571	1%	5.668	2%
External factor costs - €/farm	3.539	3.653	3%	3.576	1%	3.563	1%	3.609	2%
Own capital - €/farm	2.043	2.152	5%	2.066	1%	2.057	1%	2.108	3%
INCOME									
Farm Net Value Added - €/farm	13.511	14.671	9%	13.829	2%	13.713	1%	14.217	5%
Farm Net Value Added per AWU - €/AWU	10.041	10.904	9%	10.278	2%	10.191	1%	10.566	5%
Remuneration for family labour - €/farm	7.978	8.915	12%	8.236	3%	8.142	2%	8.549	7%
Remuneration for family labour - €/FWU	7.116	7.739	9%	7.267	2%	7.206	1%	7.493	5%
Share of Pillar 1 payments in FNVA	31%	36%	18%	33%	5%	32%	3%	34%	11%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

EU15	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	93.890	93.890	0%	93.890	0%	93.890	0%	93.890	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	11.507	10.599	-7.9%	11.200	-3%	11.284	-2%	10.918	-5%
Basic rate / decoupled - €/farm	10.979	10.060	-8%	10.670	-3%	10.754	-2%	10.388	-5%
Coupled payments - €/farm	528	539	2%	531	0%	531	0%	530	0%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	13.736	12.827	-7%	13.429	-2%	13.513	-2%	13.147	-4%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	63.878	63.878	0%	63.878	0%	63.878	0%	63.878	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	22.304	22.161	-1%	22.270	0%	22.287	0%	22.218	0%
External factor costs - €/farm	15.071	14.967	-1%	15.041	0%	15.054	0%	15.014	0%
Own capital - €/farm	7.189	7.150	-1%	7.185	0%	7.189	0%	7.160	0%
INCOME									
Farm Net Value Added - €/farm	43.747	42.839	-2%	43.440	-1%	43.525	-1%	43.158	-1%
Farm Net Value Added per AWU - €/AWU	34.232	33.521	-2%	33.992	-1%	34.058	-1%	33.771	-1%
Remuneration for family labour - €/farm	21.444	20.678	-4%	21.170	-1%	21.237	-1%	20.940	-2%
Remuneration for family labour - €/FWU	22.032	21.284	-3%	21.745	-1%	21.810	-1%	21.522	-2%
Share of Pillar 1 payments in FNVA	26%	25%	-6%	26%	-2%	26%	-1%	25%	-4%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

EU-27	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	66.678	66.678	0%	66.678	0%	66.678	0%	66.678	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	8.426	8.387	-0.5%	8.382	-1%	8.382	-1%	8.382	-1%
Basic rate / decoupled - €/farm	8.118	8.074	-1%	8.073	-1%	8.073	-1%	8.073	-1%
Coupled payments - €/farm	308	314	2%	309	0%	309	0%	309	0%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	10.079	10.041	0%	10.036	0%	10.035	0%	10.035	0%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	45.729	45.729	0%	45.729	0%	45.729	0%	45.729	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.249	15.260	0%	15.255	0%	15.255	0%	15.256	0%
External factor costs - €/farm	10.220	10.208	0%	10.218	0%	10.220	0%	10.216	0%
Own capital - €/farm	5.024	5.047	0%	5.032	0%	5.030	0%	5.035	0%
INCOME									
Farm Net Value Added - €/farm	31.028	30.990	0%	30.984	0%	30.984	0%	30.984	0%
Farm Net Value Added per AWU - €/AWU	23.751	23.722	0%	23.717	0%	23.717	0%	23.717	0%
Remuneration for family labour - €/farm	15.779	15.730	0%	15.729	0%	15.729	0%	15.728	0%
Remuneration for family labour - €/FWU	15.624	15.464	-1%	15.525	-1%	15.535	-1%	15.494	-1%
Share of Pillar 1 payments in FNVA	27%	27%	0%	27%	0%	27%	0%	27%	0%

Impact per type of farming at EU level

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Fieldcrops	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	57.563	57.563	0%	57.563	0%	57.563	0%	57.563	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	11.865	11.089	-7%	10.965	-8%	10.942	-8%	11.001	-7%
Basic rate / decoupled - €/farm	11.616	10.827	-7%	10.706	-8%	10.683	-8%	10.742	-8%
Coupled payments - €/farm	249	262	5%	259	4%	259	4%	259	4%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	13.241	12.465	-6%	12.341	-7%	12.318	-7%	12.377	-7%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	40.161	40.161	0%	40.161	0%	40.161	0%	40.161	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.918	15.780	-1%	15.757	-1%	15.754	-1%	15.763	-1%
External factor costs - €/farm	10.801	10.701	-1%	10.697	-1%	10.697	-1%	10.700	-1%
Own capital - €/farm	5.153	5.116	-1%	5.097	-1%	5.094	-1%	5.100	-1%
INCOME									
Farm Net Value Added - €/farm	30.642	29.866	-3%	29.742	-3%	29.719	-3%	29.778	-3%
Farm Net Value Added per AWU - €/AWU	25.162	24.524	-3%	24.422	-3%	24.404	-3%	24.452	-3%
Remuneration for family labour - €/farm	14.725	14.087	-4%	13.985	-5%	13.966	-5%	14.016	-5%
Remuneration for family labour - €/FWU	15.789	14.764	-6%	14.825	-6%	14.828	-6%	14.780	-6%
Share of Pillar 1 payments in FNVA	39%	37%	-4%	37%	-5%	37%	-5%	37%	-5%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Horticulture	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	186.202	186.202	0%	186.202	0%	186.202	0%	186.202	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	1.177	1.345	14%	1.417	20%	1.415	20%	1.383	17%
Basic rate / decoupled - €/farm	1.107	1.268	15%	1.339	21%	1.337	21%	1.305	18%
Coupled payments - €/farm	70	78	11%	78	11%	78	11%	78	11%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	1.416	1.584	12%	1.655	17%	1.654	17%	1.621	15%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	97.907	97.907	0%	97.907	0%	97.907	0%	97.907	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	38.719	38.749	0%	38.760	0%	38.760	0%	38.754	0%
External factor costs - €/farm	33.701	33.723	0%	33.733	0%	33.733	0%	33.729	0%
Own capital - €/farm	4.965	4.972	0%	4.972	0%	4.973	0%	4.971	0%
INCOME									
Farm Net Value Added - €/farm	89.711	89.879	0%	89.951	0%	89.949	0%	89.917	0%
Farm Net Value Added per AWU - €/AWU	36.197	36.265	0%	36.293	0%	36.293	0%	36.280	0%
Remuneration for family labour - €/farm	50.992	51.131	0%	51.191	0%	51.189	0%	51.163	0%
Remuneration for family labour - €/FWU	45.604	45.726	0%	45.783	0%	45.782	0%	45.757	0%
Share of Pillar 1 payments in FNVA	1%	1%	14%	2%	20%	2%	20%	2%	17%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Wine	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	89.602	89.602	0%	89.602	0%	89.602	0%	89.602	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	2.181	3.752	72%	3.998	83%	4.021	84%	3.871	78%
Basic rate / decoupled - €/farm	2.134	3.704	74%	3.952	85%	3.975	86%	3.825	79%
Coupled payments - €/farm	47	48	2%	46	-1%	46	-1%	46	-2%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	2.765	4.337	57%	4.583	66%	4.606	67%	4.456	61%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	40.997	40.997	0%	40.997	0%	40.997	0%	40.997	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	23.932	24.236	1%	24.288	1%	24.292	2%	24.261	1%
External factor costs - €/farm	16.949	17.077	1%	17.096	1%	17.099	1%	17.090	1%
Own capital - €/farm	7.270	7.447	2%	7.480	3%	7.481	3%	7.459	3%
INCOME									
Farm Net Value Added - €/farm	51.370	52.941	3%	53.188	4%	53.211	4%	53.061	3%
Farm Net Value Added per AWU - €/AWU	33.811	34.846	3%	35.008	4%	35.023	4%	34.924	3%
Remuneration for family labour - €/farm	27.438	28.706	5%	28.900	5%	28.918	5%	28.799	5%
Remuneration for family labour - €/FWU	30.023	31.375	5%	31.603	5%	31.626	5%	31.487	5%
Share of Pillar 1 payments in FNVA	4%	7%	67%	8%	77%	8%	78%	7%	72%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Other permanent crops	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	34.943	34.943	0%	34.943	0%	34.943	0%	34.943	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	2.530	2.240	-11%	2.409	-5%	2.408	-5%	2.300	-9%
Basic rate / decoupled - €/farm	2.481	2.189	-12%	2.360	-5%	2.359	-5%	2.251	-9%
Coupled payments - €/farm	49	50	3%	49	0%	49	0%	49	0%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	2.807	2.516	-10%	2.686	-4%	2.685	-4%	2.577	-8%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	14.543	14.543	0%	14.543	0%	14.543	0%	14.543	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	8.849	8.796	-1%	8.831	0%	8.831	0%	8.809	0%
External factor costs - €/farm	5.480	5.481	0%	5.486	0%	5.486	0%	5.483	0%
Own capital - €/farm	3.317	3.265	-2%	3.294	-1%	3.294	-1%	3.275	-1%
INCOME									
Farm Net Value Added - €/farm	23.207	22.917	-1%	23.086	-1%	23.085	-1%	22.977	-1%
Farm Net Value Added per AWU - €/AWU	21.006	20.743	-1%	20.897	-1%	20.896	-1%	20.798	-1%
Remuneration for family labour - €/farm	14.358	14.120	-2%	14.255	-1%	14.254	-1%	14.168	-1%
Remuneration for family labour - €/FWU	17.318	17.021	-2%	17.187	-1%	17.186	-1%	17.081	-1%
Share of Pillar 1 payments in FNVA	11%	10%	-10%	10%	-4%	10%	-4%	10%	-8%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Milk	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	101.964	101.964	0%	101.964	0%	101.964	0%	101.964	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	10.824	9.500	-12%	9.791	-10%	9.752	-10%	9.739	-10%
Basic rate / decoupled - €/farm	10.713	9.390	-12%	9.682	-10%	9.644	-10%	9.630	-10%
Coupled payments - €/farm	111	110	-1%	109	-2%	108	-2%	108	-3%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	14.070	12.746	-9%	13.037	-7%	12.998	-8%	12.984	-8%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	73.758	73.758	0%	73.758	0%	73.758	0%	73.758	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	20.148	19.956	-1%	19.991	-1%	19.984	-1%	19.989	-1%
External factor costs - €/farm	12.654	12.528	-1%	12.578	-1%	12.578	-1%	12.567	-1%
Own capital - €/farm	7.244	7.177	-1%	7.162	-1%	7.155	-1%	7.171	-1%
INCOME									
Farm Net Value Added - €/farm	42.276	40.953	-3%	41.243	-2%	41.205	-3%	41.191	-3%
Farm Net Value Added per AWU - €/AWU	29.899	28.963	-3%	29.168	-2%	29.141	-3%	29.131	-3%
Remuneration for family labour - €/farm	22.128	20.996	-5%	21.253	-4%	21.220	-4%	21.202	-4%
Remuneration for family labour - €/FWU	17.756	16.761	-6%	17.001	-4%	16.990	-4%	16.942	-5%
Share of Pillar 1 payments in FNVA	26%	23%	-9%	24%	-7%	24%	-8%	24%	-8%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Other grazing livestock	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	53.067	53.067	0%	53.067	0%	53.067	0%	53.067	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	12.094	14.745	22%	14.725	22%	14.779	22%	14.687	21%
Basic rate / decoupled - €/farm	10.769	13.410	25%	13.413	25%	13.466	25%	13.375	24%
Coupled payments - €/farm	1.324	1.335	1%	1.312	-1%	1.313	-1%	1.311	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	16.272	18.923	16%	18.904	16%	18.957	17%	18.865	16%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	42.669	42.669	0%	42.669	0%	42.669	0%	42.669	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	12.467	13.008	4%	12.994	4%	13.005	4%	12.991	4%
External factor costs - €/farm	6.410	6.706	5%	6.719	5%	6.727	5%	6.714	5%
Own capital - €/farm	6.180	6.425	4%	6.397	4%	6.401	4%	6.400	4%
INCOME									
Farm Net Value Added - €/farm	26.670	29.322	10%	29.302	10%	29.355	10%	29.264	10%
Farm Net Value Added per AWU - €/AWU	20.688	22.745	10%	22.730	10%	22.771	10%	22.700	10%
Remuneration for family labour - €/farm	14.204	16.313	15%	16.308	15%	16.350	15%	16.272	15%
Remuneration for family labour - €/FWU	12.633	14.488	15%	14.507	15%	14.547	15%	14.463	14%
Share of Pillar 1 payments in FNVA	45%	50%	11%	50%	11%	50%	11%	50%	11%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Granivores	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	184.342	184.342	0%	184.342	0%	184.342	0%	184.342	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	5.155	4.880	-5%	4.902	-5%	4.949	-4%	4.912	-5%
Basic rate / decoupled - €/farm	5.084	4.807	-5%	4.831	-5%	4.878	-4%	4.842	-5%
Coupled payments - €/farm	71	73	2%	71	-1%	71	-1%	71	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	6.011	5.736	-5%	5.758	-4%	5.805	-3%	5.768	-4%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	155.276	155.276	0%	155.276	0%	155.276	0%	155.276	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	25.262	25.218	0%	25.211	0%	25.221	0%	25.218	0%
External factor costs - €/farm	18.418	18.373	0%	18.393	0%	18.396	0%	18.386	0%
Own capital - €/farm	6.573	6.574	0%	6.548	0%	6.553	0%	6.561	0%
INCOME									
Farm Net Value Added - €/farm	35.078	34.803	-1%	34.825	-1%	34.872	-1%	34.835	-1%
Farm Net Value Added per AWU - €/AWU	23.347	23.164	-1%	23.179	-1%	23.210	-1%	23.185	-1%
Remuneration for family labour - €/farm	9.816	9.584	-2%	9.613	-2%	9.651	-2%	9.616	-2%
Remuneration for family labour - €/FWU	12.251	12.018	-2%	12.045	-2%	12.085	-1%	12.048	-2%
Share of Pillar 1 payments in FNVA	15%	14%	-5%	14%	-4%	14%	-3%	14%	-4%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Mixed	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	52.658	52.658	0%	52.658	0%	52.658	0%	52.658	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	7.740	7.780	1%	7.572	-2%	7.586	-2%	7.697	-1%
Basic rate / decoupled - €/farm	7.494	7.532	1%	7.328	-2%	7.342	-2%	7.453	-1%
Coupled payments - €/farm	246	248	1%	244	-1%	244	-1%	244	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	9.186	9.226	0%	9.019	-2%	9.032	-2%	9.143	0%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	42.674	42.674	0%	42.674	0%	42.674	0%	42.674	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	11.061	11.086	0%	11.042	0%	11.045	0%	11.068	0%
External factor costs - €/farm	7.476	7.433	-1%	7.444	0%	7.447	0%	7.444	0%
Own capital - €/farm	3.598	3.666	2%	3.611	0%	3.610	0%	3.636	1%
INCOME									
Farm Net Value Added - €/farm	19.171	19.210	0%	19.003	-1%	19.017	-1%	19.127	0%
Farm Net Value Added per AWU - €/AWU	14.909	14.940	0%	14.779	-1%	14.789	-1%	14.875	0%
Remuneration for family labour - €/farm	8.109	8.125	0%	7.961	-2%	7.972	-2%	8.059	-1%
Remuneration for family labour - €/FWU	7.281	7.224	-1%	7.101	-2%	7.118	-2%	7.175	-1%
Share of Pillar 1 payments in FNVA	40%	40%	0%	40%	-1%	40%	-1%	40%	0%

Impact per LFA/non LFA zones at EU level

		Change in FNVA per AWU in comparison with the status quo in 2020				
		Base	1	2	3	4
		Status quo € per AWU	EU flat rate	Min 80%	MFF distribution key	Min 90% and objective criteria
(1) not in less-favoured areas	not in less-favoured areas	23.053	-2.8%	-2.9%	-3.0%	-2.8%
(2) in less-favoured not mountain areas	in less-favoured not mountain areas	22.972	4.4%	2.5%	2.7%	3.2%
(3) in less-favoured mountain areas	in less-favoured mountain areas	21.748	4.4%	7.3%	7.2%	5.8%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

not in less-favoured areas	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	70.140	70.140	0%	70.140	0%	70.140	0%	70.140	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	8.340	7.437	-11%	7.405	-11%	7.394	-11%	7.433	-11%
Basic rate / decoupled - €/farm	8.155	7.249	-11%	7.218	-11%	7.206	-12%	7.246	-11%
Coupled payments - €/farm	184	188	2%	188	2%	188	2%	187	1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	9.032	8.129	-10%	8.097	-10%	8.086	-10%	8.125	-10%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	47.258	47.258	0%	47.258	0%	47.258	0%	47.258	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	16.090	15.928	-1%	15.920	-1%	15.918	-1%	15.926	-1%
External factor costs - €/farm	11.614	11.497	-1%	11.505	-1%	11.506	-1%	11.505	-1%
Own capital - €/farm	4.466	4.421	-1%	4.405	-1%	4.402	-1%	4.411	-1%
INCOME									
Farm Net Value Added - €/farm	31.914	31.011	-3%	30.979	-3%	30.967	-3%	31.007	-3%
Farm Net Value Added per AWU - €/AWU	23.053	22.402	-3%	22.379	-3%	22.370	-3%	22.398	-3%
Remuneration for family labour - €/farm	15.823	15.083	-5%	15.059	-5%	15.049	-5%	15.080	-5%
Remuneration for family labour - €/FWU	15.255	14.376	-6%	14.437	-5%	14.444	-5%	14.420	-5%
Share of Pillar 1 payments in FNVA	26%	24%	-8%	24%	-9%	24%	-9%	24%	-8%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

in less-favoured not mountain areas	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	56.174	56.174	0%	56.174	0%	56.174	0%	56.174	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	9.411	10.601	13%	10.105	7%	10.143	8%	10.290	9%
Basic rate / decoupled - €/farm	8.979	10.161	13%	9.673	8%	9.711	8%	9.857	10%
Coupled payments - €/farm	432	440	2%	432	0%	432	0%	432	0%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	12.100	13.290	10%	12.794	6%	12.832	6%	12.979	7%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	41.030	41.030	0%	41.030	0%	41.030	0%	41.030	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	12.727	12.980	2%	12.887	1%	12.894	1%	12.922	2%
External factor costs - €/farm	7.306	7.418	2%	7.400	1%	7.404	1%	7.409	1%
Own capital - €/farm	5.426	5.569	3%	5.492	1%	5.496	1%	5.518	2%
INCOME									
Farm Net Value Added - €/farm	27.245	28.435	4%	27.940	3%	27.978	3%	28.124	3%
Farm Net Value Added per AWU - €/AWU	22.972	23.975	4%	23.558	3%	23.590	3%	23.713	3%
Remuneration for family labour - €/farm	14.518	15.455	6%	15.053	4%	15.083	4%	15.202	5%
Remuneration for family labour - €/FWU	15.126	16.020	6%	15.630	3%	15.667	4%	15.769	4%
Share of Pillar 1 payments in FNVA	35%	37%	8%	36%	5%	36%	5%	37%	6%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

in less-favoured mountain areas	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	44.871	44.871	0%	44.871	0%	44.871	0%	44.871	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	6.147	7.282	18%	8.014	30%	8.011	30%	7.642	24%
Basic rate / decoupled - €/farm	5.605	6.728	20%	7.476	33%	7.473	33%	7.104	27%
Coupled payments - €/farm	542	553	2%	538	-1%	538	-1%	538	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	9.299	10.434	12%	11.166	20%	11.163	20%	10.794	16%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	28.426	28.426	0%	28.426	0%	28.426	0%	28.426	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	10.130	10.341	2%	10.476	3%	10.476	3%	10.407	3%
External factor costs - €/farm	4.959	5.118	3%	5.164	4%	5.167	4%	5.142	4%
Own capital - €/farm	5.256	5.309	1%	5.398	3%	5.395	3%	5.351	2%
INCOME									
Farm Net Value Added - €/farm	25.744	26.879	4%	27.611	7%	27.608	7%	27.239	6%
Farm Net Value Added per AWU - €/AWU	21.748	22.706	4%	23.325	7%	23.322	7%	23.011	6%
Remuneration for family labour - €/farm	15.615	16.538	6%	17.136	10%	17.132	10%	16.832	8%
Remuneration for family labour - €/FWU	15.565	16.435	6%	17.079	10%	17.076	10%	16.754	8%
Share of Pillar 1 payments in FNVA	24%	27%	13%	29%	22%	29%	22%	28%	17%

Impacts on grassland / non grassland based farming at EU level

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Farms with less than 80% grassland	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	66.383	66.383	0%	66.383	0%	66.383	0%	66.383	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	8.131	7.579	-7%	7.584	-7%	7.585	-7%	7.587	-7%
Basic rate / decoupled - €/farm	7.923	7.367	-7%	7.374	-7%	7.375	-7%	7.377	-7%
Coupled payments - €/farm	208	212	2%	210	1%	210	1%	210	1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	9.363	8.811	-6%	8.816	-6%	8.817	-6%	8.819	-6%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	44.451	44.451	0%	44.451	0%	44.451	0%	44.451	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.267	15.178	-1%	15.177	-1%	15.178	-1%	15.179	-1%
External factor costs - €/farm	10.515	10.445	-1%	10.457	-1%	10.458	-1%	10.455	-1%
Own capital - €/farm	4.728	4.709	0%	4.697	-1%	4.696	-1%	4.700	-1%
INCOME									
Farm Net Value Added - €/farm	31.294	30.742	-2%	30.747	-2%	30.748	-2%	30.750	-2%
Farm Net Value Added per AWU - €/AWU	23.854	23.434	-2%	23.438	-2%	23.438	-2%	23.440	-2%
Remuneration for family labour - €/farm	16.027	15.564	-3%	15.570	-3%	15.570	-3%	15.571	-3%
Remuneration for family labour - €/FWU	15.934	15.338	-4%	15.412	-3%	15.424	-3%	15.382	-3%
Share of Pillar 1 payments in FNVA	26%	25%	-5%	25%	-5%	25%	-5%	25%	-5%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Grassland based farms	Base	1		2		3		4	
	Status quo	EU flat rate		Min 80%		MFF distribution key		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	68.628	68.628	0%	68.628	0%	68.628	0%	68.628	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	10.374	13.727	32%	13.650	32%	13.645	32%	13.631	31%
Basic rate / decoupled - €/farm	9.405	12.743	35%	12.687	35%	12.682	35%	12.669	35%
Coupled payments - €/farm	970	984	1%	963	-1%	963	-1%	962	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	14.817	18.170	23%	18.093	22%	18.088	22%	18.074	22%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	0	-	0	-
COSTS									
Total operating costs, depreciation and taxes	54.175	54.175	0%	54.175	0%	54.175	0%	54.175	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.129	15.796	4%	15.763	4%	15.763	4%	15.767	4%
External factor costs - €/farm	8.269	8.636	4%	8.641	5%	8.644	5%	8.638	4%
Own capital - €/farm	6.982	7.282	4%	7.244	4%	7.241	4%	7.251	4%
INCOME									
Farm Net Value Added - €/farm	29.271	32.623	11%	32.547	11%	32.542	11%	32.528	11%
Farm Net Value Added per AWU - €/AWU	23.045	25.685	11%	25.625	11%	25.621	11%	25.610	11%
Remuneration for family labour - €/farm	14.141	16.827	19%	16.783	19%	16.778	19%	16.760	19%
Remuneration for family labour - €/FWU	13.721	16.238	18%	16.214	18%	16.216	18%	16.184	18%
Share of Pillar 1 payments in FNVA	35%	42%	19%	42%	18%	42%	18%	42%	18%

Additional income support in areas with specific natural constraints

All comparisons are done to the redistribution option "MFF distribution key". Options for specific natural constraint payments are described in section 4.2 above.

Impact per farming type

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(1) Fieldcrops	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	57.563	57.563	0%	57.563	0%	57.563	0%	57.563	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	10.942	10.785	-1%	10.774	-2%	11.645	6%	10.837	-1%
Basic rate / decoupled - €/farm	10.683	10.197	-5%	10.242	-4%	0	-100%	10.306	-4%
Coupled payments - €/farm	259	254	-2%	254	-2%	244	-6%	254	-2%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	333	-	278	-	277	-	277	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	12.318	12.160	-1%	12.149	-1%	13.020	6%	12.212	-1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	927	-	0	-
COSTS									
Total operating costs, depreciation and taxes	40.161	40.161	0%	40.161	0%	40.161	0%	40.161	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.754	15.723	0%	15.721	0%	15.875	1%	15.731	0%
External factor costs - €/farm	10.697	10.676	0%	10.675	0%	10.774	1%	10.680	0%
Own capital - €/farm	5.094	5.083	0%	5.083	0%	5.138	1%	5.088	0%
INCOME									
Farm Net Value Added - €/farm	29.719	29.562	-1%	29.551	-1%	30.422	2%	29.614	0%
Farm Net Value Added per AWU - €/AWU	24.404	24.274	-1%	24.265	-1%	24.980	2%	24.317	0%
Remuneration for family labour - €/farm	13.966	13.839	-1%	13.830	-1%	14.547	4%	13.883	-1%
Remuneration for family labour - €/FWU	14.828	14.703	-1%	14.691	-1%	15.602	5%	14.647	-1%
Share of Pillar 1 payments in FNVA	37%	36%	-1%	36%	-1%	38%	4%	37%	-1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(2) Horticulture	Base	1		2		3		4	
	Min 1 distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	186.202	186.202	0%	186.202	0%	186.202	0%	186.202	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	1.415	1.392	-2%	1.394	-1%	1.155	-18%	1.362	-4%
Basic rate / decoupled - €/farm	1.337	1.281	-4%	1.286	-4%	0	-100%	1.254	-6%
Coupled payments - €/farm	78	77	-1%	77	-1%	70	-10%	77	-1%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	34	-	32	-	29	-	32	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	1.654	1.631	-1%	1.633	-1%	1.394	-16%	1.601	-3%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	59	-	0	-
COSTS									
Total operating costs, depreciation and taxes	97.907	97.907	0%	97.907	0%	97.907	0%	97.907	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	38.760	38.755	0%	38.756	0%	38.715	0%	38.750	0%
External factor costs - €/farm	33.733	33.730	0%	33.731	0%	33.699	0%	33.727	0%
Own capital - €/farm	4.973	4.971	0%	4.971	0%	4.962	0%	4.969	0%
INCOME									
Farm Net Value Added - €/farm	89.949	89.926	0%	89.928	0%	89.689	0%	89.896	0%
Farm Net Value Added per AWU - €/AWU	36.293	36.283	0%	36.284	0%	36.188	0%	36.271	0%
Remuneration for family labour - €/farm	51.189	51.171	0%	51.172	0%	50.974	0%	51.146	0%
Remuneration for family labour - €/FWU	45.782	45.767	0%	45.768	0%	45.590	0%	45.744	0%
Share of Pillar 1 payments in FNVA	2%	2%	-2%	2%	-1%	1%	-18%	2%	-4%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(3) Wine	Base	1		2		3		4	
	Min 1 distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	89.602	89.602	0%	89.602	0%	89.602	0%	89.602	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	4.021	3.980	-1%	3.961	-1%	2.215	-45%	3.817	-5%
Basic rate / decoupled - €/farm	3.975	3.777	-5%	3.781	-5%	0	-100%	3.641	-8%
Coupled payments - €/farm	46	44	-5%	44	-5%	45	-4%	44	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	159	-	136	-	136	-	132	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	4.606	4.565	-1%	4.546	-1%	2.799	-39%	4.401	-4%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	70	-	0	-
COSTS									
Total operating costs, depreciation and taxes	40.997	40.997	0%	40.997	0%	40.997	0%	40.997	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	24.292	24.285	0%	24.281	0%	23.939	-1%	24.251	0%
External factor costs - €/farm	17.099	17.093	0%	17.093	0%	16.951	-1%	17.084	0%
Own capital - €/farm	7.481	7.479	0%	7.476	0%	7.276	-3%	7.455	0%
INCOME									
Farm Net Value Added - €/farm	53.211	53.170	0%	53.151	0%	51.404	-3%	53.006	0%
Farm Net Value Added per AWU - €/AWU	35.023	34.996	0%	34.984	0%	33.834	-3%	34.888	0%
Remuneration for family labour - €/farm	28.918	28.885	0%	28.870	0%	27.465	-5%	28.755	-1%
Remuneration for family labour - €/FWU	31.626	31.591	0%	31.575	0%	30.053	-5%	31.440	-1%
Share of Pillar 1 payments in FNVA	8%	7%	-1%	7%	-1%	4%	-43%	7%	-5%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(4) Other permanent crops

	Base with distribution key	1		2		3		4	
		MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	34.943	34.943	0%	34.943	0%	34.943	0%	34.943	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	2.408	2.395	-1%	2.397	0%	2.512	4%	2.290	-5%
Basic rate / decoupled - €/farm	2.359	2.242	-5%	2.244	-5%	0	-100%	2.142	-9%
Coupled payments - €/farm	49	47	-4%	47	-4%	47	-4%	47	-4%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	106	-	107	-	105	-	101	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	2.685	2.672	0%	2.674	0%	2.789	4%	2.567	-4%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	78	-	0	-
COSTS									
Total operating costs, depreciation and taxes	14.543	14.543	0%	14.543	0%	14.543	0%	14.543	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	8.831	8.828	0%	8.829	0%	8.845	0%	8.807	0%
External factor costs - €/farm	5.486	5.485	0%	5.485	0%	5.480	0%	5.482	0%
Own capital - €/farm	3.294	3.292	0%	3.293	0%	3.315	1%	3.274	-1%
INCOME									
Farm Net Value Added - €/farm	23.085	23.073	0%	23.075	0%	23.189	0%	22.967	-1%
Farm Net Value Added per AWU - €/AWU	20.896	20.885	0%	20.886	0%	20.990	0%	20.789	-1%
Remuneration for family labour - €/farm	14.254	14.244	0%	14.246	0%	14.344	1%	14.160	-1%
Remuneration for family labour - €/FWU	17.186	17.175	0%	17.176	0%	17.301	1%	17.072	-1%
Share of Pillar 1 payments in FNVA	10%	10%	0%	10%	0%	11%	4%	10%	-4%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(5) Milk

	Base with distribution key	1		2		3		4	
		MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	101.964	101.964	0%	101.964	0%	101.964	0%	101.964	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	9.752	9.879	1%	9.881	1%	10.918	12%	9.871	1%
Basic rate / decoupled - €/farm	9.644	9.216	-4%	9.263	-4%	0	-100%	9.246	-4%
Coupled payments - €/farm	108	103	-5%	103	-5%	106	-2%	103	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	560	-	515	-	513	-	522	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	12.998	13.125	1%	13.127	1%	14.164	9%	13.117	1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	798	-	0	-
COSTS									
Total operating costs, depreciation and taxes	73.758	73.758	0%	73.758	0%	73.758	0%	73.758	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	19.984	20.010	0%	20.010	0%	20.168	1%	20.015	0%
External factor costs - €/farm	12.578	12.594	0%	12.594	0%	12.668	1%	12.583	0%
Own capital - €/farm	7.155	7.165	0%	7.165	0%	7.250	1%	7.181	0%
INCOME									
Farm Net Value Added - €/farm	41.205	41.331	0%	41.334	0%	42.371	3%	41.324	0%
Farm Net Value Added per AWU - €/AWU	29.141	29.231	0%	29.232	0%	29.966	3%	29.225	0%
Remuneration for family labour - €/farm	21.220	21.322	0%	21.324	0%	22.202	5%	21.308	0%
Remuneration for family labour - €/FWU	16.990	17.054	0%	17.061	0%	17.802	5%	17.015	0%
Share of Pillar 1 payments in FNVA	24%	24%	1%	24%	1%	26%	9%	24%	1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(6) Other grazing livestock

	Base with distribution key	1		2		3		4	
		MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	53.067	53.067	0%	53.067	0%	53.067	0%	53.067	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	14.779	15.090	2%	15.131	2%	12.596	-15%	15.037	2%
Basic rate / decoupled - €/farm	13.466	12.809	-5%	12.833	-5%	0	-100%	12.751	-5%
Coupled payments - €/farm	1.313	1.247	-5%	1.250	-5%	1.262	-4%	1.249	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	1.034	-	1.048	-	1.057	-	1.037	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	18.957	19.268	2%	19.310	2%	16.775	-12%	19.215	1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	868	-	0	-
COSTS									
Total operating costs, depreciation and taxes	42.669	42.669	0%	42.669	0%	42.669	0%	42.669	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	13.005	13.065	0%	13.072	1%	12.560	-3%	13.058	0%
External factor costs - €/farm	6.727	6.764	1%	6.768	1%	6.466	-4%	6.755	0%
Own capital - €/farm	6.401	6.425	0%	6.427	0%	6.217	-3%	6.426	0%
INCOME									
Farm Net Value Added - €/farm	29.355	29.667	1%	29.708	1%	27.173	-7%	29.614	1%
Farm Net Value Added per AWU - €/AWU	22.771	23.012	1%	23.044	1%	21.078	-7%	22.971	1%
Remuneration for family labour - €/farm	16.350	16.601	2%	16.636	2%	14.612	-11%	16.555	1%
Remuneration for family labour - €/FWU	14.547	14.763	1%	14.793	2%	12.990	-11%	14.707	1%
Share of Pillar 1 payments in FNVA	50%	51%	1%	51%	1%	46%	-8%	51%	1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(7) Granivores

	Base with distribution key	1		2		3		4	
		MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	184.342	184.342	0%	184.342	0%	184.342	0%	184.342	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	4.949	4.907	-1%	4.915	-1%	5.112	3%	4.880	-1%
Basic rate / decoupled - €/farm	4.878	4.663	-4%	4.688	-4%	0	-100%	4.649	-5%
Coupled payments - €/farm	71	67	-5%	67	-5%	68	-4%	67	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	176	-	159	-	156	-	164	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	5.805	5.763	-1%	5.771	-1%	5.968	3%	5.736	-1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	306	-	0	-
COSTS									
Total operating costs, depreciation and taxes	155.276	155.276	0%	155.276	0%	155.276	0%	155.276	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	25.221	25.213	0%	25.215	0%	25.254	0%	25.213	0%
External factor costs - €/farm	18.396	18.393	0%	18.394	0%	18.414	0%	18.384	0%
Own capital - €/farm	6.553	6.549	0%	6.550	0%	6.569	0%	6.558	0%
INCOME									
Farm Net Value Added - €/farm	34.872	34.830	0%	34.838	0%	35.035	0%	34.803	0%
Farm Net Value Added per AWU - €/AWU	23.210	23.182	0%	23.187	0%	23.318	0%	23.164	0%
Remuneration for family labour - €/farm	9.651	9.616	0%	9.623	0%	9.780	1%	9.590	-1%
Remuneration for family labour - €/FWU	12.085	12.044	0%	12.053	0%	12.212	1%	12.018	-1%
Share of Pillar 1 payments in FNVA	14%	14%	-1%	14%	-1%	15%	3%	14%	-1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(8) Mixed

	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	52.658	52.658	0%	52.658	0%	52.658	0%	52.658	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	7.586	7.587	0%	7.577	0%	7.726	2%	7.690	1%
Basic rate / decoupled - €/farm	7.342	6.996	-5%	7.029	-4%	0	-100%	7.136	-3%
Coupled payments - €/farm	244	232	-5%	233	-5%	235	-4%	232	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	359	-	316	-	313	-	322	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	9.032	9.033	0%	9.024	0%	9.172	2%	9.136	1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	576	-	0	-
COSTS									
Total operating costs, depreciation and taxes	42.674	42.674	0%	42.674	0%	42.674	0%	42.674	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	11.045	11.045	0%	11.043	0%	11.059	0%	11.067	0%
External factor costs - €/farm	7.447	7.447	0%	7.445	0%	7.473	0%	7.442	0%
Own capital - €/farm	3.610	3.611	0%	3.611	0%	3.599	0%	3.638	1%
INCOME									
Farm Net Value Added - €/farm	19.017	19.018	0%	19.008	0%	19.156	1%	19.120	1%
Farm Net Value Added per AWU - €/AWU	14.789	14.790	0%	14.783	0%	14.898	1%	14.870	1%
Remuneration for family labour - €/farm	7.972	7.973	0%	7.965	0%	8.097	2%	8.054	1%
Remuneration for family labour - €/FWU	7.118	7.110	0%	7.107	0%	7.264	2%	7.165	1%
Share of Pillar 1 payments in FNVA	40%	40%	0%	40%	0%	40%	1%	40%	1%

Impacts on grassland / non grassland based farming

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Farms with less than 80% grassland	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	66.383	66.383	0%	66.383	0%	66.383	0%	66.383	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	7.585	7.530	-1%	7.521	-1%	8.039	6%	7.525	-1%
Basic rate / decoupled - €/farm	7.375	7.035	-5%	7.066	-4%	0	-100%	7.070	-4%
Coupled payments - €/farm	210	202	-4%	203	-3%	200	-5%	203	-4%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	292	-	252	-	251	-	253	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	8.817	8.762	-1%	8.752	-1%	9.271	5%	8.757	-1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	592	-	0	-
COSTS									
Total operating costs, depreciation and taxes	44.451	44.451	0%	44.451	0%	44.451	0%	44.451	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.178	15.168	0%	15.166	0%	15.249	0%	15.167	0%
External factor costs - €/farm	10.458	10.452	0%	10.450	0%	10.503	0%	10.447	0%
Own capital - €/farm	4.696	4.692	0%	4.692	0%	4.722	1%	4.696	0%
INCOME									
Farm Net Value Added - €/farm	30.748	30.693	0%	30.684	0%	31.202	1%	30.688	0%
Farm Net Value Added per AWU - €/AWU	23.438	23.396	0%	23.389	0%	23.785	1%	23.393	0%
Remuneration for family labour - €/farm	15.570	15.525	0%	15.518	0%	15.953	2%	15.521	0%
Remuneration for family labour - €/FWU	15.424	15.379	0%	15.373	0%	15.859	3%	15.333	-1%
Share of Pillar 1 payments in FNVA	25%	25%	-1%	25%	-1%	26%	4%	25%	-1%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

Grassland based farms	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	68.628	68.628	0%	68.628	0%	68.628	0%	68.628	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	13.645	13.991	3%	14.051	3%	10.956	-20%	14.035	3%
Basic rate / decoupled - €/farm	12.682	12.073	-5%	12.093	-5%	0	-100%	12.086	-5%
Coupled payments - €/farm	963	914	-5%	916	-5%	923	-4%	916	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	1.004	-	1.042	-	1.049	-	1.033	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	18.088	18.434	2%	18.493	2%	15.398	-15%	18.477	2%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	729	-	0	-
COSTS									
Total operating costs, depreciation and taxes	54.175	54.175	0%	54.175	0%	54.175	0%	54.175	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.763	15.830	0%	15.841	0%	15.239	-3%	15.845	1%
External factor costs - €/farm	8.644	8.684	0%	8.692	1%	8.337	-4%	8.686	0%
Own capital - €/farm	7.241	7.268	0%	7.271	0%	7.025	-3%	7.281	1%
INCOME									
Farm Net Value Added - €/farm	32.542	32.888	1%	32.947	1%	29.852	-8%	32.931	1%
Farm Net Value Added per AWU - €/AWU	25.621	25.893	1%	25.940	1%	23.503	-8%	25.927	1%
Remuneration for family labour - €/farm	16.778	17.057	2%	17.106	2%	14.613	-13%	17.086	2%
Remuneration for family labour - €/FWU	16.216	16.477	2%	16.521	2%	14.163	-13%	16.487	2%
Share of Pillar 1 payments in FNVA	42%	43%	1%	43%	2%	37%	-12%	43%	2%

Impacts in LFA/non LFA zones

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(1) not in less-favoured areas

	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	70.140	70.140	0%	70.140	0%	70.140	0%	70.140	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	7.394	7.066	-4%	7.104	-4%	8.004	8%	7.147	-3%
Basic rate / decoupled - €/farm	7.206	6.884	-4%	6.922	-4%	0	-100%	6.965	-3%
Coupled payments - €/farm	188	181	-3%	182	-3%	179	-5%	181	-3%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	8.086	7.758	-4%	7.796	-4%	8.696	8%	7.839	-3%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	651	-	0	-
COSTS									
Total operating costs, depreciation and taxes	47.258	47.258	0%	47.258	0%	47.258	0%	47.258	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	15.918	15.855	0%	15.862	0%	16.025	1%	15.871	0%
External factor costs - €/farm	11.506	11.468	0%	11.473	0%	11.575	1%	11.473	0%
Own capital - €/farm	4.402	4.377	-1%	4.379	-1%	4.439	1%	4.388	0%
INCOME									
Farm Net Value Added - €/farm	30.967	30.640	-1%	30.678	-1%	31.578	2%	30.721	-1%
Farm Net Value Added per AWU - €/AWU	22.370	22.133	-1%	22.161	-1%	22.811	2%	22.192	-1%
Remuneration for family labour - €/farm	15.049	14.785	-2%	14.816	-2%	15.552	3%	14.850	-1%
Remuneration for family labour - €/FWU	14.444	14.214	-2%	14.235	-1%	15.009	4%	14.215	-2%
Share of Pillar 1 payments in FNVA	24%	23%	-3%	23%	-3%	25%	6%	23%	-3%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(2) in less-favoured not mountain areas

	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
		Max 5% of DP; Max € 100 in LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA		Max 5% of DP; € 50 in mountain LFA; € 25 in other LFA	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	56.174	56.174	0%	56.174	0%	56.174	0%	56.174	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	10.143	10.583	4%	10.418	3%	9.715	-4%	10.574	4%
Basic rate / decoupled - €/farm	9.711	9.224	-5%	9.251	-5%	0	-100%	9.391	-3%
Coupled payments - €/farm	432	413	-4%	414	-4%	413	-4%	414	-4%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	946	-	753	-	743	-	769	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	12.832	13.272	3%	13.107	2%	12.404	-3%	13.263	3%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	659	-	0	-
COSTS									
Total operating costs, depreciation and taxes	41.030	41.030	0%	41.030	0%	41.030	0%	41.030	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	12.894	12.979	1%	12.948	0%	12.786	-1%	12.977	1%
External factor costs - €/farm	7.404	7.456	1%	7.436	0%	7.342	-1%	7.442	1%
Own capital - €/farm	5.496	5.529	1%	5.518	0%	5.450	-1%	5.542	1%
INCOME									
Farm Net Value Added - €/farm	27.978	28.417	2%	28.252	1%	27.549	-2%	28.409	2%
Farm Net Value Added per AWU - €/AWU	23.590	23.960	2%	23.821	1%	23.228	-2%	23.953	2%
Remuneration for family labour - €/farm	15.083	15.438	2%	15.304	1%	14.763	-2%	15.431	2%
Remuneration for family labour - €/FWU	15.667	15.985	2%	15.867	1%	15.349	-2%	15.977	2%
Share of Pillar 1 payments in FNVA	36%	37%	3%	37%	2%	35%	-3%	37%	3%

INCOME PROJECTIONS

Source: L3 calculations based on FADN and the AIDS7K model

(3) in less-favoured mountain areas	Base	1		2		3		4	
	MFF distribution key	MFF distribution key		MFF distribution key		Status quo		Min 90% and objective criteria	
	2020	2020	/base	2020	/base	2020	/base	2020	/base
MARKET									
Output - €/farm	44.871	44.871	0%	44.871	0%	44.871	0%	44.871	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES									
Total Pillar 1 payments - €/farm	8.011	8.313	4%	8.521	6%	6.772	-15%	8.132	2%
Basic rate / decoupled - €/farm	7.473	7.100	-5%	7.103	-5%	0	-100%	6.754	-10%
Coupled payments - €/farm	538	511	-5%	511	-5%	516	-4%	512	-5%
Greening - €/farm	0	0	-	0	-	0	-	0	-
Natural handicap - €/farm	0	703	-	907	-	926	-	867	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	11.163	11.466	3%	11.673	5%	9.924	-11%	11.284	1%
Amounts transferred to Pillar II or capped - €/farm	0	0	-	0	-	309	-	0	-
COSTS									
Total operating costs, depreciation and taxes	28.426	28.426	0%	28.426	0%	28.426	0%	28.426	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	0	-
Total external factors, own capital and investment aids	10.476	10.534	1%	10.573	1%	10.248	-2%	10.501	0%
External factor costs - €/farm	5.167	5.198	1%	5.221	1%	5.026	-3%	5.194	1%
Own capital - €/farm	5.395	5.422	1%	5.439	1%	5.309	-2%	5.393	0%
INCOME									
Farm Net Value Added - €/farm	27.608	27.911	1%	28.118	2%	26.369	-4%	27.729	0%
Farm Net Value Added per AWU - €/AWU	23.322	23.578	1%	23.753	2%	22.276	-4%	23.425	0%
Remuneration for family labour - €/farm	17.132	17.377	1%	17.545	2%	16.121	-6%	17.229	1%
Remuneration for family labour - €/FWU	17.076	17.296	1%	17.466	2%	16.049	-6%	17.127	0%
Share of Pillar 1 payments in FNVA	29%	30%	3%	30%	4%	26%	-11%	29%	1%

SUB-ANNEX 3D: current state of play of LFA

(5) LFA zoning

There are three types of less favoured areas: mountain areas, intermediate areas and areas affected by specific handicaps.

Currently, mountain areas cover nearly 16% of the agricultural area of the EU and are designated according to a limited number of physical indicators (a short growing season and steep slope, and in addition areas beyond the 62nd parallel).

Approximately 31% of the agricultural land of the EU is classified as intermediate LFA (as of 2005, they are referred to as '*areas with natural handicaps*' – NHA), on the basis of a wide range of soil and climate criteria defined by Member States. Their diversity throughout the EU was spotlighted by the European Court of Auditors as a possible source of unequal treatment. In the light of this ECA report, and on a mandate from the Council, the Commission is currently carrying out an exercise together with Member States in which a delimitation of intermediate areas with natural handicaps based on common set of biophysical indicators is tested..

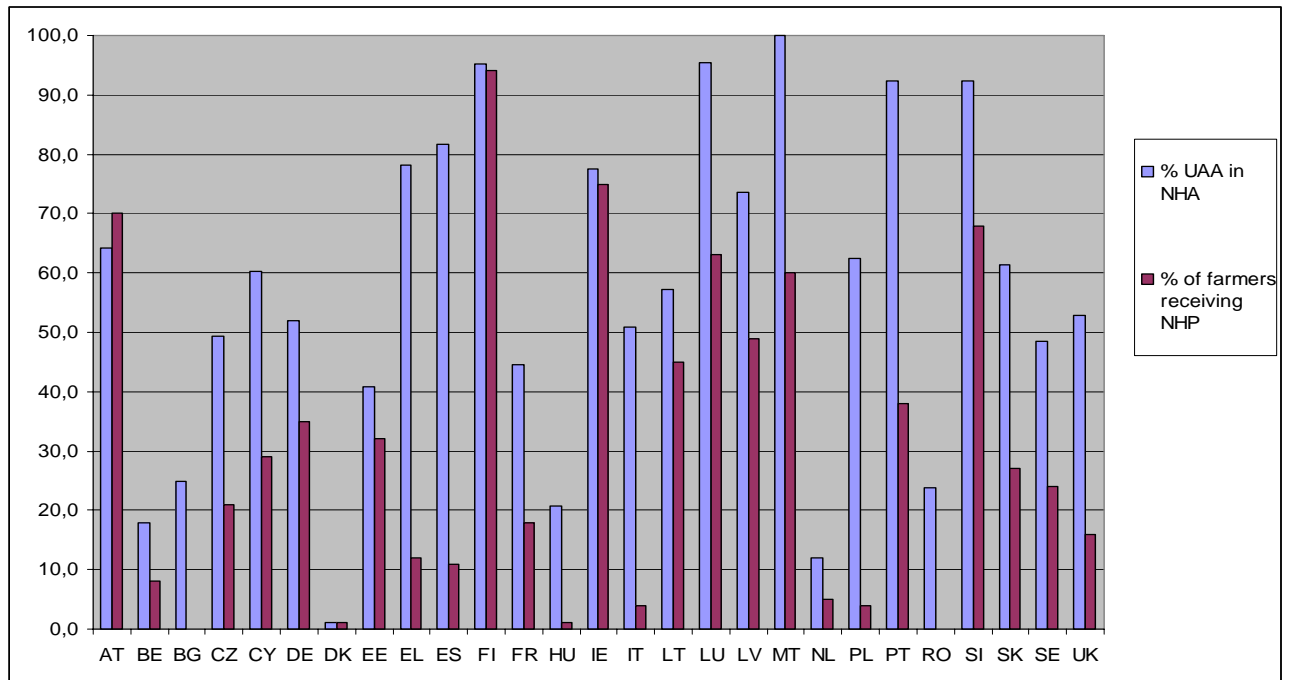
Areas affected by specific handicaps, as a third category, are areas where farming should be continued in order to conserve or improve the environment, maintain the countryside, preserve the tourist potential of the areas, or protect the coastline. These areas cover 9.1% of the EU agricultural area.

(6) LFA payment in Pillar 2

About 56% of UAA in the EU27 (i.e. about 100 million ha) has been identified as naturally handicapped. Not all of the area is subject to specific support for LFA in pillar 2, and only about 13% of all farms located in LFA currently receive the LFA payments in pillar 2. The total indicative EAFRD budget for these measures amounts to EUR 12.6bn.

The payments are calculated according to additional cost and loss of income related to the handicap, and the amounts of payments are capped by EUR 250/ha in mountain areas and EUR 150/ha in other areas. The minimum payment is EUR 25/ha. Farmers (who are the only beneficiaries) are obliged to continue farming (in LFA) for at least five years since the first payment and they are obliged to apply GAEC.

(7) Share of NHA in total UAA and percentage of farms receiving NHP from the total number of farms (2005)



SUB-ANNEX 3E: Suppression of coupled support for beef, sheep and goat sectors

See separate document



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

SUB-ANNEX 3E

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{COM(2011) 626 final}
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{COM(2011) 628 final}
{COM(2011) 629 final}
{SEC(2011) 1154 final}

SUB-ANNEX 3E: DIRECT PAYMENTS

SUPPRESSION OF COUPLED SUPPORT FOR BEEF, SHEEP AND GOAT SECTORS

1. INTRODUCTION

The aim of this note is to analyse the role of coupled payments on farmers' margins. The analysis is limited to beef, sheep and goat sectors¹ for the period 2006-2007. All types of coupled payment implemented during the analysed period are taken into account: "re-coupled" payment, specific support (Article 69 of Reg. 1782/2003), national aid or Complementary National Direct Payment.

If all the payments are decoupled it is assumed that a farmer continues producing only if the output covers the operating costs. Therefore the analysis will compare the margin over operating costs with and without coupled payments. The impact of decoupling is assessed through the percentage of farms and/or livestock population becoming negative with respect to their margins.

2. SUMMARY

Beef: The situation in the beef sector varies among the different bovine systems and Member States. In Finland and Sweden direct payments (both European and national coupled & decoupled payments – especially LFA and environmental payments) are so important that the farmers may not take their production decision solely on the basis of a margin analysis per enterprise. Specialist breeders especially in mountainous LFA are the most sensitive to the decoupling of any of the per head payments especially in France, Austria and Portugal where from 18 to 44% of the suckler cow population respectively could be affected due to margins becoming negative when coupled payments are not taken into account. The payments per head represent a lower share of the margin of the specialist breeders and fatteners (B&F); therefore the impact of a total decoupling would be limited for these systems except in France and Portugal where respectively 15% and 36% of the cows could be affected especially in other LFA areas. Suppression of the coupled direct payments (CDPs) for fatteners affected an estimated 86% of Finish fattening farms and 89% of the total population of animals.

Sheep & Goats: For sheep milk producers the impact on margins of a total decoupling would be limited because of the high output they obtain from milk and cheese. The highest impact is estimated in Portugal (5% of the ewes kept on farms moving to a negative margin without coupled payments). For goat milk farms, 5% of the she-goats in France and Spain are grazed on farms moving to a negative margin and 9% in Cyprus. On the contrary sheep meat specialists are more sensitive to any decoupling because coupled payments represent a high share of their margin. In France 26% of the 'meat' ewes may be affected, in Spain the impact may be limited to 5% of the ewes. Despite the limitation due to small sample sizes, it seems plausible that the impact would be also significant in Hungary and Portugal.

¹ Some payments will be decoupled during the next period (sugar beet and cane, fruits and vegetables), some are part of specific programmes (POSEI and Small Aegean Islands), or are guaranteed by the Treaty (cotton). Support for rice and silk worms (possible under article 68) is not covered.

3. METHODOLOGY

The analysis is based on **Farm Accountancy Data Network (FADN)**, a European system of sample surveys that take place each year and collect structural and accountancy data relating to farms.

FADN provides farm level data and therefore it is necessary to estimate the costs of production because FADN accounts are not based on analytical accounts. For the beef sector, rules are defined to allocate the different costs recorded at farm level to each enterprise². Due to the need to allocate costs, the more the farm is specialised in the production of the product studied the better should be the estimate. Therefore estimations of production costs are based on a sample of farms with a rate of specialisation³ of at least 50% for beef.

For the sheep and goat sector no FADN model allocating costs has been developed. Therefore this analysis will focus on highly specialised farms (above 60% of the output coming from sheep) and the margin analysis will be done at farm level and not specifically for the sheep enterprise. For more information on typology please see Annex 1, point (5).

Costs and margins per head are analysed because the FADN does not gather data on the weight of the animals. It should be taken into account that these head counts could be for animals of different breeds, weights and age categories.

The margin over operating costs is defined as follows:

$$\text{Margin} = \text{output} - \text{specific costs}^4 - \text{farming overheads}^5$$

Estimations are performed on the most recently available FADN data; to limit conjectural price impact⁶ a two-year average (2006-2007) were used unless specified otherwise. Results based on less than 15 farms are not displayed.

In the model, the coupled payments refer to the "re-coupled" payments (Art. 111-135 of Reg. 1782/2003), the specific support (Article 69 of Reg. 1782/2003), national aid or Complementary National Direct Payment (Act of Adhesion). Then the margins with coupled payments are compared to margins without coupled payments.

In the analysis, farmers changing to a negative margin with a full decoupling always refer to the sample selected and are presented in form of percentage of total farms, as well as the percentages of hectares and heads affected.

² Annex 1, on page 139 gives details of the model which is used in this analysis for estimating beef production costs and margins.

³ Specialisation rate: output of the crop studied on total output.

⁴ Specific costs: feed and other specific livestock costs, seeds, fertilisers, crop protection and other specific crop costs.

⁵ Farming overheads: contract work, upkeep of machinery, motor fuel, car expenses, upkeep of land and buildings, electricity, heating fuels, water, insurance.

⁶ As last FADN data available were referring to 2007 and the implementation of 2003 CAP reform was only completed for all Member States in 2006.

4. BEEF SECTOR

4.1. Beef sector – the main findings

Beef producers are classified into three groups (described in more detail in sections 4.4 to 4.6) on the basis of the beef production system practised. “**Breeders**” are farmers with suckler cows not fattening their calves, “**breeders and fatteners**” (B&F) fatten the calves born on their farm, and “**fatteners**” purchase animals and then finish fattening them.

Not surprisingly the effect of the CDPs suppression appears to be the strongest for farms with high share of CDP in Gross Margin and with high share of all subsidies in total receipts.

Suppression of CDPs for **breeders** would increase (the already) negative margin in the Czech Republic, Denmark, Sweden and UK. Only in the case of Finland and Austria does the existing coupled support manage to counterbalance the otherwise negative margins. Luxembourg, Germany and Ireland do not use CDP but the data suggest that apart from Luxembourg their beef breeders are barely breaking-even.

Eighty four percent of the EU-27 breeders are located in less favoured areas. Gross margin is significantly lower in mountainous LFA as the lower value of output is not fully compensated by lower costs of production.

The highest share of farms would be affected in Austria (39%); in the whole EU27 it would be about 20.6 thousand farms (17% of total) out of which more than three fourth are located in France. In terms of effects on livestock units the highest share is reported in Austria (44%).

The effect of suppressing CDPs for **B&F** would contribute to a worsening situation in the UK and Sweden where the share of farms operating on a negative margin would increase up to 68-69% (from xx%).

About three fourth of EU-27 B&F are located in less favoured areas out of which nearly 80% operate in other LFA. Their margin is about 30% lower as compared to the remaining area; this is especially evident in France (55%), Ireland (63%), Italy (61%) and UK (29%). For the average B&F farm in each EU country, value of output is lower for B&F located in LFA and this effect is not fully compensated by lower costs of production in these areas or by the CDPs but situation varies country by country. The least compensatory effect of CDPs was found in UK, Italy and Ireland where B&F in other LFA make respectively 10%, 61% and 63% of the non-LFA Gross Margin with CDPs.

Withdrawal of the CDPs would affect the highest share of farms in France (17%); at the EU level nearly 5.8 thousand farms are going to be affected, of which nearly 80% in France. Suppression of CDPs would increase the share of farms operating on negative Gross Margin in France from 5% to 22% and in Portugal from 6% to 22%. The highest share of livestock units to be affected is reported in Portugal (36%) where large farms (twice as large as the average size) are going to be affected. A considerable increase in the share of farms operating on negative Gross Margin is also reported in Czech Republic from 35% to 57%, in Slovenia from 53% to 63% and in Sweden from 40% to 58%.

Specialist beef **fatteners** in Sweden and Finland would suffer losses contrary to the 2007 situation where CDPs turn the (otherwise negative) margin positive. While Ireland does not use CDPs, the margin of 49€cattle sold can be seen as unsustainable.

Suppression of the CDP would largely affect Finish fatteners as 86% of farms would move to negative Gross Margin, affecting 89% of the total population of animals. This is because the subsidies contributed in 2007 more than half to the total output. In Denmark 59% of specialist fatteners already operate on negative Gross Margin and this percentage would increase.

4.2. Coupled support in the beef sector

The implementation of coupled payments in the beef sector in 2006 and 2007 (base years in the analysis) is shown in **Table 1**. Coupled Payments displayed between brackets, were not anymore implemented in 2010.

Table 1 Implementation of the coupled payments in the beef sector

	Suckler cow premium	Special premium	Slaughter premium adults	Slaughter premium calves	Art. 69	National aid and Complementary National Direct Payments
Belgium	100%			100% (Fland.)	Wallonie	
Bulgaria						x
Czech Republic						x
Denmark		75%				x
Estonia						
Ireland					X	
Greece					X	
Spain	100%		40%	100%	X	
France	100%		(40%)	(100%)	X	
Hungary						x
Italy					X	
Cyprus						x
Latvia						x
Lithuania						x
Netherlands			(100%)	(100%)		
Austria	100%		(40%)	(100%)		
Poland					X	
Portugal	100%		40%	100%	X	
Romania						x
Slovakia						x
Slovenia		75%	65%		x	x
Finland		(75%)			x	x
Sweden		75%	74.55%			
United Kingdom					Scotland	

(): not in 2010

4.3. Population

To demonstrate FADN sample coverage at EU level, the number of suckler cows is taken into account. The FADN survey for 2007 covers 100% of the suckler cows in the Eurostat farm structure survey (FSS) for 2007. However, as FADN does not cover small farms, the coverage is lower in some Member States such as Austria, Slovenia or Portugal. This analysis focuses on specialist beef producers⁷, thus specialisation criteria are applied to the FADN database. In the 2007 FADN survey, 74% of the suckler cows in the EU-27 were raised by specialised beef producers. However, application of specialisation criteria and division into three groups (breeders, B&F and fatteners) significantly reduces the coverage to an average of 51% for EU27, which becomes even lower in Member States where beef production is mainly based on non-specialised farms.

The decrease in coverage is particularly significant for Belgium, Luxembourg and Austria, where around 40% of suckler cows are kept in combination with dairy cows, and for the UK where 50% of suckler cows are raised on farms combining extensive beef and sheep production (see Table 2).

Table 2 Share of suckler cows in the FADN sample in 2007

	Coverage of suckler cows in FADN		
	Beef breeders without criteria on specialisation	Breeders and fatteners (B&F) without criteria on specialisation	FADN: Breeders, B&F, fatteners + 50% specialisation rate
BE	37%	26%	45%
CZ	38%	37%	39%
DK	36%	56%	33%
DE	35%	48%	38%
IE	17%	56%	57%
EL	44%		47%
ES	33%	45%	64%
FR	49%	35%	64%
IT	35%	38%	39%
LU	27%	27%	32%
AT	28%	41%	28%
PT	40%	29%	47%
SI	27%	51%	35%
FI	41%	55%	61%
SE	34%	59%	41%
UK	10%	36%	27%
EU-27	35%	39%	51%

Source: DG AGRI – EU Beef report 2010 based on FADN data

⁷ Defined in this case as farms which generate at least 50% of output in form of beef

4.4. Breeders

Breeders produce non-finished animals (male and females). Some of the females are kept for replacement. The calves are fed with milk and mainly grass. They are sold once they are weaned or later. The age and weight of the animals at the time they are sold depend on the breed and on the commercial channels.

Breeders' farms are usually small. Numerous specialist breeders located on grassland area produce weanlings that will be fattened on cereals and maize silage by a smaller number of specialist fatteners. In the FADN survey, more than 60% of specialist breeders are located in two countries: France (39%) and Spain (20%). There are also large numbers in Ireland (11%) and Italy (8%). Only 3% of the breeders are in the EU-10, mainly in Slovenia and the Czech Republic.

The degree of specialisation in beef production is relatively high: 82% in the EU-15 and 74% in EU-10. The average area stands at 73 hectares (ha) in the EU-27, but is as high as 162 ha in Germany and the Czech Republic. The stocking density⁸ is low: 1 LU/ha in the EU-15 and 0.5 LU/ha in the EU-10. A large proportion of the UAA is allocated to forage production, mainly grassland.

Table 3 Overview, Breeders⁹

Country code	Farms represented	Av. Labour in AWU	Beef specialisation - % output	Average UAA - ha	Stocking density - LU/ha	Av. number of suckler cows - head
EU27	87 810	1.3	82%	73	1.0	47
EU15	84 610	1.3	82%	73	1.0	47
EU10	2 590	1.9	74%	88	0.5	29
BE	2 940	1.4	87%	54	1.9	54
CZ	660	2.5	70%	161	0.4	50
DK	770	0.6	63%	26	1.9	23
DE	1 020	2.2	74%	162	1.0	97
IE	9 410	1.0	85%	45	0.9	25
ES	17 980	1.4	85%	65	0.8	49
FR	34 350	1.3	84%	93	1.1	59
IT	7 220	1.4	70%	42	0.9	28
LU	130	1.1	72%	71	1.3	49
AT	990	1.6	65%	48	0.7	25
PT	4 400	1.4	70%	78	0.4	27
FI	600	1.3	70%	56	0.8	28
SI	1 120	1.6	75%	15	0.8	9
SE	840	1.0	72%	86	0.7	38
UK	1 730	1.3	76%	103	1.2	73

* Including females under one year

Source: DG AGRI – EU-FADN

⁸ Average number of bovine LU (except calves for fattening) and sheep/goat LU per hectare of forage UAA.

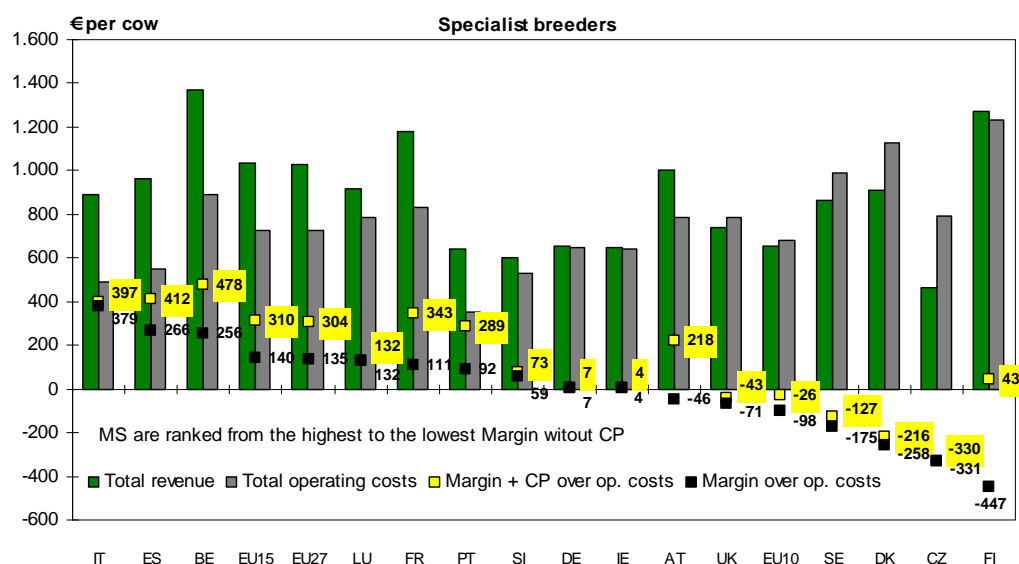
⁹ Common land used for grazing is not included in the farm UAA and is therefore not included in the calculation of stocking density. That is why the stocking density may seem high in some areas where this practice is more common.

4.4.1. Margin over variable costs with and without coupled payments

Fifteen out of the 27 Member States are presented in this section (with a large enough sample for analysis).

Figure 1 shows that in 2007 for most Member States in question CDPs considerably raise the level of Gross Margin. Producers in Italy, Spain, Belgium and France after suppression of CDP would still generate margin above 100€ per suckler cow, but producers in Czech Republic, Denmark, Sweden and UK would suffer even higher losses. CDPs however would not fully address the problem of negative margins as only in case of Finland and Austria does the negative margin become positive if coupled DPs remain. Luxembourg, Germany and Ireland do not use CDP but the data suggest that apart from Luxembourg their beef breeders are barely breaking-even.

Figure 1: Margin over operating costs by MS, Breeders, 2007



Source: DG AGRI EU FADN

Total revenues presented in Figure 1 contain CDPs but if they are subtracted it can be seen (Figure 6 on page 144) that the highest output can be associated with high market price per animal due to quality and weight of finished animals¹⁰.

Structure of operating costs reflects local natural conditions for cattle breeding, and the highest total operating costs were found in Finland, Denmark and Sweden (from €1.232 to €90/cow). The lowest costs (from €353 to 529/cow) were observed in areas with a milder climate, i.e. in Portugal, Italy and Slovenia.

By far the majority (84%) of the EU-27 breeders are located in less favoured areas, and about one in three are located in mountainous areas. Table 5 on page 123 shows that an

¹⁰ For example in Belgium and France revenue per cow reached respectively €1.145 and €946 where production is dominated by heavy *Blanc Bleu Belge* raised in Belgium and *Charolais* and *Limousin* in France.

average EU breeder makes a comparable Gross Margin in non-LFA and other LFA but the margin is significantly lower in mountainous areas, especially in France where it reaches only 47% of the non-LFA margin. CDPs compensate this effect for an average EU breeder but the situation may vary country by country. The least compensatory effect of CDPs was found in France and Italy where breeders in mountain LFA make respectively 75% and 85% of the non-LFA Gross Margin with CDPs.

In each country with the exemption of UK, value of output is lower for breeders located in LFA and this effect is not fully compensated by lower costs of production in these areas. For more details please see Annex 2 on page 144.

4.4.2. Farmers moving to a negative margin with the suppression of re-coupled payments

Representative FADN sample allowing projection on number of farms moving from positive to negative Gross Margin exist for Austria, Spain, France and Portugal (see Table 4). However some existing data for Italy, Sweden and UK allow to have some insight into impact of the CDPs suppression.

Table 4 Output, margins and Coupled Direct Payments, specialist beef breeders

	AT	AT	ES	ES	FR	FR	PT	PT
	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms
Farms represented	720	1 840	1 690	43 870	16 020	70 870	2 210	8 410
Farms represented % of total	39%	100%	4%	100%	23%	100%	26%	100%
Beef specialisation - % output	67%	65%	80%	85%	82%	84%	79%	75%
Heard affected - total LU	26 371	67 393	120 495		1 178 545	5 213 700	86 049	327 452
Share of herd affected	44%		6%		18%		31%	
in €/COW								
TOTAL BEEF OUTPUT	729	763	538	797	790	965	388	441
TOTAL BEEF COUPLED DP	265	267	220	160	251	233	226	210
Share of CP in output value	36%	35%	41%	20%	32%	24%	58%	48%
Gross margin	-118	-33	-94	279	-101	142	-95	68
Gross margin with CP	147	234	126	438	150	375	131	278
in €/AWU								
Total output	18 553	18 908	33 110	28 135	35 813	48 220	9 840	12 297
Balance subsidies and taxes	22 132	21 725	18 180	9 772	24 755	26 463	10 894	9 658
of which LFA/AWU	4 598	4 660	693	655	3 070	2 783	1 103	1 023
of which environmental/AWU	8 387	7 934	814	166	2 504	2 621	865	854
Share of all subsidies in total receipts	54%	53%	35%	26%	41%	35%	53%	44%

Source: DG AGRI – EU-FADN

Specialist breeders are characterised by high share of suckler cow premium in CDP and total CDP share in output is different by MS (see Table 4 or Annex 4 for more details). On average they range from 20% in Spain to 48% in Portugal. However, these shares are higher for farms which are moving from positive to negative margin as a consequence of withdrawal of the CDPs and they range from 32% in France to 58% in Portugal. Similar pattern is observed for shares of all subsidies in total receipts (last row in Table 5).

In terms of farm number, withdrawal of CDPs would affect the highest share of farms in Austria (39%) and the lowest in Spain (4%). In absolute terms 20.6 thousand farms are going to be affected, accounting for 11% of the EU total; more than three fourth of them are located in France. Similar picture appears from the analysis of number of livestock units affected – the highest share is reported in Austria (44%) and the lowest in Spain (6%). The average number of these livestock units per farm range from 37 in Austria to 74 in France and match exactly average breeders herd size in these countries.

Suppression of CDP would increase share of farms operating on negative Gross Margin from 2% to 6%, in Spain, from 7% to 29.5%, in France and from 5% to 31% in Portugal. For Austria the sample is not large enough to determine the share of farms already operating on negative margin, thus drawing the conclusion of how much the share would increase after the suppression of CDP.

For countries not reported in Table 4, the share of farms operating on negative Gross Margin would increase in Italy from 4% to 6%, in Sweden from 59% to 69% and in UK from 65% to 68%.

Estimates suggest that there are also countries where vast majority of beef specialist breeders are expected to operate on positive margin with or without suppression of the CDPs. These are: Belgium, (88%), Spain (94%), Italy (93%), France (71%) and Portugal (69%).

Table 5 Output, costs and margins by LFA type and non-LFA, specialist beef breeders

	FR			IT			ES			SE		UK		EU		
	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA
Farms represented	19 711	38 126	13 037	9 398	1 218	3 914	22 786	16 123	4 962	1 748	323	2 175	1 008	92 961	133 761	49 509
Sample farms	316	660	162	269	29	83	246	296	63	52	20	78	30	1 675	2 508	918
Beef specialisation - % output	91%	83%	78%	71%	78%	70%	95%	77%	93%	74%	74%	78%	73%	87%	82%	79%
Stocking density - LU/ha	0.9	1.1	1.5	0.8	1.2	2.5	0.9	0.7	0.7	0.6	0.9	1.2	1.2	0.9	1.0	1.3
Av. number of suckler cows - he	54	62	51	34	25	25	32	42	63	31	66	78	57	37	47	50
Number of suckler cows	1 069 519	2 365 337	666 712	316 337	30 438	99 024	739 178	671 845	314 740	54 608	21 218	170 585	57 436	3 435 839	6 250 652	2 461 587
% of cows by LFA class	26%	58%	16%	71%	7%	22%	43%	39%	18%					28%	51%	20%
in €/COW																
TOTAL BEEF OUTPUT	904	981	1 003	739	778	1 216	705	823	963	806	847	813	773	766	871	968
TOTAL BEEF COUPLED DP	229	231	249	17	14	15	148	192	118	45	41	29	8	211	218	165
Specific costs	415	427	443	272	312	606	347	461	568	395	628	580	459	350	410	487
Non specific costs	420	380	415	96	146	165	100	79	73	542	413	301	396	267	290	316
Total operating costs	835	807	858	367	459	771	447	540	641	937	1 041	881	855	616	701	803
Gross margin	69	174	145	372	320	445	258	282	322	-131	-194	-68	-82	150	170	165
Ratio CP/GM	331%	133%	171%	5%	5%	3%	57%	68%	37%	34%	21%	43%	9%	141%	129%	100%
Gross margin with CP	298	405	395	389	334	460	405	474	440	-86	-153	-39	-75	360	388	329

Source: DG AGRI – EU-FADN

4.5. Breeders and Fatteners

Breeders and fatteners (B&F) fatten the calves born on their farms and in some cases additional purchased calves. They produce either young bulls or steers (Ireland). B&F producing steers use a feeding system based mainly on grass, whereas for young bulls cereals and silage maize are used.

There are about 74 000 specialist B&F in the EU-27 represented in the FADN sample. They are located mainly in Germany (27%), Ireland (22%) and Spain (16%). Seven percent of B&F are in the EU-10, but none of the above countries have a sample that is large enough to be presented independently.

The average herd size in the EU-27 is 31 suckler cows per farm, with 32 male cattle sold per year. The average UAA of 55 ha is smaller than for specialist breeders.

The production systems differ widely between MS (Table 6). The largest herds can be found in Belgium (56 cows/farm) where, because of the limited area, the density is very high (3.0 LU/ha). By contrast, in Portugal the area is large (113 ha), the number of suckler cows is average and the density is low (0.7 LU/ha).

In the B&F system it is mostly the young bulls that are fattened. In Ireland fattening of steers is more common (as in the UK). The forage system is mainly based on grass and the daily diet is supplemented with concentrates. The farms are relatively small (32 ha and 20 cows).

In Finland, Sweden and Slovenia, it is common to buy additional calves for fattening, typically from milk producers who do not fatten their males.

Table 6 Overview, B&F

Country code	Farms represented	Av. Labour in AWU	Beef specialisation - % output	Average UAA - ha	Stocking density - LU/ha	Av. number of suckler cows - head
EU27	73 689	1.3	78%	55	1.1	31
EU15	68 546	1.3	78%	56	1.2	32
EU12	5 028	1.5	69%	43	0.6	13
BE	1 454	1.5	75%	56	3.0	56
DK	1 468	1.6	73%	86	1.1	45
DE	19 821	1.1	84%	45	1.2	23
IE	16 334	1.1	79%	32	0.7	20
ES	11 829	1.5	80%	98	1.2	56
FR	5 389	1.5	68%	29	1.3	20
IT	82	1.0	73%	75	1.8	48
LU	1 322	1.6	88%	79	0.4	26
AT	626	1.6	83%	74	0.9	31
PT	964	1.3	70%	113	0.7	36
FI	6 265	1.4	74%	91	1.4	49

* Including females < 1 year

Source: DG AGRI – EU-FADN

4.5.1. Margin over variable costs with and without coupled payments

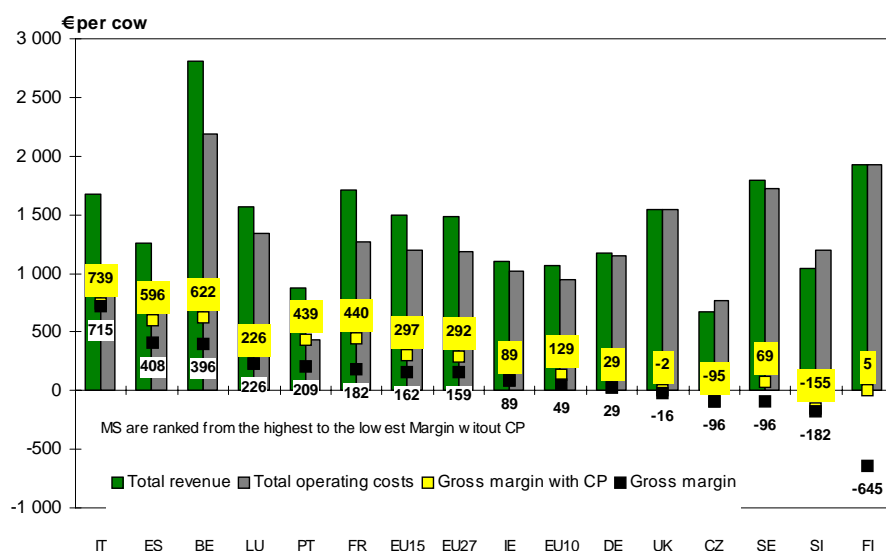
This section presents estimates for the thirteen Member States, out of the total of 27, which provide a sufficiently large sample.

Figure 2 shows that in 2007 for most Member States in question CDPs considerably raise the level of Gross Margin. Producers in Italy, Spain, Belgium, France and Portugal after suppression of CDPs would still generate margin above 100€/per suckler cow, but producers in Czech Republic, Slovenia and UK would suffer even higher losses. CDPs however would not fully address the problem of negative margins as only in case of Finland and Sweden does the negative margin become positive if coupled DPs are maintained. Luxembourg, Ireland and Germany do not use the CDPs but situation of beef B&F considerably differ among them. Only in Luxembourg producers generate reasonable margin while in the remaining two countries margin is below 100€/cow (in Germany only 29€/cow).

Total revenues presented in Figure 2 contain CDPs but if they are subtracted it can be seen (Figure 5 on page 144) that the highest output can be associated with high market price per animal due to quality and weight of finished animals¹¹.

Structure of operating costs reflects both local natural conditions and quality-oriented systems for cattle B&F. The highest total operating costs were found in Belgium, Finland, and Sweden (€2.1807, €1.923 and €1.721/cow respectively). The lowest costs were observed in areas with a milder climate, i.e. in Portugal, Spain and Czech Republic (€437, €656 and €767/cow respectively).

Figure 2: Margin over operating costs by MS, B&F, 2007



Source: DG AGRI EU FADN

¹¹ For example in Belgium and France revenue per cow reached respectively €1.145 and €946 where production is dominated by heavy *Blanc Bleu Belge* raised in Belgium and *Charolais* and *Limousin* in France.

A majority of EU-27 B&F (76%) are located in less favoured areas; only 21% are in mountainous areas and the rest are located in other LFA. Table 7 on page 127 shows that margin is significantly lower in other LFA which is especially visible in France (55%), Ireland (63%), Italy (61%) and UK (29%).

For an average B&F in each EU country value of output is lower in LFA and this effect is not fully compensated by lower costs of production in these areas or by the CDPs. On average the other LFA margin is lower by about 30% than in non-LFA but situation vary country by country. The least compensatory effect of CDPs was found in UK; Italy and Ireland where breeders in other LFA make respectively 10%, 61% and 63% of the non-LFA Gross Margin with CDPs. For more details please see Annex 2.

Table 7 Output, costs and margins by LFA type and non-LFA, specialist beef breeders and fatteners

	BE		FR		FR		IE		IT		PT	
	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA
Farms represented	385	2 552	7 398	9 914	9 115	31 376	6 181	6 214	1 402	4 312	1 430	1 695
Sample farms	16	56	97	199	136	303	63	201	35	110	59	63
Beef specialisation - % output	74%	75%	92%	81%	76%	85%	80%	70%	73%	71%	68%	86%
Average UAA - ha	97.7	53.9	83.4	108.2	83.7	45.7	43.0	28.8	32.8	25.2	25.6	129.3
Stocking density - LU/ha	2.2	3.2	1.0	1.2	1.5	1.1	1.4	1.1	1.2	2.1	0.6	0.5
Av. number of suckler cow s - head	66	56	51	62	49	23	20	18	23	17	11	45
% of cow s by LFA class			26%	43%	31%			51%	15%	34%		
in €COW												
TOTAL BEEF OUTPUT	2 835	2 734	1 234	1 409	1 706	1 086	1 592	1 340	1 382	2 808	705	555
TOTAL BEEF COUPLED DP	272	225	247	246	275	0	0	17	20	34	205	254
Share of CP in output value	10%	8%	20%	17%	16%	0%	0%	1%	1%	1%	29%	46%
Specific costs	2 041	1 852	622	750	936	665	1 025	523	668	1 674	407	304
Non specific costs	329	392	480	444	532	327	416	206	204	294	163	129
Total operating costs	2 370	2 243	1 102	1 195	1 468	991	1 442	729	871	1 968	570	433
Gross margin	465	490	132	214	238	95	150	611	511	840	135	123
Ratio CP/GM	58%	46%	188%	115%	115%	0%	0%	3%	4%	4%	152%	207%
Gross margin with CP	737	716	379	460	513	95	150	628	532	874	340	377

	ES		SE		UK		EU			
	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA
Farms represented	10 576	18 215	2 929	1 185	508	9 065	4 476	50 818	116 915	56 252
Sample farms	88	115	29	49	20	273	132	918	1 816	1 121
Beef specialisation - % output	91%	70%	94%	70%	70%	78%	71%	85%	79%	75%
Average UAA - ha	33.0	27.4	31.5	124.8	79.1	94.7	101.2	43.0	58.1	62.4
Stocking density - LU/ha	0.8	0.8	2.0	0.7	0.8	1.2	1.6	0.9	1.1	1.5
Av. number of suckler cow s - head	24	17	68	38	29	53	49	26	32	37
% of cow s by LFA class	33%	41%	26%					19%	52%	29%
in €COW										
TOTAL BEEF OUTPUT	1 033	1 057	1 510	1 666	1 231	1 081	2 173	1 157	1 138	1 829
TOTAL BEEF COUPLED DP	172	209	48	172	127	20	2	255	141	156
Share of CP in output value	17%	20%	3%	10%	10%	2%	0%	22%	12%	9%
Specific costs	480	577	1 074	1 001	690	722	1 557	569	684	1 151
Non specific costs	133	115	107	699	590	390	539	337	338	461
Total operating costs	613	693	1 181	1 700	1 280	1 112	2 096	906	1 022	1 612
Gross margin	420	364	328	-34	-49	-31	76	251	116	217
Ratio CP/GM	41%	57%	14%	506%	258%	66%	3%	102%	122%	72%
Gross margin with CP	591	573	376	138	78	-10	78	505	258	373

Source: DG AGRI – EU-FADN

4.5.2. Farmers moving to a negative margin with the suppression of re-coupled payments

Representative FADN sample allowing projection on number of farms moving from positive to negative Gross Margin exist for Spain, France and Portugal (see Table 8). However some existing data for Czech Republic, Slovenia, Sweden and UK allow to have some insight into impact of the CDPs suppression.

Table 8 Output, margins and Coupled Direct Payments, specialist B&F

	ES	ES	FR	FR	PT	PT
	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms	Farms moving to (-)	Total farms
Farms represented	650	31 720	4 570	26 430	570	3 470
Farms represented % of total	2%	100%	17%	100%	16%	100%
Beef specialisation - % output	88%	81%	80%	82%	80%	81%
Heard affected - total LU	63 321	865 778	400 867	2 676 053	45 481	276 873
Share of heard affected	7%		15%		36%	
in €/COW						
TOTAL BEEF OUTPUT	644	1 169	1 380	1 455	494	628
TOTAL BEEF COUPLED DP	215	154	272	255	262	244
Share of CP in output value	33%	13%	20%	18%	53%	39%
in €/AWU						
Gross margin	-126	374	-106	200	-24	125
Gross margin with CP	88	529	166	455	238	369
in €/AWU						
Total output	23 430	26 607	41 043	55 035	26 814	14 353
Balance subsidies and taxes	17 616	6 629	26 041	26 398	19 997	10 480
<i>of which LFA/AWU</i>	717	471	2 751	2 287	995	995
<i>of which environmental/AWU</i>	2 808	128	2 509	2 024	1 225	905
Share of all subsidies in total receipts	43%	20%	39%	32%	43%	42%

Source: DG AGRI – EU-FADN

Similar as it is in case of specialist breeders, specialist B&F are characterised by high share of suckler cow premium in CDP; slaughter premium however plays slightly greater role for this type of beef producers. Share of total CDP in output is different by MS (see Table 7 or Annex 4 for more details). On average they range from 13% in Spain to 39% in Portugal. However, these shares are higher for farms which are moving from positive to negative margin as a consequence of withdrawal of the CDPs and they range from 20% in France to 53% in Portugal. Similar pattern is observed for shares of all subsidies in total receipts (last row).

In terms of farms number, withdrawal of CDP would affect the highest share of farms in France (17%) and the lowest in Spain (2%). In absolute terms nearly 5.8 thousand farms are going to be affected and nearly 80% of them are located in France. Suppression of CDP would increase share of farms operating on negative Gross Margin from 3% to 5% in Spain, in France from 5% to 22% and in Portugal from 6% to 22%.

Livestock is going to be affected in a different pattern: – the highest share of livestock units to be affected is reported in Portugal (36%) and the lowest in Spain (7%). The average number of these livestock units per farm range from 80 in Portugal to 97 in Spain and match exactly an average B&F heard size in these countries. In terms of the Utilised Agriculture Area Portuguese and Spanish farm affected by the suppression are respectively twice and three times larger than the average size; in France they are close to an average.

For countries not reported in Table 8 share of farms operating on negative Gross Margin would increase in Czech Republic from 35% to 57%, in Slovenia from 53% to 63%, in Sweden from 40% to 58% and UK from 48% to 49%. Estimates suggest that there are also countries where vast majority of beef specialist B&F are expected to operate on positive margin with or without suppression of the CDPs. These are: Spain (95%), Italy (95%), France (77%) and Portugal (77%).

4.6. Fatteners

Specialist fatteners are less widespread in the EU than specialist breeders and B&F. There are around 23 000 specialist fatteners in the EU-27, of whom 98% are located in the EU-15. The average number of male cattle fattened on farms is high (105 in the EU-27) thus the data analysed represent 2.4 million head of male cattle.

The characteristic feature of this system is that the males are not born on the farm, but are purchased from specialist breeders. For example, a large number of the weanlings produced in France are fattened in the North of Italy. Specialist fatteners are particularly numerous in Germany and Denmark (32% and 24% respectively of the total for EU-27).

The production systems differ widely between MS, ranging from an extensive system in Ireland and Sweden to a very intensive system in Italy, where young bulls of meat breeds are slaughtered at the age of around 15 to 18 months. In Italy they are mainly fed with cereals and silage maize which may or may not be produced on the farm. The livestock density can be high, at almost 5.1 LU/ha, compared with the EU-27 average of 1.8 LU/ha. The number of male cattle sold averages more than 282 per farm.

Table 9 Overview, Fatteners, 2007

Country code	Farms represented	Av. Labour in AWU	Beef specialisation - % output	Average UAA - ha	Stocking density - LU/ha	Male cattle sold - head
EU27	22 994	1.3	79%	41	1.8	105
EU15	22 558	1.3	79%	41	1.8	107
EU10	436	2.0	80%	23	1.5	46
AT	1 002	1.2	64%	25	2.1	42
DE	2 022	1.5	68%	57	2.7	132
ES	7 383	1.3	85%	30	0.7	66
FI	1 008	1.9	84%	73	1.8	109
IE	5 441	1.0	85%	46	1.1	64
IT	3 049	1.6	82%	36	5.1	282
SE	584	1.2	68%	102	0.9	82

* Including females < 1 year
Source: DG AGRI – EU-FADN

The system in Sweden is different; wider use is made of grass, the livestock density is only 0.9 LU/ha, the animals fattened are mainly dairy breeds or crossings, and the average UAA is large (102 ha) compared with the EU-27 average of 41 ha. The weight, breed and age of the animals fattened are not reported in the FADN data but it is known that in Spain, young bulls are often slaughtered before the age of one year, in Italy at around 15 to 18 months and in France a little later. In Ireland at least 75% of the males sold are steers.

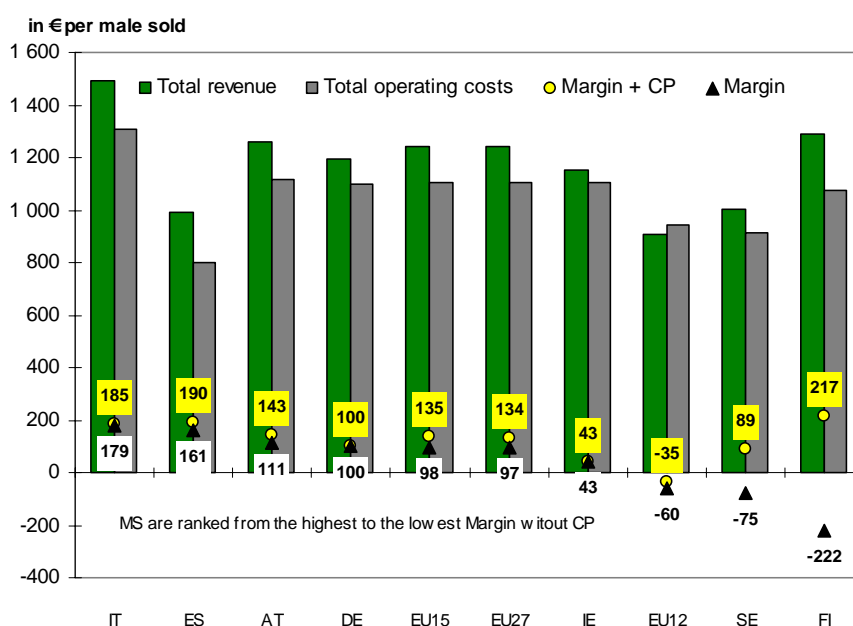
4.6.1. Margin over variable costs with and without coupled payments

This section presents the seven countries out of all 27 Member States with a large enough sample to perform analysis.

Figure 3 shows that in 2007 for most Member States in question DCP considerably raise the level of Gross Margin. Producers in Italy, Spain, Austria and Germany after suppression of CDP would still generate margin of at least 100€/per cattle sold, but producers in Sweden and Finland would suffer losses and only due to CDPs their negative margin was in 2007 positive. Germany and Ireland do not use the CDPs. While it seems that a margin of 100€/cattle sold obtained by German fatteners could be still acceptable, less than half of it would endanger the existence of many producers in Ireland¹².

Total revenues presented in Figure 3 contain CDPs but if they are subtracted it can be seen (Figure 8 on page 144) that the highest output can be associated with high market price per animal. Prices received by specialist fatteners are about €250 higher per male sold than the prices received by breeders, because fattened animals are heavier. In case of fatteners structure of operating costs does not directly reflect local natural conditions as this activity tends to involve more high-energy intensive feeding. The highest total operating costs were found in Italy (€1.307), followed by a fairly comparable group of countries which included Austria, Ireland, Germany and Finland (from €1.118 to €1.075/male sold). The lowest costs were observed in Spain and Sweden (€800 and €913/male sold).

Figure 3: Margin over operating costs by MS, Fatteners, 2007



Source: DG AGRI – EU-FADN

¹² Margins obtained by fatteners per unit are not directly comparable with these obtained by breeders because of considerable difference in production process and hence the way margins are reported in FADN. While for breeders margin is calculated per suckler cow, for fatteners it is calculated per cattle sold. Fatteners are usually able to fatten relatively large number of cattle per year and therefore can operate on lower margin per unit produced as compared to breeders.

4.6.2. Farmers moving to a negative margin with the suppression of re-coupled payments

Representative FADN sample allowing projection on number of farms moving from positive to negative Gross Margin exists only for Finland (see Table 10). However some existing data for Denmark and Spain allow having some insight into impact of the DCP suppression.

Table 10 Output, margins and Coupled Direct Payments, specialist beef fatteners

	FI	FI
	Farms moving to (-)	Total farms
Farms represented	1 780	2 080
Farms represented % of total	86%	100%
Beef specialisation - % output	85%	85%
Heard affected - total LU	195 553	220 687
Share of heard affected	89%	
in €cattle sold		
TOTAL BEEF OUTPUT	815	847
TOTAL BEEF COUPLED DP	433	435
Share of CP in output value	53%	51%
in €AWU		
Gross margin	-217	-202
Gross margin with DCP	216	233
in €AWU		
Total output	43 246	44 037
Balance subsidies and taxes	57 632	56 581
<i>of which LFA/AWU</i>	11 912	11 673
<i>of which environmental/AWU</i>	5 224	5 399
Share of all subsidies in total receipts	57%	56%

Source: DG AGRI – EU-FADN

Specialist fatteners in Finland and Denmark are characterised by considerable share of the special male premium in CDP. In case of Finland, where it has been suppressed from 2010 they reach one third of the total CDP and two thirds are other direct payments including national direct payments (see Annex 4 for more details). In Denmark the special male premium reaches 100% of the CDP; in Spain CDP are paid in form of slaughter premium and are 80% lower than in Denmark and 95% lower than in Finland.

Suppression of the CDP would largely affect Finish fatteners as 86% of farms would move to negative Gross Margin, affecting 89% of the total population of animals. This is because the subsidies contribute more than half to the total output thus their withdrawal would have serious consequences. The average numbers of livestock units and Utilised Agriculture Area per 'moving' farm are close to fatteners' farm averages.

Data for Denmark show that 59% of specialist fatteners already operate on negative Gross Margin and that some would move from positive to negative but the sample is too small to estimate the magnitude. Data indicate that 9% of farm fattening cattle in Spain would move from positive to negative Gross Margin enlarging the fatteners' farm population already operating on negative Gross Margin from 22% to 31%.

Estimates suggest that vast majority (93%) of Italian beef specialist fatteners are expected to operate on positive margin with or without suppression of the CDPs.

Table 11 Output, costs and margins by LFA type and non-LFA, specialist beef fatteners

	IE	IE	IT	IT	IT	ES	ES
	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA
Farms represented	7 346	3 279	586	326	5 078	3 596	3 191
Farms represented % of total			10%	5%	85%	53%	47%
Beef specialisation - % output	85%	78%	78%	89%	82%	88%	77%
Average UAA - ha	38.9	39.7	19.7	107.6	36.1	47.2	49.8
Forage crops - ha	38.6	36.4	11.0	80.2	22.6	31.5	35.4
Stocking density - LU/ha	1.1	1.3	2.8	6.8	4.4	0.8	0.7
Total cattle sold - head	62	61	76	1 296	239	136	95
Number of animals sold in the LFA class	452 684	199 794	44 441	422 596	1 212 356	490 640	302 651
% of animals sold by LFA class			3%	25%	72%		
in €cattle sold							
TOTAL BEEF OUTPUT	1 110	984	1 566	1 415	1 465	958	705
TOTAL BEEF COUPLED DP	0	0	2	5	6	29	24
Share of CP in output value	0%	0%	0%	0%	0%	3%	3%
Specific costs	956	778	995	1 311	1 172	755	653
Non specific costs	132	131	56	73	67	51	87
Total operating costs	1 088	909	1 051	1 384	1 239	806	740
Gross margin	22	75	514	31	226	151	-35
Ratio CP/GM	0%	0%	0%	16%	3%	19%	68%
Gross margin with CP*	22	75	517	35	232	180	-11

Source: DG AGRI – EU-FADN

5. COUPLED SUPPORT IN THE SHEEP AND GOATS SECTOR

After the 2003 CAP Reform only six Member States have re-coupled 50% of the sheep and goat payments (Denmark, Spain, France, Portugal, Slovenia and Finland) and only two of them have provided some support to this sector in the framework of article 69 of regulation 1782/2003 (Greece and Italy)¹³.

5.1. Population

Depending on the type of production, the size of the sample selected enables to display results only in Cyprus, Spain, France, Hungary and Portugal.

In Cyprus, nearly 90% of the sheep and goats are kept in specialised farms considered. The importance of specialised farms is lower in other Member States. In particular, in Hungary, only one third of ewes and one tenth of goats are in specialised farms (Table 12).

Table 12 Share of sheep and goats in the specialised farms analysed

	Number of ewes	Number of goats	Number of other sheep	Number of other goats
Cyprus	88%	88%	87%	87%
Spain	68%	72%	65%	69%
France	56%	51%	55%	63%
Hungary	32%	11%	36%	16%
Portugal	45%	56%	39%	63%

Source: DG AGRI – EU-FADN

In general, farms specialised in sheep and goat production are located mainly in less favoured areas (LFAs). It is particularly true for sheep milk specialists (Table 13). There is a larger share of goat's milk producers in non LFA (up to 35% in France). For meat production, the situation varies between Member States. In Portugal, Spain and France more than 85% of the producers are located in LFA while this share decreases to around 51% in Cyprus and 42% in Hungary. In France, it seems that breeding activity is more concentrated in non LFA and the fattening in LFA while the contrary is observed in Hungary.

Table 13: Share of farms specialised in sheep and goats production in LFA

	Specialised sheep milk farms		Specialised goat's milk farms		Specialised sheep and goat meat			
	Farms represented	Number of ewes	Farms represented	Number of goats	Farms represented	Number of ewes	Number of goats	Number of sheep and goats - heads
Cyprus			73%	84%	51%	60%	48%	52%
Spain	95%	92%	84%	80%	85%	90%	88%	87%
France	97%	100%	65%	78%	87%	56%	1%	91%
Hungary					42%	94%	96%	37%
Portugal	99%	85%			91%	90%	94%	90%

Source: DG AGRI – EU-FADN

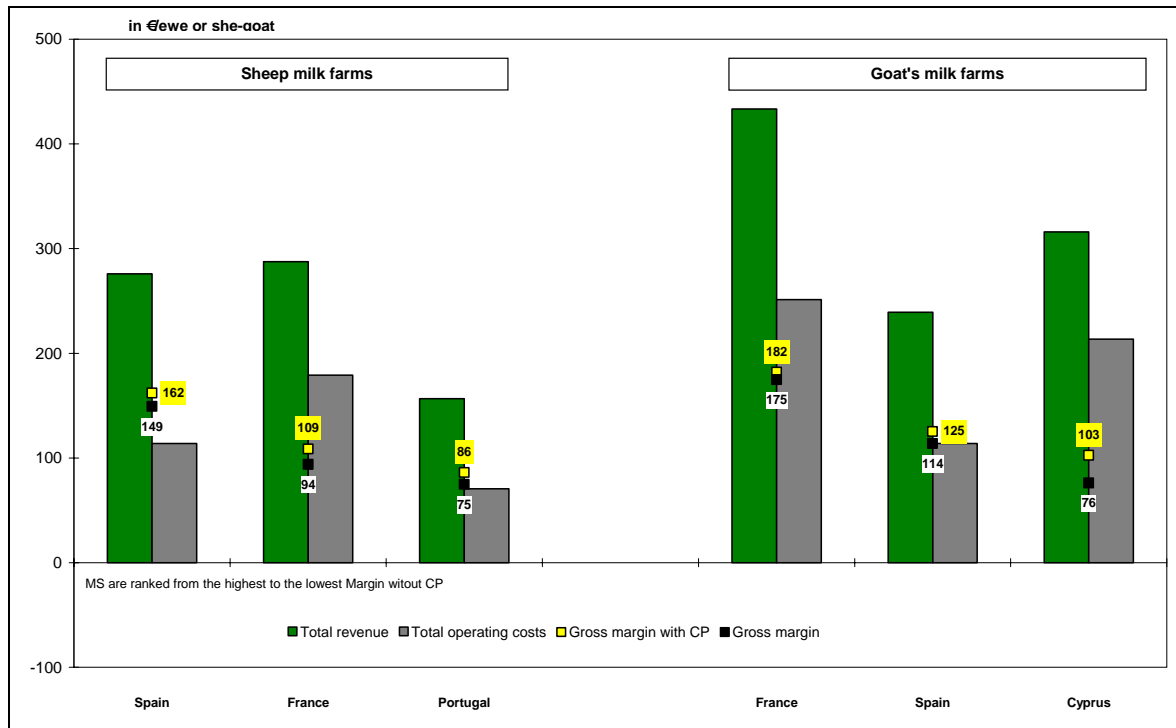
¹³ After 2007, only Denmark, Portugal and Finland maintained re-coupled payments () and seven, provided specific aid in the framework of articles 68 or 72 of Regulation 73/2009 (Ireland, Greece, Spain, France, Italy, Poland and Portugal), and Cyprus and Hungary as Complementary National Direct Payment.

5.2. Sheep and goat milk farms

5.2.1. Margin over variable costs with and without direct payments

The milk production systems do not rely much on direct payments and the margins, even without coupled payments, are significantly positive. However, relatively low levels of margins (around 75 euro per female) are observed in Portugal for sheep milk farms and in Cyprus for goat's milk farms (Table 14 and Figure 4).

Figure 4 Margin by MS, specialised sheep or goat milk farms, average 2006-2007



Source: DG AGRI – EU-FADN

The coupled ovine payments contribute from 1% of the margin over operating costs for goat's milk farms in France, to 25% in Cyprus. For the other systems and countries it ranges from 6% to 12%.

The margin without coupled direct payments of sheep milk producers is 149 €/ewe in Spain and 94 €/ewe in France. The profitability of the Spanish systems is linked to the low costs (especially the farming overheads). The Portuguese value the milk at a high price, they may produce cheese on the farm, but the yield is very low and the margin (75 €/ewe) is smaller than in the other MS.

The margin without coupled payments of goat milk producers is very high in France (175 €/she-goat) thanks to a very good yield and to the good valorisation of the milk with cheese. Yield and prices are identical in Cyprus and Spain, but very high feed costs in Cyprus impact the margin (76 €/she-goat).

Table 14: Margin over variable costs on FADN sheep and goat milk farms

	Sheep milk farms			Goat's milk farms		
	Spain	France	Portugal	Cyprus	Spain	France
Farms represented	25 070	6 750	6 380	680	11 520	4 620
Sheep & goats specialisation - % output	90%	92%	85%	89%	91%	91%
Av. number of ewes or she-goats - head	345	332	132	237	234	243
Total heard of ewes or she-goats - heads	8 532 400	2 240 200	834 500	149 400	2 530 500	1 021 100
Milk price - €/l	0.75	0.85	1.11	0.54	0.54	0.70
Milk yield - kg/breeding female	226	223	88	261	280	511

Output and costs in €/ewe or she-goat

Total output	263	273	145	290	228	426
o.w. for sheep and goats	231	249	124	242	206	385
Share of Coupled Direct Payment in total output	5%	5%	8%	9%	5%	2%
Total Coupled Direct Payments	13	15	11	26	11	7
o.w. for sheep and goats	11	11	11	26	7	1
Total operating costs	114	179	71	213	114	251

Gross margin (over operating costs) in €/ewe or she-goat

With Coupled Direct payments	162	109	86	103	125	182
Share of Coupled Direct Payment in margin	7%	10%	12%	25%	6%	1%
Without Coupled Direct payments	149	94	75	76	114	175

Source: DG AGRI – EU-FADN

The detailed margin calculation is provided in Annex.

5.2.2. Farmers moving to a negative margin with the suppression of re-coupled payments

With the suppression of the coupled payments almost all the sheep milk producers keep a positive margin in Spain and France and only 4% would be affected in Portugal. For milk goat farms, 5% of the she-goats in France and Spain are grazed on farms moving to a negative margin and 9% in Cyprus. However in all the analysed countries, more than 96% of goats are located on farms keeping a positive margin.

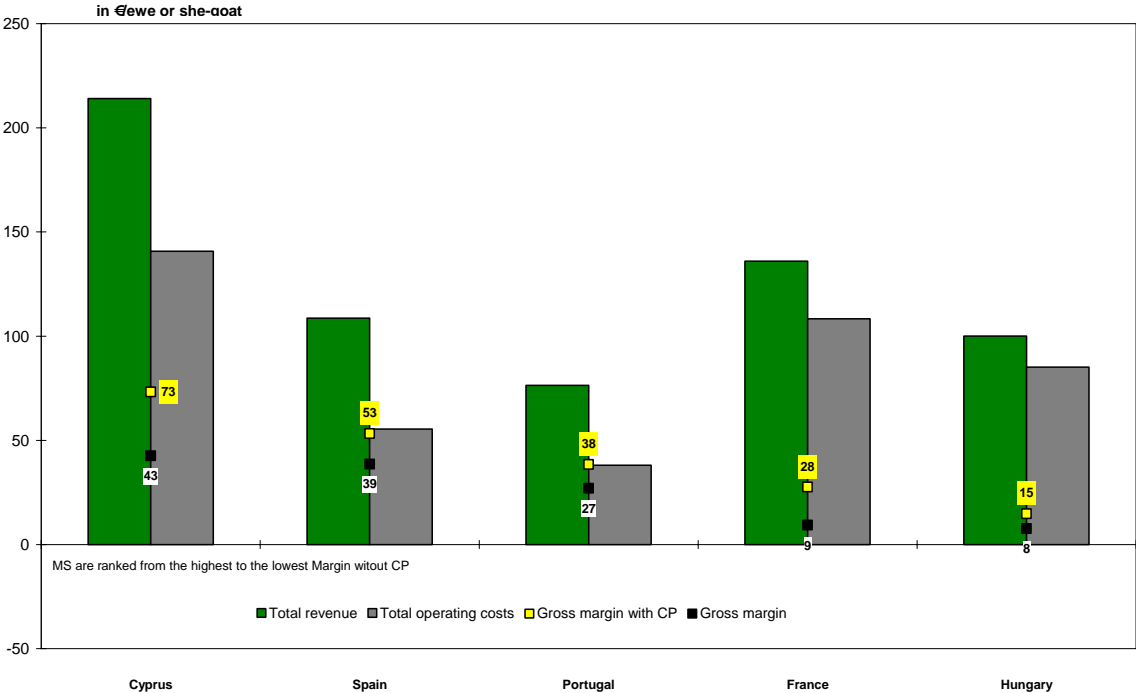
5.3. Sheep and goat meat*5.3.1. Margin over variable costs with and without coupled payments*

The margins over variable costs are smaller for sheep meat producers than for the milk producers and the coupled payments represent a larger share of the margin: it ranges from 52% in France to 23% in Spain (Table 15 and Figure 5).

The margin without direct payments is very small in Hungary and France (around 8-9 €/ewe), and increase from 27 €/ewe in Portugal to 39-43 €/ewe in Spain and Cyprus.

The highest margin in Cyprus is due to very high prices, despite the technical productivity is the lowest and operating costs (due mainly to feed) are the highest. In addition, sheep and goat meat producers in Cyprus received the highest coupled payment. Producers in Portugal have also a low productivity but, in addition, receive the lowest prices. They however reach a positive average margin as their very extensive systems lead to the lowest operating costs. Producers in Spain and Hungary reach nearly the same technical productivity and receive the same prices. Spanish producers reach 5 times higher margins due to much lower feed costs and farming overheads. Coupled payments, even if at the lowest level among the analysed countries, are therefore crucial for Hungarian sheep and meat producers. In France, despite relatively good prices, margins are affected by high non-feed costs, in particular farming overheads.

Figure 5 Margin over operating costs by MS, specialised sheep or goat meat farms, average 2006-2007



Source: DG AGRI – EU-FADN

The variability of margins according to the less favoured character is not homogeneous among the Member states analysed. Margins are lower in less favoured areas (LFAs) in France, mountains in Spain and other LFA in Portugal, while they are higher in other LFA in Cyprus and Portugal. The reasons are various: costs in LFAs are higher in Cyprus and Spain but are lower in France and Portugal. On the other hand, outputs are higher in LFAs in Cyprus and Portugal but are lower in France. The most clear negative trend is observed in France, with a margin (with coupled payments) decreasing from 75 €/ewe in non LFA to 13 €/ewe in mountain areas with a share of coupled payments in the margin increasing from 15% to 117% respectively.

5.3.2. Farmers moving to a negative margin with the suppression of re-coupled payments

In France, with the suppression of the coupled payments numerous farms move to a negative margin: 26% of the ewes may be concerned (1.5 million ewes in FADN field of survey). The main reason is the low productivity of the ewes: 1.0 lamb is sold per ewe while farmers keeping a positive margin sell 1.4 lambs per ewe. There are no significant differences in the costs. As a remark, in France 19% of the ewes are raised on farms having a negative margin with and without the re-coupled payments. The mountainous character plays a significant role: 58% of farms moving to negative margin without coupled payments and 56% of the farms with negative margins even with coupled payments are located in mountains while the total share of farms in mountains reaches only 41%. In France, the LFA and agri-environmental payments contribute largely to the farmers' income: in other LFA total direct payments represent 32% of total receipts of which 9% from LFA and agri-environment aids; in mountain areas these proportions increase to 48% and 23% respectively. Moreover it is to be underlined that sheep production is located in areas where often no other production is possible.

In Spain the impact of the suppression of the coupled payments is limited to 5% of the ewes (nearly 575.000 heads) and 13% of the goats (nearly 125.000 heads). As in France, the main reason is also a low productivity and a higher proportion of these farms located in mountains (45% for a global share of 28% of farms in mountains).

In Hungary, Cyprus and Portugal, the share of farms with margins staying positive without coupled payments ranges from 64% to 88% (Table 15). Unfortunately, the sample is too small to be able to analyse the role of coupled payments. However, taken into account the low national margins over operating costs in Hungary and Portugal (Table 16), it can be reasonably expected that some farmers may move to a negative margin without coupled payments.

Table 15: Impact of the suppression of coupled payments on margin on operating costs of specialised sheep and goats meat farms, average 2006-2007.

	Cyprus	Spain	Spain	Spain	France	France	France	Hungary	Portugal
	Farms always (+)	Farms always (+)	Farms moving to (-)	Farms always (-)	Farms always (+)	Farms moving to (-)	Farms always (-)	Farms always (+)	Farms always (+)
Farms represented	76%	93%	5%	2%	55%	26%	19%	64%	88%
Number of goats	78%	87%	13%	0%	92%	7%	2%		92%
Number of ewes	67%	93%	5%	1%	57%	26%	17%	60%	93%
Sheep and goats meat	80%	95%	5%	1%	67%	22%	11%	64%	93%
Sheep and goats milk & milk products	77%	88%	11%	1%	95%	1%	4%	100%	98%

Source: DG AGRI – EU-FADN

Classes: margin always positive (with and without coupled direct payments) / margin moving from positive (with coupled direct payments) to negative (without coupled direct payments) / margin always negative (with and without coupled direct payments)

Table 16: Margin over variable costs on FADN sheep meat producers

	Sheep and goat meat farms															
	Cyprus			Spain			France			Hungary			Portugal			
	non LFA	Other LFA	Total area	non LFA	Other LFA	Mountain LFA	Total area	non LFA	Other LFA	Mountain LFA	Total area	non LFA	Total area	Other LFA	Mountain LFA	Total area
Farms represented	820	760	1 670	3 400	14 640	6 880	24 920	1 340	6 390	5 390	13 120	1 250	1 480	2 680	2 990	6 050
Sheep & goats specialisation - % output	89%	88%	89%	84%	86%	82%	85%	81%	87%	87%	86%	74%	74%	82%	91%	86%
Av. number of ewes and she-goats - head	257	289	269	401	478	432	455	334	468	428	438	452	477	204	139	173
Total sheep and goats sold - head	214	297	257	516	669	555	617	1 061	593	487	598	533	556	199	160	185
Total heard of ewes or she-goats - heads																
Lambs-kids sold / female	0.7	0.9	0.8	1.2	1.3	1.2	1.3	3.1	1.1	1.0	1.2	1.1	1.1	0.9	1.1	1.0
Selling price sheep and goats - €/head	97	97	97	53	54	54	54	57	88	74	77	55	55	45	46	44
Output and costs in €/ewe and she-goat																
Total output	161	199	183	93	93	95	94	206	124	92	118	97	93	57	70	65
o.w. for sheep and goats	147	175	165	80	78	76	78	171	107	79	101	70	67	46	60	54
Share of Coupled Direct Payment in tot.	18%	16%	17%	12%	16%	16%	16%	8%	15%	20%	16%	8%	8%	21%	17%	18%
Total Coupled Direct Payments	29	32	31	12	15	15	15	17	18	19	18	7	7	12	12	11
o.w. for sheep and goats	28	31	29	10	13	12	12	11	14	15	14	7	7	12	12	11
Total operating costs	131	149	141	55	54	59	55	147	111	98	108	92	85	39	32	38
Gross margin (over operating costs) in €/ewe or she-goat																
With Coupled Direct payments	59	82	73	50	55	51	53	75	32	13	28	13	15	29	50	38
Share of Coupled Direct Payment in margin	47%	37%	40%	20%	23%	23%	23%	15%	45%	117%	52%	53%	44%	40%	24%	30%
Without Coupled Direct payments	29	51	43	39	40	36	39	59	14	-6	9	6	8	17	38	27

Source: DG AGRI – EU-FADN

Annex 1: Methodology

(1) General introduction to FADN

The **Farm Accountancy Data Network (FADN)** is a European system of sample surveys that take place each year and collect structural and accountancy data relating to farms; their aim is to monitor the income and business activities of agricultural holdings and to evaluate the impacts of the Common Agricultural Policy (CAP).

The scope of the FADN¹⁴ survey covers only those farms exceeding a minimum economic size (threshold) so as to cover the most relevant part of the agricultural activity of each EU Member State, i.e. at least 90% of the total Standard Gross Margin¹⁵ (SGM) covered in the Farm Structure Survey (FSS, EUROSTAT). For 2007, the sample consists of approximately 81.000 holdings in the EU-27, which represents 5.1 million farms (37%) out of a total of nearly 14 million farms included in the FSS.

The applicable rules are aimed at providing representative data along three dimensions: region, economic size and type of farming. FADN is the only harmonised source of micro-economic data, which means that the accounting principles are the same in all Member States.

(2) Method of calculating costs and margins with FADN

The FADN database contains information about output, specific costs and subsidies per product, but as far as non-specific costs are concerned it only provides information relating to the farm as a whole. Hence, the direct contribution of each enterprise to the farm income is not available. This means that the production costs by product have to be estimated. The EU FADN unit has built several models to estimate costs and margins for the various products: arable crops, milk and beef, pigmeat and permanent crops. These models allocate farm costs to a particular product using different ratios.

(3) Method of calculating beef costs and margins

Specific costs

Home-grown forage

One feature of FADN accounts is that they assign no value to the production of fodder areas in some countries (generally those in the north of the EU)¹⁶.

In order to take into account the differences in data-gathering and to facilitate comparison between Member States, fodder production consumed on the farm is valued as equal to the cost of the inputs used to cultivate the fodder area.

The share of fodder crops in specific crop costs (seeds, fertilisers and crop protection) is estimated from the share of fodder area in the total area. As not all types of fodder crop benefit from the same inputs (e.g. there is no crop

¹⁴ For more information on FADN: <http://ec.europa.eu/agriculture/rca/index.cfm>

¹⁵ The Standard Gross Margin (SGM) is the difference between the standardised monetary value of gross production and the standardised monetary value of certain special costs. This difference is calculated for the various crop and animal characteristics (per hectare or per animal), at the level of the survey district for each Member State and given in €. By multiplying the areas or the number of animals by the corresponding SGM and then adding the products together, the total SGM of the holding is obtained. By adding the total SGM of all holdings of a Member State, the total Member State SGM is obtained. The concept of SGM is used for the determination of the economic size and the type of farming in FADN and in the Farm Structure Survey (FSS) organised by EUROSTAT.

¹⁶ This stems mainly from the difficulty of estimating forage production and value. Therefore, based on the principle that forage production is just an input for animal production and that not recording it – neither on the crop output side, nor on the animal costs side – does not affect income, no effort is made to estimate it. In other countries, generally those where fodder production is more expensive, a value is allocated to production from the fodder areas. Even though this difference should not affect margins, it leads to biases when comparing costs between Member States.

protection on temporary grassland), the area taken into account – both the forage part and the total area – depends on the input. This cost item is known as “specific forage costs”.

Livestock replacement/animal purchase costs

Since the FADN survey was conducted for 2000, the farm return now includes a table giving details of the number and value of bovine animals sold and purchased. Nevertheless, in the first year following its introduction, this table was not completed by Ireland, Italy, Finland and Sweden. In the case of Greece, this table is missing for both 2000 and 2001. In Italy, from 2001 to 2005 only the total number and value of bovine animals were available. Therefore, the replacement costs of livestock in these MS are estimated from the total purchase value of bovine animals.

Method of allocating costs

Costs have to be estimated because FADN accounts, like many others, are not based on analytical accounts. This means that costs are not recorded separately for the various enterprises on the holding. The specific costs of crop products and animals are recorded separately (not by product, but by group of products) and all the other costs are recorded for the entire holding only.

It is therefore necessary to lay down rules for allocating the different costs recorded at farm level to each enterprise.

Costs are allocated to beef production on the basis of three criteria (see the table below):

1. the proportion of livestock units (LU): for the livestock-specific costs (mainly feed);
2. the proportion of area: for the costs of forage produced on the farm;
3. the proportion of output and coupled DP: for the other costs.

“Beef cattle” means all cattle except dairy cows and a share of total breeding heifers and young females equal to the proportion of suckler cows in the total number of cows (dairy cows, cull dairy cows and other cows).

COST ITEM	ALLOCATION KEYS FOR BEEF PRODUCTION
Purchased feed for grazing livestock (concentrates and coarse fodder)	% of beef livestock units in the total grazing livestock units
Crops produced on the farm used for feed	% of beef livestock units in the total livestock units
On-farm use of forage crops = “specific forage costs”	% of beef livestock units in the total grazing livestock units
Seed	% of the total utilised agricultural area (UAA) under fodder crops and temporary grass - after exclusion of fallow land, areas leased to others, meadows and rough grazing
Fertilisers	% of the total UAA under fodder crops, temporary grass and meadows - after exclusion of fallow land, areas leased to others and rough grazing
Crop protection	% of the total UAA under fodder crops - after exclusion of fallow land, temporary grass, areas leased to others, meadows and rough grazing
Animal purchases cattle under one year and male cattle all females over one year	100% % of suckler cow livestock units in the total cow livestock units
Other specific livestock costs (e.g. veterinary)	% of beef livestock units in the total livestock units
All other costs (non-specific costs)	% of beef output and DP in the total output and coupled DP

As “output and coupled DP” is used to construct the scale, certain precautions must be taken to avoid problems with the estimates:

- output and coupled DP on beef and total production should be positive;

- beef output and DP should not be greater than total output and coupled DP.

Farms that do not meet these conditions are excluded from the sample.

(4) Margin and cost indicators

Coverage of costs

- The **operating costs** include:
 - The **specific costs**: purchased feed, home-grown feed, animals purchased and other specific livestock costs (such as veterinary costs);
 - The operating **non-specific costs**: upkeep of machinery and buildings, power (fuels and electricity), contract work, taxes and other dues, taxes on land and buildings, insurance for farm buildings and other direct costs;
 - Water can be considered as specific (for maize) or non specific (for milk) depending on the product concerned.

All margins are displayed with or without coupled payments. The decoupled payments are not attributed to products by definition. They are taken into account when studying income indicators.

Gross margin (over operating costs): Output – operating costs

(5) Typology

A typology of Grazing Livestock Systems (GLS) developed by INRA¹⁷ for DG AGRI is used to separate the various beef and sheep and goats sectors analysed:

- beef breeding (GLS 5210)
- beef breeding-fattening (GLS 5220)
- beef fattening (GLS 5120)
- sheep milk production (GLS 6110)
- goat milk production (GLS 6120)
- sheep and goat meat production (GLS 6200)

¹⁷ Institut National de la Recherche Agronomique, France – Annex 1.

Typology of Grazing Livestock Systems (adapted from INRA typology elaborated for DG AGRI)

4000: Cattle, dairying (CD)	Grazing LU (incl. calves for fattening) \geq 5 and dairy cows LU \geq 3
4100: Specialist dairying	Sheep, goats LU/grazing LU $<$ 0.2 and cow LU/total cows LU $<$ 0.1 and MC LU ($>$ 1 year)/DC LU $<$ 0.25 and (cattle LU ($<$ 1 year) + CF LU)/DC LU $<$ 0.35
4200: Cattle, dairying - Cattle, fattening	Sheep, goats LU/grazing LU $<$ 0.25 cow LU/total cows LU $<$ 0.1
4210: CD — Cattle, fattening — Calves	and MC LU ($>$ 1 year)/DC LU $<$ 0.25 and (cattle LU ($<$ 1 year) + CF LU)/DC LU \geq 0.35
4220: CD — Cattle, fattening — Young cattle	and MC LU ($>$ 1 year)/DC LU \geq 0.25 and MC LU ($>$ 2 years) $<$ MC LU (1-2 years)
4230: CD — Cattle, fattening — Steers	and MC LU ($>$ 1 year)/DC LU \geq 0.25 and MC LU ($>$ 2 years) $>$ MC LU (1-2 years)
4300: Cattle, dairying — Suckler cows	Sheep, goats LU/grazing LU $<$ 0.2 and cow LU/total cows LU \geq 0.1
4310: CD — Suckler cows — Breeder	MC LU ($>$ 1 year)/cows LU $<$ 0.1
4320: CD — Suckler cows — Breeder-fattener	MC LU ($>$ 1 year)/cows LU \geq 0.1
4400: Cattle, dairying — Sheep and goats	Sheep, goats LU/grazing LU \geq 0.2 and cow LU/total cows LU $<$ 0.1
4410: CD — Sheep, goats — mainly dairying	TO milk and other milk products (ewe, goat) \geq TO meat
4420: CD — Sheep, goats — mainly fattening	TO milk and other milk products (ewe, goat) $<$ TO meat
5000: Cattle, fattening (CF)	Grazing LU (incl. calves for fattening) \geq 5 and dairy cows LU $<$ 3 and cattle LU \geq 3
5100: Cattle, fattening — Fattener	Sheep, goats LU/grazing LU $<$ 0.2 and cow LU $<$ 3
5110: CF, Fattener — Calves	Cattle LU/(cow LU+1) \geq 8 and CF LU/cattle LU \geq 0.2
5120: CF, Fattener — Young cattle	Cattle LU/(cow LU+1) \geq 8 and CF LU $<$ 5 and MC LU (1-2 years)/cattle LU $>$ 0.4
5130: CF, Fattener — Steers	Cattle LU/(cow LU+1) \geq 8 and MC LU (1-2 years)/cattle LU $<$ 0.4 and MC LU ($>$ 2 years)/cattle LU \geq 0.4
5140: CF, Fattener — Diversified	Considered as CF, Fattener — Young cattle for Spain and Denmark. Other cattle holdings, fattening type — Fattener
5200: Cattle fattening — Suckling	Sheep, goats LU/grazing LU $<$ 0.2 and cow LU \geq 3
5210: CF — Suckling — Breeder	MC LU ($>$ 1 year)/cow LU $<$ 0.25 and MS/cow $<$ 0.9
5220: CF — Suckling — Fattener	MC LU ($>$ 1 year)/cow LU \geq 0.25 Or (MC LU ($>$ 1 year)/cow LU $<$ 0.25 and MS/cow \geq 0.9)
5300: Cattle, fattening — Sheep, goats	Sheep, goats LU/grazing LU \geq 0.2
5310: CF — Sheep, goats — mainly dairying	TO milk and other milk products (ewe, goat) \geq TO meat
5320: CF — Sheep, goats — mainly fattening	TO milk and other milk products (ewe, goat) $<$ TO meat
6000: Sheep/goats	Grazing LU (incl. calves for fattening) \geq 5 and dairy cows LU $<$ 3 and cattle LU $<$ 3 and sheep, goats LU \geq 3
6100: Sheep, goats — mainly milk	TO milk and other milk products (ewes, goats) \geq TO meat
6110: Sheep, goats — mainly milk — Sheep	(TO sheep's milk + TO other sheep's milk products) \geq (TO goats' milk + TO other goats' milk products)
6120: Sheep, goats — mainly milk — Goats	(TO sheep's milk + TO other sheep milk products) $<$ (TO goats' milk + TO other goats' milk products)
6200: Sheep, goats — mainly fattening	TO milk and other milk products (sheep, goats) $<$ TO meat
7000: Small farms	Grazing LU (incl. calves for fattening) $<$ 5

Abbreviations: **MC:** Male cattle; **LU:** Livestock unit; **GL:** Grazing livestock; **Cow:** Suckler cow; **CF:** Calves for fattening; **DC:** Dairy cow; **TO:** Total output; **MS:** Male cattle sold (including females < 1 year)

Annex 2

Figure 6: Revenues and costs – no CDP, beef breeders, 2007

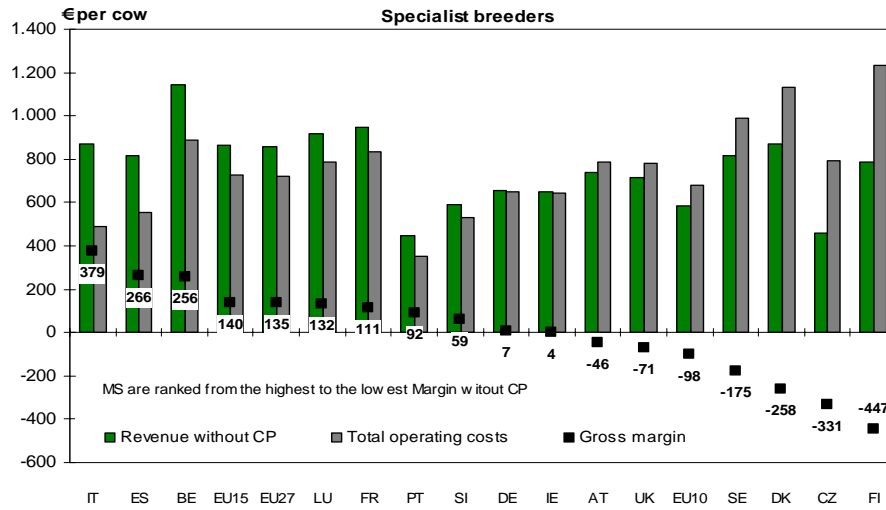


Figure 7: Revenues and costs – no CDP, beef B&F, 2007

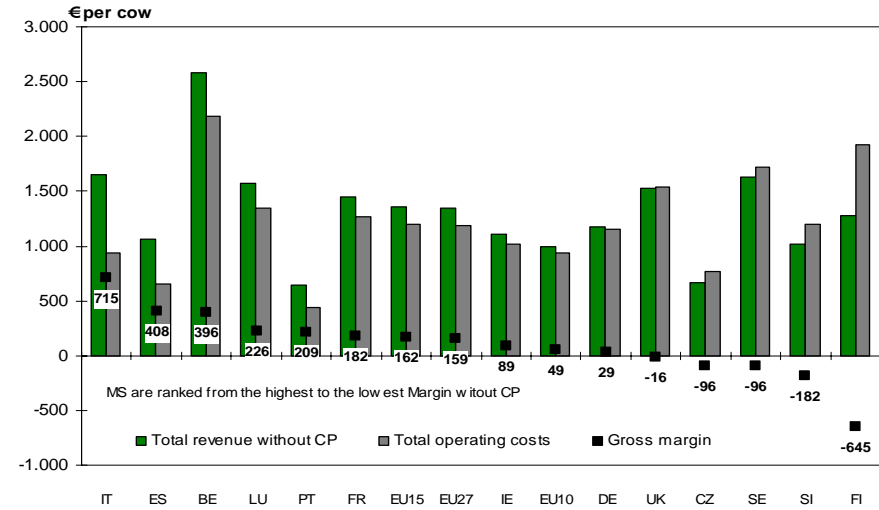
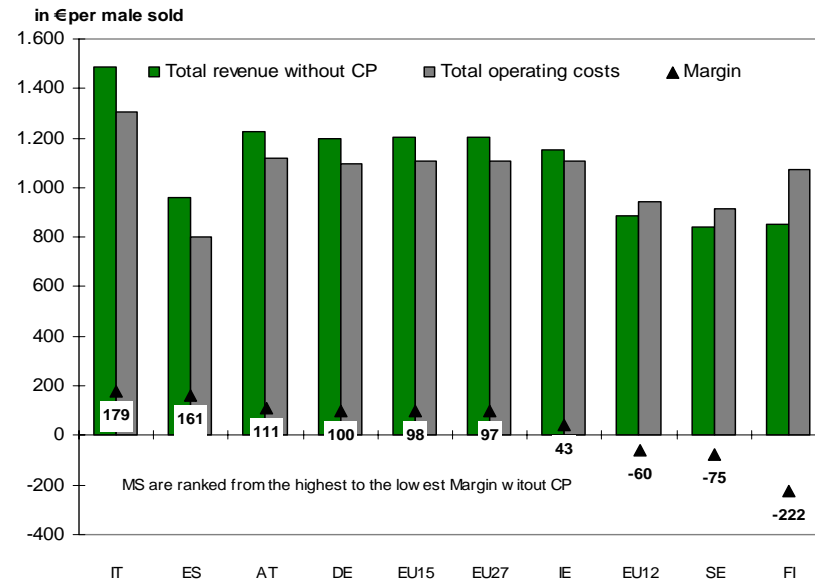


Figure 8: Revenues and costs – no CDP, beef fatteners, 2007



Annex 3_1: Detailed calculation of the Gross Margin for specialist beef breeders by LFA class (1)

	AT	BE	BE	CZ	CZ	DK	FI	FR	FR	FR
	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Mountain LFA	Mountain LFA	Other LFA	non LFA
Farms represented	1 677	3 726	2 162	582	673	1 943	720	19 711	38 126	13 037
Sample farms	36	129	50	29	41	32	18	316	660	162
Av. Labour in AWU	1.60	1.41	1.29	2.88	3.26	0.62	1.18	1.29	1.37	1.23
Family labour - %	97%	99%	99%	52%	36%	98%	95%	96%	93%	97%
Beef specialisation - % output	65%	91%	78%	69%	70%	69%	80%	91%	83%	78%
Average UAA - ha	58.6	65.1	37.6	196.5	208.9	27.9	53.3	93.5	100.0	71.6
Forage crops - ha	55.3	59.9	30.0	190.9	195.9	18.4	42.7	89.2	85.1	58.1
Stocking density - LU/ha	0.5	1.8	2.5	0.4	0.4	1.8	0.8	0.9	1.1	1.5
Av. number of suckler cow s - head	25	63	44	60	61	22	26	54	62	51
% of cow s by LFA class								26%	58%	16%
in €/COW										
TOTAL BEEF OUTPUT	753	1 139	1 245	378	487	1 198	709	904	981	1 003
TOTAL BEEF COUPLED DP	266	228	220	60	92	56	574	229	231	249
<i>of which suckler cow premium</i>	250	228	220	0	0	0	0	222	222	235
<i>of which special male premium</i>	0	0	0	0	0	56	10	0	0	0
<i>of which slaughter premium</i>	16	0	0	0	0	0	0	6	9	14
<i>of which extensification premium</i>	0	0	0	0	0	0	0	0	0	0
<i>of which other DP (incl. National DP)</i>	0	0	0	60	92	0	564	0	0	0
Specific costs	302	581	715	136	314	797	463	415	427	443
Non specific costs	483	247	295	638	452	583	796	420	380	415
Total operating costs	785	828	1 010	773	766	1 380	1 258	835	807	858
Gross margin	-32	311	235	-395	-278	-182	-550	69	174	145
Ratio CP/GM	842%	73%	93%	15%	33%	31%	104%	331%	133%	171%
Gross margin with CP	234	539	455	-336	-187	-126	25	298	405	395

Source: DG AGRI L3 – EU FADN

Annex 2_2 Detailed calculation of the Gross Margin for specialist beef breeders by LFA class (2)

	DE	GR	HU	IE	IT	IT	IT	PT	PT
	non LFA	Mountain LFA	non LFA	Other LFA	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA
Farms represented	2 297	1 186	491	16 356	9 398	1 218	3 914	3 667	4 487
Sample farms	121	16	15	160	269	29	83	172	137
Av. Labour in AWU	2.12	1.73	1.17	1.00	1.39	1.33	1.50	1.53	1.35
Family labour - %	70%	73%	45%	98%	89%	98%	95%	98%	80%
Beef specialisation - % output	74%	88%	72%	84%	71%	78%	70%	75%	75%
Average UAA - ha	153.0	6.9	63.4	42.7	51.1	30.8	18.3	46.7	103.8
Forage crops - ha	139.6	3.9	52.2	42.4	47.5	26.5	12.2	21.3	50.4
Stocking density - LU/ha	1.0	8.0	0.8	0.8	0.8	1.2	2.5	0.4	0.5
Av. number of suckler cows - head	90	45	39	22	34	25	25	14	39
% of cows by LFA class							22%		
in €COW									
TOTAL BEEF OUTPUT	628	491	456	632	739	778	1 216	528	414
TOTAL BEEF COUPLED DP	0	8	147	0	17	14	15	195	216
<i>of which suckler cow premium</i>	0	0	27	0	0	0	0	183	198
<i>of which special male premium</i>	0	0	7	0	0	0	0	0	5
<i>of which slaughter premium</i>	0	0	0	0	0	0	0	10	3
<i>of which extensification premium</i>	0	0	20	0	0	0	0	0	7
<i>of which other DP (incl. National DP)</i>	0	8	93	0	17	14	15	1	2
		0.00							
Specific costs	213	326	395	345	272	312	606	282	224
Non specific costs	422	62	193	281	96	146	165	134	134
Total operating costs	636	389	588	626	367	459	771	416	358
Gross margin	-7	102	-131	7	372	320	445	112	55
Ratio CP/GM	0%	8%	112%	0%	5%	5%	3%	174%	391%
Gross margin with CP	-7	110	15	7	389	334	460	307	271

Source: DG AGRI L3 – EU FADN

Annex 2_3 Detailed calculation of the Gross Margin for specialist beef breeders by LFA class (3)

	LU	SI	ES	ES	ES	SE	SE	UK	UK
	Other LFA	Mountain LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Other LFA	non LFA
Farms represented	313	2 000	22 786	16 123	4 962	1 748	323	2 175	1 008
Sample farms	48	28	246	296	63	52	20	78	30
Av. Labour in AWU	1.05	1.64	1.33	1.19	1.52	1.08	1.23	1.44	1.18
Family labour - %	97%	99%	99%	97%	82%	97%	78%	88%	84%
Beef specialisation - % output	72%	73%	95%	77%	93%	74%	74%	78%	73%
Average UAA - ha	65.6	16.0	40.4	65.0	84.5	76.6	128.8	110.7	85.9
Forage crops - ha	52.5	15.4	39.7	49.5	81.4	68.5	105.8	102.2	68.9
Stocking density - LU/ha	1.3	0.7	0.9	0.7	0.7	0.6	0.9	1.2	1.2
Av. number of suckler cows - head	42	9	32	42	63	31	66	78	57
% of cows by LFA class			43%	39%	18%				
in €/COW									
TOTAL BEEF OUTPUT	937	468	705	823	963	806	847	813	773
TOTAL BEEF COUPLED DP	0	220	148	192	118	45	41	29	8
<i>of which suckler cow premium</i>	0	132	124	177	72	0	0	0	0
<i>of which special male premium</i>	0	20	0	0	0	44	39	0	0
<i>of which slaughter premium</i>	0	21	10	15	14	0	0	0	0
<i>of which extensification premium</i>	0	47	4	1	5	0	0	0	0
<i>of which other DP (incl. National DP)</i>	0	0	10	0	28	0	2	29	8
Specific costs	418	151	347	461	568	395	628	580	459
Non specific costs	412	320	100	79	73	542	413	301	396
Total operating costs	829	471	447	540	641	937	1 041	881	855
Gross margin	107	-3	258	282	322	-131	-194	-68	-82
Ratio CP/GM	0%	7119%	57%	68%	37%	34%	21%	43%	9%
Gross margin with CP	107	217	405	474	440	-86	-153	-39	-75

Source: DG AGRI L3 – EU FADN

Annex 2_4 Detailed calculation of the Gross Margin for specialist beef breeders & fatteners by LFA class (1)

	AT	BE	BE	CZ	CZ	DK	FI	FR	FR	FR
	Mountain LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Mountain LFA	Mountain LFA	Other LFA	non LFA
Farms represented	935	385	2 552	234	853	995	600	7 398	9 914	9 115
Sample farms	17	16	56	15	32	24	17	97	199	136
Av. Labour in AWU	1.39	1.48	1.52	2.37	1.64	0.92	1.33	1.32	1.44	1.56
Family labour - %	96%	99%	98%	65%	80%	91%	92%	97%	91%	94%
Beef specialisation - % output	63%	74%	75%	81%	75%	72%	85%	92%	81%	76%
Average UAA - ha	58.2	97.7	53.9	174.2	84.2	52.1	63.9	83.4	108.2	83.7
Forage crops - ha	56.2	65.8	36.4	161.9	78.7	28.2	47.5	79.5	89.4	66.0
Stocking density - LU/ha	0.5	2.2	3.2	0.4	0.5	2.6	1.0	1.0	1.2	1.5
Av. number of suckler cows - head	22	66	56	47	22	19	22	51	62	49
% of cows by LFA class								26%	43%	31%
in €/COW										
TOTAL BEEF OUTPUT	1 048	2 835	2 734	560	813	5 558	1 775	1 234	1 409	1 706
TOTAL BEEF COUPLED DP	262	272	225	50	99	804	1 109	247	246	275
<i>of which suckler cow premium</i>	237	272	225	0	0	0	0	240	222	242
<i>of which special male premium</i>	0	0	0	0	0	804	131	0	0	0
<i>of which slaughter premium</i>	25	0	0	0	0	0	0	8	23	33
<i>of which extensification premium</i>	0	0	0	0	0	0	0	0	0	0
<i>of which other DP (incl. National DP)</i>	1	0	0	50	99	0	978	0	0	0
Specific costs	472	2 041	1 852	222	381	4 725	1 409	622	750	936
Non specific costs	527	329	392	658	529	1 240	1 242	480	444	532
Total operating costs	999	2 370	2 243	880	910	5 965	2 651	1 102	1 195	1 468
Gross margin	50	465	490	-319	-97	-407	-876	132	214	238
Ratio CP/GM	529%	58%	46%	16%	102%	198%	127%	188%	115%	115%
Gross margin with CP	312	737	716	-269	2	397	233	379	460	513

Source: DG AGRI L3 – EU FADN

Annex 2_5 Detailed calculation of the Gross Margin for specialist beef breeders & fatteners by LFA class (2)

	DE	IE	IE	IT	IT	IT	LU	NL	PT	PT
	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA
Farms represented	2 781	31 376	6 181	6 214	1 402	4 312	159	2 844	1 430	1 695
Sample farms	100	303	63	201	35	110	37	17	59	63
Av. Labour in AWU	1.66	1.10	1.13	1.37	1.41	1.46	1.10	0.97	1.71	1.45
Family labour - %	80%	97%	96%	95%	94%	95%	97%	98%	99%	73%
Beef specialisation - % output	71%	85%	80%	70%	73%	71%	74%	72%	68%	86%
Average UAA - ha	91.8	45.7	43.0	28.8	32.8	25.2	80.7	28.5	25.6	129.3
Forage crops - ha	81.1	45.0	40.3	23.7	27.1	16.5	62.8	25.9	16.5	79.4
Stocking density - LU/ha	1.2	1.1	1.4	1.1	1.2	2.1	1.7	1.7	0.6	0.5
Av. number of suckler cows - head	46	23	20	18	23	17	52	24	11	45
% of cows by LFA class				51%	15%	34%				
in €/COW										
TOTAL BEEF OUTPUT	0	1 086	1 592	1 340	1 382	2 808	1 583	1 478	705	555
TOTAL BEEF COUPLED DP	0	0	0	17	20	34	0	172	205	254
<i>of which suckler cow premium</i>	0	0	0	0	0	0	0	45	186	208
<i>of which special male premium</i>	0	0	0	0	0	0	0	23	0	15
<i>of which slaughter premium</i>	0	0	0	0	0	0	0	97	17	7
<i>of which extensification premium</i>	0	0	0	0	0	0	0	2	0	11
<i>of which other DP (incl. National DP)</i>	0	0	0	17	20	34	0	6	2	12
Specific costs	140	665	1 025	523	668	1 674	934	964	407	304
Non specific costs	1 301	327	416	206	204	294	420	750	163	129
Total operating costs	0	991	1 442	729	871	1 968	1 354	1 713	570	433
Gross margin	94	95	150	611	511	840	229	-235	135	123
Ratio CP/GM	0%	0%	0%	3%	4%	4%	0%	73%	152%	207%
Gross margin with CP	290	95	150	628	532	874	229	-63	340	377

Source: DG AGRIL3 – EU FADN

Annex 2_6 Detailed calculation of the Gross Margin for specialist beef breeders & fatteners by LFA class (3)

	SI	SI	ES	ES	ES	SE	SE	UK	UK
	Mountain LFA	Other LFA	Mountain LFA	Other LFA	non LFA	Other LFA	non LFA	Other LFA	non LFA
Farms represented	5 466	521	10 576	18 215	2 929	1 185	508	9 065	4 476
Sample farms	78	18	88	115	29	49	20	273	132
Av. Labour in AWU	1.52	1.69	1.28	0.98	1.38	1.38	1.07	1.38	1.48
Family labour - %	99%	99%	99%	97%	70%	88%	94%	91%	82%
Beef specialisation - % output	68%	72%	91%	70%	94%	70%	70%	78%	71%
Average UAA - ha	14.0	14.9	33.0	27.4	31.5	124.8	79.1	94.7	101.2
Forage crops - ha	13.3	13.3	31.6	24.7	30.5	109.8	65.8	88.8	80.1
Stocking density - LU/ha	0.8	1.1	0.8	0.8	2.0	0.7	0.8	1.2	1.6
Av. number of suckler cows - head	7	8	24	17	68	38	29	53	49
% of cow s by LFA class			33%	41%	26%				
in €/COW									
TOTAL BEEF OUTPUT	941	1 061	1 033	1 057	1 510	1 666	1 231	1 081	2 173
TOTAL BEEF COUPLED DP	338	246	172	209	48	172	127	20	2
<i>of which suckler cow premium</i>	130	121	141	181	24	0	0	0	0
<i>of which special male premium</i>	74	92	0	0	0	170	124	0	0
<i>of which slaughter premium</i>	56	25	22	26	20	0	0	0	0
<i>of which extensification premium</i>	77	10	1	2	3	0	0	0	0
<i>f which other DP (incl. National DP)</i>	0	0	7	0	0	2	3	20	2
Specific costs	466	569	480	577	1 074	1 001	690	722	1 557
Non specific costs	683	442	133	115	107	699	590	390	539
Total operating costs	1 149	1 011	613	693	1 181	1 700	1 280	1 112	2 096
Gross margin	-208	51	420	364	328	-34	-49	-31	76
Ratio CP/GM	162%	487%	41%	57%	14%	506%	258%	66%	3%
Gross margin with CP	130	297	591	573	376	138	78	-10	78

Source: DG AGRIL3 – EU FADN

Annex 2_7 Detailed calculation of the Gross Margin for specialist beef fatteners by LFA class

	AT	DK	FI	DE	IE	IE	IT	IT	IT	PT	ES	ES	SE	UK
	Other LFA	non LFA	Mountain LFA	non LFA	Other LFA	non LFA	Mountain LFA	Other LFA	non LFA	non LFA	Other LFA	non LFA	Other LFA	non LFA
Farms represented	964	1 156	1 664	4 588	7 346	3 279	586	326	5 078	663	3 596	3 191	633	727
Farms represented % of total	100%						10%	5%	85%		53%	47%	100%	
Av. Labour in AWU	1.00	0.84	1.72	1.47	0.94	0.96	1.43	2.92	1.59	1.86	1.04	1.18	1.53	1.26
Family labour - %	100%	85%	84%	95%	97%	92%	85%	46%	88%	79%	93%	93%	86%	83%
Beef specialisation - % output	69%	65%	84%	68%	85%	78%	78%	89%	82%	76%	88%	77%	71%	69%
Average UAA - ha	21.1	40.3	72.0	54.5	38.9	39.7	19.7	107.6	36.1	9.2	47.2	49.8	143.2	73.1
Forage crops - ha	13.1	8.5	39.6	31.4	38.6	36.4	11.0	80.2	22.6	8.3	31.5	35.4	111.5	47.7
Stocking density - LU/ha	1.9	4.5	1.7	2.7	1.1	1.3	2.8	6.8	4.4	4.0	0.8	0.7	0.8	2.2
Total LU on the farm	26	48	77	98	43	48	32	574	111	34	34	46	92	114
Total cattle sold - head	34	123	102	129	62	61	76	1 296	239	41	136	95	110	183
Number of animals sold in the LFA class	32 838	142 132	169 945	593 156	452 684	199 794	44 441	422 596	1 212 356	27 068	490 640	302 651	69 819	133 069
% of animals sold by LFA class							3%	25%	72%					
in €cattle sold														
TOTAL BEEF OUTPUT	1 170	633	871	1 157	1 110	984	1 566	1 415	1 465	927	958	705	965	1 022
TOTAL BEEF COUPLED DP	31	113	481	0	0	0	2	5	6	24	29	24	161	0
Share of CP in output value	3%	18%	55%	0%	0%	0%	0%	0%	0%	3%	3%	3%	17%	0%
<i>of which suckler cow premium</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>of which special male premium</i>	0	113	149	0	0	0	0	0	0	0	0	0	161	0
<i>of which slaughter premium</i>	31	0	0	0	0	0	0	0	0	24	27	22	0	0
<i>of which extensification premium</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>of which other DP (incl. National DP)</i>	0	0	332	0	0	0	2	5	6	0	2	2	0	0
Specific costs	860	600	759	860	956	778	995	1 311	1 172	749	755	653	701	897
Non specific costs	257	174	348	217	132	131	56	73	67	106	51	87	248	145
Total operating costs	1 117	774	1 107	1 077	1 088	909	1 051	1 384	1 239	855	806	740	949	1 042
Gross margin	53	-141	-236	81	22	75	514	31	226	72	151	-35	16	-20
Ratio CP/GM	58%	80%	203%	0%	0%	0%	0%	16%	3%	33%	19%	68%	1001%	0%
Gross margin with CP*	84	-28	244	81	22	75	517	35	232	96	180	-11	177	-20

Source: DG AGRI L3 – EU FADN

Annex 4_1: Farms moving from positive to negative margin as a result of withdrawal of Coupled Payments, specialist beef breeders

	ES	ES	FR	FR	AT	AT	PT	PT
	Farms switching	Total farms	Farms switching	Total farms	Farms switching	Total farms	Farms switching	Total farms
Farms represented	1 690	43 870	16 020	70 870	720	1 840	2 210	8 410
Farms represented % of total	4%	100%	23%	100%	39%	100%	26%	100%
Av. Labour in AWU	1.40	1.30	1.25	1.32	1.64	1.55	1.50	1.42
Family labour - %	96%	96%	96%	94%	97%	97%	87%	88%
Beef specialisation - % output	80%	85%	82%	84%	67%	65%	79%	75%
Average UAA - ha	112.1	54.4	83.6	93.0	60.4	56.0	88.0	76.3
Forage crops - ha	99.1	48.0	73.8	81.2	57.5	52.3	38.9	36.7
Stocking density - LU/ha	0.7	0.8	1.0	1.1	0.6	0.6	0.5	0.5
Av. number of suckler cows - head	63	39	48	58	28	25	32	27
Total beef cattle - LU	71	71	74	74	37	37	39	39
Heard affected - total LU	120 495	3 127 874	1 178 545	5 213 700	26 371	67 393	86 049	327 452
Share of heard affected	6%		18%		44%		31%	
in €/COW								
TOTAL BEEF OUTPUT	538	797	790	965	729	763	388	441
TOTAL BEEF COUPLED DP	220	160	251	233	265	267	226	210
Share of CP in output value	41%	20%	32%	24%	36%	35%	58%	48%
<i>of which suckler cow premium</i>	190	135	241	224	251	251	210	193
<i>of which special male premium</i>	0	0	0	0	0	0	3	4
<i>of which slaughter premium</i>	17	12	10	9	14	16	4	5
<i>of which extensification premium</i>	7	3	0	0	0	0	7	5
<i>of which other DP (incl. National DP)</i>	5	10	0	0	0	0	1	2
Specific costs	512	432	445	426	322	300	306	239
Non specific costs	120	87	447	396	525	496	177	134
Total operating costs	632	519	892	823	847	796	483	373
Gross margin	-94	279	-101	142	-118	-33	-95	68
Gross margin with CP	126	438	150	375	147	234	131	278
in €/AWU								
Total output	33 110	28 135	35 813	48 220	18 553	18 908	9 840	12 297
Balance subsidies and taxes	18 180	9 772	24 755	26 463	22 132	21 725	10 894	9 658
<i>of which LFA/AWU</i>	693	655	3 070	2 783	4 598	4 660	1 103	1 023
<i>of which environmental/AWU</i>	814	166	2 504	2 621	8 387	7 934	865	854
Share of all subsidies in total receipts	35%	26%	41%	35%	54%	53%	53%	44%

Source: DG AGRI L3 – EU FADN

Annex 3_2 Farms moving from positive to negative margin as a result of withdrawal of Coupled Payments, specialist beef breeders and fatteners

	ES	ES	FR	FR	PT	PT
	Farms switching	Total farms	Farms switching	Total farms	Farms switching	Total farms
Farms represented	650	31 720	4 570	26 430	570	3 470
Farms represented % of total	2%	100%	17%	100%	16%	100%
Av. Labour in AWU	1.85	1.12	1.41	1.44	1.69	1.55
Family labour - %	83%	95%	92%	94%	82%	87%
Beef specialisation - % output	88%	81%	80%	82%	80%	81%
Average UAA - ha	95.0	29.6	87.5	92.8	151.3	74.8
Forage crops - ha	64.3	27.6	75.7	78.5	80.1	46.6
Stocking density - LU/ha	1.2	0.9	1.1	1.3	0.5	0.5
Av. number of suckler cows - head	75	24	49	54	58	27
Total beef cattle - LU	97	97	88	88	80	80
Heard affected - total LU	63 321	865 778	400 867	2 676 053	45 481	276 873
Share of heard affected	7%		15%		36%	
in €COW						
TOTAL BEEF OUTPUT	644	1 169	1 380	1 455	494	628
TOTAL BEEF COUPLED DP	215	154	272	255	262	244
Share of CP in output value	33%	13%	20%	18%	53%	39%
<i>of which suckler cow premium</i>	173	127	243	233	227	200
<i>of which special male premium</i>	2	0	0	0	2	14
<i>of which slaughter premium</i>	17	23	29	22	7	10
<i>of which extensification premium</i>	17	2	0	0	2	10
<i>of which other DP (incl. National DP)</i>	6	3	0	0	24	10
Specific costs	613	675	950	774	381	365
Non specific costs	157	119	535	481	137	139
Total operating costs	770	794	1 486	1 255	518	503
Gross margin (over operating costs)	-126	374	-106	200	-24	125
Gross margin (over operating costs) with CP*	88	529	166	455	238	369
in €AWU						
Total output	23 430	26 607	41 043	55 035	26 814	14 353
Balance subsidies and taxes	17 616	6 629	26 041	26 398	19 997	10 480
<i>of which LFA/AWU</i>	717	471	2 751	2 287	995	995
<i>of which environmental/AWU</i>	2 808	128	2 509	2 024	1 225	905
Share of all subsidies in total receipts	43%	20%	39%	32%	43%	42%

Source: DG AGRI L3 – EU FADN

Annex 3_3 Farms moving from positive to negative margin as a result of withdrawal of Coupled Payments, specialist beef fatteners

	FI	FI
	Farms switching	Total farms
Farms represented	1 780	2 080
Farms represented % of total	86%	100%
Av. Labour in AWU	1.67	1.67
Family labour - %	86%	85%
Beef specialisation - % output	85%	85%
Average UAA - ha	69.9	70.3
Forage crops - ha	37.8	37.4
Stocking density - LU/ha	2.0	2.0
Total cattle sold - head	106.7	102.2
Total beef cattle - LU	110	106
Heard affected - total LU	195 553	220 687
Share of herd affected	89%	
in €cattle sold		
TOTAL BEEF OUTPUT	815	847
TOTAL BEEF COUPLED DP	433	435
Share of CP in output value	53%	51%
<i>of which suckler cow premium</i>	0	0
<i>of which special male premium</i>	138	144
<i>of which slaughter premium</i>	0	0
<i>of which extensification premium</i>	0	0
<i>of which other DP (incl. National DP)</i>	295	292
Specific costs	718	729
Non specific costs	314	320
Total operating costs	1 031	1 049
Gross margin (over operating costs)	-217	-202
Gross margin (over operating costs) with CP*	216	233
in €AWU		
Total output	43 246	44 037
Balance subsidies and taxes	57 632	56 581
<i>of which LFA/AWU</i>	11 912	11 673
<i>of which environmental/AWU</i>	5 224	5 399
Share of all subsidies in total receipts	57%	56%

Source: DG AGRI L3 – EU FADN

Annex 5_1: Detailed calculation of the margin over operating costs for FADN specialist sheep milk producers

STRUCTURAL INFORMATION	Sheep milk farms								
	Spain non LFA	Spain Other LFA	Spain Mountain LFA	Spain Total area	France Mountain LFA	France Total area	Portugal Other LFA	Portugal Mountain LFA	Portugal Total area
Farms represented	800	20 540	3 730	25 070	6 420	6 750	2 750	3 590	6 380
Av. Labour in AWU	1.58	1.24	1.72	1.32	1.58	1.58	1.78	1.71	1.74
Family labour - %	88%	84%	95%	86%	96%	96%	93%	91%	91%
Sheep & goats specialisation - % output	87%	89%	93%	90%	92%	92%	87%	83%	85%
Average UAA - ha	59.0	31.2	21.2	30.6	77.4	77.7	47.5	46.1	46.4
Forage crops - ha	38.3	14.2	11.0	14.5	66.2	66.4	27.6	39.5	34.1
Stocking density - LU/ha	0.5	1.8	1.3	1.7	0.7	0.7	0.5	0.3	0.4
Av. number of ewes and she-goats - head	355	348	326	345	331	332	154	114	132
Total sheep and goats - LU	43	40	41	41	45	45	20	14	17
Lambs-kids sold - head	546	463	419	459	374	374	136	105	119
Lambs-kids sold / female	1.5	1.3	1.3	1.3	1.1	1.1	0.9	0.9	0.9
Selling price lamb-kid - €/head	62	48	57	50	46	46	31	28	30
Total sheep and goats sold - head	558	481	427	476	436	435	147	112	128
Total sheep and goats sales - €	34 358	23 803	24 269	24 208	19 517	19 606	4 641	3 129	3 838
Selling price sheep and goats - €/head	62	49	57	51	45	45	32	28	30
Milk price - €/l	0.71	0.74	0.81	0.75	0.85	0.85	1.25	0.93	1.11
Milk yield - kg/breeding female	267	226	219	226	225	223	78	102	88

in €/ewe or she-goat

OUTPUT AND COSTS	Spain	Spain	Spain	Spain	France	France	Portugal	Portugal	Portugal
TOTAL OUTPUT	305	259	275	263	274	273	138	148	145
TOTAL SHEEP AND GOATS OUTPUT	269	226	251	231	250	249	121	123	124
<i>of which meat</i>	81	60	74	62	58	58	24	28	26
<i>of which milk&products</i>	189	166	177	168	191	190	98	95	98
Share of CP in output value	4%	5%	5%	5%	5%	5%	7%	7%	8%
TOTAL COUPLED DIRECT PAYMENTS	12	13	14	13	15	15	10	11	11
TOTAL SHEEP AND GOATS COUPLED DP	10	11	13	11	11	11	10	11	11
<i>of which sheep premium</i>	9	11	12	11	11	11	9	10	9
<i>of which goats premium</i>	0	0	1	0	0	0	0	0	0
<i>of which sheep milk&products</i>	0	0	0	0	0	0	0	0	0
<i>of which goats' milk&products</i>	0	0	0	0	0	0	0	0	0
<i>of which other DP</i>	0	0	0	0	0	0	1	1	1
Feed	77	80	74	79	58	58	36	29	33
Other specific costs	11	16	10	15	32	32	16	12	14
Specific costs	88	97	85	95	90	89	52	40	47
Non specific costs	43	19	18	19	90	89	25	22	24
Total operating costs	131	115	102	114	180	179	77	63	71
Gross margin (over operating costs)	174	144	173	149	93	94	61	85	75
Gross margin (over operating costs) with CP*	187	157	186	162	108	109	71	96	86

* CP: coupled payments

in €/AWU

INCOME per AWU	Spain	Spain	Spain	Spain	France	France	Portugal	Portugal	Portugal
Total output	68 628	72 748	52 080	68 706	57 330	57 337	11 980	9 875	11 071
Intermediate consumptions	29 409	32 282	19 385	29 727	37 756	37 627	6 676	4 177	5 378
Balance subsidies and taxes	6 946	9 799	6 893	9 143	14 809	14 764	3 240	2 784	3 131
<i>of which LFA/AWU</i>	0	515	288	452	5 913	5 747	551	1 149	878
<i>of which environmental/AWU</i>	0	94	34	80	1 420	1 473	351	61	193
Gross Farm Income (GFI)	46 165	50 265	39 588	48 123	34 383	34 475	8 544	8 482	8 824
Share of all subsidies in total receipts	9%	12%	12%	12%	21%	20%	21%	22%	22%

Source: DG AGRIL3 – EU FADN

Annex 4_2: Detailed calculation of the margin over operating costs for FADN specialist goat's milk producers

	Goat's milk farms									
	Cyprus	Cyprus	Spain	Spain	Spain	Spain	France	France	France	France
STRUCTURAL INFORMATION	Other LFA	Total area	non LFA	Other LFA	Mountain LFA	Total area	non LFA	Other LFA	Mountain LFA	Total area
Farms represented	500	680	1 940	3 310	6 270	11 520	1 850	1 490	1 290	4 620
Av. Labour in AWU	1.87	1.75	1.43	1.49	1.80	1.65	2.32	1.54	1.84	1.93
Family labour - %	64%	66%	94%	89%	94%	93%	72%	90%	96%	83%
Sheep & goats specialisation - % output	87%	89%	95%	94%	88%	91%	92%	88%	92%	91%
Average UAA - ha	27.2	22.4	11.3	24.7	35.1	28.1	35.4	37.3	75.9	47.3
Forage crops - ha	16.5	14.3	8.3	18.2	23.8	19.6	20.0	22.4	71.6	35.1
Stocking density - LU/ha	1.8	1.7	1.6	0.8	0.6	0.7	1.4	1.0	0.5	0.8
Av. number of ewes and she-goats - head	268	237	253	266	211	234	277	195	249	243
Total sheep and goats - LU	29	26	32	33	26	29	29	23	33	28
Lambs-kids sold - head	212	186	267	351	217	263	88	120	202	130
Lambs-kids sold / female	0.8	0.8	1.1	1.3	1.0	1.1	0.3	0.6	0.8	0.5
Selling price lamb-kid - €/head	98	98	43	49	44	46	25	31	37	32
Total sheep and goats sold - head	255	220	282	360	232	277	264	198	227	233
Total sheep and goats sales - €	25 165	21 737	12 302	17 696	10 382	12 806	5 426	6 320	8 233	6 496
Selling price sheep and goats - €/head	99	99	44	49	45	46	21	32	36	28
Milk price - €/l	0.56	0.54	0.49	0.50	0.59	0.54	0.78	0.58	0.70	0.70
Milk yield - kg/breeding female	242	261	282	279	280	280	563	538	402	511

in €/ewe or she-goat

OUTPUT AND COSTS	Cyprus	Cyprus	Spain	Spain	Spain	Spain	France	France	France	France
TOTAL OUTPUT	291	290	195	229	239	228	499	392	340	426
TOTAL SHEEP AND GOATS OUTPUT	240	242	184	206	214	206	455	342	312	385
<i>of which meat</i>	104	102	45	66	48	53	18	29	32	25
<i>of which milk&products</i>	135	140	138	140	166	152	437	313	280	360
Share of CP in output value	9%	9%	4%	5%	6%	5%	1%	3%	2%	2%
TOTAL COUPLED DIRECT PAYMENTS	25	26	7	10	13	11	6	10	7	7
TOTAL SHEEP AND GOATS COUPLED DP	25	26	7	9	7	7	0	1	3	1
<i>of which sheep premium</i>	2	2	0	0	0	0	0	1	3	1
<i>of which goats premium</i>	23	24	7	9	6	7	0	0	0	0
<i>of which sheep milk&products</i>	0	0	0	0	0	0	0	0	0	0
<i>of which goats' milk&products</i>	0	0	0	0	0	0	0	0	0	0
<i>of which other DP</i>	0	0	0	0	0	0	0	0	0	0
Feed	162	157	69	76	94	84	102	102	99	101
Other specific costs	23	21	9	13	12	12	36	34	20	31
Specific costs	184	178	78	89	107	96	138	136	119	132
Non specific costs	37	36	15	17	20	18	130	113	108	119
Total operating costs	221	213	93	106	126	114	268	249	226	251
Gross margin (over operating costs)	70	76	101	122	113	114	231	143	114	175
Gross margin (over operating costs) with CP*	96	103	109	133	126	125	237	153	121	182

* CP: coupled payments

in €/AWU

INCOME per AWU	Cyprus	Cyprus	Spain	Spain	Spain	Spain	France	France	France	France
Total output	41 801	39 285	34 495	40 821	28 045	32 277	59 570	49 612	46 026	53 567
Intermediate consumptions	31 700	28 963	16 529	18 974	14 816	16 132	32 002	31 512	30 612	31 590
Balance subsidies and taxes	6 783	6 265	2 525	4 299	2 763	3 124	2 854	6 105	9 349	5 421
<i>of which LFA/AWU</i>	1 371	1 081	0	108	68	68	0	841	4 108	1 307
<i>of which environmental/AWU</i>	0	0	0	0	1	1	312	381	1 331	601
Gross Farm Income (GFI)	16 883	16 586	20 492	26 146	15 992	19 269	30 422	24 205	24 764	27 399
Share of all subsidies in total receipts	14%	14%	7%	10%	9%	9%	5%	11%	17%	9%

Source: DG AGRIL3 – EU FADN

Annex 4_3: Detailed calculation of the margin over operating costs for FADN specialist t sheep & goat meat producers

STRUCTURAL INFORMATION	Sheep and goat meat farms															
	Cyprus non LFA	Cyprus Other LFA	Cyprus Total area	Spain non LFA	Spain Other LFA	Spain Mountain LFA	Spain Total area	France non LFA	France Other LFA	France Mountain LFA	France Total area	Hungary non LFA	Hungary Total area	Portugal Other LFA	Portugal Mountain LFA	Portugal Total area
Farms represented	820	760	1 670	3 400	14 640	6 880	24 920	1 340	6 390	5 390	13 120	1 250	1 480	2 680	2 990	6 050
Av. Labour in AWU	1.38	1.57	1.53	1.24	1.27	1.32	1.28	1.23	1.39	1.25	1.31	1.56	1.76	1.34	1.46	1.41
Family labour - %	85%	89%	85%	90%	88%	93%	90%	93%	95%	96%	95%	40%	41%	94%	92%	92%
Sheep & goats specialisation - % output	89%	88%	89%	84%	86%	82%	85%	81%	87%	87%	86%	74%	74%	82%	91%	86%
Average UAA - ha	7.0	18.7	12.3	60.4	82.6	91.3	82.0	51.3	97.8	95.4	92.0	53.1	74.9	86.4	35.2	58.3
Forage crops - ha	5.7	16.6	10.5	38.3	59.7	58.6	56.5	38.5	85.3	87.7	81.5	47.2	68.7	59.7	15.8	36.4
Stocking density - LU/ha	4.6	1.7	2.8	1.0	0.7	0.7	0.8	1.6	0.9	0.8	0.9	1.3	1.0	0.4	0.7	0.5
Av. number of ewes and she-goats - head	257	289	269	401	478	432	455	334	468	428	438	452	477	204	139	173
Total sheep and goats - LU	28	31	29	54	59	54	57	63	79	68	73	63	66	29	22	26
Lambs-kids sold - head	185	261	225	484	641	523	587	1 029	529	434	541	509	530	180	149	169
Lambs-kids sold / female	0.7	0.9	0.8	1.2	1.3	1.2	1.3	3.1	1.1	1.0	1.2	1.1	1.1	0.9	1.1	1.0
Selling price lamb-kid - €/head	96	98	97	54	53	55	54	57	92	79	81	53	54	44	45	43
Total sheep and goats sold - head	214	297	257	516	669	555	617	1 061	593	487	598	533	556	199	160	185
Total sheep and goats sales - €	20 733	28 677	24 888	27 228	35 823	30 063	33 060	60 258	51 951	36 127	46 297	29 329	30 877	8 878	7 394	8 092
Selling price sheep and goats - €/head	97	97	97	53	54	54	54	57	88	74	77	55	55	45	46	44

in €/ewe or she-goat

OUTPUT AND COSTS	Cyprus	Cyprus	Cyprus	Spain	Spain	Spain	Spain	France	France	France	France	Hungary	Hungary	Portugal	Portugal	Portugal
TOTAL OUTPUT	161	199	183	93	93	95	94	206	124	92	118	97	93	57	70	65
TOTAL SHEEP AND GOATS OUTPUT	147	175	165	80	78	76	78	171	107	79	101	70	67	46	60	54
<i>of which meat</i>	86	105	98	74	74	71	73	156	106	79	99	66	64	39	48	45
<i>of which milk&products</i>	61	70	67	6	4	5	5	14	1	0	1	4	3	7	12	10
Share of CP in output value	18%	16%	17%	12%	16%	16%	16%	8%	15%	20%	16%	8%	8%	21%	17%	18%
TOTAL COUPLED DIRECT PAYMENTS	29	32	31	12	15	15	15	17	18	19	18	7	7	12	12	11
TOTAL SHEEP AND GOATS COUPLED DP	28	31	29	10	13	12	12	11	14	15	14	7	7	12	12	11
Feed	109	109	110	36	36	38	37	65	40	31	38	60	56	16	10	14
Other specific costs	8	17	12	8	8	8	8	24	21	17	19	8	7	8	12	11
Specific costs	117	127	123	44	44	46	45	89	61	48	58	68	63	24	22	25
Non specific costs	15	22	18	11	9	13	11	59	50	50	51	24	22	15	10	13
Total operating costs	131	149	141	55	54	59	55	147	111	98	108	92	85	39	32	38
Gross margin (over operating costs)	29	51	43	39	40	36	39	59	14	-6	9	6	8	17	38	27
Gross margin (over operating costs) with CP*	59	82	73	50	55	51	53	75	32	13	28	13	15	29	50	38

in €/AWU (nominal)

INCOME per AWU	Cyprus	Cyprus	Cyprus	Spain	Spain	Spain	Spain	France	France	France	France	Hungary	Hungary	Portugal	Portugal	Portugal
Total output	29 928	36 680	32 250	30 193	35 176	31 267	33 396	55 843	41 869	31 420	39 308	28 165	25 165	8 651	6 715	7 981
Intermediate consumptions	24 462	27 388	24 759	17 727	20 258	19 428	19 683	39 937	37 265	33 452	36 199	26 526	23 096	6 001	3 065	4 668
Balance subsidies and taxes	6 165	8 337	6 951	8 513	12 562	11 940	11 847	12 433	20 001	27 110	22 155	6 017	7 445	6 161	3 737	4 760
<i>of which LFA/AWU</i>	0	1 047	525	0	191	598	282	442	2 796	9 576	5 242	0	231	949	1 160	993
<i>of which environmental/AWU</i>	0	0	0	102	100	377	180	276	2 803	3 904	3 005	759	1 157	435	355	365
Gross Farm Income (GFI)	11 631	17 629	14 442	20 979	27 480	23 779	25 560	28 338	24 606	25 078	25 264	7 657	9 514	8 812	7 387	8 073
Share of all subsidies in total receipts	17%	19%	18%	22%	26%	28%	26%	18%	32%	46%	36%	18%	23%	42%	36%	37%

Source: DG AGRIL3 – EU FADN

Annex 4_4: Detailed calculation of the margin over operating costs for FADN specialist t sheep & goat meat producers
Impact on the margin of the suppression of the coupled payments

STRUCTURAL INFORMATION	Sheep and goat meat farms									
	Cyprus	Spain	Spain	Spain	France	France	France	Hungary	Portugal	
	Farms always +	Farms always +	Farms switching	Farms always -	Farms always +	Farms switching	Farms always -	Farms always +	Farms always +	
Farms represented	1 270	23 260	1 260	410	7 280	3 360	2 480	940	5 350	
Av. Labour in AWU	1.44	1.29	1.17	1.10	1.38	1.30	1.14	1.68	1.44	
Family labour - %	91%	90%	87%	99%	95%	95%	96%	40%	92%	
Sheep & goats specialisation - % output	89%	85%	88%	85%	87%	84%	87%	71%	87%	
Average UAA - ha	13.2	84.3	43.0	69.7	96.5	94.7	75.4	80.0	60.0	
Forage crops - ha	11.2	58.2	26.2	52.8	84.6	83.1	70.3	75.8	37.8	
Stocking density - LU/ha	2.4	0.7	1.7	0.7	0.9	0.9	0.8	0.8	0.5	
Av. number of ewes and she-goats - head	252	452	522	395	451	451	380	454	182	
Total sheep and goats - LU	28	57	62	52	79	71	59	62	28	
Lambs-kids sold - head	224	595	502	396	650	446	350	495	180	
Lambs-kids sold / female	0.9	1.3	1.0	1.0	1.4	1.0	0.9	1.1	1.0	
Selling price lamb-kid - €/head	100	54	57	49	80	84	82	52	43	
Total sheep and goats sold - head	252	623	563	452	706	514	394	523	196	
Total sheep and goats sales - €	25 047	33 381	31 121	20 685	54 404	40 479	30 369	28 140	8 577	
Selling price sheep and goats - €/head	99	54	55	46	77	79	77	54	44	

in €/ewe or she-goat

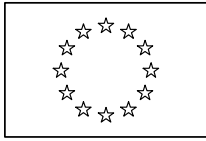
OUTPUT AND COSTS	Cyprus	Spain	Spain	Spain	France	France	France	Hungary	Portugal
TOTAL OUTPUT	204	96	80	50	138	97	79	100	66
TOTAL SHEEP AND GOATS OUTPUT	182	79	68	42	119	81	68	73	55
<i>of which meat</i>	110	75	59	40	117	81	68	68	45
<i>of which milk&products</i>	72	4	9	2	2	0	0	5	10
Share of CP in output value	15%	15%	22%	25%	13%	21%	22%	7%	17%
TOTAL COUPLED DIRECT PAYMENTS	31	15	17	12	18	21	17	7	11
TOTAL SHEEP AND GOATS COUPLED DP	30	12	13	12	14	15	14	6	11
Feed	99	36	46	38	41	36	35	50	13
Other specific costs	14	7	14	12	20	19	16	6	10
Specific costs	113	44	60	50	61	55	51	56	23
Non specific costs	19	10	25	21	47	52	62	20	12
Total operating costs	132	53	86	71	108	107	113	76	35
Gross margin (over operating costs)	72	42	-6	-21	30	-9	-34	24	30
Gross margin (over operating costs) with CP*	103	57	11	-9	48	12	-16	31	42

* CP: coupled payments

INCOME per AWU

INCOME per AWU	Cyprus	Spain	Spain	Spain	France	France	France	Hungary	Portugal
Total output	35 682	33 501	35 520	17 800	45 123	33 815	26 361	27 079	8 308
Intermediate consumptions	23 117	18 679	38 159	25 338	35 258	37 012	37 593	20 579	4 484
Balance subsidies and taxes	7 305	11 714	14 462	11 643	19 636	26 308	24 273	7 837	4 812
of which LFA/AWU	677	247	772	972	3 674	7 686	6 946	30	1 020
of which environmental/AWU	0	184	15	445	2 653	2 942	4 295	1 217	379
Gross Farm Income (GFI)	19 870	26 536	11 823	4 105	29 501	23 111	13 041	14 338	8 636
Share of all subsidies in total receipts	17%	26%	29%	40%	30%	44%	48%	22%	37%

Source: DG AGRI L3 – EU FADN



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 4

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Annex 4: Rural Development

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Annexes

Annex 4a – Assessment of rural development policy in the current period (2007-2013)

Annex 4b – Alignment with Europe 2020 on priorities and targets

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1. BACKGROUND

Rural development is today Pillar II of the CAP taking up 20% of the CAP budget.¹ The policy has gradually evolved from supporting structural adjustment in agriculture to an integrated policy for the sustainable development of all rural areas in the EU. Moreover, in the Health Check of the CAP (HC), the policy benefited from additional resources earmarked for new challenges (climate change, biodiversity, water management, renewable energy, innovation and dairy restructuring), with broadband added to the list by the European Economic Recovery Package (EERP).

The EU added value of rural development lies in its contribution to the cohesion objective and in the fact that it addresses challenges which are fully or partially cross-border - such as climate change and the need for improved economic / environmental / social co-operation in rural areas. In fulfilling these missions, Pillar II usefully complements Pillar I. It should be noted that rural development policy is the major EU funding instrument for supporting environmental land management. The support for the policy from the EU budget – in line with an objective of cohesion - assists Member States in achieving environmental goals that might otherwise be difficult for them to prioritize.

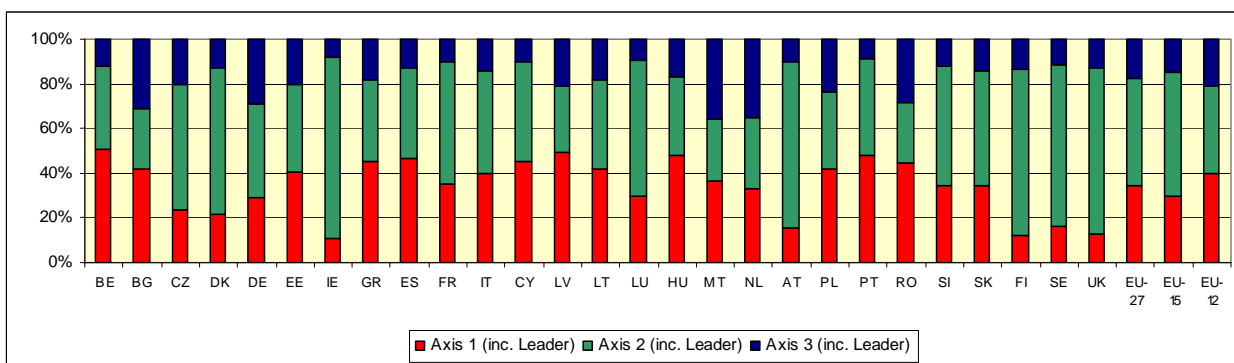
The policy operates on the basis of multi-annual programming where Member States / regions assume responsibility for shaping the policy in their territories. In the framework of strategic guidelines that set out common priorities at EU level, Member States design and co-finance rural development programs (RDPs) tailored to their specific needs; there are 94 national and regional programs operating in the current (2007-2013) period.

Each program consists of measures taken from a menu established at EU level that groups measures into three thematic and one methodological 'axes':

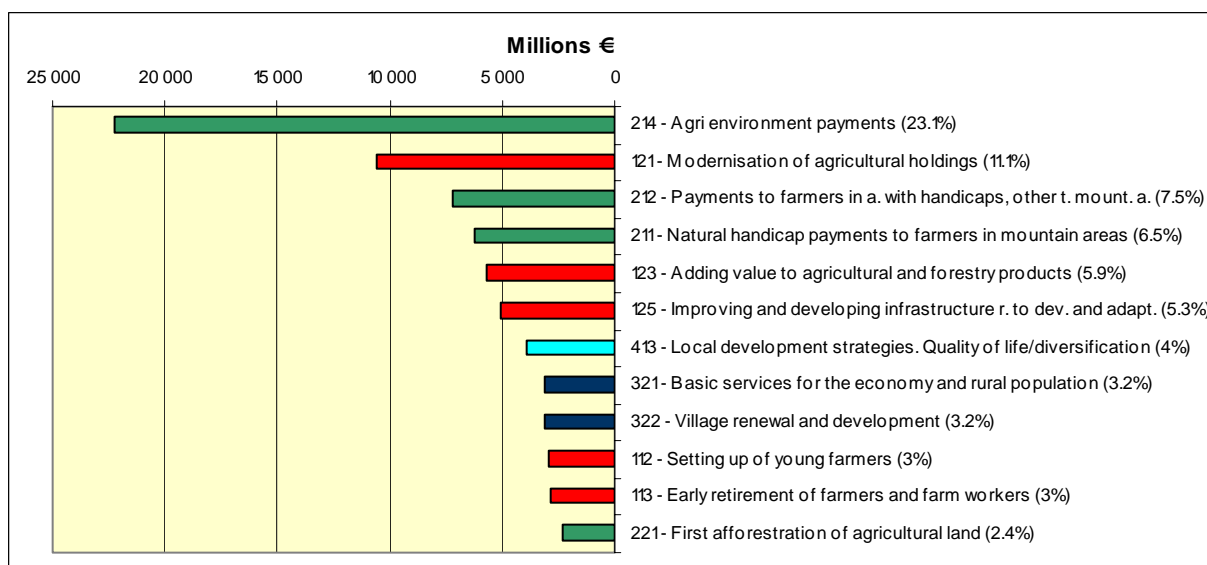
- **Axis 1:** improving the competitiveness of agriculture and forestry (e.g. farm investments, support to producer groups, training actions);
- **Axis 2:** improving the environment and the countryside (e.g. agri-environment measures compensating land managers for the provision of eco-system services, measures targeting the sustainable use of forestry);
- **Axis 3:** promoting economic diversification and quality of life in rural areas (e.g. basic services for the rural population, business creation and development); and
- **Axis 4:** the horizontal bottom-up Leader approach based on Local Action Groups (LAGs) for mobilizing local actors by means of local integrated strategies.

Relative importance of the three axes by Member State in the current period

¹ For a description of the current rural development policy, see *APP Brief no 4: The future of rural development policy*, and *Rural development in the EU, Statistical and Economic Information, Report 2010*.



Main rural development measures programmed in the EU-27 in the current period



In addition, to ensure that all objectives are addressed in each program, there are minimum spending requirements per axis, while results are assessed under a common monitoring and evaluation framework (CMEF). The European Network for Rural Development (ENRD) brings together national networks, organizations and administrations active in the field of rural development for the purpose of collecting, analyzing and disseminating information and good practices.

The two pillars of the CAP work together in a complementary way towards common objectives. In fact, the structural measures offered in Pillar II complement the more general income support in Pillar I as well as open alternative employment opportunities in rural areas, while more targeted environmental measures in Pillar II allow farmers to provide goods above the environmental baseline set by Pillar I.

2. ACHIEVEMENTS AND CHALLENGES

2.1. Assessment of the current policy framework

The design of the future policy as well as the analysis of the impact of different options relies on the experience gained with the operation of the policy to date. This section

provides a brief assessment of the current policy framework on the basis of evaluations and other available information.²

See **Annex 4a** for a more detailed assessment.

2.1.1. Overall assessment

The strategic approach put in place in the current period has had a positive impact, as Member States have made considerable efforts to develop strategies on the basis of a SWOT analysis so as to best tailor their intervention to policy objectives. Still, there has been some evidence of path dependency in programming, as well as of lack of capacity of certain areas and groups to use rural development funding (though final spending amounts for the period 2007-13 are not yet known). Some Member States have struggled to set the right relationship between programmes and national strategy plans.

The economic, environmental and social policy objectives are often mutually supportive, as shown in the examples below:

Use of the farm modernisation measure to deliver environmental benefits - France, Champagne-Ardenne, 'Plan Végétal pour l'Environnement' (PVE)

In France, the farm modernisation measure is being used to combat the environmental impact of agriculture by supporting investment in precision farming equipment. At a national level the focus of the PVE is to reduce pollution from pesticides and fertilisers and green house gas emissions; reduce soil erosion; reduce the pressure on the use of water resources; and improve energy efficiency at farm level. Investment in new equipment is intended to address these environmental issues at the same time as helping farmers gain an economic advantage in the market. The government is partly funding this programme in conjunction with local authorities and water agencies. Investments can be between €4 000 and €30 000 (up to €80 000 for cooperative farms). Although the programme has a detailed list of eligibility requirements, some regions found that their financial resources were insufficient to cope with demand. In Champagne-Ardenne, the PVE was so successful in its first year that many applications had to be turned down. A more stringent application system has now been put in place. This prioritises investment in precision equipment for planting hedgerows as the top priority, alongside investments to reduce the use of pesticides.

Source: Issue 5 of the EU Rural Review

Employment and social benefits of agri-environment schemes in Poland - Beka Nature Reserve

The Beka Nature Reserve, a coastal Natura 2000 site important for birds and wet grassland and sedge habitats has benefited since 2005 from a 100 hectares agri-environment contract, covering half the reserve and supporting organic farming on permanent grassland, and specialised habitat management. To meet the requirements of the scheme the reserve employs a full-time manager plus a shepherd during the May – October grazing season. Local businesses benefit too, including the farmers who save veterinary and feed costs for the 60-70 cattle and horses they lend to graze the reserve during summer. Local contractors mow grass in summer and reeds in winter, and maintain stock enclosures. The reserve is used to train agricultural advisers, acts as an informal advisory point for local farmers and cooperates closely with 4-6 local schools. It has become an additional tourist attraction in the commune, a bike path along the coast will be constructed in 2010 and a new educational path is planned.

Source: ENRD TWG3 Public goods and public intervention, Final report, December 2010, p.46

² See the evaluation *Synthesis of ex-ante evaluations of rural development programmes 2007–2013 (2008)*; the study *Defining EU Priorities: A Review of Rural Development Instruments (2008)*; and the final report of the Thematic Working Group 1 of the ENRD *Targeting rural territorial specificities and needs in rural development programmes 2007-2013*.

In this respect, the axis system provides a crude guarantee for the allocation of resources to objectives, which relies on a simplified intervention rationale and may thus at times mislead since a single measure often serves more than one objective. In addition, the ring fencing introduced in the Health Check to match the additional funds made available with the new priorities has considerably increased the administrative burden of the system.

Implementation is well under way and performance is measured using the CMEF. See Annex 4a for more details on financial implementation to date, reasons for low uptake of certain measures, output and result indicators.

Work is under way to improve the CMEF; admittedly, it is a challenge to capture the spill over effects of intervention while keeping the system simple. Selected output and result indicators are shown below:

State of play on selected output indicators

	Measure	Indicator	Total realised 2007-2009	Target 2007-2013	% of target achieved
111	Vocational training and information actions	Number of participants in training	1136877	5258036	21,6%
121	Modernisation of agricultural holdings	Number of farm holdings supported	105802	592700	17,9%
211 212	Payments to farmers in areas with handicaps (Article 36 (a) (i) and (ii) of Reg. (EC) N. 1698/2005)	Number of holdings supported	2568319	3734832	71,5%
		UAA supported (Ha)	49005000	51700000	94,8%
214	Agri-environment payments	Physical area supported (Ha)	21528712,65	50000000	43,1%
		Number of contracts	1675447	2931033,14	57,2%
225	Forest-environment payments	Physical area supported (Ha)	187256,52	919762	20,4%
		Number of contracts	8747	75884	11,5%
312	Business creation and development	Number of micro-enterprises supported	6111	94700	6,5%
321	Basic services for the economy and rural population	Number of actions supported	8707	86651	10,0%

Selected result indicators (targets 2007-2013)

AXIS 1	
Increase in GVA in supported holdings/enterprises ('000 EUR)	25.900.000
121 Modernisation of farms	5.362.000
123 Adding value to agricultural and forestry products	7.839.000
Number of holdings / enterprises introducing new products and/or new techniques	334.000
121 Modernisation of farms	172.000
122 Improving the economic value of forests	50.000
AXIS 3	
Increase in Non-agricultural gross value added in supported business ('000 EUR)	3.100.000

312 Business creation and development	1.491.000
Gross number of jobs created	307.000
313 Encouragement of tourism activities	108.000
Population in rural areas benefiting from improved services (unique number of persons)	71.000.000
321 Basic services	21.048.000
322 Village renewal	25.939.000
Increase in internet penetration in rural areas (unique nbr of persons)	47.060.000

As regards the possibilities to facilitate implementation of rural development measures, and in this context ease the access to finance of rural development beneficiaries, 9 Member States (IT, LV, LT, RO, BE, DE, FR, NL, EL) have set up guarantee and/or loan funds as part of the financial engineering actions under rural development, or provided for these options in their rural development programmes. Total EAFRD commitment amounts at present to more than EUR 540 million. However, these funds are operational for the moment in only 4 of these Member States (IT, LV, LT and RO) and the Greek modifications covering EUR 107 million of EAFRD were just recently approved. By end of 2010, a total amount of EUR 274 million of EAFRD has been paid out to the active funds in these 4 Member States (the total amount paid by Member States to these funds, including national/regional contributions, amounts to EUR 371 million).

As far as renewable energy development is concerned, most of the Member States indicated in their National Renewable Energy Action Plans that they make use (and plan to continue to make use) of existing rural development measures in order to reach their renewable energy legally binding target.

Member States have generally been successful in setting demarcation lines and ensuring coordination between rural development and other policies; however, synergies have not always been fully exploited to allow the different policies to work together towards common objectives. In other words, in some cases the authorities have satisfied themselves with avoiding overlaps between policies instead of actively attempting to use the policies in such a way that they strengthen each other. Furthermore, synergies have sometimes been asserted without being demonstrated.

All in all, considerable steps have been taken to better target resources, monitor progress and evaluate results. A learning process is under way that will no doubt still bear fruit in the next period, while the policy would benefit from further improvements in the management system.

2.1.2. Farm investments

Farm investments aim at improving the overall performance of agricultural holdings. There is strong evidence of a positive contribution to reducing production costs and improving quality thus having a positive impact on income – as well as on job creation and maintenance. There is also a positive environmental impact deriving from investments in greener technologies. This measure has a high leverage effect.

The measure is particularly relevant in regions with small or medium-size farms that use it to become more efficient, as well as in regions with highly productive farms that use it to address environmental issues. Evaluations have, however, in some instances shown poor targeting, leading to deadweight effects in the case of support for large, highly

productive farms undertaking 'traditional' investments, and support for farms with significant asset value which could invest without public assistance.

2.1.3. *Agri-environment measures*

Agri-environment payments are a key EU policy measure on which depend many aspects of environmental protection. As a result, agri-environment payments have for many years been the sole rural development measure (leaving aside the Leader approach) which Member States must make available throughout their territory (though its use is voluntary for farmers).

Agri-environment measures support the provision of a wide range of environmental public goods, from biodiversity, water, soil, to climate change and genetic resources, by encouraging farmers and land managers to apply practices delivering environmental outcomes going beyond legal obligations, while leaving flexibility to Member States and regions to optimize their design to address national, regional and sub-regional needs. The measures often allow for simultaneously addressing a number of environmental objectives, e.g. reduction in chemical inputs has a positive impact on water quality while also contributing to preservation of biodiversity. At the same time, they may contribute to generating additional employment (especially in tourism - by contributing to the preservation of natural heritage and landscape elements) and enhancing quality of life in rural areas.

Some agri-environmental measures are inherently complex. Such complexity is often necessary to achieve high quality environmental results. These are often measures that consist of multiple obligations to be implemented in a spatially differentiated manner and where compliance must be continuous or at different points in time. Although this complexity can imply an increased error rate, the rate still remains acceptable compared to that of other policy areas and is justifiable in view of the public good outcomes. Finally, the focus is necessarily on management requirements rather than results, partly because of WTO rules that require payments to be based on costs incurred and income foregone to benefit from green box classification and partly because the latter are subject to multiple drivers that are only partly under the control of beneficiaries.³

2.1.4. *Key measures in axes 3 and 4*

Within axis 3, business creation and diversification are particularly important in areas where there is a high share of part-time farmers or where significant restructuring of the agricultural sector is still under way. The provision of basic services is considered to be one of the main drivers for the development of rural areas, and is particularly important for social inclusion in poor regions.

Leader has successfully brought local actors together and allowed for the development of local governance capacities. However, its mainstreaming in the current period has in some cases meant that the specificities of this innovative bottom-up approach were

³ See also *Evaluation of the agri-environment measures (2005)*.

compromised, due to narrowing the scope to pre-defined measures and to the lack of clear distinction of roles between managing authorities, paying agencies and LAGs.⁴

In connection with Leader-related difficulties it is worth noting that, in response to feedback from various sources – including Special Report No. 5/2010 from the European Court of Auditors - the Commission has already improved the implementing rules related to the Leader approach and revised guidance to Member States, thus clarifying the requirement that Leader be implemented in a flexible way.

2.2. The role of agriculture

The economic structure of rural areas is changing with the importance of the primary sector declining. Still, agriculture remains important for the rural economy in many parts of Europe. This is particularly the case in predominantly rural areas where the primary sector represents around 5% of added value and 16% of employment, as well as in the new Member States where structural adjustment is still under way.

In addition, agriculture has strong links with other economic activities in rural areas, notably food processing, tourism and trade, while one third of farmers have other gainful activities outside of agriculture. Beyond economic aspects, farmers contribute considerably to the provision of public goods, both environmental and non-environmental, valued by society and not remunerated on the market.

The table below summarizes the work of the thematic group 2 of the ENRD⁵ pointing to **important forward linkages between agriculture and the rural economy, especially with the food processing, hotel, catering and trade sectors.**

Agriculture and the wider rural economy
<p>The aim of TWG2 was to identify and describe the relationships, and potential synergies/conflicts, between agriculture and the wider rural economy in various types of EU rural areas.</p> <p>Analytical activities were undertaken in order to provide a better understanding of the <i>relationship</i> between agriculture and rural economy at the local level; identify the <i>key factors</i> that determine the potential of different types of regions; assess the <i>contribution</i> of current policies and institutional arrangements to successful outcomes; present the <i>main findings</i> that could be relevant for the development of policy; consider what <i>further issues</i> warrant investigation or development. This involved a series of <i>in-depth analyses</i>, using a mixture of techniques: input-output analyses, general economic assessments, and case studies, in 18 selected NUTS3 regions - the smallest geographical areas for which comparable EU-wide data is available for most of the key economic and social characteristics.</p> <p>The input-output analysis considered the economic relationship between agricultural activities and other sectors in the local economy, and the direct and indirect impact of changes in agricultural activity in terms of:</p> <p>backward linkages – the extent to which changes in output in the agriculture sector result in increased purchases from the rest of the local economy;</p>

⁴ See also *Ex-post evaluation of Leader+ (2010)* and the work of the ENRD focus group 1 on 'Implementation of the bottom-up approach of Leader'.

⁵ Final report of the Thematic Working Group 2 of the ENRD *Linkages between agriculture and the wider rural economy*.

forward linkages – the extent to which changes in output in the agricultural sector result in increased sales to the rest of the local economy.

The estimated effects of changes in agricultural output on suppliers (**backward linkages**) were found to be generally low or average, in line with estimates from other studies. In numerical terms, the typical coefficient is around 1.5 indicating that an increase in agricultural output of (indicatively) 1 million EUR will produce an additional output of 0.5 million EUR in other sectors in the local economy, due to the fact that local sectors provide inputs to agriculture.

The effects on the local economy of sales of increased farm output to other sectors in the region (**forward linkages**) were found to be high in most areas, with a typical coefficient of around 2.5; this indicates that an increase in agricultural output of 1 million EUR will produce an additional output of 1.5 million EUR in the local economy.

In terms of forward linkages, **agriculture was identified as a ‘key sector’ in 14 out of 18 regions studied**, in the sense that increases in output in the sector result in above-average increases in output elsewhere in the region, compared with the average results for all sectors in the region. Agriculture has **especially high forward linkages with food processing, hotels and catering and trade, all sectors that, in turn, have further high linkages with the rest of the rural economy.**

2.3. Challenges and opportunities for rural areas

Rural areas span more than 90% of territory and more than 50% of population in the EU. The picture is increasingly diverse, especially following successive enlargements: some regions are facing decline with young people leaving and land abandoned, while others are among the most dynamic in the EU. See **Section 2.6 of Annex 1** for a more detailed picture of rural areas across the EU.

A recent study on employment and growth in rural areas⁶ identified the following key drivers for rural economies: natural resources and environmental quality, the sectoral structure of the economy, quality of life and cultural capital, infrastructure and accessibility. The analysis also identified the following key barriers to growth: demographic developments, infrastructure and accessibility and the sectoral nature of the economy.

Notwithstanding this diverse picture, all rural areas face today important economic, environmental and territorial challenges. And they have been severely hit by the economic crisis against the backdrop of an already fragile economic situation with income in rural areas 50% lower than in urban areas.

At the same time, one of the most important assets of rural areas is their natural capital, with most land under agricultural management or forest. Agriculture and forests in rural areas are in fact entrusted with managing eco-systems for the purpose of maintaining the rural landscape, combating biodiversity loss, improving the status of water and mitigating climate change, all the more important in the face of climate change and other environmental challenges. But the EU 2010 biodiversity baseline⁷ shows that 75% of the assessments of the conservation status of habitats linked to agro-ecosystems and some 70% of assessments of species of European interest in agro-ecosystems are unfavorable.

⁶ See *Study on employment, growth and innovation in rural areas (SEGIRA)*, and the report of the thematic group on rural development and territorial cohesion.

⁷ EEA Technical report No 12/2010

The European Environmental Agency also indicates that the trend in common farmland bird populations is negative (decline by 20-25% since 1990).

As regards forests in particular, it should be noted that forest cover is roughly equal to agricultural area and hence important for land management and rural development. A great diversity of natural forest types, forest covers, and forest ownership structures exist in the EU, and with enlargement the importance of forests has increased considerably. Forests are one of Europe's most important renewable resources and provide multiple benefits to the economy but also public goods for the environment. As a result of afforestation programmes and due to natural regeneration on marginal lands, forest cover in the EU has increased over the past few decades.

In addition, there are growing expectations from consumers for quality and diversity of food and rural amenities that open up new possibilities to give value to the assets of rural areas, for instance in developing quality products and local markets.⁸

All in all, there are important challenges for agriculture, forestry and rural areas ahead that are further exacerbated by the economic crisis and climate change, **as well as opportunities to be seized**. As regards the role of agriculture, on the one hand agriculture relies on dynamic rural areas (in terms of human capital, infrastructure and basic services),⁹ on the other hand, agriculture has an important role to play in maintaining rural vitality, a public good that is recognized as an objective for the vast majority of measures included in the RDPs.¹⁰

3. FUTURE OBJECTIVES AND POLICY OPTIONS

3.1. Main issues for the future

The future rural development policy should continue to **enhance agricultural competitiveness, improve the sustainable management of natural resources (including climate change mitigation) and promote a balanced territorial development across the EU**.

The results of the public consultation showed considerable support for increasing the rural development budget in the pursuit of these objectives; however, some respondents were concerned that such an increase could come at the expense of decreased spending in

⁸ See also sub-Annex V of Annex 5 (market measures) on the role of short marketing chains in the context of the discussion on addressing issues related to the food supply chain. Short marketing chains are often linked to the development of local markets.

⁹ See in particular the work of the thematic group on rural development and territorial cohesion created in the framework of this impact assessment. The group looked into drivers of rural development to signal the importance of diversification (including the link between agriculture and the wider rural economy), accessibility to services of general interest and development of human capital as particularly important. These drivers can be stimulated by rural development and cohesion policy using a coordinated territorial approach.

¹⁰ See the final report of the Thematic Working Group 3 of the ENRD *Public goods and public intervention in agriculture*, where it was found that of the 88 RDPs examined, 85 had measures with explicit objectives expected to contribute to rural vitality. Of the 36 measures, 31 were identified having rural vitality as a focus.

1st pillar measures. The consultation also identified concerns on Member States' ability to co-finance, draw good programmes and reach out to farmers, as well as the need to improve delivery and reduce administrative burden.

In the light of the achievements and challenges discussed above, the following issues are particularly important for the future:

- **how to ensure the best fit with the EU priorities, notably the Europe 2020 strategy** for smart, sustainable and inclusive growth, especially given the broad scope of rural development policy: A lot of attention in the debate on the future of the policy revolves around the policy's contribution to enhancing resource efficiency for the purpose of helping rural economies exit from the crisis while addressing climate change and other pressures on resources, as well as its contribution to preserving habitats and biodiversity and to the bio-based economy.
- **how to make the policy more efficient and effective:** This is particularly important for a policy that operates on many levels, from defining a strategic framework at EU level to drawing national / regional programs to implementation by local administrations, and seeking to promote bottom-up approaches (such as initiatives taken by local groups). A related issue is **how to improve cooperation with other EU funds that operate in rural areas to maximize synergies** without losing the important synergies with Pillar I of the CAP. In the end, effective policy delivery should result in more flexibility and better targeting the policy response to the challenges while at the same time reducing the administrative burden for administrations and beneficiaries. Moreover, consideration should be given to offering incentives to Member States / regions to make their rural development programmes perform as well as possible.
- **how to ensure that the policy is backed by adequate funding.** It may be envisaged to use criteria based on the future policy objectives for the distribution of support between Member States with a view to ensuring a better fit between policy objectives and the budgetary means available, thus making a better use of the EU budget. And to increase the leverage of EU spending, existing possibilities to provide support in a form other than grants should be further explored (for instance, to subsidize interest rates on loans or contributions to venture capital funds, guarantee funds and loan funds).

For rural development policy as an integral part of the CAP to contribute effectively to the CAP objectives, **it will be important to set clear priorities and ensure effective delivery backed up with adequate funding.**

3.2. Policy options

This table below elaborates in relation to the rural development policy instruments the three broad policy options set out in the Communication (adjustment, integration and refocus):

	Budget	Objectives	Instruments	Management system
Adjustment	Moderate increase in funding Same distribution between MS	Additional resources go towards: <ul style="list-style-type: none"> ▪ option 1: competitiveness / innovation, or ▪ option 2: environment ('new challenges') 	Same	Same
Integration	Same funding Redistribution between MS	Policy better aligned with Europe 2020: <ul style="list-style-type: none"> ▪ priorities ▪ related targets 	Streamlined toolkit	Common Strategic Framework (CSF) Strengthened strategic targeting No axis system Enhanced possibilities to combine measures
Refocus	Funding doubled Redistribution between MS	Focus on the environment and climate change Limited temporary measures to ease the impact of phasing out direct payments	Significantly reduced toolkit	Simplified management system No Leader

In terms of budget, the adjustment scenario follows the Health Check model of a moderate increase in the rural development budget within a constant CAP budget, while the refocus scenario provides for a significant increase in the rural development budget; for the present exercise and taking into account possible limits in terms of absorption capacity in different Member States, a doubling of the budget is foreseen.¹¹ Moreover, under the integration and the refocus scenarios it is foreseen to distribute the support between Member States on the basis of objective criteria also looking at the current distribution.

¹¹ For purposes of this annex, the integration of risk management into Pillar II and the corresponding budgetary needs has not taken into account, as this is dealt with in a separate annex on risk management.

As regards the policy objectives, the analysis of future challenges for agriculture, forestry and rural areas has made clear the need to put further emphasis on climate change and innovation. The adjustment scenario includes two options for channeling the additional resources made available either 1) towards the environment ('new challenges' of climate change, water, biodiversity, renewable energy and innovation, as in the Health Check) or 2) towards competitiveness / innovation. Innovation, climate change and the environment in general are explicitly recognized as guiding considerations that cut across all three objectives in the integration scenario. The refocus scenario has a single objective: the environment (including climate change, which in turn includes the sustainable production of renewable energy and of biomass for bio-based products) with the continuation of axis-3 type measures possibly left to cohesion policy.

On this basis, the current toolkit of around 40 measures is streamlined into approximately 20 measures in the integration scenario and significantly reduced in the refocus scenario. The latter consists mainly of environmental measures also including limited temporary measures to ease the phasing out of direct payments. In all cases, measures are reviewed to address issues with current implementation, to make them more effective and relevant and to facilitate uptake - in particular in relation to measures that are very important from the perspective of Europe 2020 and that have not been fully used to date (such as support for co-operation for the development of new products, processes and technologies).

With respect to the management system, the adjustment scenario maintains the status quo while the refocus scenario aims at further simplification given the reduced policy remit. Building on the positive experience in the current period, the integration scenario proposes to reinforce the strategic approach in two respects:

- first, to improve coordination with the other funds by placing the European Agricultural Fund for Rural Development (EAFRD), the European Regional Development Fund (ERDF), the Cohesion Fund, the European Social Fund (ESF) and the European Fisheries Fund (EFF) under a Common Strategic Framework (CSF) in the service of the Europe 2020 strategy for smart, sustainable and inclusive growth (in this context, the EU targets concerning climate change and biodiversity are particularly relevant) – and also under corresponding national framework documents of some form; and
- second, to strengthen strategic targeting in programming by requiring Member States / regions to draw their programs on the basis of a common set of priorities and to set appropriate targets under these priorities, as well as enhancing possibilities to use measures in combination while doing away with the axis system (as well as with the ring-fencing introduced in the Health Check).

Finally, it is foreseen that the outcome of the review of the delimitation of intermediate NHA areas that is currently under way will be implemented under all options (see section 6.2. below).

The Communication presented by the Commission on 29 June 2011 *A budget for Europe*¹² set the budget and main lines for rural development policy in the period 2014-2020. It is proposed to keep the same budget in nominal terms as in the current period, and to include rural development policy within a Common Strategic Framework with all

¹² COM(2011) 500 final.

structural funds as well as within Partnership Contracts with Member States. Moreover, the policy should be subject to ex-ante "conditionalities" (i.e. preconditions for the approval of programmes and / or the disbursement of payments through programmes) and a performance reserve, like the structural funds.

3.3. Alignment with Europe 2020 through priorities and associated targets

An important aspect of the integration scenario is the use of "priorities" and associated targets (see **Annex 4b**) - with a view to ensuring the best fit with the Europe 2020 strategy for smart, sustainable and inclusive growth, and notably the resource efficiency flagship with the associated climate and biodiversity targets.

In sum, the following priorities may be set at EU level to steer the policy:

- (1) Transfer of knowledge;
- (2) Competitiveness and farm viability;
- (3) Food chain organisation and risk management;
- (4) Preserving and enhancing ecosystems dependant on agriculture and forestry;
- (5) Low carbon economy and resource efficiency
- (6) Job potential and development of rural areas.

The expected contribution and the actual performance of the policy in relation to the different priorities could then be measured by making use of specific "target" indicators to be defined for each of these priorities. As an example, indicators such as "total energy savings in the agriculture and agri-food sectors in supported projects by 2020" and "total water savings in supported projects by 2020" may be used – among others - to quantify ex ante target levels for the programmes in relation to priority 5 ("Low carbon economy and resource efficiency") and to regularly assess the contribution of the programmes to this priority during the implementation phase.

A common set of indicators would be part of the new CMEF for the future policy, which would in turn be part of performance measurement for the CAP as a whole. Improved indicators would make the CMEF better suited to a more outcome-oriented approach. Ex-ante evaluations would be used more thoroughly in programme preparation.

4. IMPACT ANALYSIS

4.1. Impact on the agricultural sector

The overall impact of the reform on the agricultural sector will in all likelihood **be driven more by the changes in Pillar I, in particular in direct payments**, than by the changes in rural development policy, considering the size of the budgets involved. As shown in Scenar 2020, "Within the limits of the foreseeable budget, the total amount of

EU Rural Development support per farmer or per agricultural area is small in comparison to the regional GVA in the agricultural sector in most EU regions"¹³

See also the table below for a broad indication of the magnitude of EAFRD support involved for the entire programming period 2007-2013, which translates on a yearly basis on average to EUR 100/farm for investments under the farm modernization measure (121), EUR 17/ha for agri-environment measures, and EUR 14/rural inhabitant for axis 3 measures.

Table 2 - Allocation of resources to farm investments (€/farm), to agri-environment measures (€/ha) and to axis 3 (€/rural population) for the entire period 2007-2013

Member State	Measure 121 – €/farm	Measure 214 – €/ha	AXIS 3 - €/rural population	Member State	Measure 121 – €/farm	Measure 214 – €/ha	AXIS 3 - €/rural population
Belgium	2.367	90	38	Hungary	1.787	207	104
Bulgaria	928	117	235	Malta	916	815	
Czech Republic	5.494	239	138	the Netherlands	465	57	1.350
Denmark	608	77	10	Austria	1.599	565	78
Germany	2.266	120	137	Poland	558	119	178
Estonia	6.097	186	138	Portugal	1.044	117	4
Ireland	195	278	0	Romania	202	57	200
Greece	354	165	106	Slovenia	820	500	112
Spain	543	41	44	Slovakia	4.488	138	98
France	1.309	42	23	Finland	891	287	86
Italy	664	150	58	Sweden	1.841	315	71
Cyprus	822	271		United Kingdom	567	148	221
Latvia	2.218	72	223	EU-27	706	119	104
Lithuania	1.307	110	140	EU-15	822	118	67
Luxembourg	8.545	205		EU-12	624	122	169

As regards the three scenarios under consideration, the impact on the agricultural sector will differ depending on 1) the level of the rural development budget and co-financing possibilities at national level, 2) the orientation of the funding more towards competitiveness or more towards the environment, and to a lesser extent 3) on the absence of axis 3 type measures in the refocus scenario.¹⁴

4.1.1. Adjustment scenario

A small positive impact on competitiveness due to investments in human and physical capital that increase productivity is expected under this scenario. In fact, the Modulation Study found a relatively small overall impact of a transfer from Pillar I to Pillar II of the

¹³ Scenario 2020 Follow-up Study (2009), and Scenario 2020: scenario study on agriculture and the rural world (2006).

¹⁴ See also Situation and prospects for EU agriculture and rural areas (2010).

same level as the moderate increase in the RD budget under the adjustment scenario, with most impact resulting from the decrease in direct payments.¹⁵

- Under option 1 (additional resources for competitiveness/innovation), an increase in the support for farm investments should result in an increase in income, better use of production factors and improvement in quality of farm products. Investment in physical and human capital may also accelerate existing trends towards fewer, larger farms.
- Under option 2 (additional resources for the environment/climate change), a small positive effect on agricultural employment may result from supporting more labor intensive extensive production systems. Increased support for NHA and agri-environment payments may help maintain the economic viability of farms that would otherwise disappear.

Of course, within an overall moderate impact across the EU, regional impacts could be more pronounced (Scenar 2020).

4.1.2. Integration scenario

In a context of greater demands on the agricultural sector to contribute to the provision of public goods, the quality of the design of RDPs should be considerably higher under this scenario with Member States under a reinforced strategic approach putting the resources to the best use to meet the Europe 2020 priorities. If the right balance is struck, there is considerable potential to improve resource efficiency that is a win-win situation for both farmers and the environment.

In addition, support possibilities for NHAs in Pillar II will be further reinforced by the Specific Natural Constraints component of direct payments (see **Annex 3**).

4.1.3. Refocus scenario

Clearly, the additional employment and income opportunities for farmers as land managers under Pillar II cannot make up for the significant impact on farm income of the phasing out of direct payments (see annex on direct payments). The temporary axis 1-type measures foreseen under this scenario should alleviate to some extent this pressure on farm income by opening possibilities for the farmers concerned to either leave the sector or to modernize.

In addition, the discontinuation of funding for axis 3-type measures may put at risk basic conditions for the sector in terms of infrastructure and basic services in certain regions that depend heavily on agriculture in Member States lagging behind.

4.2. Impact on the environment and climate change

It is important to consider the impact on the environment and climate change of the different scenarios **for the policy instruments as a whole**. In fact, direct payments in combination with cross compliance play an important role for the supply of basic environmental public goods that are then complemented by the more targeted measures

¹⁵ *Economic, Social and Environmental Impact of Modulation (2008).*

of Pillar II delivering public goods in particular with respect to environment and climate change. See also **Annex 2**.¹⁶

As regards in particular the impact of the changes in rural development:

4.2.1. Adjustment scenario

The moderate increase of the available funds will positively benefit measures that aim to improve environmental conditions. The effects of this are difficult to quantify since it depends on how Member States use the available funds. As an indication, see the relevant target indicators corresponding to the CAP Health Check / European Economic Recovery Package budget in the table below:

Selection of main relevant target indicators 2007-2013 (outputs) per priority for the HC/EERP budget defined in the Rural Development Programmes

<i>Priority/indicators</i>	<i>Unit of measure</i>	<i>Value</i>
Climate Change		
Improvement of energy efficiency	total volume of investments ¹⁷ (million EUR)	243
Improve efficiency of nitrogen fertiliser use	total volume of investments (million EUR)	104
N of participants in trainings	% of participants in CC related topics	40%
Soil management practices (measure 214)	N of ha supported (million ha)	1.4
Afforestation and the establishment of agro-forestry system	N of ha supported (ha)	10,000
	Programmed expenditure (EAFRD – million EUR)	47
Renewable energy		
Installations/infrastructure for renewable energy using biomass and other renewable energy sources (solar and wind power, geothermal)	total volume of investments (million EUR)	248
Processing of agricultural/forest biomass for renewable energy	total volume of investments (million EUR)	197
Biogas production using organic waste (on farm and local production)	total volume of investments (million EUR)	62
Water management		
Water storage (including water overflow areas) – Axis 1	total volume of investments (million EUR)	184
Water savings technologies (e.g. efficient irrigation systems) – Axis 1	total volume of investments (million EUR)	568
Westland restoration (measure 216)	total volume of investments (million EUR)	119
Meandering rivers (measure 323)	total volume of investments (million EUR)	71
Biodiversity		
Extensive forms of livestock management (measure 214)	N of ha supported (million ha)	1.65

¹⁶ See also the studies *Study on the Provision of Public Goods through EU Agriculture (2009)*, *Reflecting environmental land use needs into EU policy: Preserving and enhancing the environmental benefits of "Land Services": Soil sealing, biodiversity corridors, intensification/marginalisation of land use and the permanent grassland (2009)* and *Reflecting environmental land use needs into EU policy: preserving and enhancing the environmental benefits of unfarmed features on EU farmland (2008)*, and the *CLIMSOIL* study (2008).

¹⁷ Total amount (= the sum of all public and private expenditure) of all the tangible and/or intangible investments related to the supported operations.

Integrated and organic production (measure 214)	N of ha supported (million ha)	1.58
Restructuring of dairy sector		
Investments related to dairy production (measure 121)	total volume of investments (million EUR)	1,116
Improvements in processing and marketing related to dairy sector (measure 123)	total volume of investments (million EUR)	270
Broadband infrastructure		
Creation and enabling of access to broadband infrastructure	total volume of investments (million EUR)	383
Upgrade of existing broadband infrastructure	total volume of investments (million EUR)	175
Laying down passive broadband infrastructure	total volume of investments (million EUR)	129

As regards the two options examined:

- Under option 1 where an increased focus is put on competitiveness and innovation, positive effects would mainly come through increased resource efficiency and through modernisation implementing more environment friendly systems.
- Under option 2 where an increased focus is be on the environment ('new challenges'), it is likely that this would see more funds being used for agri-environment measures and climate change mitigation measures (including renewable energy and bio-based products) with positive effects for biodiversity and climate change.

4.2.2. *Integration scenario*

Even if the budget stays the same, the shift of some agri-environmental actions to the first pillar will free up some funds that might then be used for more targeted and more ambitious agri-environment measures, thus producing a further reinforcement of the environmental outcome of the policy.

Among other things, under the "integration" scenario, rural development policy would be more closely aligned with the objectives of the *Europe 2020* strategy. This would be achieved through a Common Strategic Framework shared with other EU funds, through a set of rural development policy "priorities" in line with Europe 2020, and through the setting of targets against each of these priorities within Member States' / regions' rural development programmes.

As Europe 2020 has a strong environmental aspect – as expressed in its "sustainable growth" objective, its "Resource efficiency" flagship initiative and the associated EU climate and biodiversity targets – this alignment should be beneficial for the environment, with targets set in RDPs to contribute to the EU targets. So too should the requirement that the environment, climate change and innovation be treated as cross-cutting concerns.

Bottom-up approaches and efforts to enhance collaboration of farmers in terms of implementation of agri-environmental actions for better effect at the landscape scale will yield higher benefits for biodiversity and for mitigating effects of climate change. In addition, the greater freedom to use measures in combination – e.g. advice and training alongside demanding agri-environment measures – would maximize positive outcomes.

Finally, the focus on innovation should have the effect of a better dissemination of efficient measures that improve resource efficiency.

4.2.3. *Refocus scenario*

The doubling of funds under this scenario and the clear focus on measures for the improvement of the environment and climate change actions (including renewable energy developments) should result in significant positive impacts on these areas of concern.

However, **the fact that direct payments under Pillar I are phased out could severely compromise such an outcome.** Without basic income support, the less competitive farmers who very often manage marginal land and land in remote areas in an extensive manner, thereby helping to maintain areas of high natural value, may cease their agriculture activity because they no longer earn an adequate income; moreover, GAEC that are part of the baseline for agri-environment measures no longer apply to land that does not receive direct payments (see below relevant extracts from Scenar 2020 Follow-up study).¹⁸ On the other hand, agriculture activity may be concentrated and intensified in the most competitive areas.

It is thus questionable to what extent the increased budget that can be made available for NHA and AE support can make up for the loss of direct payments.

The fact that the Rural Development toolbox in this scenario will be emptied of most axis 1 and all of axis 3 measures will only further increase the risk of abandonment and have the effect of decreasing rural vitality in these regions.

Extracts from SCENAR 2020 - II

The role of farming to maintain landscape quality and biodiversity (associated with both Natura 2000 and HNV areas) underlines the potential risk associated with land abandonment, which is apparent to different degrees in the three scenarios elaborated in the macroeconomic part of Scenar 2020-II. This possibility is put into perspective by the type of subsequent regional analysis performed, and within Scenar 2020-II an attempt has been made to identify the regions particularly characterised by those types of land use that might indicate an ongoing process of land abandonment. To do this, the future shares of different farming types projected on the horizon of 2020 have been clustered to give a broad overview of agricultural performance (but only for the Reference scenario). The conditions representing a risk of land abandonment are found in a third of the EU regions. Most of the regions in this cluster are located in France, Greece, Italy, Portugal and Spain in the western and southern EU; in Bulgaria, Hungary, Poland and Romania in the eastern EU; and in Finland and Sweden in the northern EU. The reduction in agricultural utilised land projected in the macro-economic analysis with regard to the Liberalisation scenario, however, indicates the heightened risk of more widespread land abandonment within the EU as the agricultural economy becomes more liberalised. In any case in the Liberalisation scenario the Good Agricultural and Environmental Conditions (GAEC) do not apply anymore due to the cessation of direct payments in the absence of Pillar 1. Farmers will still have to fulfil requirements of the environmental legislation, without further consideration of good agricultural practices that are present in the GAEC and not in the existing legislation. In the less competitive regions, in particular, structural land abandonment would be accompanied by environmental decline. As a secondary effect of such structural change, targeted Pillar 2 measures aiming to enhance the environment would not find addressees and, therefore, could no longer contribute to sustaining extensive farming practices and thus securing the ecological values and benefits which these provide.

¹⁸ See also *Analysis of farmland abandonment and the extent and location of agricultural areas that are actually abandoned or are in risk to be abandoned (2008)*.

Note that the average decrease in the nitrogen surplus in the Liberalisation scenario at NUTS2 level hides local concentration of the production. Particularly under the Liberalisation, the narrower concentration of production which is expected would mean also greater localised water pollution risks. Moreover, the predicted increase in farm specialisation and concentration under Liberalisation would increase the negative externalities of agriculture, both by leading to increased concentrations of pollutants in more intensive areas, by losing the features of mixed and less intensive farms which are key to protecting farmland biodiversity, and by leading to the abandonment of farmland in remoter areas, with concomitant loss to biodiversity and landscape, and an increase in climate change gas release through increased soil erosion. These effects are, however, not taken into account in CAPRI.

In addition to this assessment of environmental conditions via the indicators included in the CAPRI model (nitrogen and phosphate surplus, ammonia and greenhouse gas emissions), the consequences of the decline in agricultural land use for the environment should be mentioned. In particular under the Liberalisation scenario, the steep increase in land abandonment risks seriously undermining the ecosystem services and biodiversity values of the respective landscapes. This should be a serious concern for future policy design.

The environmental status of forests may benefit from the doubling of the funding for environment and climate change in the refocus scenario. However the phasing out of axis 1 measures would weaken the multifunctional services of forestry and would lead to negative side effects on the environment, such as creating abandonment of the less productive forests.

Finally, the new distribution key under both the integration and refocus scenarios with its focus on environmental indicators will, depending on how it is designed, have an effect on the level and distribution of environmental improvements.

4.3. Impact on the socio-economic development of rural areas

First, given that agriculture remains an important driver in many rural areas, the impact of the three scenarios on the agricultural sector will also affect rural areas in general. In addition, axis 3 measures are directly relevant for the broader socio-economic development of rural areas.¹⁹

4.3.1. Adjustment scenario

The additional resources to be made available under this scenario could help meet challenges related to Europe 2020 objectives, e.g. through the development of renewable energy projects and contributions to the bio-based economy. This would make a certain contribution to the development of rural areas.

The minimum spending requirement of 10% ensures that a minimum amount goes towards axis 3 measures, but does not take into account the fact that the relevant Europe 2020 priorities (such as energy efficiency, employment and skills, poverty reduction) are cross-cutting priorities combining different elements that cannot be grouped into single measures such as those existing under axis 3. These priorities also call for strategic and

¹⁹ See also the report of the thematic group on rural development and territorial cohesion, the RTD project *RUFUS Rural Future Networks (FP7)*, the RTD project *RuDI Assessing the Impact of Rural Development Policies (FP7)*; the RTD project *CAPRI-RD Common Agricultural Policy Regionalised Impact - The Rural Development Dimension (FP7)*; and the *Green Paper on territorial cohesion (2008)*.

integrated approaches. Therefore, the rather "schematic" current structure of axis 3 would struggle to deliver maximum benefits for rural areas.

Finally, this scenario fails to address a number of shortcomings in the delivery of axis 3 measures identified in the current programming period, e.g. the fact that support for businesses outside agriculture and tourism is limited to micro-enterprises.

4.3.2. *Integration scenario*

This scenario facilitates the use of measures in combination and support for integrated projects provided that the Member State concerned can develop a good strategy to make the best use of the funds available in line with the EU priorities. LAGs also benefit from more freedom to deliver, and a better coordination with other funds should be ensured.

In the absence of minimum spending requirements, the Member States that are most advanced in reaching the socio-economic objectives of Europe 2020 in rural areas may choose to channel funds more towards objectives other than those currently covered by axis 3 measures (e.g. they might spend more on the environment), but this would have to be justified within the process of strategic programming. For the Member States that have yet to achieve significant progress towards Europe 2020 socio-economic targets, support for general socio-economic development would probably continue to be a priority.

4.3.3. *Refocus scenario*

In broad terms (i.e. taking into account **all** aspects of the scenario), the result would be a negative impact on the socio-economic development of rural areas, including the loss of valuable social capital formation and the undermining of micro- and family business development, which is currently an essential element of the rural economies. This would be especially felt in regions where agriculture is the main driver, as well as in regions most dependent on rural development funding.

The absence of axis 3 measures **in particular** (leaving aside the absence of direct payments) would probably have a more mixed impact from one region to another. In regions which depend heavily on agriculture, extra axis 2 funding might offset the effects of the loss of axis 3 measures, **at least in the short-to-medium term**, and as far as agriculture is concerned. By contrast, regions with diversified economies would probably suffer negative effects from a shift to a more sharply environmental focus.²⁰ Of course, the overall impact on rural areas would depend on how they would then be treated in the future cohesion policy.

See below the results of a case study of regional impacts under different scenarios:

<u>Rural ECMOD research project</u>

²⁰ See also the analysis *Standard of living and economic growth in rural areas and their main determinants by type of regions (2010)*, and the RegPOL model showing the importance of labor productivity as a driver of GDP in rural areas, and farm investments as the measure that had the greatest impact on GDP growth and the greatest influence on the regions' development.

The **Rural ECMOD** research project estimates the impact on the rural and urban parts of EU's NUTS-3 areas of widening the scope of EU policy intervention from a clear agricultural focus to an approach aiming at rural development in a broader sense.

The scenarios examined compare the economic impacts of alternative "paths" of pillar 1 and 2 measures (over the period 2006-2020) with those of the current policy context.

Scenario 1 – "Agricultural" rural development policy: All RD spending on axes 1 & 2.

Scenario 2 – "Diversification" rural development policy: All RD spending on axis 3.

Scenario 3 – "Reduction of pillar 1 support": Pillar 1 support is reduced by 30%.

Scenario 4 – "SCENAR scenario": EU-wide flat-rate direct payment is introduced in pillar 1; pillar 1 support is cut by 15% in nominal terms. Pillar 2 funds increase by 45% in nominal terms.

There are 3 other scenarios dealing with the distribution of funds within axis 3.

In this project 6 NUTS-3 regions representing different patterns (predominantly rural or urban regions; regions in the process of diversifying) are analysed. They were chosen with the help of the OECD-refined and TERA-SIAP (Weingarten, *et al.*, 2009) territorial typologies.

The selected case studies are: Aberdeen City and Aberdeenshire (UK), Arkadia (GR), Jihomoravsky kraj (CZ), Guipuzcoa (ES), Potenza (IT) and Rheintal-Bodenseegebiet (AT).

Some initial findings are set out below:

If a decrease of pillar 1 funding is compensated by an increase of pillar 2 funding, in general the effects on GDP (both rural and urban) are very limited. Within the farm sector specifically, the impact on agricultural output and farm household income may be greater but is also moderated by the extra rural development funding.

A diversification-focused CAP (scenario 2) has varied effects according to the characteristics of the region in question. **Over the period modelled (2006-2020)**, regional/local economies which are already diverse benefit (in particular from the perspective of the economic activity of their rural areas) from funding for diversification measures, whereas economies which still depend significantly on agriculture and food processing may suffer negative effects over that period, **particularly in the short / medium term**.

In general, keeping the total level of funding for axis 3 constant but reallocating it between measures has only a modest impact. However, in a given region the impact could be higher with the "right" choice of measures (in this case, investments made in rural public infrastructure and services with a view to improving the attractiveness of the rural areas of the region).

For the purpose of this Impact Assessment, an attempt was made to analyse the refocus scenario, in line with the following parameters: a progressive phasing out of pillar 1 from 2010 to 2013 and doubling of pillar 2 funds (EU, national public and private expenditure) during the same period. Within pillar 2, axis 3 is abolished and axis 1 maintained at its baseline level (CAP Health-Check): the full increase of pillar 2 amount is injected in axis 2. Indicative results suggest that, notwithstanding regional specificities, in general this scenario would impact negatively rural areas in terms of GDP, and as regards farm income, the negative effects from the phasing out of pillar 1 are dominant, overshadowing other possible effects of re-allocation within pillar 2.

All in all, the impact under all three scenarios **depends to a large extent on the situation of the area concerned.**²¹

²¹ See also the *Study on Employment, Growth and Innovation in Rural Areas (SEGIRA)*, 2010.

4.4. Impact from the change in the management system, including considerations of administrative burden

4.4.1. Adjustment scenario

The maintenance of the axis system under this scenario provides a crude guarantee of a minimum level of spending per objective, but may unduly constrain the development of a full-fledged strategic approach in combining measures in the best possible way to meet the policy objectives.

If, in addition, the same ring-fencing as in the Health Check is used to allocate the additional resources, the administrative burden will be considerable.

4.4.2. Integration scenario

If designed with the correct level of ambition (not too high, not too low), a Common Strategic Framework (CSF) will help to coordinate rural development policy with the other policies covered (i.e. the ERDF, the Cohesion Fund, the ESF and the EFF), especially in the case of Member States / regions that have struggled with coordination in the current period. The CSF will also help to link the policies covered to the objectives of the Europe 2020 strategy. With regard to this last point, a useful aspect of the CSF would be the inclusion of "thematic objectives" which between them would link the scope of Europe 2020 to the areas of action of the policies covered. All of the priorities of rural development policy would be included in these thematic objectives.

At national level, the CSF could translate into Partnership Contracts (PC) on the use of the EU funds concerned, including the relevant coordination mechanisms. Within the PCs, Member States would have to explain how they would use the policies covered to serve the thematic objectives of the CSF – in ways which would be in line with their National Reform Programmes set in the framework of Europe 2020. Other key features of the PCs would include: the specification of indicators for assessing progress on the objectives chosen; and a description of national and regional mechanisms for co-ordinating the use of EU funds.

The basic model of a PC outlined above could help to co-ordinate rural development policy with other EU policies in the service of Europe 2020 - provided that it respected the particular characteristics of rural development policy. PCs would however add an extra layer of administration and it would be important to ensure that this did not lead to delays in approving and implementing programmes.

At the same time, structuring rural development programmes essentially around priorities which reflect Europe 2020 – and setting appropriate targets against those priorities within the programmes – would likewise strengthen links with Europe 2020.²²

The Commission proposal for the Multiannual Financial Framework for 2014-2020 provides that rural development policy shall be included within a Common Strategic

²² See Annual Growth Survey, Annex 1: Progress Report on Europe 2020, COM (2011) 11 final, that includes provisional national targets set by Member States in their draft National Reform Programmes.

Framework with all structural funds as well as within Partnership Contracts with Member States. Moreover, the policy should be subject to ex-ante conditionalities and a performance reserve, like the other structural funds.

Conditionality is not a new concept for rural development policy. The regulatory framework in the current period is already geared towards maximizing the efficiency and effectiveness of policy intervention with detailed conditions for the operation of programmes and individual measures (though in comparison to other policies, rural development policy operates more through conditions applying at the level of individual measures and beneficiaries). It is now proposed to bring these elements together in a more structured approach also in line with the approach for the other funds.²³ New / refined ex-ante conditionalities for rural development policy should be essential for good programme performance and feasible in practice (a possible example would be the provision of sufficient resources and capacity-building activities to address needs related to requirements of monitoring and evaluation).

There is moderate evidence to suggest that the minimum spending requirements of the axis system have influenced the spending decisions of Member States. (For example, according to a simple analysis, planned spending levels have in some cases been close to the minimum permitted levels, especially with regard to axes 3 and 4 – see **Annex 4c**). Therefore, the abolition of the axis system might lead some Member States / regions to change their spending patterns.

However, provided that strategic programming worked effectively, these changes should be appropriate to the individual situations of programming areas and clearly justified by a more realistic intervention logic (i.e. one which could depict a given measure's contribution to more than one priority / objective, instead of artificially limiting its contribution to one objective only).

To ensure that strategic programming did indeed function effectively, the Commission would have to be firm in not approving a given rural development programme before being satisfied that the programme was of adequate quality. Subsequent programme modifications would also have to be treated firmly.

The abolition of the axes would also reduce the burden on financial management.

All in all, reliance on a strengthened form of strategic targeting would make it easier for Member States to combine measures intelligently under a more results-based approach, thus allowing for a better fit of intervention to the objectives provided that the programming was done well.

There would be some additional administrative burden involved in putting new systems in place, which nonetheless should be compensated by the resulting better synergies and increased efficiency of the new management system.

²³ See also the impact assessment for cohesion policy and the work of the Conditionality Task Force with Member States and other EU institutions.

4.4.3. Refocus scenario

The programming will be simplified, as there would no longer be any competition for funding between objectives. There would also be fewer issues of demarcation with cohesion policy.

Some Member States may lack the absorption capacity to make the full use of the environmental measures. In addition, some Member States may be even more tempted to use the now reduced set of measures for other purposes (e.g. income support) under the guise of environmental measures.

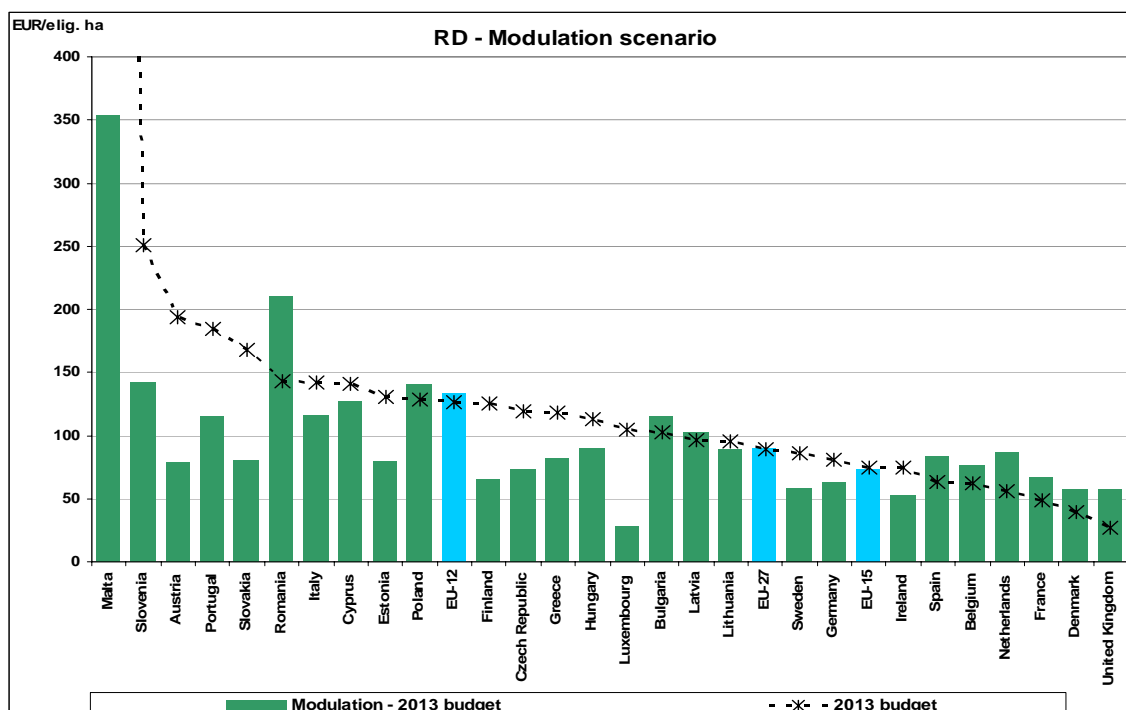
Finally, the absence of Leader would deprive rural areas of an important engine of innovative, tailor-made policy-making, which has a strong tradition in many Member States as a method for community-led local development in rural areas.

5. DISTRIBUTION OF RURAL DEVELOPMENT SUPPORT AMONG MEMBER STATES

In response to calls for more equity in the distribution of support in the next period, it is foreseen under the integration and the refocus scenarios to use objective criteria also taking the current distribution into account. This should maximize the added value of EU spending by ensuring a better fit between resources available and policy objectives.

One option is to use the so-called modulation formula that was used to distribute among Member States the additional resources made available through modulation.

- Modulation: $(0.65 \text{ Area} + 0.35 \text{ Labour}) \times \text{GDP inverse index}$



Another option is to come up with a new formula using criteria related to the future policy objectives weighed on the basis of their importance in the policy design. Clearly, the criteria would differ in the two cases of the integration and the refocus scenario.

5.1. Criteria for the distribution of support

For the integration scenario:

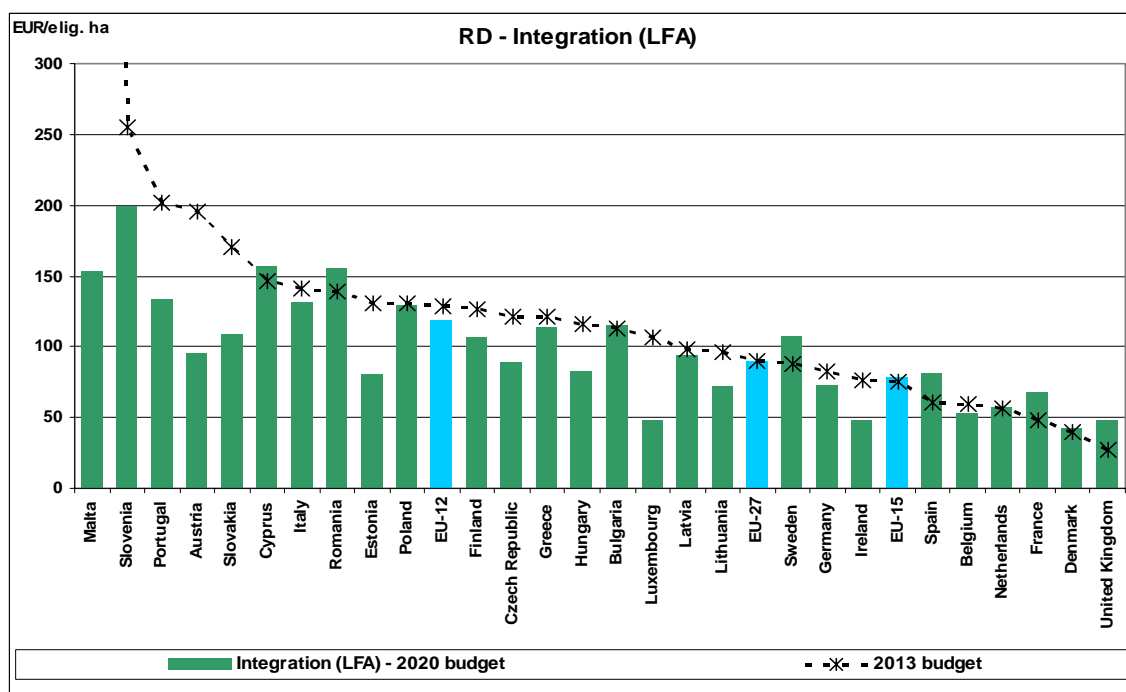
- In relation to Objective 1 (competitiveness of the agricultural sector), agricultural area and labour force are used as indicators of the economic size of the agricultural sector and labour productivity of the extent to which the sector is lagging behind;
- In relation to Objective 2 (climate change and the environment), agricultural area, Natura 2000, NHA, forest and permanent pasture areas are used as indicators of the public goods provided. Work on climate change vulnerability indicators is still ongoing and hence such indicators cannot be used.
- In relation to Objective 3 (balanced territorial development), rural population is used as an indicator of the target group benefiting from the support while the extent to which rural areas are lagging behind is covered by the use of a GDP coefficient for the whole formula.

For cohesion purposes, the whole formula is then calibrated by GDP/capita in PPS (the lower the GDP in the MS, the higher the MS envelope).

For the refocus scenario, only those indicators related to the environment and climate change remain relevant.

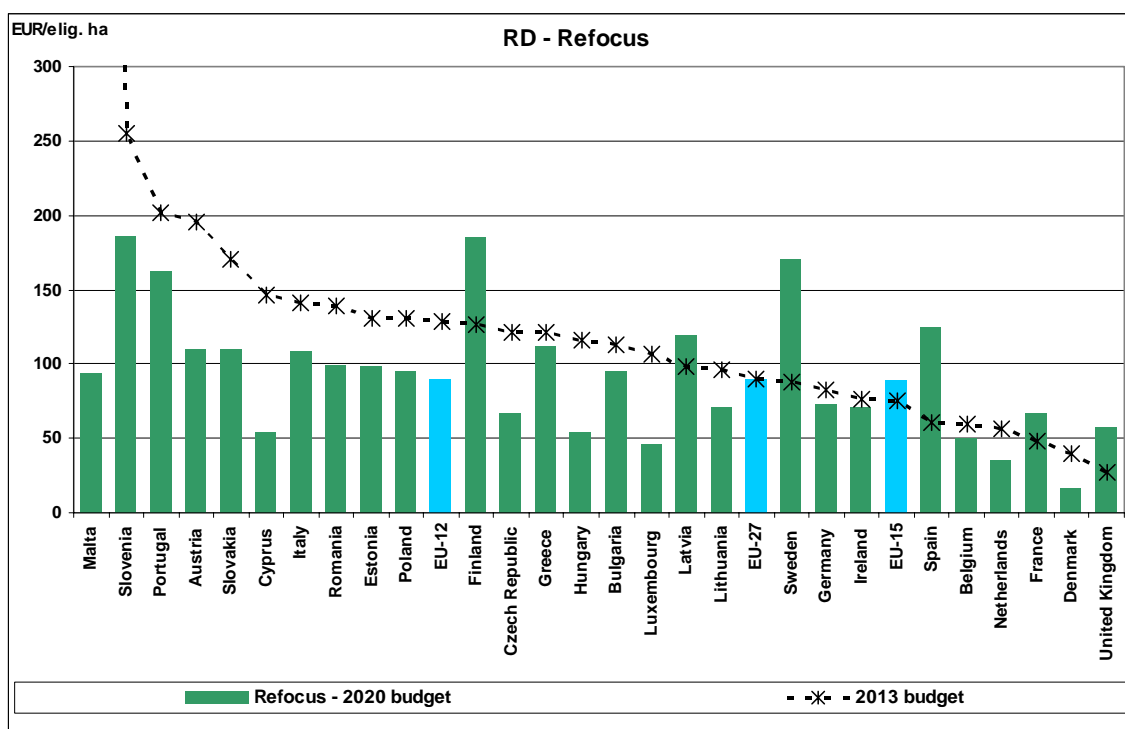
On this basis, the following options are considered:²⁴

- Integration scenario: $[1/3 [(1/2 \text{ Area} + 1/2 \text{ Labour}) \times \text{labour productivity inverse index}] + 1/3 (1/3 \text{ NHA area} + 1/3 \text{ Natura 2000} + 1/6 \text{ Forest} + 1/6 \text{ Permanent pasture}) + 1/3 \text{ Rural population}] \times \text{GDP inverse index}$



²⁴ This distribution key doesn't take into account the transfers made through the market reforms in the tobacco, cotton and wine sectors. These amounts are exempted from the redistribution and added to the national envelopes afterwards.

- Refocus scenario: (1/3 Area + 1/3 Natura 2000 + 1/6 Forest + 1/6 Permanent pasture) x GDP inverse index

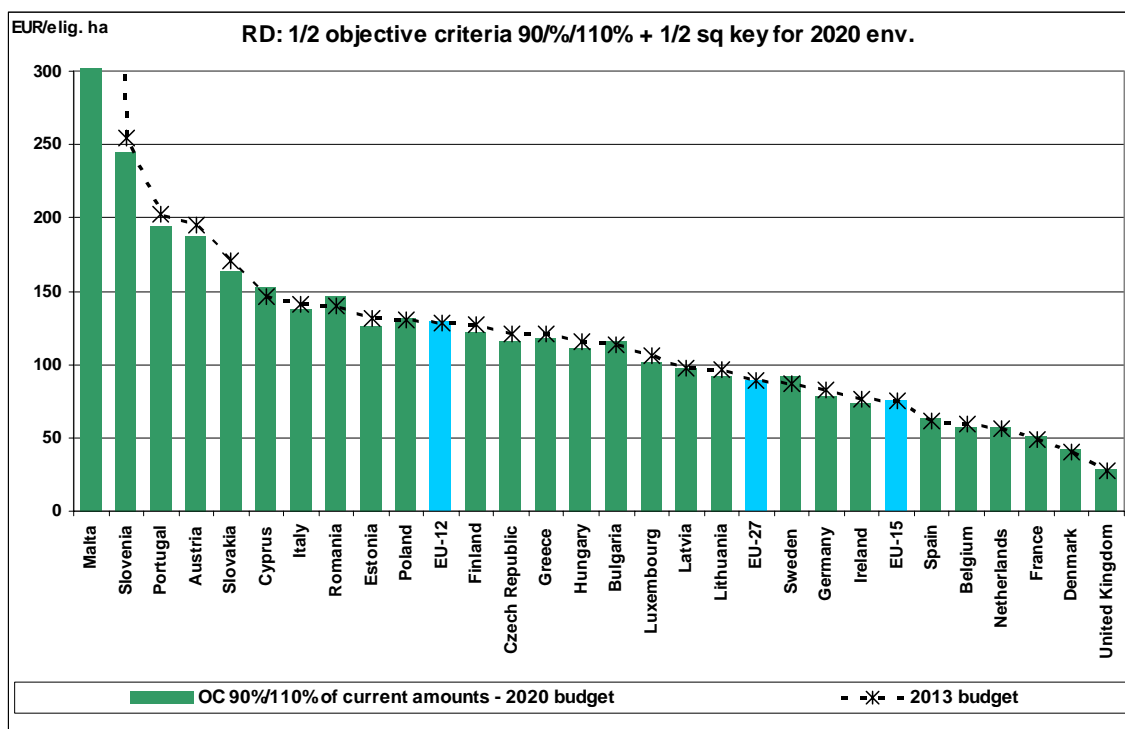


The results shown above differ considerably from the current distribution.

To smooth out the impact of redistribution, the current distribution may be taken into account in the following way:

- by distributing 50% of the total envelope on the basis of the current distribution key and 50% on the basis of the new distribution key (transfers from the market remain exempted from the redistribution)
- by providing that no MS should end up with less than 90% and not more than 110% of its current envelope
- by providing for a transitional period gradually moving towards the new distribution

For the small Member States (LU, MT) an *ad hoc* solution would in any case be required.



5.2. Assessment (for the integration and refocus scenarios)

As a general matter, a distribution on the basis of objective criteria would allow for a better fit between the policy objectives and the resources made available, thus a better use of the EU budget. However, this is less the case the closer we stay to the current distribution, and the more discretion the MS reserve to use the funds across the different objectives.

At the same time, a smooth redistribution based on the aforementioned elements ensures that there is no disruption, especially in relation to ongoing measures, and allows Member States the opportunity to find alternative financing or to introduce new measures as appropriate.

6. OTHER ISSUES

6.1. EIP "Agricultural Productivity and Sustainability"

The setting up of a European Innovation Partnership (EIP) on "Agricultural Productivity and Sustainability" is currently under consideration. The aim is to increase agricultural productivity through innovation with a focus on sustainable land management. The actions envisaged would rely to a large extent on opportunities under the 7th Framework Programme for research as well as a range of rural development measures.

The partnership should contribute to the Europe 2020 strategy by increasing resource efficiency. Even if the setting up of the partnership does not depend on the policy choice to be made for the future CAP that is the subject of the current impact assessment exercise, the use of innovation as a guiding theme as well as enhanced possibilities to put measures together under the Integration scenario should facilitate actions under the partnership.

6.2. Future delimitation of intermediate NHA

Work is ongoing on the use of biophysical criteria for the future delimitation of the non-mountainous areas with natural handicaps on the basis of the Communication from the Commission *Towards a better targeting of the aid to farmers in areas with natural handicaps* of 21 April 2009 accompanied by an impact assessment, and of the Council Conclusions of 22 June 2009.

For that purpose, the 8 biophysical criteria proposed by a scientific panel of independent experts have been tested by all Member States. The results of the simulations demonstrated the relevance and applicability of the biophysical criteria. Overall, they resulted in a modest increase in the total size of NHAs in the EU, with some changes within Member States. At national level, particular situations could arise, where the changes might affect large areas (mainly due to the removal of population and others socio-economic related criteria).

The analyses of the simulations also showed that a number of MS have to develop better datasets and that some refinements of the criteria, scientifically validated by experts, are necessary to adapt the method to better reflect data availability and others specific situations in Member States.

The end result of this exercise should be a credible and sound delimitation which is transparent and comparable across all EU Member States. Some areas will cease being eligible for payments to areas with natural handicaps, while some other areas will newly acquire this possibility.

6.3. State aid aspects

As is the case today, it will be necessary to continue to ensure consistency in the future between rural development measures in the framework of the rural development programmes and rural development measures financed through state aids.

This means that state aid rules for the agricultural sector and forestry will have to be modified to take into account the changes to be introduced in the rural development policy.

These rules are currently foreseen in:

- the Community Guidelines for state aids in the agricultural and forestry sector and
- the Commission Regulation (EC) n° 1857/2006 of 15.12.2006 on the application of Articles 87 and 88 of the Treaty to state aid to small and medium size enterprises in the production of agricultural products.

This impact assessment will be used to justify the changes to be introduced on state aid rules.

6.4. WTO aspects

As a general matter, the measures currently in place comply with Green Box criteria as set out in Annex 2 of the Agreement on Agriculture. The changes proposed in the three policy scenarios under consideration do not affect the WTO compliance of the measures concerned.

Annexes

Annex 4a – Assessment of rural development policy in the current period (2007-2013)

Annex 4b – Alignment with Europe 2020 on priorities and targets

Annex 4c – Implications of a change in the management system

Annex 4a – Assessment of rural development policy in the current period (2007-2013)

Introduction

This note presents a brief assessment of rural development policy in the current period (2007-2013) - always bearing in mind that, at the time of writing, the programmes will run for a further five-year period.

The note first analyses what might loosely be referred to as the "management system" of rural development policy.

It then assesses the strengths and weaknesses of three individual rural development measures which are considered especially significant (as well as the set of forestry measures).

Finally, it offers analysis of the Leader approach.

1. THE MANAGEMENT SYSTEM OF RURAL DEVELOPMENT POLICY²⁵

1.1. Description of key components

Rural development policy functions according to three broad objectives, which are: (a) to improve the competitiveness of agriculture and forestry; (b) to improve the environment and the countryside; and (c) to improve the quality of life in rural areas and to encourage economic diversification.

The current management system of rural development policy essentially takes these broad objectives, links them to needs at national, regional and local level, and provides the tools with which Member States (MS) and regions target financial resources at these needs.

This management system is significantly more sophisticated than its predecessors and now carries the label "strategic targeting". A brief summary of the process of strategic targeting could be the following:

- EU strategic guidelines spell out the most important areas for action under each of the three overarching objectives.
- On the basis of the strategic guidelines, MS draw up national strategy plans (NSPs) which set out (still in relatively broad terms) their needs and their planned use of rural development policy.
- Next, rural development programmes (RDPs) are produced at either national or regional level. RDPs contain an analysis of strengths, weaknesses, opportunities and threats (SWOT), a list of measures to be used to address that situation (based on a preset menu, but with tailoring of individual measures) and a set of targets.
- The ongoing implementation and impact of RDPs are assessed via a system of monitoring and evaluation with accompanying indicators, set out in the Common Monitoring and Evaluation Framework (CMEF).

The individual "building blocks" of this approach are set out in the table on page 16.

Two further aspects of the management system need to be understood.

²⁵ Relevant studies include:

Delivery Mechanisms of Rural Development Policy, Step One Report (European Network for Rural Development, October 2010);

Review of Rural Development Instruments: DG Agri project 2006-G4-10 (Dwyer et al., July 2008)

Synthesis of Ex-Ante Evaluations of Rural Development Programmes 2007-2013 (December 2008)

First, the predefined measures of rural development policy are divided up according to "axes". There is one axis for each of the three objectives of the policy (and a cross-cutting axis related to the Leader approach – see section 6). A given measure is assumed to contribute to the objective attached to the axis to which it "belongs" – and only to this objective. Within its RDP, a MS / region must spend a minimum proportion of its EU rural development funding on each axis, for the sake of balance between objectives.

Secondly, as part of the CAP Health Check agreed in 2008, an extra financial ring-fencing was introduced. At the end of the current period, MS / regions will have to show that they have spent certain amounts of money on operations²⁶ related to a small list of specific "priorities" (e.g. climate change, water management). In order to steer MS / regions into spending the funding on operations which will be genuinely useful, the Commission provided detailed (indicative) lists of eligible operations.

1.2. Assessment: identifying needs, setting objectives, allocating funding

Strong points

The current approach of strategic targeting marks a considerable advance from the previous period (2000-2006) – in which MS / regions simply selected whichever measures they wished from the preset menu and allocated funding as they saw fit, with little formal justification.

Overall, the new approach has built an effective bridge – though an imperfect one – between the general goals of the EU, needs at national, regional and local level, and measures to be used to meet those needs.

Many of the SWOT analyses conducted by MS / regions contain some high-quality work, even if there have been divergent approaches in applying certain concepts and terms. The analyses have made it possible to compare national and regional circumstances across the EU.

The subsequent setting of quantified objectives by MS / regions in their RDPs on the basis of this analysis has allowed a significantly better targeting of resources than in the previous period.

Clearly, MS / regions need to acquire additional experience of the new approach, but they have essentially taken it on board – using experience from the previous programming period but adapting it to new requirements.

Weak points

In some RDPs, a certain divergence appears between the needs identified, the choice of measures and the pattern of resource allocation. The following reasons have been suggested, among others:

²⁶ In this context, an "operation" is a practice or project serving one or more of the priorities in question. An example would be a reduced use of nitrogen fertiliser to lower greenhouse gas emissions.

- The RDP is only one tool available for addressing needs in rural areas – it is part of a "bigger picture".
- There seems to be a certain path dependence: if the authorities are familiar with a given measure and have "successfully" spent money through it in the past, they look on it with greater favour.
- Ongoing spending commitments from the previous period have a certain influence – especially in the case of multi-annual measures with a long duration.
- Certain areas and groups whose needs are relevant to rural development policy may not have made a convincing case that they would be able to absorb funding.
- Last but not least: in some cases, discussions over resource allocation are seen as significantly "political", and certain groups (especially farmers and land managers) may exert a particularly strong influence in some MS.

Another perceived weak point is that the axis system is misleading, because it supposes a 1:1 relationship between measures and objectives: i.e. that one measure serves one objective (i.e. competitiveness OR the environment OR quality of life / diversification), and one only. This supposition is clearly false (e.g. an investment can raise a farm's economic and environmental performance), and therefore its application inhibits the effectiveness of strategic targeting.

The ring-fencing introduced by the CAP Health Check has not been in operation for long, and therefore analysis of this subject is scarce. However, anecdotal evidence suggests that the administrative burden associated with ring-fencing has been very heavy – even for the small number of priorities involved. Furthermore, the approach is not seen as effective at linking spending to results.

1.3. Assessment: ensuring complementarity with other policy instruments

Strong points

With regard to the interplay between rural development policy and other policies, the task at which MS / regions have generally performed well is that of "demarcation" – a simple drawing-up of the respective boundaries of action of the various policies (e.g. stating that, in rural areas, small-scale infrastructure could be funded by rural development policy, larger-scale infrastructure by regional policy).

This has been achieved partly through the use of formal inter-ministerial co-ordination mechanisms.

Weak points

On the other hand, MS / regions have less often moved beyond simple demarcation to a full "complementarity" between policies – i.e. they have been less successful in finding synergies between policies and avoiding funding gaps.

The comment has been made that at national, regional and local level the mechanisms in place ensuring such complementarity on the basis of consultation were sometimes not adequate.

There have also been a few problems of demarcation between rural development policy and instruments in the first pillar of the CAP.

1.4. Assessment: specific points on NSPs & RDPs, links & organisation

Strong points

MS / regions seem to have had good intentions when drafting NSPs and RDPs. Attempts were made at reasonably broad consultation with stakeholders, and authorities made efforts to learn the new principles and procedures involved, drawing on technical support from the Commission.

In some cases, these efforts have led to positive results – both in terms of RDPs which are better structured than they were in the previous period, and in terms of coherence between NSPs and RDPs.

Weak points

On the other hand, the process of producing both NSPs and RDPs has entailed difficulties in some cases.

Some MS which implement regional RDPs rather than a single national programme perceived a tension of principle between NSPs and RDPs: if regional RDPs are based to a large extent on a SWOT analysis carried out at regional level, to what extent should they be influenced by the national analysis behind the NSP?

Particularly (though not uniquely) for these MS, the process of producing NSPs and RDPs which were both consistent with each other and individually rigorous seemed highly time-consuming – in a situation where time was arguably in short supply.

Furthermore, some commentators have criticised the fact that NSPs are simply "submitted" to the Commission, without a full approval process. However, it should be noted that the Commission engages in detailed discussions with MS where it believes that NSPs are flawed.

1.5. Assessment: specific points on the CMEF

Strong points

Overall, the CMEF is regarded as a significant improvement on the preceding approach to monitoring and evaluation. A fundamental aspect of the new approach is that the CMEF provides common indicators for use by all MS (though MS may design additional indicators of their own), and in doing so provides a much more comprehensive picture of what rural development policy is achieving.

Weak points

The CMEF is seen as having flaws in terms of the volume and value of data involved. The list of common indicators is seen to be long (leaving aside the additional indicators to be designed by MS); this fact, along with notably the obligation to break down indicators by age and sex of the beneficiaries where possible, is perceived as imposing a significant administrative burden.

Given the novelties of the system, MS / regions have used many of the indicators with varying levels of quality and completeness.

The CMEF has not fully overcome the difficulties involved in assessing the impact of policy action in cases where that impact is subject to multiple influences. However, it should be noted that such difficulties are certainly not unique to rural development policy – they are common in policy-making in general - and that the now-established European Evaluation Network For Rural Development will contribute to easing these difficulties.

2. MEASURE 121 – MODERNISATION OF AGRICULTURAL HOLDINGS²⁷

2.1. Description

The main purpose of investments under this measure is to improve the overall performance of farms by helping them to make better use of the factors of production. It can also provide assistance in complying with EU standards under certain conditions.

The maximum aid intensity permitted under the measure is 40 % in most cases. However, in Natural Handicap Areas (NHAs) the standard maximum rate is 50 %; young farmers are eligible for an extra 10 percentage points, inside NHAs and outside them; aid intensity can reach 75 % in outermost regions and in smaller Aegean Islands.

The range of investments which can be supported is very broad. Examples include (among many others):

- construction and renovation of buildings, including increased storage capacity for manure for fertilizing or energy production;
- new machinery and equipment (including computer software), including for spraying plant protection products and distributing fertilisers more accurately on the field;
- installation of on-farm renewable energy plants for on-farm consumption;
- energy efficiency;
- improvement of irrigation systems and facilities for water treatment and recovery;
- environmental and hygiene investments;
- improvement of product quality.

²⁷ Provided for in articles 20 (b) (i) and 26 of Council Regulation (EC) No 1698/2005

Measure 121 is programmed in all Member States in the current period and in 86 RDPs (Wales and Valle d'Aosta have not programmed it). The EAFRD budget allocated by RDPs to this measure is € 10 667 million for around 527 000 beneficiaries. The average contribution from the EAFRD is €18 300.

According to the financial plans in force at the end of 2010, this EAFRD contribution will be matched by € 6 645 million of national public funding and €25 770 million of private funding.

Support is mostly paid as a grant, but in some cases as both a grant and an interest rate subsidy.

2.2. Assessment – measure design and implementation

Strong points

In general, this measure can be very effective in its essential mission of improving the overall performance of farms. There is clear evidence that the measure has made a strong contribution to:

- reducing production costs²⁸ – especially by encouraging a more efficient use of labour;
- improving quality – often indirectly, as only a small proportion of investments appear to have been made with this in mind as a specific objective;
- increasing income;
- securing employment – even though the measure also leads to a more efficient use of labour;
- improving working conditions;
- improving animal welfare conditions;
- improving environmental performance (e.g. cutting greenhouse gas emissions through investments in heating, biomass, energy efficiency and liquid manure storage and sustainable use of pesticides).

The measure has been especially useful when appropriately targeted by sector and geography to meet specific needs²⁹. For example, according to various evaluation reports it has been particularly relevant in:

²⁸ Mid-term evaluations of the 2000-2006 period and DG AGRI's note "Analysing the support for investment in agricultural holdings" (2009)

²⁹ Rural Development Instruments study (2008)

- regions with small or medium-sized farms with low productivity where the measure is used to foster general modernisation, advance the pace of structural change and add value to products – though animal welfare and environmental concerns have also sometimes been addressed in such cases³⁰;
- regions with highly productive farms where the measure is used to address challenges related to the environment and animal welfare.

Several Member States report a very good uptake and financial execution, and the measure is considered to be a very important asset within the programmes³¹.

DG AGRI calculated that this measure has a high leverage effect. For every €1 of EU funds allocated, the total public support is €1.62 (i.e. with €0.62 from national / regional public funds). In addition to that, the average private expenditure is €2.47 – giving total spending of €4.09 for every €1 of EU funding.

Weak points

As stated above, the measure delivers clear benefits when targeted well; on the other hand, evaluation reports have suggested some instances of poor targeting, sometimes leading to deadweight effects in the case of support for large, highly productive farms undertaking 'traditional' investments - and for farms with a significant asset value which could have raised funding for investment from private-sector sources.

(However, it has been difficult to assess the extent of deadweight because of problems related to quantitative methodology and available monitoring data. Moreover, much of the relevant work carried out so far has focused on the EU-15 – whereas the picture is somewhat different in many regions of the EU-12, where lending markets are less developed and the scope for raising private capital is more limited.)

Although targeting has been introduced as prerequisite for the programming period 2007-2013, its possibilities have not fully been utilised³². In some cases, Member States / regions have made insufficient effort to target support at real needs (e.g. through eligibility conditions and selection criteria). In certain other cases, they applied targeting in theory, but in practice the application procedures and general administration attached to the measure were complex, and this sometimes led to a *de facto* exclusion of some farms in genuine need (e.g. small farms).

3. MEASURE 214: AGRI-ENVIRONMENT PAYMENTS³³

³⁰ DG AGRI's note "Analysing the support for investment in agricultural holdings" (2009)

³¹ This has been confirmed in the strategic monitoring reports submitted at the beginning of October 2010.

³² Rural Development Instruments study (2008)

³³ Provided for in art. 36 (a) (iv) and 39 of Council Regulation (EC) No. 1698/2005

3.1. Description

Agri-environment payments encourage farmers to adopt agricultural practices or levels of production intensity which deliver positive environmental outcomes but imply lower profits. They are an essential tool for integrating environmental concerns into the CAP, and they play a crucial role in meeting society's demand for environmental public goods and ecosystem services provided by agriculture.

In order to be supported by agri-environment payments, a given practice must go beyond a farmer's or land manager's legal obligations. The agri-environment payment then provides compensation for additional costs and income foregone resulting from the commitment.

In general terms, the payments help to combat and adapt to climate change (e.g. by cutting greenhouse gas emissions and sequestering carbon), preserve valuable habitats and biodiversity, conserve diversity in genetic resources, care for landscapes and manage a range of natural resources sustainably (e.g. water and soil).

The range of the specific practices / types of farming which are covered is extremely wide. Just a few examples include:

- organic farming (N.B. for environmental benefit only – not to influence product markets);
- maintenance or introduction of extensive farming practices and extensive livestock management;
- maintenance and management of landscape features;
- more sustainable use of chemical inputs (fertilisers and pesticides);
- conversion of arable land into grassland;
- management of habitats, and biodiversity preservation;
- establishment and management of riparian zones, buffer strips and field margins;
- maintenance of traditional and local breeds and conservation of genetic resources.

Agri-environment payments are not only by far the leading environmental measure but also, in terms of planned expenditure, the leading measure overall: in the current period, spending earmarked for measure 214 from the European Agricultural Fund for Rural Development (EAFRD) amounts to about €22 231 million, i.e. 23.1 % of total EAFRD funds.

The EAFRD contribution will be matched by €15 399 million of national public funds.

3.2. Assessment – measure design and implementation³⁴

Strong points

Essentially, although in the environmental sphere quantification is sometimes difficult, it is beyond question that measure 214 has delivered strong environmental benefits (see, for example, IEEP 2009).

The range of environmental benefits delivered is wide – partly because the range of practices / operations covered is also wide. These benefits vary not only in nature but also in "depth": it is possible to support both "light-green" measures (with relatively light commitments but broad coverage) and "dark-green" measures (with more demanding commitments but usually narrower coverage).

Many agri-environment measures provide multiple environmental benefits. For example, a reduction in chemical inputs will have a positive impact not only on water quality but also (in many cases) on climate change mitigation and biodiversity preservation.

The voluntary agri-environment approach complements the contribution of the first pillar of the CAP. Direct payments help to keep farming in place around the EU and the link to cross-compliance helps to ensure that farmers observe a mandatory baseline of environmentally sustainable farming practice. Agri-environment measures then help to meet objectives beyond that baseline – often, a long way beyond it – in line with the expectations of society.

Agri-environment measures are very flexible and may be designed at the national, regional, or local level so that they can be adapted to particular farming systems and specific environmental conditions, be spatially differentiated and target specific environmental objectives.

In many cases, agri-environment measures also provide non-environmental benefits, especially in terms of local employment (e.g. by making the countryside more attractive and thereby stimulating tourism).

³⁴ Relevant literature includes:

The Provision of Public Goods through Agriculture in the EU, IEEP 2009

Synthesis of Rural Development Mid-Term Evaluations EAGGF Guarantee, Agra CEAS Consulting 2005

A Pan-European Overview of How MS Approach the Delivery of Environmental and Social Public Goods through the 2007-13 RDPs, TWG3 2010

Impact Assessment of RDPs in View of Post-2006 Rural Development Policy, DG AGRI 2004

Evaluation of Agri-Environment Measures, Report for DG AGRI, Oréade-Brèche 2005

Review of RD Instruments, DG AGRI project, 2008

Measure 214 is now familiar to Member States and regions and well accepted by farmers. It is therefore widely used: according to an indicative target, in this period the measure will cover 50 million ha of land, or 28 % of the EU's utilised agricultural area (see section 4.1 for spending figures).

Weak points

In practice, although all proposed agri-environment measures must be justified (the justification including a calculation of related costs incurred and income foregone), in practice some measures are proposed whose likely net benefits are limited – e.g. in cases where:

- measures are insufficiently tailored to regional / local needs;
- measures involve only commitments just above the baseline of legal obligations (i.e. they are not combined with more demanding commitments);
- demanding commitments are (for budgetary reasons) not matched by an appropriate payment rate (which discourages take-up).

Measure 214 works on the basis of obligations defined in a contract which must last at least 5 years. This is sometimes seen as too short, and sometimes as too long – in the latter case, possibly discouraging some farmers and land managers from applying (e.g. if the land is rented).

The rules on using measure 214 to pay for "transaction costs" as well as (in some cases) costs arising directly from the environmental obligations are seen as unclear.

It is difficult (though not impossible) in the current rural development policy to link more complex agri-environment measures to support for relevant training for farmers and land managers who need help to make use of those measures.

Agri-environment measures sometimes entail the risk of a higher error rate than in some rural development measures. It should be emphasised, however, that this fact is inherent in some of the practices / operations supported and necessary to meet the measure's objectives (e.g. multiple obligations may be involved which can be checked only at certain times or over a relatively long period) – and it should be weighed against the benefits delivered.

4. MEASURES SPECIFIC TO THE FORESTRY SECTOR

4.1. Description

The current Council Regulation on rural development policy provides for eight measures specific to the forestry sector – one in axis 1 and seven in axis 2 (though there are many other measures which are not specific but relevant to the sector).

The forestry-specific measures are:

- Improving the economic value of forests (measure 122, article 27 of Council Regulation (EC) 1698/2005;

- First afforestation of agricultural land (measure 221, article 43);
- First establishment of agro-forestry systems on agricultural land (measure 222, article 44);
- First afforestation of non-agricultural land (measure 223, article 45);
- Natura 2000 payments in forests (measure 224, article 46);
- Forest environment payments (measure 225, article 47);
- Restoring forestry production potential and introducing prevention actions (measure 226, article 48);
- Non-productive investments (measure 227, article 49).

4.2. Assessment – measure design and implementation

Strong points

Between them, the forestry-specific measures address a broad range of objectives, economic and social (this range is further extended by the measures which are relevant to the forestry sector but not specific to it).

The relatively popular afforestation measures have helped to increase the extent of EU forests, which are a vital resource for combating climate change, maintaining environmental stability in other respects and providing raw materials for the sustainable production of energy and goods.

The measures addressing suitable care of forests rather than their creation have helped to meet a range of genuine needs, including:

- carbon sequestration;
- improvement of water balance;
- soil protection;
- preservation of biodiversity.

Weak points

Although the uptake of the afforestation measures has been good overall, these have been markedly less popular in areas of intensive farming.

The "baseline" for forest environment payments – i.e. the basic requirements for which the measure may not offer support - is not defined in the rural development Regulations. This has caused difficulties for programming authorities and probably helps to explain the measure's modest uptake.

The forestry-specific measures have struggled to catch the interest of owners / holders of the many small, fragmented pockets of forest which make up a significant share of the EU's total forest area.

Finally, anecdotal evidence suggests that some programming authorities and potential beneficiaries have found the sheer range of the forestry-specific measures a little confusing.

5. MEASURE 312 – SUPPORT FOR THE CREATION AND DEVELOPMENT OF MICRO-ENTERPRISES³⁵

5.1. Description

The essential aim of the measure is to support the creation and development of micro-enterprises "with a view to promoting entrepreneurship and developing the economic fabric" in rural areas (quotation from Regulation 1698/2005).

The measure has a wide scope, covering non-agricultural and non-forestry activities – as well as services linked to agriculture and forestry.

Typical supported investments include those in premises, equipment and (processing/industrial) facilities, IT software and patents.

Implementation of the measure is generally based on a business plan (especially in the case of starting a business), and on the demonstration of adequate professional abilities.

In the current period, the measure is programmed by 21 Member States, in 50 rural development programmes. The total planned EAFRD funding is €2 209 million.

According to the financial plans in force at the end of 2010, this EAFRD contribution will be matched by €885 million of national public contribution and €2 878 million of private funding. With national and private co-funding added, total investment should reach about €5.97 billion.

Actual spending started slowly – as is common in the case of measures in axis 3 – but has accelerated significantly.

The measure aims to support some 95 000 businesses and create 115 000 jobs.

5.2. Assessment – measure design and implementation

Strong points

The measure is extremely relevant to the general development of rural areas, offering support to existing and potential small-scale entrepreneurs to widen and develop the sources of growth and jobs in the countryside.

According to discussions with managing authorities, the measure is easy to implement and has a good absorption capacity – even in a context of economic crisis.

MS have found it feasible to use financial engineering tools in connection with this measure.

Targeting of the measure has been relatively strong – including through eligibility conditions (e.g. a minimum level of investment), selection criteria and aid intensities. Groups targeted include:

³⁵ Provided for in articles 52 (a) (ii) and 54 of Council Regulation (EC) No 1698/2005

- female entrepreneurs;
- young people;
- particular business sectors;
- particular parts of rural areas where economic diversity needs to be stimulated (mountains, areas with natural handicaps, remote areas, etc.)
- beneficiaries likely to score a good level of job creation.

Weak points

The limitation of the measure to micro-enterprises has been criticised (e.g. in official requests to the Commission from certain managing authorities). It is judged that supporting small enterprises would lead to considerable benefits – especially as this "gap" is in many cases not filled by other EU funds.

6. THE LEADER APPROACH

6.1. Description

The "Leader approach" is a tool for stimulating rural development which is more flexible, territorial, innovative and especially "bottom-up" than the traditional delivery approaches of rural development policy as a whole. Its main elements are:

- area-based local development strategies intended for well-identified sub-regional territories;
- local public-private partnerships (local action groups – LAGs);
- a bottom-up approach with decision-making power for LAGs concerning the elaboration and implementation of local development strategies;
- multi-sectoral design;
- implementation of innovative approaches;
- implementation of co-operation projects;
- networking of local partnerships.

In the previous period (2000-2006), the Leader approach was implemented through the Community Initiative "Leader +" and worked entirely outside the menu of mainstream rural development policy measures.

In the current period (2007-2013), the Leader approach has in a sense been brought into the "mainstream". This means that it can be used to implement projects which naturally relate to rural development measures in the main menu – though it is not limited to doing so.

Planned spending on Leader from the EAFRD in the current period is € 5 755 million– 6 % of total EAFRD resources³⁶. According to the financial plans in force at the end of 2010, this EAFRD contribution will be matched by €3 426 million of national public funding and €4 963 million of private funding, thus generating a total financial impact of € 14 144 million in the areas selected. More than 2100 LAGs have been selected so far (not counting groups in Romania or Bulgaria) – more than double the number under Leader +.

Actual spending on Leader started slowly but has been accelerating.

As the implementation of the Leader local development strategies in the current period is still at a relatively early stage in some Member States, the comments below relate both to Leader + (2000-2006) and to the current approach – distinguishing where necessary.

6.2. Assessment – conception and implementation

Strong points

Generally, Leader has been successful in promoting the diversification of rural economies.

There has been a positive impact on employment creation and maintenance, on income (through creation of new enterprises and activities and through improved marketing and promotion of existing activities) and the creation of new facilities and services for local people.

Leader has brought local actors together at both strategic and operational levels who would not otherwise have met or co-operated. It has supported the development of local governance capacities. It has developed professionalism, local knowledge and contacts, increasing local actors' capacity for self-organisation. The areas covered by Leader have critical mass but are small enough not to threaten personal interaction between stakeholders of various types.

There is evidence that social capital and territorial competitiveness have been enhanced by Leader. It has complemented mainstream programmes and in particular created the right conditions (i.e. in terms of actors' knowledge, experience and contacts) for drawing in financial support from other funds.

Innovation has been fostered - particularly through enabling local actors to start new activities, by combining existing activities/actors in new ways, and by linking local competences to external sources of knowledge and technology.

Greater fiscal autonomy appears to have led to greater scrutiny at LAG level of value for money, and thus contributed to greater added value.

³⁶ Member States of the EU-15 are obliged to spend at least 5 % of their EAFRD allocation on Leader; for Member States of the EU-12, the obligatory level is 2.5 %.

In the current period, where MS have taken advantage of the mainstreaming of Leader as intended, this shift has provided them with a useful "new" delivery mechanism and governance tool for achieving the objectives of mainstream rural development measures.

Weak points

In the current period, a significant number of Member States have subordinated Leader to the rules of the predefined measures in the measure catalogue. In these cases, the "innovative" quality of Leader has been compromised.

Following the inclusion of Leader in the administrative management of rural development policy as a whole, in some MS LAGs have no longer had adequate decision-making powers. This has hindered Leader's effectiveness.

In some cases, LAGs have lacked administrative capacity, and this and other factors have meant that the quality of local development strategies has been varied.

With regard to Leader + in particular (2000-2006), monitoring and evaluation were sometimes inadequate.³⁷

³⁷ It should be noted that, at the time of writing, the full evaluation of Leader + is about to become available.

Delivery mechanisms of rural development policy

Delivery mechanism	Description
EU strategic guidelines	<ul style="list-style-type: none"> • adopted by the Council • set out the EU goals to be addressed through rural development policy
National strategy plans	<ul style="list-style-type: none"> • submitted by Member States to the Commission (but not "approved") • identify national rural development needs and link them to EU objectives • set out means for co-ordinating rural development policy with other EU policies
Rural development programmes (RDPs)	<ul style="list-style-type: none"> • drawn up at either national or regional level • analysis of strengths, weaknesses, opportunities, threats (SWOT) in Member State / region concerned • set quantitative targets • select appropriate measures (see below), adapt these to national/regional needs • allocate funding to measures – ensuring that a minimum percentage of funding will be spent on each axis
Rural development measures	<ul style="list-style-type: none"> • basic building blocks of policy (for example the <u>measure</u> "farm modernisation") • describe <u>types of operation</u> (e.g. investment support for drip irrigation) that can be supported – with eligibility criteria, aid intensities, payment levels, other rules etc. • grouped into "axes" according to supposed effect (axis 1: competitiveness; axis 2: environment; axis 3: economic diversity and quality of life) + one "methodological" axis – Leader (axis 4)
Common Monitoring and Evaluation Framework (CMEF)	<ul style="list-style-type: none"> • provides indicators <ul style="list-style-type: none"> – output indicators (e.g. area under agri-environmental support) – result indicators (e.g. area under successful land management contributing to biodiversity) – impact indicators (e.g. reversing biodiversity decline) • and other tools for: <ul style="list-style-type: none"> – mapping out the baseline situation in Member States/regions – setting targets and monitoring progress – evaluating the impact of RDPs

Financial implementation – State of play

Measure code	Measure description	EAFRD realised 2007-2010	EAFRD programmed 2007-2013	EAFRD: % on target
111	Vocational training and information actions	178.374.159	1.088.770.755	16%
112	Setting up of young farmers	960.913.203	2.887.459.093	33%
113	Early retirement	1.087.495.694	2.853.038.896	38%
114	Use of advisory services	24.905.326	440.116.503	6%
115	Setting up of management, relief and advisory services	4.765.168	93.521.358	5%
121	Modernisation of agricultural holdings	4.006.385.790	10.667.014.207	38%
122	Improvement of the economic value of forests	91.251.870	653.687.055	14%
123	Adding value to agricultural and forestry products	1.184.998.893	5.647.323.016	21%
124	Cooperation for development of new products, processes and technologies in the agriculture and food sector and in the forestry sector	22.091.416	349.276.602	6%
125	Infrastructure related to the development and adaptation of agriculture and forestry	902.139.120	5.129.438.277	18%
126	Restoring agricultural production potential	128.594.404	477.542.677	27%
131	Meeting standards based on EU legislation	46.477.476	103.920.898	45%
132	Participation of farmers in food quality schemes	18.561.738	294.073.244	6%
133	Information and promotion activities	16.182.663	206.366.222	8%
141	Semi-subsistence farming	402.845.455	993.869.819	41%
142	Producer groups	61.948.011	327.863.144	19%
143	Providing farm advisory and extension services	1.912.534	131.773.438	1%
144	Holdings undergoing restructuring due to a reform of a common market organisation	0	17.030.527	0%
Axis 1		9.139.842.921	32.362.085.731	28%
211	Natural handicap payments to farmers in mountain areas	3.581.524.850	6.240.877.766	57%
212	Payments to farmers in areas with handicaps, other than mountain	3.788.760.958	7.241.359.414	52%

	areas			
213	Natura 2000 payments and payments linked to Directive 2000/60/EC	68.235.935	476.726.824	14%
214	Agri-environment payments	9.793.423.243	22.231.273.684	44%
215	Animal welfare payments	170.177.253	543.036.224	31%
216	Non-productive investments	72.592.201	591.086.049	12%
221	First afforestation of agricultural land	682.098.301	2.294.955.976	30%
222	First establishment of agroforestry systems on agricultural land	13.327	16.382.490	0%
223	First afforestation of non-agricultural land	48.658.741	347.805.392	14%
224	Natura 2000 payments	7.211.959	101.956.083	7%
225	Forest-environment payments	17.514.378	271.411.253	6%
226	Restoring forestry potential and introducing prevention actions	389.600.509	1.609.673.680	24%
227	Non-productive investments	131.439.024	808.940.730	16%
Axis 2		18.751.250.678	42.775.485.565	44%
311	Diversification into non-agricultural activities	201.037.922	1.488.899.856	14%
312	Support for business creation and development	199.303.071	2.208.788.801	9%
313	Encouragement of tourism activities	158.336.140	1.291.017.104	12%
321	Basic services for the economy and rural population	445.229.953	3.120.183.405	14%
322	Village renewal and development	655.075.573	3.107.941.407	21%
323	Conservation and upgrading of the rural heritage	247.085.155	1.314.598.779	19%
331	Training and information	19.961.244	147.529.893	14%
341	Skills-acquisition and animation measure with a view to preparing and implementing a local development strategy	40.488.786	150.021.451	27%
Axis 3		1.966.517.845	12.828.980.696	15%
411	Competitiveness	32.969.085	471.879.819	7%
412	Environment/land management	3.450.284	167.031.778	2%
413	Quality of life/diversification	293.883.419	3.877.472.891	8%
421	Implementing cooperation projects	5.070.698	278.555.888	2%

431	Running the LAG, skills acquisition, animation	166.786.045	959.729.194	17%
Axis 4		502.159.530	5.754.669.570	9%
511	Technical assistance	347.836.012	1.877.371.428	19%
611	Complimentary direct payments	438.676.604	645.581.697	68%
Total		31.146.283.591	96.244.174.687	32%

Where uptake of individual rural development measures has been slow at the time of writing, reasons include the following:

- administrative requirements which are relatively time-consuming in the start-up phase (*e.g. Leader approach*);
- limits on premia which are seen as low in relation to costs to be covered (*e.g. measure 114 – use of advisory services*);
- unclear level of need of measure in some areas (*e.g. 115 – setting-up of farm management, relief & advisory services – some services already in place in several Member States*);
- new measure, therefore more difficult to use – sometimes resulting in complex conditions put in place by Member States / regions (*e.g. 124 – co-operation for development of new products, processes & technologies*);
- in the case of measures "establishing" certain natural features, policy choice by Member States / regions to focus on maintaining existing areas with those features rather than establishing new areas (*e.g. 222 – first establishment of agro-forestry systems on agricultural land*);
- more demanding administrative procedures for implementing axis 3 types of measures compared to certain annual area related payments. This includes in particular the need for MS to prepare state-aid schemes and to organise broad project selection processes.
- preferences given by MS to other measures than axis 3 aid schemes in the context of accreditation processes when these were done by axis or by measure, with axis 3 (and its measures) being in general the last one to be accredited;
- need of running of public procurement procedures for selection of sub-contractors, which delay implementation (*e.g., 321 – basic services where municipalities are beneficiaries, but sub-contractors implement projects*);
- lack of advance payments to training institutions for carrying out vocational training activities (*e.g., 331 – training and information actions in rural areas*);
- difficulties of access to finance, especially for rural businesses (*e.g., 311 – farm diversification, 312 – micro-business development, 313 - rural tourism, etc.*)

Output and result indicators

Output indicators – State of play

Measures code	Measures	Number of RDP implementing the measures (max 88)	EAFRD 2007-2009	Total allocation 2007-2013	uptake level
111	Vocational training and information actions	78	93,266,011	996,338,654	9%
112	Setting-up of young farmers	69	537,109,921	2,729,762,572	20%
113	Early retirement	52	750,047,270	2,644,456,215	28%
114	Use of advisory services	60	12,241,690	662,546,667	2%
115	Setting up of farm management, relief and advisory services	33	1,958,763	137,271,564	1%
121	Modernisation of agricultural holdings	86	2,165,093,096	9,652,819,268	22%
122	Improvement of the economic value of forests	50	50,823,649	652,127,142	8%
123	Adding value to agricultural and forestry products	86	528,305,883	5,519,893,083	10%
124	Cooperation for development of new products, processes and technologies	55	8,006,806	336,457,412	2%
125	Infrastructure related to the development and adaptation of agriculture and forestry	78	456,373,495	4,866,010,414	9%
126	Restoring agricultural production potential damaged by natural disasters and introducing appropriate prevention actions	25	69,860,106	732,535,861	10%
131	Meeting standards based on Community legislation	17	44,128,620	96,683,558	46%
132	Participation of farmers in food quality schemes	51	7,694,531	293,455,582	3%
133	Information and promotion activities	47	6,998,387	212,320,517	3%
141	Semi-subsistence farming	8	268,766,385	915,274,606	29%
142	Producer groups	10	40,151,798	325,507,181	12%
143	Providing farm advisory and extension services	2	624,804	131,773,438	0%
Total Axis 1			5,041,451,215	30,905,233,734	16%
211	Payments to farmers in areas with handicaps (Article 36 (a) (i) of Reg. (EC) N, 1698/2005)	58	2,535,342,208	6,004,100,602	42%
212	Payments to farmers in areas with handicaps in mountain areas (Article 36 (a) (ii) of Reg. (EC) N, 1698/2005)	74	2,689,096,097	6,642,712,499	40%
213	Natura 2000 payments and payments linked to Directive 2000/60/EC (WFD)	28	38,923,729	471,826,214	8%
214	Agri-environment commitments	88	6,766,447,108	20,317,820,878	33%
215	Animal welfare payments	21	104,442,195	312,974,710	33%

216	Non-productive investments	49	26,179,845	462,790,092	6%
221	First afforestation of non-agricultural land	66	487,931,021	2,417,586,932	20%
222	First establishment of agroforestry systems on agricultural land	16	-	22,743,954	0%
223	First afforestation of non-agricultural land	39	21,584,293	360,798,588	6%
224	Natura 2000 payments	15	3,656,799	110,646,424	3%
225	Forest-environment payments	31	10,899,107	265,436,228	4%
226	Restoring forestry potential and introducing prevention actions	58	217,636,399	1,552,976,933	14%
227	Non-productive investments	71	71,172,180	808,852,967	9%
Total Axis 2			12,973,310,981	39,751,267,021	33%
311	Diversification into non-agricultural activities	67	84,033,772	1,442,111,649	6%
312	Business creation and development	51	57,332,430	2,185,744,982	3%
313	Encouragement of tourism activities	62	66,389,380	1,300,160,835	5%
321	Basic services for the economy and rural population	64	141,770,148	2,685,865,662	5%
322	Village renewal and development	54	223,388,217	3,046,071,082	7%
323	Conservation and upgrading of the rural heritage	69	125,595,829	1,265,471,141	10%
331	Training and information for economic actors operating in the fields covered by Axis 3	35	9,328,125	136,185,036	7%
341	Skills acquisition, animation and implementation	38	21,891,831	161,215,956	14%
Total Axis 3			729,729,730	12,222,826,343	6%
411	Implementing local development strategies - axis 1	61	13,841,102	522,378,659	3%
412	Implementing local development strategies - axis 2	43	1,446,691	165,209,131	1%
413	Implementing local development strategies - axis 3	86	96,583,627	3,725,553,233	3%
421	Implementing cooperation projects	87	1,038,962	265,619,794	0%
431	Running the local action group, acquiring skills and animating the territory	86	47,765,310	854,443,162	6%
Total Axis 4			160,675,692	5,533,203,979	3%
511	Technical assistance		197,240,105	1,925,361,913	10%
611	Direct Payments (RO and BG)		342,426,737	645,581,697	53%
Grand Total			19,444,834,460	90,983,474,687	21%

Monitoring output indicators 2007-2009, and targets 2007-2013
(before HC as at end 2009) ³⁸

Code	Measure	Output	Unit	Value (2007-2009)	Targets 2007-2013	% target
111	Vocational training and information actions	Number of participants in training	N,	1,136,877	5258036	22%
112	Setting up of young farmers	Number of assisted young farmers	N,	36,660	188,427	19%
113	Early retirement	Number of beneficiaries	N,	17,385	81,453	21%
		Number of hectares released	Ha	230,000	998,627	23%
114	Use of advisory services	Number of farmers supported	N,	34,800	1,125,166	3%
		Number of forest holders supported	N,	1,070	64,042	2%
115	Setting up of management, relief and advisory services	Number of newly set up management, relief or advisory services	N,	185	1,191	16%
121	Modernisation of agricultural holdings	Number of farm holdings that received investment support	N,	105,800	592,700	18%
122	Improvement of the economic value of forests	Number of forest holdings that received investment support	N,	6,020	68057	9%
123	Adding value to agricultural and forestry products	Number of enterprises supported	N,	7,060	69,000	10%
124	Cooperation for development of new products, processes and technologies	Number of cooperation initiatives supported	N,	353	5,683	6%
125	Infrastructure related to the development and adaptation of agriculture and forestry	Number of operations supported	N,	16,623	49,151	34%
126	Restoring agricultural production potential damaged by natural disasters and prevention actions	Supported area of damaged agricultural land	Ha	336,000	1,411,673	24%
131	Meeting standards based on Community legislation	Number of beneficiaries	N,	8,214	88,133	9%

³⁸ Source: RDIS IDIM 2009, outputs indicators for commitments made from 2007 onwards

132	Participation of farmers in food quality schemes	Number of supported farm holdings participating in a quality scheme	N,	134,000	393,381	34%
133	Information and promotion activities	Number of supported actions	N,	2,041	51,635	4%
141	Semi-subsistence farming	Number of semi-subsistence farm holdings supported	N,	8,885	110,889	8%
142	Producer groups	Number of supported producer groups	N,	280	2,162	13%
LFA	Support to Less Favoured Areas	Number of supported holdings in LFAs	N,	2,568,319	3,734,832	69%
		Supported agricultural land in LFAs	Ha	49,050,000	51,700,000	95%
213	Natura 2000 payments and payments linked to Directive 2000/60/EC (WFD)	Number of supported holdings in Natura 2000 areas/under WFD	N,	29,679	58,476	51%
		Supported agricultural land under Natura 2000/under WFD	Ha	536,492	1,506,695	36%
214	Agri-environment payments	Number of farm holdings	N,	947,000	2,778,267	34%
		Total area under agri-environmental support	Ha	33,150,000	60,000,000	55%
		Physical area under agri-environmental support	Ha	21,528,712	50,000,000	43%
		Total Number of contracts	N,	1,675,447	2,931,033	57%
215	Animal welfare payments	Number of animal welfare contracts	N,	126,700	184,287	69%
216	Non-productive investments	Number of farm holdings	N,	5,642	92,977	6%
221	First afforestation of agricultural land	Number of beneficiaries receiving support	N,	14,100	130,089	11%
		Number of ha afforested land	Ha	72,500	600,000	12%
222	First establishment of agroforestry systems on agricultural land	Number of beneficiaries	N,	0	277	0%
		Number of ha under new agroforestry systems	Ha	0	39,830	0%
223	First afforestation of non-agricultural land	Number of beneficiaries receiving support	N,	2,250	48,806	5%
		Number of ha of afforested land	Ha	19,500	222,776	9%
224	Natura 2000 payments	Number of forest holdings receiving aid in Natura 2000 area	N,	4,075	52,000	8%
		Supported forest land (ha) in Natura 2000 area	Ha	71,926	382,491	19%

225	Forest-environment payments	Number of forest holdings receiving support	N,	5,130	75,610	7%
		Total forest area under forest environment support	Ha	211,886	2,135,933	10%
		Physical forest area under forest environment support	Ha	187,256	919,762	20%
		Number of contracts	N,	8,750	76,939	11%
226	Restoring forestry potential and introducing prevention actions	Number of prevention/restoration actions	N,	19,370	132,717	15%
227	Non-productive investments	Number of supported forest holders	N,	39,411	136,876	29%
311	Diversification into non-agricultural activities	Number of beneficiaries	N,	4,971	83,944	6%
312	Business creation and development	Number of micro-enterprises supported/created	N,	6,111	94,700	6%
313	Encouragement of tourism activities	Number of new tourism actions supported	N,	3,691	44,146	8%
321	Basic services for the economy and rural	Number of supported actions	N,	8,707	86,651	10%
322	Village renewal and development	Number of villages where actions took place	N,	12,790	32,400	39%
323	Conservation and upgrading of the rural heritage	Number of rural heritage actions supported	N,	23,462	70,671	33%
331	Training and information	Number of economic actors participating	N,	49,390	501,000	10%
341	Skills acquisition, animation and implementation	Number of actions supported	N,	5,489	16,045	34%
414 412 413	Implementing local development strategies	Number of projects financed by LAGs	N,	7,090	1,118,258	0,6%
		Number of beneficiaries supported	N,	8,756	207659	4,2%
421	Implementing cooperation projects	Number of cooperation projects	N,	130	4,711	3%
431	Running the local action group, acquiring skills and animating the territory	Number of actions supported	N,	20,434	89,895	23%

Result indicators – state of play

	Result indicators	Targets	
AXIS 1	Number of participants that successfully ended a training activity related to agriculture and/or forestry	2 200 000	
	Increase in GVA in supported holdings/enterprises ('000 EUR)	25 900 000	
	Number of holdings / enterprises introducing new products and/or new techniques	334 000	
	Number of farms entering the market	130 000	
	Value of agricultural production under recognized quality label/standards (millions of euros)	16 700 000	
Axis 2	Agricultural and forestry areas under successful land management contributing to (ha)	Biodiversity	57 000 000
		Water quality	38 000 000
		Climate change	26 000 000
		Soil quality	37 000 000
		Avoidance marginalisation	53 000 000
Axis3	Increase in Non-agricultural gross value added in supported business ('000 EUR)	3 100 000	
	Gross number of jobs created	307 000	
	Additional number of tourist visits	Number of day visitors	7 808 000
		Number of overnight stays	7 366 000
	Population in rural areas benefiting from improved services	71 000 000	
	Increase in internet penetration in rural areas (nbr of persons)	47 060 000	
	Number of participants that successfully ended a training activity in the field of axis 3	572 000	

Annex 4b – Alignment with Europe 2020 through priorities and associated targets

1. INTRODUCTION

This section presents a preliminary analysis of possible EU "priorities" for the rural development policy post-2013 (the concept of "priorities" being an important aspect of improved strategic targeting in the integration scenario).

2. PROPOSED CONTENT, MODE OF OPERATION

The EU priorities for rural development would aim at translating the broad policy objectives outlined in overarching policy documents of the Commission (Europe-2020 strategy, the Communication on the future CAP) into a set of concrete priority areas for action for the policy.

For the Member States the EU priorities will support the preparation of the rural development programmes (programming) by logically linking the objectives of the policy to possible operational outcomes and to the available instruments (including the set of rural development measures currently under development). For the Commission, the EU priorities will represent a reference tool for steering the programmes towards EU strategic priorities, thus ensuring the EU added value of the policy.

The following five EU priorities for the rural development policy may be proposed, based on the analytical work carried out within the Impact Assessment process:

- Transfer of knowledge;
- Competitiveness and farm viability;
- Food chain organisation and risk management;
- Preserving and enhancing ecosystems dependant on agriculture and forestry;
- Low carbon economy, and resource efficiency
- Job potential and development of rural areas.

This classification intends to provide a logic and structured presentation of the policy, for example by distinguishing between priorities applying at sectoral level (priorities 2 and 3) from those applying at a broader territorial scale (priorities 4 and 5), or those mainly based on land management practices (priority 4). This is considered to be particularly important for steering programming effectively.

The content of this proposed list of priorities shows clear links with the Europe 2020 strategy, especially as regards the issue of sustainable growth and corresponding headline targets.

A number of possible synergies and complementarities exist between the different priorities (e.g. increasing resource efficiency can equally support the competitiveness of agriculture etc.).

Each of the priorities is intended to be matched by a limited number of "target indicators" (currently under development), which will have to be quantified ex ante, within programming, and regularly monitored during the implementation of the programmes. The target indicators intend to capture the expected (during the programming phase) and actual (during the implementation phase) outcomes of the programmes in relation to relevant intervention areas within each priority.

As for the measures which could possibly serve each of the priorities, full flexibility would be left to the Member States concerning the choice of measures and instruments for achieving the different priorities, in the context of strategic programming. As a result of the programming phase, the Member States will have to demonstrate that relevant combinations of measures are included into the programmes in relation to each priority, in view of achieving the corresponding targets.

Specific provisions would be defined in the design of the measures to ensure strong links with the priorities and with the horizontal guiding themes concerning climate change, environment and innovation.

When looking at the priorities, it is important to consider that a single measure (and projects under a given measure) can contribute to different priorities (and therefore to different target indicators). As an example, a given investment increasing energy efficiency of an agricultural holding will certainly contribute to priority 5, but it may also support the competitiveness of the agricultural sector (priority 2). Similarly, a more rationale use of chemical inputs as a result of, for example, agri-environmental measures, will at the same time increase resource efficiency at the level of the agricultural holding, helping reducing GHG emissions from agriculture (priority 5) and contribute to the protection of ecosystems (priority 4). Many other similar examples can be drawn.

3. IMPACT

The impact of the use of "priorities" in the manner outlined above would depend to a significant extent on the choice of target indicators matched to each priority.

For the purposes of this impact analysis, it is assumed that the target indicators chosen would be closer to what are currently referred to as "result indicators" than to "impact indicators".

Result indicators measure the "immediate" effects of an intervention by policy. They provide information on changes in (for example) the behaviour, capacity or performance of direct beneficiaries of the policy.

By contrast, impact indicators refer to the benefits of the policy beyond its immediate effects on direct beneficiaries – e.g. in the agricultural sector as a whole, or even in rural areas as a whole. It is more difficult to set targets for such indicators because they are affected by a wider range of factors.

The difficulties related to impact indicators have been apparent in the current period. Rural development programmes are supposed to set targets at the level of impact indicators, aggregated from targets at measure level and axis level. However, this has proved challenging in some programmes; and in these cases, much of the reliable targeting carried out has been at measure level. Such targeting is not without value; however, the picture which it gives of the effect of rural development policy may prove not to be completely satisfactory.

Therefore, in the period after 2013, choosing appropriate target indicators closer to the result level than the impact level should make the targeting system more manageable. (It should be noted that impact indicators would still be used within the overall evaluation process, but would not be used for ex-ante targeting.) Of course, there would still be a certain administrative burden involved: the effort involved in agreeing the targets for a given programme - and then agreeing the combination of measures to be used to meet those targets – should not be underestimated. On the other hand, administrative effort is already involved in the current approach to setting the main targets. Overall, there should be a simplification effect (even if the provisions of "greening" in the first pillar of the CAP had to be taken into account in some cases for target-setting in rural development policy).

At the same time as being more manageable, a targeting system with the right priorities and indicators would provide an improved picture of what was being achieved by rural development policy, in line with Europe 2020 and other sources of strategic orientation. Result indicators are capable of providing "useful" information; moreover, priorities and target indicators chosen specifically with Europe 2020 in mind would of course give a clearer image of how rural development policy was serving the Europe 2020 strategy.

Furthermore, it should be repeated here that the explicit flexibility which MS / regions would enjoy in using measures in combination to achieve any given target set against priorities would allow them to construct programmes with stronger intervention logics.

Annex 4c – Implications of a change in the management system

Introduction

This annex attempts to assess the possible impact of various approaches to managing rural development policy, in line with the three scenarios set out in the impact assessment exercise as a whole.

It should be read in conjunction with annex [], which presents a picture of how (and how well) rural development policy has been functioning in the current period of 2007-2013.

As it limits itself to questions of management, it does not look in detail at the impact of the changes in the content of the policy.

1. SCENARIO 1: "ADJUSTMENT"

1.1. Summary of the management approach to be applied (see also table 1)

Under this scenario, the management approach for rural development (RD) policy would be essentially the same as in the current period (2007-13).

- Strategic targeting (result-based management) would be applied, in more or less the same manner as at present.
- The overall strategic objectives of the competitiveness of agriculture, the sustainable management of natural resources and balanced territorial development would apply.
- Rural development programmes (RDPs) would still operate at either national or regional level. As at present, they would be subject to an approval process.
- RD measures would still be divided into axes. Each axis would still have one (and only one) strategic objective attached to it; minimum spending requirements would apply to each axis for each RDP. (This is a form of input-based management.)
- Under the "Health Check method" of ring-fencing, minimum spending requirements would also apply to operations related to a small number of objectives which would be more specific than the "strategic" objectives. These would be related either to competitiveness and innovation, or to the environment. (This is another form of input-based management.)
- Complementarity / demarcation between RD policy and other policy tools would still be ensured primarily at national / regional level.

1.2. Impact

The use of strategic targeting as it currently operates would continue to help MS / regions to base their national strategy plans (NSPs) and RDPs on the overall objectives of the EU as well as on their national, regional and local needs – with the help of: EU strategic guidelines; analyses of strengths, weaknesses, opportunities and threats (SWOT); ex-ante evaluations of RDPs; and ongoing monitoring and evaluation.

However, the effectiveness of strategic targeting would be compromised by the continued existence of the axis system:

- Some MS / regions would probably still yield to the temptation of agreeing the division of funding between axes as a "political" decision³⁹ in a first step, and then designing their NSPs / RDPs on this basis. In other words, decisions about funding would in some cases precede decisions about objectives, rather than the other way round.

³⁹ *Step One Report*, European Network for Rural Development Thematic Working Group 4, [October 2010]

- With the axis system still in place, the process of using measures in combination to meet objectives would continue to be problematic⁴⁰ - especially because there are administrative difficulties involved in combining measures from different axes. The axis system would also continue to make it impossible to give a full picture of the effects achieved by measures, as it would still be assumed that a given measure contributed to one objective and one only (so that an investment in a farm raised either economic or environmental performance – not both).

The axis system would nevertheless continue to provide a crude guarantee that the spending of a given MS / region on a given strategic objective would not drop below a certain minimum level. The guarantee would be "crude" in the sense that it would not reflect the fact that most measures contribute to more than one objective, and that it would in itself give no information about the quality or impact of measures.

Ongoing ring-fencing in the style of the Health Check would continue to ensure that certain amounts of funding were still being spent on certain relatively specific objectives (more specific than the strategic objectives). However, this would in no way guarantee outcomes – it would essentially be an exercise in "labelling" money – and would therefore contradict the approach of strategic targeting. By its very nature (as experienced in the current period), it would continue to add considerably to the administrative burden borne at EU, national and regional level.

2. SCENARIO 2: "INTEGRATION"

2.1. Summary of the management approach to be applied (see also table 1)

- Strategic targeting would be applied, with certain adaptations (see below).
- The overall strategic objectives of the competitiveness of agriculture, the sustainable management of natural resources and balanced territorial development would apply.
- The policy would also make use of a number of "priorities" (probably about 6 in number). These would reflect the broad objectives but be more specific / operational. Examples could include "food chain organisation and risk management" and "low-carbon economy and resource efficiency".
- Innovation, the environment and action over climate change would be guiding themes within the policy. In other words, they would have to be taken into consideration in the design of every section of a given RDP, even sections designed to contribute primarily to other objectives (e.g. competitiveness).

⁴⁰ *Synthesis of Ex-Ante Evaluations of Rural Development Programmes 2007-2013, Final Report*, European Commission, December 2008

- The current EU strategic guidelines for rural development would be replaced by a common strategic framework (CSF) which would cover the European Agricultural Fund for Rural Development, the European Regional Development Fund, the Cohesion Fund, the European Social Fund and the European Fisheries Fund.
 - The CSF would set out how each fund could contribute to the goals of the Europe 2020 strategy (smart, sustainable and inclusive growth). In the case of rural development policy, this implies that the CSF would indicate by which means the rural development "priorities" would contribute to achieving the overarching goals of the Europe 2020 strategy.
 - In one version of the scenario, strict "burden-sharing" would be attempted between the funds within the CSF. In other words, there would be an attempt to quantify – at EU level – the contribution which each fund could make to the objectives of Europe 2020.
 - In another version of the scenario, the description of how each fund could contribute would be mainly qualitative. Any quantitative targets which were set for rural development policy within the CSF would be indicative, and they would not be set with mathematical reference to the other funds.
- The CSF would be matched by equivalent national framework documents, reflecting the scope and objectives of the CSF at the level of each Member State. This could take the form of "Partnership Contracts", the precise structure and content of which will be defined by the Commission Services concerned by the CSF.
- RDPs would still operate at either national or regional level. As at present, they would be subject to an approval process.
 - All RDPs would contain a SWOT analysis.
 - On the basis of this, within each RDP, targets of the appropriate kind would be set for each "priority". (Those targets would have to balance several requirements: for example, they would have to function with indicators which would say something meaningful about what was being achieved but which would also be useable in practice.) The axis system would be abolished. Measures would be used more flexibly in combination to serve the priorities.
- Ring-fencing in the style of the CAP Health Check would be abolished.

2.2. Impact

N.B. For more detail on the use of "priorities" and associated targets, see annex 4.

Introducing a common strategic framework (CSF) matched by equivalent national "Partnership Contracts"

If it provided guidelines at EU level on how the five funds concerned would work together in the service of *Europe 2020*, the CSF and "Partnership Contracts" would provide greater consistency from one MS / region to another in terms of how the funds are co-ordinated. On the other hand, this could mean less flexibility for MS / regions in deciding how to co-ordinate the funds on their territory. Therefore, there might be a particular gain for MS / regions which have struggled to ensure this co-ordination in the current period, but less of a gain for others.

This point might be especially relevant to co-ordination at the regional (in the Member States implementing regional programmes) and sub-regional level, where the sophistication of strategies to co-ordinate funds varies significantly.

If the CSF attempted strict "burden-sharing" – i.e. if it selected targets related to *Europe 2020* and then quantified (in a binding fashion and at EU level) the contribution which each fund could make, a heavy technical and administrative burden would result:

- It would be difficult to make a reliable assessment of the potential contribution of each fund towards some targets – especially in cases where that potential contribution was small.
- There could be an organisational mismatch between the funds concerned and other tools for implementing the *Europe 2020* strategy. On the one hand, the CSF would define how instruments would work together at EU level. On the other hand, within the main framework of *Europe 2020*, MS would be defining how instruments should work together at national level – through their National Reform Programmes.

If the CSF limited itself to a primarily qualitative description of how each fund could contribute to the objectives of *Europe 2020*, the problems described above would be avoided. Nevertheless, the CSF would probably still help to steer RDPs into contributing to *Europe 2020* - though this would depend on how well the strategic programming approach was executed (see next section).

This steering effect might be amplified if, in relation to rural development policy, the CSF contained a small number of relevant indicative quantified targets set at EU level (e.g. "X % of the EU area covered by RDPs should be covered by biodiversity-related agri-environment contracts"), but not derived mathematically. The targets could also make the content of rural development policy more visible. However, it must be emphasised that setting realistic targets would be difficult, and it is open to question whether the targets would be of much value if failure to reach them resulted in no follow-up action.

Similar considerations can be made concerning the development of national "Partnership Contracts"

From the perspective of simplicity, creating a CSF and "Partnership Contracts" would have implications for the decision-making process: as they would involve several funds, the process of agreeing the CSF and "partnership Contracts" would probably be more complex than the process of agreeing individual sets of guidelines for each fund and separate coordination mechanisms within each fund.

Relying on strategic targeting, abolishing the axis system and ring-fencing

Perhaps the central question related to scenario 2 is: Would it result in RDPs that reflected the genuine needs of regions, MS and the EU in a balanced way?

A fear has been expressed that the abolition of the axis system and its minimum spending requirements would allow MS / regions to spend disproportionate sums of money on certain objectives (for example, competitiveness) for "political" reasons while inappropriately neglecting others (for example, environmental care).

It is very difficult to test this hypothesis about a possible future. However, a related question which can be addressed instead is whether the axis system has exerted any influence on spending choices in the current period. And indeed, an examination of the spending decisions which MS made prior to the CAP Health Check suggests that the minimum spending requirements of the axis system probably did exert a certain influence in some cases.

The table on page [10] presents planned allocations of EAFRD funding as of August 2008 (before the CAP Health Check came into effect), ordered by MS. It is intended to give an approximate view of how MS were dividing up their EAFRD resources once most initial difficulties with the programming process had been resolved.

It emerges from the table that planned spending levels were close to the minimum permitted minimum levels⁴¹ in some cases, especially with regard to axes 3 and 4.

The table must be treated with considerable caution for at least two reasons.

- First, for the sake of simplicity, the table does not take account of the fact that some MS operate regional rather than national RDPs.
- Secondly, the situation is complicated by the fact that, in the current period, all RDPs must offer the agri-environment measure. This obligation may have raised total spending per MS on axis 2 measures overall – though this cannot be proved.

Nevertheless, the table suggests (it falls a long way short of “proof”) that the axis system has probably had a certain influence on spending decisions in the current period.

There appears to be rather less comment in the public domain about the possible consequences of abolishing the ring-fencing that was introduced with the CAP Health Check. This may be because the system has not been in place for long.

It should be borne in mind that this type of ring-fencing was not designed to be a comprehensive management system in itself; it was intended as a means of steering existing RDPs to use additional funds (provided by additional modulation) in a particular direction mid-way through the current programming period.

⁴¹ Essentially, before the CAP Health Check made extra resources available with different rules attached, RDPs had to allocate at least 10 % of their EAFRD resources to axis 1, at 25 % to axis 2 and at least 10 % to axis 3. The obligatory minimum spending levels for axis 4 were 5 % for the EU-15 and 2.5 % for the EU-12.

Therefore, abolishing Health-Check-style ring-fencing for a new programming period should not make it difficult to produce balanced RDPs - provided that the management mechanisms still in place performed adequately.

Having considered the respective roles of the axis system and ring-fencing, we now come to the heart of the matter: Would the strategic targeting approach alone be sufficient to steer MS / regions into producing balanced RDPs?

An essential point is that the Commission would retain a very important lever: RDPs would remain subject to a full approval process, and the Commission would simply not propose approval for an RDP before being satisfied that the RDP was of sufficient quality – in other words, that it reflected the relevant ex-ante evaluation, that it was in line with the CSF, and that it addressed each priority adequately, also taking account of the cross-cutting guiding considerations of innovation, the environment and climate change.

A "firm" approach of this sort would be all the more effective if negotiations over RDPs focused clearly on important points and were not sidetracked by less significant details. Provided that the CSF did not create excessive additional complexities (see related section), we could reasonably expect that the process of strategic targeting would operate more effectively and efficiently after 2013 than in the current period because MS / regions would have acquired additional experience of the process⁴².

If we assume that the strategic targeting process would function reasonably well, there would be benefits from abolishing the axis system and the ring-fencing of the Health Check:

- It would be easier to combine measures to reach particular objectives / priorities.
- It would also be possible to explicitly design measures which contributed to more than one objective / priority.
- There would be one logical approach applied (result-based targeting), rather than two approaches (result-based plus input-based) founded on three elements (strategic targeting, the axis system and ring-fencing). This would be a simplification.
- The particular administrative burden imposed by ring-fencing would be gone.

Some might claim that there would be a disadvantage related to financial reporting. Once it had been admitted that many individual measures contribute to more than one objective / priority each, it would no longer be an easy process to state how much funding was being spent on a given objective / priority.

However, it must be re-emphasised here that the apparent ease with which this can be done within the axis system is misleading, because the system makes false assumptions about the range of impacts of measures and says nothing about what is actually achieved.

⁴² *Review of Rural Development Instruments, Final Report*, Dwyer et al., July 2008

In any case, it might be possible to estimate approximately how much was being spent on a given objective / priority . Moreover, precise financial reporting would still be provided with regard to spending on individual measures.

3. SCENARIO 3: REFOCUS

3.1. Summary of the management approach to be applied (see also table 1)

- Strategic targeting would be applied, but with a much narrower range of intended outcomes (see below).
- Rural development programmes (RDPs) would still operate at either national or regional level. As at present, they would be subject to an approval process.
- The policy would make use of a number of relatively specific "priorities" (see section 2). In this scenario they would be very sharply focused on the environment, though an additional objective would be to facilitate the phasing-out of direct payments.
- As the priorities would be more focused, the axis system would be abolished.
- Ring-fencing in the style of the CAP Health Check would be abolished.
- Within each RDP, a limit would be placed on spending on temporary measures to ease the process of phasing out direct payments.
- Rural development policy would retain its own set of EU strategic guidelines.
- The policy could participate in a Common Strategic Framework, though it could conceivably stay out given its sharper focus.

3.2. Impact

Some of the political "tensions" of the programming process might be removed, since there would no longer be "competition" between substantially distinct objectives: the objectives would all be of an environmental nature except the objective of easing the phasing-out of direct payments.

This statement depends partly on two assumptions, namely that:

- strict limits would be placed on spending on temporary measures related to the phasing-out of direct payments;
- the Commission would take care not to allow "hidden income support measures" – i.e. measures which were apparently "environmental" but in fact offered farmers excessively high payments for very modest environmental achievements.

The abolition of the axis system and of ring-fencing in the style of the Health Check would lighten the administrative burden.

It would probably be easier to achieve demarcation between rural development policy and other policies because the field of activity of rural development policy would be much narrower.

However, full complementarity – including the avoidance of "funding gaps" between policies – would be a much sterner challenge. Whereas at present, support for the general socio-economic development of rural areas is programmed within rural development policy, under the refocus scenario any such support would be administered through other EU policies (if it were maintained at all): the "automatic" synergies between funding for the environmental care and for socio-economic development would be lost. The inclusion of rural development policy in a CSF could be helpful in this respect (see section 2.2 for a discussion of the likely advantages and disadvantages of a CSF).

Strictly in terms of management: Difficulties of demarcation between the current first and second pillars of the CAP would be over, since the first pillar would no longer exist.

Overall, the programming process might be simpler with regard to rural development policy itself. However, this would depend partly on whether very precise targeting of funds at very precise environmental outcomes was sought. If the level of ambition were high in this respect, that would imply considerable effort in the development and use of sophisticated measures, priorities and indicators.

Table 1

Summary of key elements of each scenario for the purposes of this annex			
Management element	Scenario 1 Adjustment	Scenario 2 Integration	Scenario 3 Refocus
Strategic targeting?	Yes Broad objectives related to competitiveness, natural resources and development of rural areas retained	Yes Broad objectives related to competitiveness, natural resources and development of rural areas retained Innovation, the environment and climate change would be cross-cutting guiding themes Small number of operational "priorities" with accompanying indicators would fix areas of emphasis	Yes Overall objectives more focused on environment
RDPs – national or regional?	Both, as at present	Both, as at present	Both, as at present
Axis system?	Yes	No - abolished	No - abolished
Ring-fencing in style of CAP Health Check?	Yes Operates in favour either of competitiveness / innovation, or of environmental issues	No – abolished	No - abolished
Common Strategic Framework?	No	Yes	Possibly no, possibly yes
National Frameworks ("Partnership Contracts")?	No	Yes	Possibly no, possibly yes

Table 2

% levels of planned EAFRD spending per axis by Member State									
(situation in August 2008 – before CAP Health Check)									
MS	Axis 1 (10%)	Axis 2 (25%)	Axis 3 (10%)	Axis 4	MS	Axis 1 (10%)	Axis 2 (25%)	Axis 3 (10%)	Axis 4
BE	49 %	36 %	12 %	5.0 %	LU	29 %	59 %	9 %	5.9 %
BG	38 %	25 %	28 %	2.4 %	HU	46 %	33 %	16 %	5.5 %
CZ	23 %	55 %	20 %	5.0 %	MT	34 %	27 %	34 %	4.0 %
DK	21 %	63 %	12 %	9.6 %	NL	32 %	31 %	34 %	9.9 %
DE	28 %	41 %	29 %	6.0 %	AT	15 %	72 %	10 %	5.5 %
EE	38 %	37 %	19 %	10.0 %	PL	41 %	34 %	23 %	4.8 %
IE	10 %	80 %	10 %	10.0 %	PT	46 %	41 %	8 %	10.1 %
EL	44 %	35 %	18 %	6.1 %	RO	40 %	24 %	26 %	2.3 %
ES	45 %	39 %	12 %	11.3 %	SI	34 %	52 %	12%	3.0 %
FR	38 %	50%	10 %	5.1 %	SK	34 %	50 %	14 %	3.0 %
IT	38 %	44 %	14 %	8.1 %	FI	11 %	74 %	13 %	5.3 %
CY	44 %	44 %	10 %	2.7 %	SE	15 %	70 %	11 %	5.8 %
LV	47 %	28 %	20 %	2.5 %	UK	13 %	73 %	13 %	6.2 %
LT	40 %	38 %	18 %	6.3 %					

Notes:

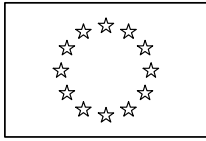
(1) The figures are approximate, based on data published in *Rural Development in the EU, Statistical and Economic Information, Report 2008*. They do not add up to 100 % because of rounding, other spending and the fact that some axis 4 spending is also counted under axes 1, 2 and 3 (see note 3 below).

(2) The obligatory minimum spending levels laid down in Regulation (EC) 1698/2005 are 10 % for axis 1, 25 % for axis 2 and 10 % for axis 3.

(2) The minimum level laid down for axis 4 is 5 % for MS which acceded to EU before 1 May 2004 and 2.5 % for MS which acceded on or after 1 May 2004.

(3) Planned spending on measures 411, 412 and 413 is counted not only under axis 4 but also under axes 1, 2 and 3 (respectively). For the sake of simplicity, spending under other axis 4 measures is not also counted under axes 1, 2 or 3, even though it may contribute to achieving the objectives of those axes.

(4) It should be recalled that obligatory minimum spending levels operate at programme level – and some MS operate regional rather than national programmes.



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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 5

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Annex 5: Market Measures

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1. CONTEXT

Agricultural market developments have attracted considerable attention recently, due to increasing consumer food prices and excessive short term price fluctuations of agricultural commodity prices. Agricultural commodity prices have displayed historically high levels of volatility with very sharp variations in short periods of time, commencing with the commodity price boom in 2007, followed by the steep fall in the wake of the economic crisis and the recent sharp rebound in 2010.

Although some price variation is functional to agricultural markets, extreme or excessive fluctuations cause major uncertainties for producers. Indeed, the impact of excessive price fluctuations on food production is a source of concern for farmers (but also others along the supply chain). This issue has brought a lot of attention to the role of market instruments in stabilising markets, as well as stabilising farmers' incomes.

Another source of concern is the cost of inputs. For the past five years, input costs have, on average, increased faster than output prices, leaving farmers with a 'squeezed' margin between fluctuating revenues and structurally higher input costs. Therefore, merely focusing on stabilising the prices farmers receive is no longer sufficient in stabilising farmers' incomes. Rather, it requires a more complex approach, taking into account also the cost side of the income equation¹.

The aim of this note is to review the existing market instruments in the context of emerging factors influencing agricultural markets and the objectives set out in the Communication on *The CAP towards 2020*, of stabilising markets and contributing to farm income, improving competitiveness of agriculture, and enhancing the value share of agriculture along the food chain. The resulting options for policy change are then assessed with regard to their potential economic, environmental and administrative impact as well as their compliance with WTO obligations.

1.1. The current policy framework

The Single Common Market Organisation (sCMO)² provides the legal framework for the market instruments currently available with regard to domestic markets, trade with third countries and rules regarding competition. A brief overview of these instruments is presented below, organised according to their scope for (internal) market management, border control and supply chain functioning.³

¹ See Annex 6 on Risk Management.

² COUNCIL REGULATION (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products

³ Annex I provides a more detailed description of current instruments, while additional elements are referred to in Annexes II and VI on quality policy and consumer related policies.

Market management measures

Private storage aid represents a first layer of market management, as it is triggered, as a general rule, at a price level which is closer to market prices (above the intervention price level). The aid is mandatory for butter and optional for white sugar, beef, pig meat, sheep and goat meat, and olive oil. Private storage has been applied several times for meat products, and in 2008 for olive oil, whereas due to the market condition it has not been used for beef and sugar (and sheep meat only in the 1990s).

Public intervention is foreseen for cereals, rice, skimmed milk powder (SMP), butter and beef. Intervention prices, triggering mechanisms, calendars and quantitative ceilings vary across sectors. For cereals (with the exception of wheat) and rice, opening of buying-in is decided by the Commission.

Special intervention measures and special measures in case of market disturbances can be implemented at member state or regional level under specific circumstances for certain sectors: to combat animal diseases for animal products or in case of loss in consumer confidence (for poultry only), or in cases where prices on the EU market rise and/or fall significantly.

Production quotas have been an important instrument for market stabilisation, in sectors facing overproduction, notably the dairy, sugar and wine sectors. Dairy and sugar quotas are set to expire following the respective 2014/2015 quota year, following earlier decisions on the CMO in 2003 and 2004 respectively. The wine planting regime is set to end from 1 January 2016 (although some national restrictions may remain until 2018).

Other instruments whose main aim is not that of supporting markets could have an indirect impact on market stability or assist in insulating farmers from extreme volatilities in commodity markets, such as the existing food programme for the most deprived persons⁴. Other programmes, like the school milk⁵ and school fruit⁶ schemes provide aid for the distribution of these products under certain conditions to schoolchildren.

EU quality policy instruments provide producers the possibility to add value-added to their products by the protection of certain marketing designations in the marketplace (e.g. geographical indications, organic label, and traditional specialities). Thus, a retailer can only offer such products by purchasing them from the limited volume of certified products. This ensures farmers participating in quality schemes⁷ a price premium and a certain protection against short term commodity price fluctuations.

Border protection

Common import tariffs apply for most agricultural products. Tariff-rate quotas are also used for various products. Imports can enter with lower tariffs or even duty and quota free under EU preferential agreements. There are safeguard provisions (especially additional duties) should imports reach trigger levels (high volumes and/or low prices). As a

⁴ http://ec.europa.eu/agriculture/most-deprived-persons/index_en.htm

⁵ http://ec.europa.eu/agriculture/markets/milk/schoolmilk/index_en.htm

⁶ http://ec.europa.eu/agriculture/markets/fruitveg/sfs/index_en.htm

⁷ See Annex II on the inter-relation of EU quality instruments and market measures.

combined result of CAP reform, WTO rules and world market developments, the use of export refunds has significantly decreased in terms of expenditure, quantities and product coverage.

Measures linked to food chain functioning

The sCMO is the common legal base for recognition by Member States of certain forms of producer cooperation in selected sectors.

Producer organisations (POs) are operating in the fruit and vegetables (F&V), olive oil, hops, wine and tobacco sectors, although with different objectives and means.⁸ The current aim of POs in the F&V sector is to ensure that production is planned and adjusted to demand, both in terms of quality and quantity; to concentrate supply and to place products produced by its members on the market, and to optimise production costs and stabilise producer prices. Each PO has to market the production of its members and can manage one or more of those actions. Specific rules exist for association and recognition of POs and associations of producer organisations (APOs) in the F&V sector. Recognition - either POs or APOs - is merely an 'entrance requirement', and not a support measure in itself.

EU funds to POs in the F&V sector are provided in the form of contribution to the creation of operational funds, co-financed in most cases at 50 % and limited to 4.1 % of the value of marketed production. Support is currently available under rural development to foster the setting up and the administrative operation of producers groups (PGs)⁹ in EU-12 Member States.

Interbranch organisations (IBOs): Member States are obliged to recognise IBO organisations in the F&V, olive oil and table olives, and tobacco sectors. Common rules are also laid down for IBOs in the wine sector and under proposal for the dairy sector. The disciplines decided by the IBO members are only effective for the members of the IBO. For example, when the French F&V IBO decides quality rules for apples, they do not apply to apples produced in other Member States or third countries. The possibility to extend certain rules issued by an IBO to national non-member producers are however possible in the F&V sector. As for POs and APOs, recognition is merely an 'entrance requirement', and not a support measure in itself.

1.2. Emerging factors

The CAP reform process started with the MacSharry reform in 1992 aimed to **increase market orientation of the sector and thereby contribute to enhancing its competitiveness**. This has been achieved through the progressive reduction of support prices (see Figure 1) and other support instruments, while at the same time accompanied by the introduction of direct payments with the aim of ensuring a certain degree of income stability to producers.¹⁰

⁸ While the available legislation provides for POs in the silkworms sector, none exist currently.

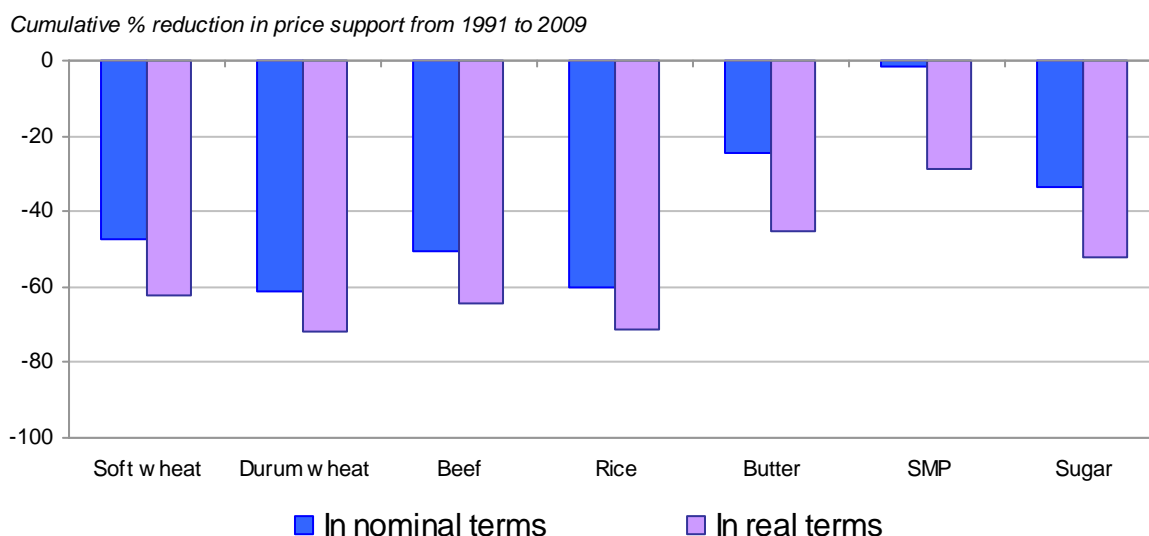
⁹ Producer groups are defined as farmers organisations that have not yet achieved the status of recognised producer organisations

¹⁰ The Agricultural Policy Perspectives Brief on *The CAP in perspective: from market intervention to policy innovation, January 2011* provides an overview of policy developments since the MacSharry reform. http://ec.europa.eu/agriculture/publi/app-briefs/01_en.pdf

During the Health check of the CAP, intervention has been modified in a way that keeps its **role as a safety-net for farmers in case of market disruptions**.¹¹ It was also decided to gradually increase milk quotas in order to pave the way towards a soft landing for the dairy sector in 2015, when quotas will expire.

Intervention prices for cereals have been lowered in total by 45 % in nominal terms (30 % in the 1992 Reform and by 15 % in Agenda 2000), and through abolition of monthly increments during the Health Check reform. The intervention price for wheat has been lower than both the EU and world market prices in the last decade, and EU market prices have been following the same trend as world prices.

Figure 1: Reductions in EU price support since 1991



Source: DG Agriculture and Rural Development.

In the beef sector intervention prices have been lowered by a cumulated 50 % in nominal terms following cuts under the MacSharry and Agenda 2000 reforms. The intervention price for beef has been much lower than EU and world market prices during the last eight years, with EU prices following the same trend as international prices.

SMP and butter intervention prices have been reduced by 15 % and 25 % respectively since Agenda 2000. SMP support prices have been further reduced under the 'mini milk package' in 2008 to take account of protein standardisation.¹² In the case of butter, the average EU market price seems to have been reflecting trends in the international market since 2007 although the EU market price remains in general above the world price level.

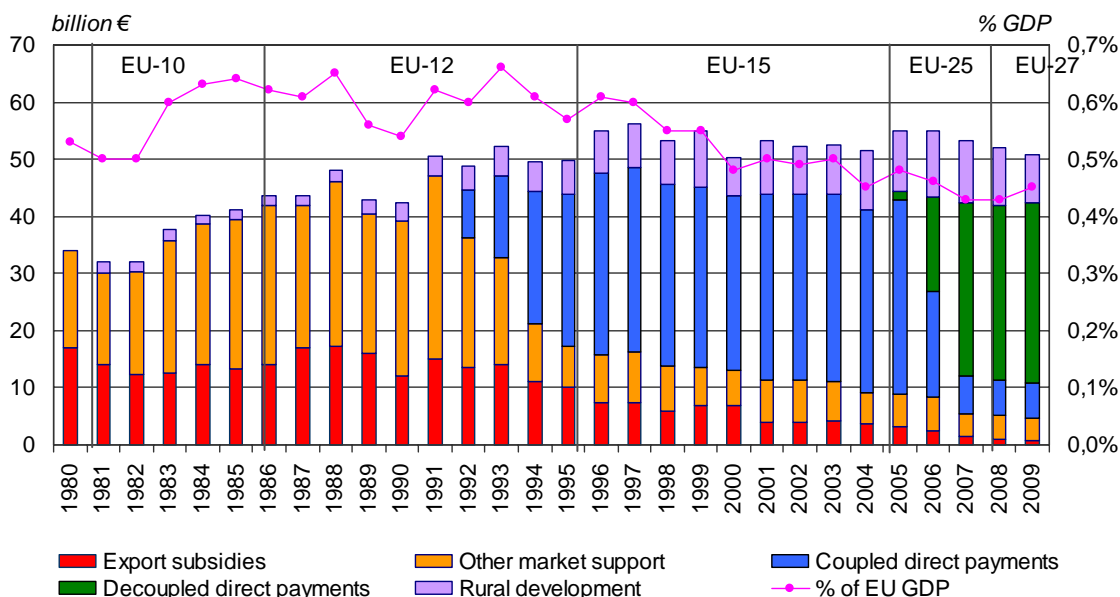
Under the ongoing WTO negotiations, the EU has committed itself to phase-out export refunds on the condition of the elimination of all similar measures by other developed countries. A successful completion of the Doha Development Round of agricultural trade negotiations would imply that these instruments could no longer be used.

¹¹ Annex III provides an overview of the implications on competitiveness between Member States in three main sectors (dairy, wheat and beef) based on comparing operating costs and total receipts with respect to intervention price levels

¹² COUNCIL REGULATION (EC) 1152/2007 of 26 September 2007

These policy changes (as well as the introduction of the mechanisms of modulation and financial discipline) have significantly changed the level and composition of the financial support to the agricultural sector. While in the past market and export support used to constitute the bulk of the CAP expenditure, most of the CAP budget is now spent on decoupled payments and direct aids. Over the period 2007-2009 market intervention captured only 9 % of the CAP budget. Figure 2 provides an overview of CAP budget expenditure over the period 1980-2009.

Figure 2: The path of CAP expenditure 1980–2009 (in 2007 constant prices)



Source: European Commission, DG AGRI

1.2.1. Increased exposure to external factors

The move towards greater market orientation exposes farmers to higher price volatility as instability on world commodity markets may permeate to EU markets more easily due to reduced market intervention and more open markets.

Increased price volatility is mainly expected to stem from the continued integration of global commodity markets with financial markets and the closer link between agriculture and non-agricultural commodity markets, as well as the impact of climate change.

Based on recent developments, agricultural prices are expected to continue to move in line with non-agricultural prices (especially energy and minerals), particularly as the biofuel sector is foreseen to reinforce the link between agricultural commodities and energy prices (both on the supply and demand side), allowing volatility on energy markets to affect agricultural prices.¹³

Climate change has far reaching effects on global production patterns, with the frequency and magnitude of extreme weather conditions increasing the uncertainties of supply and therefore the possibility of further excessive price volatility. In the short term, overall EU

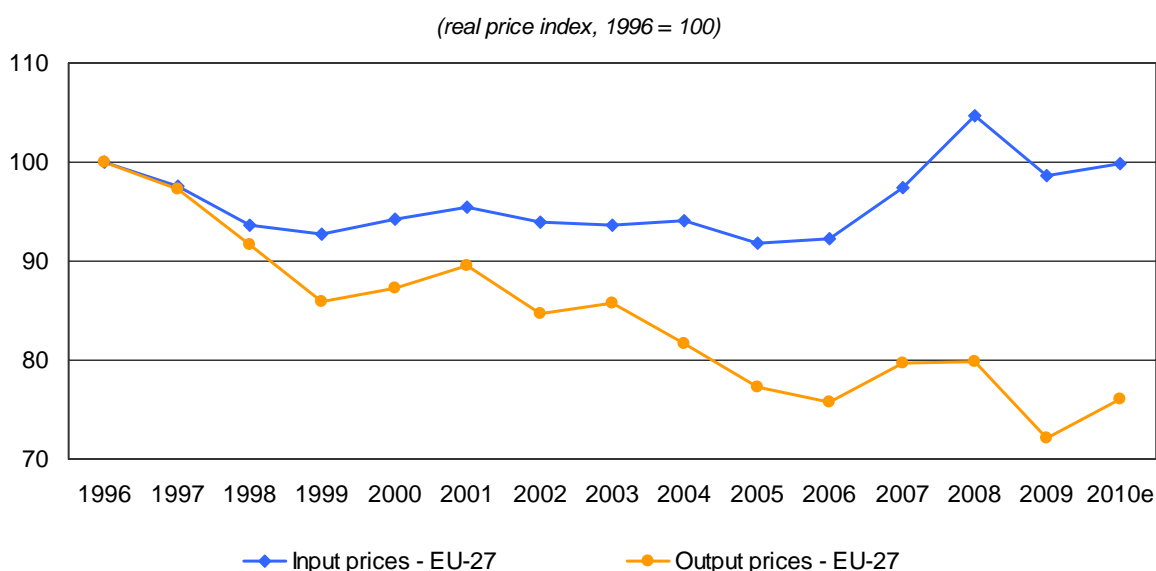
¹³ The Agricultural Markets Perspectives Brief on *High commodity prices and volatility ... what lies behind the roller coaster ride?*, June 2011 analyses the factors driving price developments in agricultural markets. http://ec.europa.eu/agriculture/analysis/tradepol/commodityprices/market-briefs/01_en.pdf

food production is not expected to be greatly altered by climate change, but greater differences will arise between countries. Therefore climate change related risks on the agricultural sector, food security and rural economy are an increasing cause for concern.

Another issue related to the relationship between agricultural and non-agricultural prices emerges clearly when looking at **input and output price trends**. Figure 3 displays the evolution of agricultural input and output prices for the EU-27 since 1996.

The Figure reveals that in the past, input costs (fertilizers, gas prices, etc.) were decreasing on average, albeit at a much slower rate than the decrease of output prices received by farmers. This narrowing gap between output and input prices was compensated by productivity gains. This trend has been exacerbated during the 2007-2008 price boom and subsequent price drop, with input prices increasing at a higher rate during the boom and declining less during the price drop, compared to output prices. As such, the gap between the two price indices has widened significantly, causing a margin 'squeeze' for farmers while increasing the volatility of farm income. In recent years the productivity gains were not sufficient to compensate for the deteriorating terms of trade in agriculture.¹⁴

Figure 3: Evolution of agricultural input and output prices for EU-27¹⁵



Source: Eurostat.

1.2.2. Uncertainties of current market prospects

Based on the most recent agricultural market perspectives available from different sources¹⁶ commodity prices are projected to stay firmly above EU reference price levels over the medium term. According to the DG AGRI *Prospects for agricultural markets and*

¹⁴ The Farm Economics Brief on *Income developments in EU farms, June 2011* analyses the factors driving income developments in EU agriculture. <http://ec.europa.eu/agriculture/rca/pdf/Brief201101.pdf>

¹⁵ Note that input and output prices are reflected in indices, thus the actual prices are not comparable.

¹⁶ DG AGRI 2010, FAPRI 2011 and OECD-FAO 2011,.

income in the EU 2010-2020,¹⁷ agricultural prices would be supported by the growth in global food demand, the long-term decline in food crop productivity growth, and by the development of the biofuel sector.

While the expected demand growth resulting from the assumed economic recovery and mandatory biofuel mandates should support production expansion, EU output would remain under its full potential as the expected increase in input costs would limit the profitability of production. As such, **the means to improve profit allocation along the food chain will remain an important element**. In addition, crop yields are expected to continue their declining rate of growth observed during the previous decade.

The assumed appreciation of the euro would further weaken the competitiveness of EU exports on world markets, leading to a loss in world market share at a time when global demand is expected to grow at a relatively fast pace. The deteriorating competitiveness of the EU under the current setting is further emphasized in the analysis of alternative assumptions on yield and global demand growth rates. Therefore, in order to enable producers to make the most of market opportunities, **the efforts towards improved market orientation should be maintained**.

Although commodity markets are expected to remain balanced over the outlook period without the need for market intervention, the SMP market in particular, could remain sensitive to global supply-demand developments over the near term, given the level of EU intervention stocks accumulated during the milk crisis in support of the market.¹⁸

In addition, **the large number of uncertainties and risks surrounding the market prospects** (such as the pace of economic recovery, future changes in the policy environment, the path of technological change, etc.) **highlight the need for an effective safety net as well as risk management instruments**.

1.2.3. Uneven distribution of value added along the food chain

The food supply chain has undergone important structural changes over the past decade, with the value-added increasingly created in sectors downwards the chain, primarily in the distribution sector and in the food industry. Analysis presented in the Communication from the Commission on *a better functioning food supply chain*¹⁹ shows that the share of the agricultural sector in the total value added of the food supply chain has dropped from 31 % in 1995 to 24 % in 2005 while the respective shares of the food processing, food wholesale and food retail sectors have increased from 31 % to 33 %, 11 % to 13 % and 27 % to 30 % respectively.

¹⁷ The prospects assume a status quo policy environment, economic stability and relatively favourable world market perspectives. The CAP is assumed to follow the Health Check decisions, and global trade policy to respect the Uruguay Round Agreement on Agriculture. Macroeconomic assumptions include a gradual and modest EU GDP growth at around 2 % p.a. and a steady appreciation of the euro to around 1.47 USD/EUR. http://ec.europa.eu/agriculture/publi/caprep/prospects2010/index_en.htm

¹⁸ Since publication of the prospects the SMP market has been stable, supported by strong demand and limited global supply, enabling a gradual de-stocking from intervention without adversely affecting the markets.

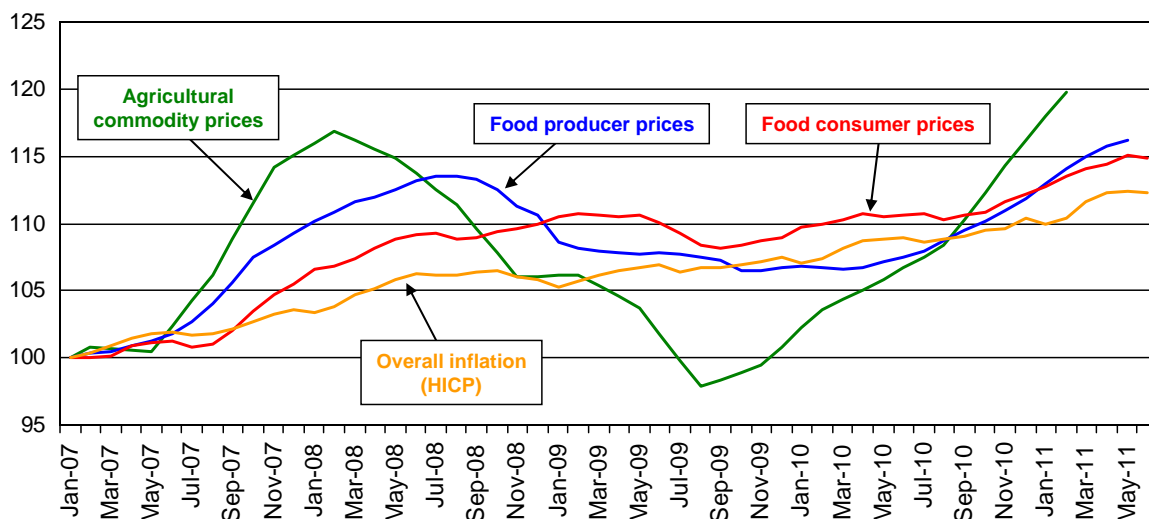
¹⁹ Staff working document on *The evolution of value-added repartition along the European food supply chain* accompanying the 2009 Communication from the Commission.

An important factor behind this increase in the dispersion of repartition of value-added has been the relative evolution of output prices *vis-à-vis* input prices, such that moving downwards along the chain output prices have increased at higher rates than input prices (cf. previous section for the implications on producer margins).

In addition to the falling share of value added for agriculture, commodity and consumer prices have displayed diverging trends over the period 2000-2010, with a relatively stable increase in food producer and consumer prices compared to the more volatile prices of agricultural commodities (Figure 4), and resulting in a widening gap between commodity and consumer prices.

Since 2007, there has been a significant change in the price transmission pattern along the chain, such that on the one hand the magnitude of price variations for food producer and consumer prices are lower than commodity price changes, and on the other hand the speed of price transmission has slowed going downwards along the chain, while remaining instantaneous for transmission upwards the chain. **The slow and asymmetric transmission of price changes delays necessary adjustments and helps prolong market inefficiencies along the chain and can therefore exacerbate price volatility in commodity markets²⁰.**

Figure 4 Price trends along the EU food supply chain, 2007-2011



Source: European Commission – DG Economic and Financial Affairs, based on Eurostat data

Evidence for the apparent 'stickiness' of consumer prices has been demonstrated during the recent dairy crisis and its aftermath, where the sharp decline in dairy commodity prices in 2008 failed to translate fully into lower dairy prices at consumer levels. Dairy consumer prices exhibited a 'rocket and feather' evolution pattern in which dairy consumer prices were fast to rise (along with dairy commodity prices) but slow to decrease (when dairy commodity prices fell), preventing demand for dairy products to adjust to lower commodity prices, eventually slowing down price recovery and exacerbating the impact of low prices on milk producers.

²⁰ From *Analysis of price transmission along the food supply chain in the EU*, an accompanying document to the Communication on *A better functioning food supply chain in Europe* COM(2009) 591

The dairy crisis has also raised awareness of the significant tensions in contractual relations between actors of the chain and the lack of price transparency along the chain. The problems with contractual relations stem from the diversity of actors active in the chain and their differences in bargaining power. This is exacerbated by **the lack of price transparency along the food supply chain that prevents market signals to reach economic agents in time and thus hampers the proper functioning of the market.**

As such, recent developments in the dairy sector revealed important inefficiencies regarding the functioning of the food supply chain, with relation to price transmission, price transparency and bargaining power, bringing to the fore the role that improved producer cooperation, and producer organisations in particular, could play in alleviating these inefficiencies and providing producers with an improved share of the value added, particularly in the context of greater market orientation and high input cost environment.

1.3. The case for a review

The system of market instruments is very articulated and complex. As shown in Section 1.1, the sCMO is characterised by a complex structure of measures. Market management tools currently in place have been designed and progressively modified - along the CAP reform path - based on specific needs in the various sectors. This has led to a very complex and articulated architecture with a set of intervention tools, whose relative importance, main parameters, and implementation may differ widely between sectors.

Intervention already acts as a safety net. The intervention system has been progressively modified over the years. Support and/or reference prices have been reduced to levels that provide a safety-net in terms of severe market disruption and no longer represent a market outlet for farmers. Changes in policy instruments may raise the need for certain products to be added to the list of products covered by intervention and/or private storage aids.

It is vital that the Commission has the **possibility to intervene quickly under urgent circumstances** in all sectors, while under the current framework disturbance clauses provide support for a limited number of sectors in case of certain crisis situations.

Production quotas are set to expire. Quotas provide rigidities and prevent the industry to respond rapidly to market developments. By putting limits to economies of scale, they also indirectly slow down the development of innovative bio-based products, therefore hampering the development of the bioeconomy. In the future, alternatives, including a non-disruptive end of sugar quotas, need to be examined to bring about greater efficiency and competitiveness for the sector. The abolition of milk quotas has been assessed in the context of the Health Check of the CAP.

Improving the functioning of the food supply chain is deemed necessary in a context of increased market orientation and high input cost environment, particularly to re-balance the bargaining power along the food chain. Imbalance of bargaining power in the food chain is a structural problem. This can mean that farmers receive a limited share of the value-added in the chain, which is often retained by other actors. Moreover, without well-functioning transmission of market signals, the long-term prospects of the farm sector and its share of the value added generated by the whole food chain are in jeopardy. Lack of transparency on price formation along the chain is considered one of the main problems as to why primary producers are not in all cases receiving accurate prices.

2. OBJECTIVES

Continued **market orientation** would be needed to maintain the competitiveness of EU agriculture. To do so it is necessary to keep the overall market orientation of the CAP while **providing a safety net for farmers in case of strong market disruptions**, which does not lead to unsustainable public stocks, but contribute to the stability of commodity markets and farm income.

The whole system of market measures is complex; therefore the **simplification of the system, its implementation and control** will surely lead to benefits to farmers and public institutions.

Tight producer margins may be alleviated by **improving distribution of value added along the food chain** through strengthening bargaining power of farmers, promoting more effective contractual relations and enhancing price transmission and transparency along the food chain. In particular, it is deemed necessary to foster cooperation among producers as well as increase awareness and reinforce the responsibility of the operators in the food chain to better take into account market signals and adapt supply to demand. This is certainly desirable across all sectors, although the extent of the problems is not uniform.

3. OPTIONS

The options presented here relate to the objectives and are not mutually exclusive; they may be inserted in any of the general policy options (i.e. adjustment, integration and refocus) as outlined and examined in the synthesis report on *The CAP towards 2020 Impact Assessment of Alternative Policy Options*.

3.1. Simplify and streamline existing instruments

Simplification and streamlining could be achieved through the adjustment of the current system without changing support levels. The general architecture of the market management tools would not change (including border measures), although corrections could be introduced to streamline and simplify existing market instruments where appropriate.

Main changes:

- Rearrange and streamline special intervention measures and disturbance clauses, through an horizontal instrument that may include two kinds of actions/situations: i) market disturbances in all sectors, and ii) mitigate market impact from animal or public health risks in animal products, with a review of the product coverage and the possibility of urgent delegating acts.
- The sugar quota scheme (including isoglucose) would be abolished, either following the 2015/16 marketing year or phased out by 2017/18 through two successive annual quota increases of 3% (for both sugar and isoglucose) in 2015/16 and 2016/17, while maintaining the support prices.²¹

²¹ Please note that the abolition of milk quotas and planting rights in the wine sector are not covered in this reform package and are therefore outside of the scope of the impact assessment.

- Intervention: *Reference/intervention prices* remain unchanged, but it could be considered to remove the current *fixed quantities* and/or *fixed buying in prices*. Removal of *automatic purchases* at a fixed price up to the quantitative ceilings for common wheat, butter and SMP. The system will open automatically via *tendering procedure* for wheat, butter and SMP, while opening would be *optional* for barley, maize, rice and beef. Durum wheat and sorghum would be removed from the list of *eligible products*.
- Private storage aid: the aid would be foreseen for butter, beef, pig meat, sheep and goat meat, white sugar, and olive oil. Optional private storage aid for SMP and flax fibre would be considered, while the aid for sugar would be removed with the abolition of the sugar quota. An alternative approach foresees private storage as an optional tool only, with butter no longer eligible for mandatory aid. An additional option is to extend the aid to other products by means of delegated acts in the light of market circumstances.

3.2. Improve the food chain functioning

This option sets out the objective to enhance the share of value added for agriculture in the food chain by improving the bargaining power of farmers, their contractual relations and price transparency along the food chain through fostering cooperation among producers. While for farmers the participation to horizontal cooperation will continue to be on a voluntary basis, the framework for cooperation would be improved following three alternative approaches with regard to the level of regulation: i) flexible cooperation, ii) enhanced cooperation and iii) regulated cooperation.

i) Flexible cooperation

While this option does not foresee additional changes to the CAP other than that already in process (i.e. milk package of 2010²²), it considers the possibility of a more efficient use of measures currently available, by supporting pro-competitive cooperation between farmers. Of most importance is the better use of the wide range of possibilities farmers have under the current competition rules in order to engage in several forms of cooperation, relating to joint production and marketing, including a consolidation of production assets (in co-operatives), rationalisation of marketing activities and/or vertical integration into the downstream collection and processing stages. This option could include measures aimed at raising farmers' awareness of these possibilities, which are currently often not taken advantage of, through the farm advisory system and rural development measures promoting knowledge and innovation (e.g. information actions).²³

ii) Enhanced cooperation

This option expands on the flexible approach by providing greater legal certainty for cooperation in the form of producer organisations, associations of producer organisations and interbranch organisations. Accordingly, Member States shall recognize *producer organisations* (POs) and *associations of producer organisations* (APOs) in all sectors

²² COM (2010) 728 of 9 December 2010

²³ As described in section 1.3.2. of Annex 7 on Research and Innovation

covered by the sCMO, including those where it is not foreseen in the existing legislation. POs may pursue any (or several) of the following objectives:

- planning production and adjusting production to demand, particularly in terms of quality and quantity;
- concentrating supply and placing the products produced by its members in the market;
- optimising production costs and stabilising producer prices;
- protecting and improving the environment;
- providing information and improving knowledge and transparency of production and markets;
- improving quality and participation in quality labelling schemes.

Rules for *associations of producer organisations* (APOs) would be based on the existing legislation for the fruit and vegetable, wine and olive sectors.

Member States shall recognise *interbranch organisations* (IBOs) in all sectors covered by the sCMO, including those where it is not foreseen today, provided that the IBOs

- are made up of representatives of economic activities linked to the production of, trade in, and/or processing of products in one or more sectors;
- are formed on the initiative of all or some of the organisations or associations which constitute them;
- pursue a specific aim, such as improving knowledge and the transparency of production and the market, helping to coordinate better the way the products are placed on the market, developing methods and instruments for improving product quality at all stages of production and marketing, developing methods and instruments for improving product quality, accessing specific quality market segments, etc.

Support for setting up *producer groups* (PGs) would be provided as a single measure under rural development policy for all sectors covered by the sCMO, in all Member States. As such, the existing specific support in the fruit and vegetables sector would become redundant.

iii) Regulated cooperation

This approach extends the measures suggested under the enhanced cooperation approach, for example to include the obligation to use written contracts, and the permission of collective bargaining by POs, in particular derogation from the prohibition on price fixing. Such measures would follow a sector approach and would be based on ad-hoc impact assessments. Limits would be imposed in terms of market coverage.

In the case of sugar, in view of the imbalance between beet and sugar producers after the phase out of quotas, and of existing obligatory price and contract requirements, an obligation for written beet delivery contracts should be introduced.

Specific provisions would be applicable to the milk and milk products sectors, based on the Commission proposal following the conclusions of the High Level Group on milk, as regards *contractual relations*. These provisions would allow POs or APOs constituted by

dairy farmers to negotiate contract terms, including price, with a dairy processor. In order to avoid negative impacts on competition on the dairy market, appropriate quantitative limits would be applied on the scope of POs and APOs with regard to production volumes. Furthermore, these provisions would be subject to review in order to assess their efficiency and whether they should continue to apply.

General considerations regarding producer cooperation

Attention would be given to certain activities of producer and interbranch organisations, in order to avoid negative impacts, such as the partitioning of markets, affecting the sound operation of the sCMO, distorting or eliminating competition at national or EU level, entailing price fixing, or creating discrimination.

In particular, the following issues are at stake: i) potential risk of excessive producers bargaining power or even producer monopoly, which would be as negative as any other monopoly, ii) potential impact in medium and small enterprises and their capacity to compete and develop; iii) potential slowdown in the modernisation path of the industry, as a by-product of the reduced competition; iv) potential loss of long term competitiveness and innovation capacities, as also a by-product of the reduced competition; v) impact on consumers prices, and in particular on low-income consumers.

As such, efforts would be necessary to ensure that the regulated cooperation of producers and/or producer organisations are not based solely on achieving higher prices through increased bargaining power, but on incentives to optimise production costs, improve market transparency and production planning that together foster a more equitable distribution of the value-added along the supply chain and improve the producers' margins in an environment of high input costs.

The objectives for improved cooperation, particularly with relation to POs and IBOs, as they appear in the policy option, have been defined to conform with the spirit of current competition rules that allow several forms of cooperation among farmers as long as they entail efficiency gains from consolidation of production assets, rationalisation of marketing activities and/or vertical integration into downstream collection and processing stages.

While the impact assessment relies on recent experience and evaluations, attention will be given to on-going discussions and research on food supply chain issues, particularly within the context of the *High Level Forum for a Better Functioning Food Supply Chain*²⁴ and the research project on the *Transparency of Food Pricing (TRANSFOP)*²⁵.

3.3. Strong focus on the market

This option entails a minimum level of intervention with a much stronger focus on market forces, including the abolition of all market measures with the exception of disturbance clauses which could be activated in times of severe crises.

²⁴ http://ec.europa.eu/enterprise/sectors/food/competitiveness/forum_food/index_en.htm

²⁵ <http://www.transfop.eu/>

4. IMPACTS

4.1. Simplify and streamline market intervention

4.1.1. *Economic advantages and disadvantages*

Opening public intervention purchases via tendering from the very first tonne without fixed prices and/or fixed quantities may create some initial uncertainty about the actual level of the safety net. On the other hand, removing the fixed price allows intervention to act only when (and at a level where) necessary, thus eluding in certain cases unnecessary expenditure. One of the disadvantages of the existing system is that, under a tendering system, operators may be willing to offer intervention products (e.g. wheat) at a lower value compared to the fixed intervention price and therefore reducing the level of support.

In the beef sector private storage aid was introduced in Agenda 2000 as the main tool available for market support, with public intervention maintained as a safety net. Public intervention was last used in 2001. Since then, the EU beef market has significantly evolved with falling production and the EU becoming a net importer.²⁶ The present trigger price for intervention is substantially below market price levels in virtually all Member States, thus it could be considered to abolish beef intervention. However it is not recommended that the basic underpinning support provided by the intervention system is removed for such an important EU sector.

Making private storage aid for butter optional would allow using this instrument in duly justified cases at times of crises, thereby avoiding a 'regular' financing of storage costs for the dairy sector. While maintaining private storage without any change would be in line with the recommendations of the High Level Group on milk and the subsequent Council conclusions regarding the importance of the existing instruments to manage the dairy market, a disadvantage is that in normal economic circumstances the private storage aid finances normal storage costs for the dairy industry, thus being a windfall profit for the processors concerned.

Optional private storage for SMP was suppressed in the 2007 'mini milk package'. It was not used since 1991 as other instruments existed (intervention, export subsidies, disposal measures for SMP in feed and casein). While the attractiveness of the scheme might be limited as the value of stored commodity would be inferior to fresh SMP and could also be considered as a backward step with regard to the objective of enhanced market orientation, the reintroduction of optional private storage could provide an alternative to public intervention at times of market disruption.

Based on analysis carried out in DG AGRI²⁷, the abolition of sugar quotas is expected to result in an increased EU sugar beet area, exceeding 1.8 million ha by 2020. This corresponds to a 12.7 % increase from 2009/10 when quotas are abolished after 2015/16 and a slightly higher increase of 14.3 % when quotas are abolished in 2017/18, following a two year phasing out period. Compared to a reference scenario assuming that quotas are maintained over the future horizon, the sugar beet area in 2020 is only 1.9 % higher under the abolition scenario and 3.3 % higher under the phasing out scenario.

²⁶ Although the EU became a net exporter in 2010 when considering live animal trade as well.

²⁷ A more detailed overview of the analysis, including methodology and results is provided in Annex IV

The higher level of sugar production would result in lower prices for sugar beet (and white sugar) when compared to the reference scenario. Prices are projected to fall below the current support prices for sugar beet and white sugar under each scenario, including the reference scenario. The effects on world prices are expected to be very limited as the price transmission between the EU market and the world market is rather low due to the existing trade regime. The impact of larger areas on sugar beet production would be counterbalanced by lower yields, leading to a limited increase in EU sugar beet production by 2020 under all scenarios (by less than 4 %). Furthermore, the increasing EU demand would be fulfilled by higher imports under the reference and quota abolition scenarios (between +10 % and 16 %) and the phasing out (+7.2 %) scenario. While remaining a net importer under each scenario, the net trade balance of the EU would improve with quota abolition compared to the reference scenario.

The effects on the isoglucose market are projected to be small. Both production and domestic demand for isoglucose is expected to increase, although the higher rise in production would result in greater exports.

Overall, the abolition of sugar quotas is justified on the basis of achieving a higher level of competitiveness as production would move to the economically most efficient areas, as well as the end of restricted EU exports. However, increased market orientation, including the abolition of private storage aid for sugar, could lead to increased co-movement (and hence volatility) with world market prices.

Comparing the two quota abolition scenarios it appears that the phasing out scenario produces a larger impact on the EU sugar market, in terms of production increase (through higher areas) and consequent price decline in 2020. In the phasing-out scenario the support price is maintained during the transition period, resulting in a higher level of (supported) production in 2018. As a consequence, the restructuring and adjustment of the sector starts later and from a higher production base and therefore extending the life of the quota system through the transition period prolongs the inefficiencies of the industry and delays the necessary (and eventual) restructuring of the sector.

4.1.2. Impacts on the environment

Conclusions of a DG AGRI evaluation study²⁸ put in evidence that until 1992 the market instruments maintained prices of cereals, oleaginous and protein crops at a significantly higher level than the world prices (increasing prices for certain crops up to 30 % above world prices).

Price support influenced importantly the profitability of the crops concerned, stimulated producers to develop the production of these crops and to intensify their production methods²⁹. Price support was not the only factor influencing intensification, but it was the most important.

²⁸ 'Evaluation de l'impact sur l'environnement des OCM et des mesures de soutien direct de la PAC relatives aux cultures arables', 2007.

²⁹ Intensification is very often negative for its impact on the environment, affecting water quality and quantity, biodiversity, soil status, landscape characteristics and climate change. Examples of changing agricultural practices were the increasing use of inputs, specialisation, monoculture, shifting from grassland to arable crops and concentration of specialised farms in specific areas.

Since 1992 the successive CAP reforms have shifted the policy instruments towards decoupled direct payments and reduced market measures to a safety net function in case of a market crisis. As world market prices are in general significantly above EU reference prices, market measures are only utilised in exceptional circumstances and therefore have a very / if any impact on production decisions.

The streamlining and simplification of market measures maintains the safety-net role of market instruments and therefore their impact on production choices and as such the impact on the environment is considered to be neutral.

4.1.3. *WTO compliance*

In terms of the WTO classification, market measures are considered as coupled support in the Amber Box, the most trade distorting category of support. This support is expressed in terms of Aggregate Measurement of Support (AMS) to which under the terms of the Uruguay Round Agreement on Agriculture (URAA) a global ceiling applies for each WTO member.

Within the context of ongoing WTO negotiations, the current draft agricultural modalities negotiated in the Doha Development Round (DDA) foresee the introduction of product specific support caps on the basis of historical references, in addition to a reduction of the global ceiling.

Amber Box support

There are two types of Amber Box support: price gap support and direct payments to producers. Since in the EU most of the non-Green Box direct payments comply with the criteria for Blue Box classification laid down in Article 6.5. (a) URAA, most support in the Amber Box is, in WTO terms, provided as so called *price gap support*.

This support is defined in point 8 of Annex 3 to the URAA as the difference between an *applied administered price* (AAP, in the case of the EU the intervention price) and a fixed *external reference price* (ERP, world market price) multiplied by the total production eligible to receive the applied administered price

In the URAA the EU negotiated its ERPs on the basis of the 1986-1988 reference period and these ERPs have remained a fixed element in the price gap calculations ever since. The AAPs vary in function of the applicable intervention prices.

In the absence of public intervention other support measures would be notified as direct payments or equivalent measurement of support (EMS); in both cases budget outlays would be included in the AMS calculation. Private storage would be notified as EMS.

For the purpose of AMS calculation only price gaps for cereals, beef, butter and skimmed milk powder should be considered. Extending the scope for public intervention to other products would be to the detriment of possibilities for other coupled support and/or the EU negotiating stance in the DDA.

Against this background it can be said that the implications of this option will be in broad terms AMS neutral and could therefore be covered in current and currently negotiated future WTO commitments.

4.1.4. *Simplification and Administrative burden*

While removing the fixed price from the intervention buying-in mechanism would limit market intervention to the necessary cases, thus avoiding in some cases unnecessary expenditure, open tenders need to be run, with the corresponding administrative burden, even when this is not justified, e.g. when prices are above the existing intervention level. The additional red tape would include, for example publishing tendering regulations and notifications by 1 November every year.

In the context of legislative simplification, a number of elements of the public intervention system and private storage aid could be transferred to delegated acts. This would concern elements that are not considered essential but are necessary to the proper functioning of the system, for example buying in periods, rules on disposals and rules on storage, or detailed granting conditions.

Member States' administrations will see, on the one hand, further simplification and a reduction of their burden resulting from the expiry of the sugar quota. The abolition of the sugar quota scheme will also have a beneficial effect on sugar beet growers and – mainly - processors, who would no longer have to deal with the administrative issues associated with the management of the quota system.

A streamlining of provisions related to intervention measures and disturbance clauses will render the legal framework more user-friendly and accessible. Obviously, the new provisions to be added should not undo the newly achieved clarity.

From a control point of view, every market measure has an inherent risk and current policy instruments are generally to have ex-ante examination of all applications with a limited amount of ex-post controls³⁰. The measures dealt with by Commission auditors of market measures are of a large number and diverse character and pursue different policy objectives. The different nature of measures (market stabilisation, social measures, emergency measures etc.) seem to limit the possibility to streamline their control.³¹

³⁰ The Court of Auditors considers an error rate of 2 % under the ECA DAS for market measures as an acceptable error, which would be the acceptable level of risk.

³¹ For example, while in the case of 'traditional' CAP measures (e.g. intervention storage) it is much easier for Member States to deal with the administrative requirements, in an emergency situation, the main focus would be on fighting the spread of an animal disease and this may be much more complex. In the case of social measures (aid for the most deprived) a lot of the work is often done by voluntary workers not necessarily being always well acquainted with public administration and accounting.

4.2. Improve the food chain functioning

4.2.1. Economic advantages and disadvantages

In general, the way a given supply chain is organised in terms of managing the sharing of risks and rewards among participants is an important determinant of the effectiveness and long-term viability of that supply chain. Therefore, providing incentives for participants of that chain to better organise themselves (while respecting competition rules) should improve the functioning of the supply chain as a whole. As a complement to this objective, farmers should be facilitated to sell their product in alternative food supply chains.³²

The economic reasoning for improving the bargaining power of farmers, their contractual relations and transparency along the food chain has been described in section 1.2.3. Accordingly, the necessity to address these issues is emphasized by the fact that the slow and asymmetric transmission of price changes delays necessary adjustments and prolongs market inefficiencies along the chain and can therefore exacerbate price volatility in commodity markets. Furthermore, the lack of price transparency along the food supply chain prevents market signals to reach economic agents in time, hampering the proper functioning of the market.

An additional element behind the increasingly disproportionate distribution of value added along the food chain has been the increased concentration downstream the supply chain, particularly at the retail level. Given the generally much lower level of concentration at agricultural producer level, downstream players of the value chain are at a comparative advantage with regard to bargaining power and the possibility to substitute suppliers.

While the main focus of the current policy options are agricultural producers, the assessment of the economic advantages and disadvantages of these policy options have to take into account the impact at the various stages of the supply chain, 'from farm to fork'.

Since the policy options stipulate that participation to horizontal organisations will continue to be on a voluntary basis, and given the largely heterogeneous nature of markets and supply chain structures at product and Member State levels, the economic assessment is based on a qualitative analysis of the potential impact of the three approaches. Special attention is given to the implications on competition.

In general, based on economic literature, the economic advantages of agricultural cooperation would come from increased bargaining power of the participants, improved economies of scale in selling and purchasing, opportunity to increase added value by entering into other (processing) stages, as well as easier access to information. In addition, improved economies of scale can enable marketing through multiple channels and decrease risks.

³² Eurostat data (2007) for 16 Member States showed that 5.9 million holdings are operated at the semi-subsistence level, selling surplus product primarily on local markets. Farmers' markets and internet sales also provide outlets for farmers of product with specific qualities (including local origin or purchased directly from the producer) to avoid the constraints of the classic food supply chain. See also Annex II on the inter-relation of EU quality instruments and market measures as well as Annex V on short marketing chains.

Flexible cooperation

This approach aims at encouraging the use of the wide range of possibilities farmers have under the current competition rules to engage in several forms of cooperation. The approach would include measures aimed at raising farmers' awareness of these possibilities, which are currently often not taken advantage of, through the launch and support of awareness campaigns in order to inform producers of their contractual rights, the exchange of best practices by notifications of current practices e.g. to an Ombudsman, and the support for the conception of voluntary standard contracts.

While this approach supports pro-competitive cooperation between farmers without recurrence to regulatory measures and exemptions from competition rules, it is doubtful whether raising awareness alone could lead to a sufficient improvement in the scale and scope of cooperation by farmers, including joint production and marketing and/or vertical integration into the downstream collection and processing stages. Experience suggests that a number of factors determine the degree of cooperation, such as historical and cultural attitudes toward cooperation, farm structure, the importance of large scale retail, unwillingness to jeopardize existing marketing channels, etc. Some factors can be derived from the evaluation of the measures concerning producer organisations in the fruit and vegetables sector (cf. enhanced cooperation), while others from economic literature³³.

Enhanced cooperation

This approach aims at enhancing horizontal and interbranch organisations by extending the scope of sectors where Member States shall recognise POs, APOs and IBOs, thus providing a gateway to benefit from the advantages offered by such producer cooperation.

Evidence from the F&V sector has shown that not all POs are able to become efficient market participants (due to factors such as the lack of well-defined objectives, assertion of the individual interests instead of the common interest, lacking transparency of the knowledge and information among partners, etc.), but in other cases, POs and their associations play useful roles in concentrating supply and promoting best practice.

Existing rules on their definition and recognition covering certain sectors should therefore be streamlined and extended to provide for recognition on request under an EU statute in all sectors.³⁴ Recognised POs will then be able to benefit from additional legal certainty regarding their activities, specific aids (specifically regarding the fruit and vegetables, olive oil and table olives sectors), and, under certain conditions, the possibility for Member States to extend certain rules to all producers in a certain area.

While the initiative and responsibility for collective action lies with farmers, as it should be, under this option the environment in which POs can blossom is strengthened. In addition financial support for starting a PO will be provided through the second pillar.

³³ As an example see 'Stimulating cooperation among farmers in a post-socialist economy: lessons from a public-private marketing partnership in Poland', A. Gramzov and M. Petrick, 2007

³⁴ In certain sectors, where necessary, specific and/or more stringent criteria for recognition of POs may (continue to) apply.

Lessons learned from the fruit and vegetables sector

The case of the fruit and vegetables (F&V) sector is taken as an example to examine the role and the impact of POs in improving the functioning of the food chain.

In the F&V sector recognised POs are large in number (1506 in 2007) and big in terms of their total value of marketed production (EUR 15.5 billion in 2007). On average, the value of marketed production per PO in 2007 reached EUR 10.4 million in the EU-15 and EUR 3.9 million in the EU-10. There is a marked variation between Member States in terms of organisation rate: in three countries (the Netherlands, Belgium and Ireland) this rate is higher than 80 % (i.e. more than 80 % of domestic production is marketed through POs), whilst in one group of countries it is lower than 15 % (most of the new Member States, Portugal, Greece and Finland). The rate in the remaining Member States is around 35 %.

An evaluation study commissioned by DG AGRI and carried out by an external consultant covering the period 1996-2007 put in evidence factors which may determine the rate of organisation and highlight its main achievements. The study indicates that producers in very 'well-organised' regions (with a high number of farmers being part of a PO) are on average better paid than producers in areas where the rate of organisation is very low. Producers join these organisations in order to ensure reliable payments and the guarantee of purchase of produce, whereas the level of producer pricing and support services provided by POs are secondary factors.³⁵ As a matter of fact, it has been observed that POs have almost no influence over the price of products supplied to large-scale distribution.

Regarding the efficiency of the system, the survey indicates that the costs incurred (excluding salary payments) and the work-time needed in order to obtain recognition was acceptable for producers.

In terms of costs, at farm level there is little evidence of collective measures to reduce and/or share costs, with the exception of technical advice. Most POs have implemented measures to improve product quality and safety (traceability systems, certifications required by large-scale distribution chains, etc.), with the consequent benefits in terms of better and more stable pricing. Even though the concentration of supply contributes to reinforcing the position of producers, it does so to an insufficient degree, taking into account the speed and size of the concentration of the down-stream part of the supply chain, in particular in a sector characterised by perishable products.

The limited success of POs in the F&V sector is explained by the fact that in this sector it is easy for producers who do not belong to a PO to take advantage of their benefits. Other factors seem also to have played a role, for example the fact that public support is limited and requires equal private financing from the producers, as well as complexities for implementing the system. Moreover, many farmers would be willing to participate in 'joint activities' related to quality, environment, promotion

³⁵ The study suggests also other factors in support of membership: historical and cultural factors, product related factors, importance of large scale retail and fiscal transparency.

or market information but they do not want to change their current marketing channels.

The provisions aimed at improving the distribution of value added along the food chain – and in particular the creation of POs in all sectors – would respond to demands in particular from some PDO/PGI³⁶ producer groups. This might create an additional incentive for farmers to participate in EU quality schemes. However, reinforcing the role of POs should not lead to excluding the possibility for newcomers to join the quality scheme and to the exclusion of small producers. It is advisable to allow IBOs (but not POs) the right to regulate supply as it is currently the situation in the wine sector.

IBOs can play useful roles in allowing dialogue between actors in the supply chain, and in promoting best practice and market transparency. Attention would be given to avoid negative impacts on markets from IBO agreements and practices, such as the partitioning of markets, affecting the sound operation of the CMO, distorting or eliminating competition, entailing price fixing, or creating discrimination.

Regulated cooperation

This approach extends the measures suggested under the enhanced cooperation approach, particularly the permission of collective bargaining by POs, to include for example the obligation to use written contracts and derogation from the prohibition on price fixing.

Provisions to improve the functioning of the food chain may have a positive impact on production planning with respect to demand, diminishing uncertainties regarding quantities and expected revenue. The impact of contract schemes would depend, among others, on the moment of conclusion of the contract, on the characteristic of the product, processing and marketing, how the food chain is organised (vertical integration), market power of the different actors, share of the internal market on global demand, net trade balance, and even the different application of rules among the Member States.

On the other hand, allowing POs to enter into collective negotiations involving price-fixing agreements on terms and conditions without appropriate safeguard clauses could entail a substantial reduction of competition in agricultural markets, with detrimental consequences on SME processors, with possible spill-over effects on consumers. The need for safeguard clauses are also justified within the context of the objective to improve the competitiveness of EU agriculture in an increasingly global market, in order to ensure that the CAP maintains its market-oriented approach and does not deter modernisation and innovation, as well as to avoid any negative consequences for consumers.

Caution is necessary with regard to contract details, particularly regarding price determination. In order to avoid possible collusive behaviour, contracts should refrain from any type of price indicator that could interfere with freedom to agree on mechanisms to determine the price. As such, while the factors determining the price should be explicitly indicated in the contract, it would be necessary to ensure that all elements of the contract are freely negotiated by the parties.

The impact on consumers is expected to arise from the aggregate effect of policy changes on price levels and transmission, product quality and safety. While the impact on the latter

³⁶ Protected Designation of Origin/Protected Geographical Indication

two will depend on the objectives pursued by POs and/or IBOs, which could be beneficial in case the declared objective is to 'improve quality', improved cooperation is expected to yield benefits with regard to price transmission. Unlike the recent period, consumers would benefit from lower prices during times of declining agricultural commodity prices, although this implies the possibility of higher price volatility for consumers as well.

As a general element with respect to all forms of cooperation, efforts would be necessary to ensure that the cooperation of producers are not based solely on achieving higher prices through increased bargaining power, that would simply be passed downward the supply chain most likely leading to higher consumer prices, but on incentives to optimise production costs, improve market transparency, and production planning that together foster a more equitable distribution of the value-added along the supply chain and improve producers' margins in an environment of high input costs.

Specific provisions applicable to the milk and milk products sectors

These provisions would allow POs or APOs constituted by dairy farmers to negotiate contract terms, including price, with a dairy processor. In order to avoid negative impacts on competition on the dairy market, appropriate quantitative limits would be applied on the scope of POs and APOs with regard to production volumes.

As the EU dairy sector is rather heterogeneous, the impact of a uniform threshold for the scope of POs and APOs with regard to production volumes would have diverging effects within Member States. For example, in Member States with a more concentrated processing sector, dairy processors would have the opportunity to switch between different agricultural producers and/or relocate collection activities in other milk production areas. In effect, this would have a positive impact on competition and increase the pace of structural adjustment in the dairy sector with production moving into more productive and/or cost efficient production areas and products.³⁷ On the other hand, in Member States with a less concentrated processing sector, increased bargaining power of producers could result in disproportionate distribution of value added towards farmers. Furthermore, depending on the concentration of the retail sector, processors might face a double margin squeeze from higher raw milk prices demanded by farmers and lower dairy product prices offered by retailers. In order to reduce the negative effects, certain levels of safeguard clauses appear necessary that take into account market and structural differences among Member States.

³⁷ See also Annex II concerning PDO-PGI quality schemes.

4.2.2. *Impacts on the environment*

The major potential impact could be delivered through IBOs and POs. The potential benefits from IBOs would originate from the aims for setting up this form of cooperation, such as:

- Adapting production and processing, in particular with regard to quality and protection of the environment, jointly to the requirements of the market;
- Providing the information and carrying out the research necessary to adjust production towards products more suited to market requirements and consumer tastes and expectations, in particular with regard to product quality and protection of the environment;
- Exploiting the potential of organic farming and protecting and promoting such farming as well as designations of origin, quality labels and *geographical indications*;
- Promoting practices of integrated production or other environmentally sound production methods.

These benefits would be multiple in case of extending IBOs to new sectors.

Coordinated action between all the actors of the food chain, based on commonly agreed voluntary commitments, is a powerful tool to improve environmental practises. This is supported by similar experiences at EU level in other fields, such as the High Level Group on the Competitiveness of the food industry; the High Level Forum for a Better Functioning Food Supply Chain or the EU Platform for Action on Diet, Physical Activity and Health.

Also for POs, potential benefits may arise from two of the proposed objectives that are specifically oriented toward environmental issues:

- ensuring that production is planned and adjusted to demand, particularly in terms of quality and quantity,
- protecting the quality of water, soil, air, habitats and landscape, favouring a sustainable use of water resources, preserving or improving biodiversity and contributing to climate change mitigation, by promoting environmentally sound cultivation practices, production techniques and waste management practices.

4.2.3. *WTO compliance*

The implications of this action will be in broad terms AMS neutral and could therefore be covered in current and currently negotiated future WTO commitments. Non-Green Box support to POs would be notified as direct payments to the extent that a benefit accrues to the producer.

4.2.4. *Simplification and Administrative burden*

New measures in relation to POs, APOs and IBOs (depending on how they are implemented), as well as contracting are likely to increase the administrative burden for Member State authorities and beneficiaries alike.

4.3. Strong focus on the market

4.3.1. Economic advantages and disadvantages

Under this option the intervention system is dismantled, only special intervention measures and disturbance clauses would be kept and implemented in case of severe market disruptions. This option would imply greater concentration of agricultural production in more competitive areas, with particularly favourable conditions³⁸, including relatively lower production costs, and would likely lead to higher price volatility with regard to the other policy options.

The recent experience during the dairy crisis has demonstrated the impact of intervention purchases and other market support measures in limiting the drop in market prices. The lack of clearly defined safety net levels could also create uncertainty among the participants of the supply chain with negative impacts on management decisions. In addition, issues related to the imperfect functioning of agricultural markets, and the consequences for farmers' income of an imbalanced distribution of value added along the food chain, may emerge much more clearly under this option.

4.3.2. Impacts on the environment

Withdrawing of support would lead to greater concentration of agricultural production in some areas with particularly favourable conditions, using more intensive farming practices, while the less competitive areas would face marginalisation and land abandonment³⁹. Such developments would result in increased environmental pressures and the deterioration of valuable habitats with serious economic and social consequences including an irreversible deterioration of the EU agricultural production capacity.

4.3.3. WTO compliance

This action would see the abolition of public intervention and therefore the corresponding elimination of AMS.

4.3.4. Simplification and Administrative burden

There would be a substantial slimming down of the legal framework, with a significant reduction of burden on Member State authorities. Beneficiaries are not requested to submit data and information, with the exception of situations of crisis. Time spent on meeting information obligations will be significantly reduced. On the other hand, it would also imply a loss of useful market information for analysis in case the current Member State obligations to communicate are removed.

From a control point of view the associated risks would relate to monitoring market developments, administration of crisis situations and to supervise that emergency measures are only used when facing crisis situations and not as hidden state aids. The pure reduction of measures should imply for Member States reduction of administrative burden and simplification.

³⁸ See *Scenar 2020 – Prospective scenario study on agriculture and the rural world*, 2006. http://ec.europa.eu/agriculture/publi/reports/scenar2020/index_en.htm .

³⁹ See previous footnote.

5. SUMMARY OF RESULTS

	Advantages	Disadvantages
Simplify and streamline existing instruments	<p>If a number of elements of the intervention system, private storage aid and special clauses are transferred to delegated acts, the system would be much more simple and easy to operate.</p> <p>Removing fixed prices in the intervention system allows intervention to act only when necessary.</p>	<p>Intervention through tendering may lead to certain initial uncertainty about the actual level of the safety net.</p> <p>The extension of private storage aid to other sectors (SMP) may be seen as a step backwards in market orientation</p>
	<p>Neutral impact on the environment. Farmers production choices today are already less influenced by market support</p>	
Improve the food chain functioning	<p>Fostering cooperation (POs, APOs, IBOs): better price transparency, improved bargaining power of farmers and market and income stability</p> <p>Optional contracts: less uncertainties regarding quantities and expected revenue, possible positive impact on price stability.</p> <p>Compulsory contracts: Positive impact on price stability.</p> <p>Major potential impact on the environment could be delivered through coordinated actions</p>	<p>Effectiveness and impacts may vary widely, by sector and country.</p> <p>Determination of the 'relevant market' is an asset to properly evaluate this option.</p> <p>Compulsory contracts: Risk of distortion in competition. Risk to disadvantage non organised farmers; Risk of rigidities in the market</p>
Strong focus on the market	<p>Greater concentration of agricultural production in more competitive areas.</p>	<p>It is not certain whether markets would be more stable.</p> <p>More intensive farming in areas with particularly favourable conditions.</p> <p>Marginalisation and land abandonment in less competitive areas.</p> <p>Increased environmental pressure, strong deterioration of EU production capacity.</p>

ANNEX I - DETAILED OUTLINE OF CURRENT MARKET INSTRUMENTS

The Single Common Market Organisation (sCMO)⁴⁰ provides the legal framework for the instruments currently available with regard to the internal market, trade with third countries, competition rules, general and specific provisions as well as implementing, transitional and final rules. To facilitate the connection with the policy options discussed in the report, the various measures have been organised with respect to their scope, as follows: (internal) market management measures, border protection and food chain functioning. Furthermore, only measures that are pertinent to the impact assessment are discussed.

Market measures

- Private storage aid is triggered, as a general rule, at a price level which is closer to market prices than intervention and represents a first layer of market management. The aid is mandatory for butter and optional for white sugar, beef, pig meat, sheep and goat meat, and olive oil. It is fixed by the Commission or established through tender, while the triggering mechanisms are set at Commission discretion. Private storage aid has been granted to the pig meat sector in 2007-2008, while in other sectors the aid has been used only in some Member States (e.g. Spain for olive oil). Although in theory private storage is the preferred market management tool to deal with temporary over-supply in the beef sector, in practice the current provisions on private storage aid have not been used.

Table 1 – Private Storage Aid

Product coverage	Reference price	Triggering mechanism	Time constraints
butter (mandatory)	Storage aid pre-fixed or established through tender	Aid fixed on the basis of certain criteria	Storage from 1 March to 15 August, can be removed from 16 August. Storage between 90 and 210 days
beef and veal		At commission discretion when market prices < 103% reference price (2 224 €/t)	
pig meat		At commission discretion when market prices < 103% reference price (1 509 €/t)	minimum storage period of 2 months
sheep and goat meat		At commission discretion under difficult market situation in one or more of the following MS: UK, Northern Ireland, other Member States taken separately	
sugar		At commission discretion when market prices < 85% reference price (404 €/t)	
olive oil		At commission discretion when market prices < 1779 €/t oil virgin extra, 1710 €/t oil virgin, 1524 €/t oil lampante	minimum storage period of 3 months

⁴⁰ COUNCIL REGULATION (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products

- Public intervention is activated at a lower level than private storage aid, when market prices go below reference price levels,. Intervention buying in is foreseen for cereals, rice, skimmed milk powder (SMP), butter and beef. Intervention prices, triggering mechanisms, calendars and quantitative ceilings vary across sectors. For cereals (with the exception of wheat) and rice, buying-in is decided by the Commission.

Table 2 – Public Intervention

Product coverage	Reference price	Triggering mechanisms	Time constraints	Quantitative Ceilings with guaranteed prices
soft wheat	101.31 €/t	at fixed price up to 3 million t, and by tendering for quantities beyond 3 million t	from 1 November to 31 May	3 million t
other cereals, rice	other cereals: 101.31 €/t rice: 150 €/t	Commission decision to extend quantitative ceiling	other cereals: from 1 November to 31 May rice: from 1 April to 31 July	other cereals and rice: 0 t
SMP	169.80 €/100 kg	Full intervention price up to 109 000 t, then monthly tenders with no minimum price	from 1 March to 31 August	109 000 t
butter	246.39 €/100 kg	90 % of reference price up to 30 000 t, then monthly tenders with no minimum price	from 1 March to 31 August	30 000 t
beef	1 560 €/t	Compulsory to open when market price at Member State level is below 1 560 €/t over 2 consecutive weeks		

- Production quotas have been an important instrument for market stabilisation, in sectors facing over production, notably the dairy and sugar sectors. Dairy and sugar quotas are set to expire following their respective 2014/15 quota year, following earlier decisions on the CMO in 2003 and 2004 respectively. In line with the greater market orientation of the CAP post-2013, the quota system cannot be seen as a solution to the market problems faced by these sectors today, as demonstrated during the run-up to and during the dairy crisis in 2009.
- Special intervention measures and special measures in case of market disturbances can be implemented at Member State or regional level under specific circumstances for certain sectors:
 - *Articles 44 to 46 Reg. 1234/2007*: In case of movement restrictions due to measures taken to combat animal diseases for beef and veal, dairy products, pig meat, sheep meat and goat meat, eggs, poultry meat. For the egg and poultry sectors, exceptional market support measures can be taken in case of loss in consumer confidence.

- *Articles 47-48 and 186-187 of Reg. 1234/2007*: Where prices on the Community market rise and/or fall significantly, the Commission may take necessary measures in the cereals, rice, sugar, hops, beef and veal, sheep meat and goat meat, milk and milk products, pig meat, eggs, poultry meat and olive oil sectors. With regard to the cereals, rice, sugar and dairy products the Commission may suspend import duties in whole or part for certain products.
- *Art 191 of Reg. 1234/2007*: allows the Commission to adopt the measures which are both necessary and justifiable in an emergency, in order to resolve specific practical problems. Such measures may derogate from provisions of the sCMO, but only to the extent that, and for such a period, as is strictly necessary.
- Other instruments whose main aim is not that of supporting markets could also have an impact on market stability. The existing food programme for the most deprived persons was originally designed to provide surplus (intervention) stocks of farm produce to needy people.⁴¹ Other programmes, like the school milk⁴² and school fruit⁴³ schemes provide those products under certain conditions to schoolchildren.

Border protection

- Border protection has an important role in contributing to stabilise (domestic) markets. Common import tariffs apply for most agricultural products. Tariff-rate quotas are also used for various products. Moreover, imports can enter with lower tariffs or even duty and quota free under EU preferential agreements. There are safeguard provisions (especially additional duties) should imports reach trigger levels (high volumes and/or low prices).
- As a combined result of CAP reform, WTO rules and world market developments, the use of export refunds has significantly decreased in terms of expenditure, quantities and product coverage. In 2009, export refunds accounted for just 1.4 % of EAGF expenditure, i.e. EUR 650 million. They have been used over some months in 2009 for dairy products to support the market in a period of severe crisis; they continue to be used for poultry and some processed pig meat products. As domestic support, border measures are subject to WTO discipline.

Under ongoing WTO negotiations, the EC committed itself to phase-out export refunds on condition of elimination of all similar measures by other developed countries. A successful completion of the Doha Development Round of agricultural trade negotiations would imply that these instruments could no longer be used in their current form. During exceptional circumstances of the dairy crisis in 2009 the resort to export subsidies allowed the relief of nearly 1.4 million tonnes of dairy products from the EU market.

⁴¹ The scheme was amended in the mid-1990s to make it possible to supplement intervention stocks with market purchases in certain circumstances. The resources available for the scheme have been increased as from the 2009 budget, and the Commission has tabled a proposal to the Council to modify the system (e.g. introducing co-financing). To be noted that Germany, United Kingdom and the Netherlands do not implement the scheme.

⁴² http://ec.europa.eu/agriculture/markets/milk/schoolmilk/index_en.htm

⁴³ http://ec.europa.eu/agriculture/markets/fruitveg/sfs/index_en.htm

Food chain functioning

- As regards the food chain functioning, the sCMO is the legal base for recognition by Member States of producer organisations (POs) in certain sectors, where they have a specific role in EU law. Otherwise Member States may do so on either a national or EU statute.

The scope of the sCMO with regard to POs covers the fruit and vegetables (F&V), olive oil, hops, wine, silkworm and tobacco sectors, although with different objectives and means. Current aim of POs in the F&V sector is to ensure that production is planned and adjusted to demand, both in terms of quality and quantity; to concentrate supply and to place products produced by its members in the market, and to optimise production costs and stabilise producer prices. Each PO has to market the production of its members and could manage one or more of those actions.

Specific rules exist for association and recognition of POs and associations of producer organisations (APOs) in the F&V sector. It has to be noted that recognition – of either POs or APOs - is merely an 'entrance requirement', and not a support measure in itself.

EU funds to POs in the F&V sector are provided in the form of contribution to the creation of operational funds, co-financed in most cases at 50 % and limited to 4.1 % of the value of marketed production.

Support is currently available under rural development to foster the setting up and the administrative operation of producers groups (PGs)⁴⁴ in EU-12 Member States. A proposal to extend this support to EU-15 Member States has been submitted to the Council and the European Parliament as part of the Lisbon alignment of the Rural Development Regulation.

Interbranch organisations (IBOs): Member States shall recognise IBO organisations in the F&V, olive oil and table olives and tobacco sectors. The disciplines decided by the IBO members are only effective for the members of the IBO. For example, when the French F&V IBO decides quality rules for apples, they do not apply to apples produced in other Member States or third countries. The possibility to extend certain rules issued by an IBO to national non-member producers are however possible in the F&V sector. As for POs and APOs, recognition is a merely 'entrance requirement', and not a support measure in itself.

⁴⁴ Producer Groups are defined as farmers organisations that have not yet achieved the status of recognised Producer Organisations

ANNEX II - INTER-RELATION OF EU QUALITY INSTRUMENTS AND MARKET MEASURES

The EU safeguards food quality in many ways, for example via measures to enhance food safety and hygiene, clear labelling rules, regulations on animal and plant health and animal welfare, control of pesticide residues and additives in food and via nutritional information. Beyond these 'baseline' requirements, farmers and food producers use their expertise and imagination to give their products other, individual qualities valued by consumers.

EU quality instruments

Marketing standards⁴⁵: The European marketing standards encourage EU farmers to produce products of given quality, in conformity with the consumers' expectations. They allow a comparison of prices between various qualities of the same product, ensure minimum quality for the consumer, and facilitate the operation of the internal market and the international trade. They replace the various national standards and are regulated by the 'single CMO'. They assure stability to the market, in certain cases they are based on international standards, in order to assure a smooth functioning of the market. All these rules require basic requirements, and should not depend on the market situation. Market stability is an important issue for quality, as producers tend to reduce production costs and consequently the quality when prices fall. Nevertheless, producers have to respect the compulsory EU standards, which guarantee that a basic quality standard is respected.

Certification schemes: In addition to marketing standards, EU quality schemes⁴⁶ (PDO-PGI⁴⁷, TSG⁴⁸ and Organic Framing) identify products and foodstuffs produced according to exact specifications, alongside an increasing number of public and private certification schemes increasingly used by retailers and farming groups. These schemes offer guarantees for consumers about origin and/or methods of production, deliver effective marketing messages about high value-added products, and underpin rural businesses producing quality products. For products obtained under a certification scheme, producers have to respect fixed specifications detailing farming methods and production techniques. As a result, price volatility has a limited impact on the quality of the product, although volatility will impact producer returns. However, evidence shows that prices for specific quality products can hold up even when commodity prices fall.

⁴⁵ A proposal to modify Regulation (EC) 1234/07 has been recently presented (COM(2010) 738 final) in the context of the 'Quality package,' taking into account the new rules of the Lisbon Treaty, which will give to the Commission the responsibility to adopt, by delegated acts, any modification to existing marketing standards, including the mandatory indication of the place of farming. This would allow harmonizing and simplifying the rules.

⁴⁶ The Commission adopted on 10 December 2010 a proposal for a European Parliament and Council Regulation on agricultural product quality schemes (COM(2010) 733 final). This proposal modifies the existing legislations on PDO-PGI and TSG and proposes to empower the Commission to adopt new optional quality terms by delegated acts.

⁴⁷ Protected Designations of Origin and Protected Geographical Indications according to Regulation (EC) N°510/2006

⁴⁸ Traditional Specialities Guaranteed according to Regulation (EC) N°509/2006

Impact of market measures on the quality of production

Market measures that intervene directly in the market (*private storage aid, public intervention, special intervention measures* in case of market disturbances and *export refunds*) can affect production decisions and product quality:

- Market instruments normally specify the standard or quality of product that is eligible for the intervention measure (e.g. minimum carcass classification or age at slaughter for meat) or provide different intervention prices for different qualities of product (e.g. virgin and non-virgin oils). These specifications will determine the impact of the market measure on the specific quality of product.
- If the market instrument (such as intervention buying) is too attractive to producers, there is a risk of production 'for intervention' rather than 'for the market'. The result will be that the signal to producers concerning the quality of product will be set by the intervention specification, and tend to shift production quality in general to this minimum level. Producers of high-value added quality may not be affected provided the market continues to give a high-enough margin for the specific product. However, producers of 'medium' quality, slightly above the minimum standard set in the intervention specification, will have an incentive to lower quality to only the basic standard.
- If market measures are designed to affect production, they could reduce the incentive for farmers to participate in quality measures. However, if market instruments are generally unattractive to producers (which is the case under normal market conditions), production standards are determined by consumers' preferences and specifications, and not by intervention standards.
- If there are no market instruments or if they are ineffective in stabilising the market, then producers risk facing volatility in the market. For producers of value-added product or niche product, volatility in commodity prices may present an advantage – provided demand for their value-added product holds up. However, a severe price fall in a sector will drag down all prices, as consumers will be incentivised to switch to bulk products (with inferior quality and lower value) as the price gap increases. A producer of value-added products who has high production costs might therefore find that a sectoral price-fall pushes the return for the value-added product below costs of production, creating incentives to scale back production costs by lowering production quantities or product qualities.
- The optimum environment from the perspective of quality policy is that producers can respond to market demand, both for standard product and for high value added product. This requires a stable market environment but where market messages are not obscured.

Production *quotas* can also influence quality policy by obscuring market messages and also by limiting the offer. Quotas may limit normal market incentives to innovate, to improve quality and meet buyer specifications, and control costs. However, in cases where producers are producing value-added product, quotas can operate to limit supply and hold up prices. In the dairy sector, production quotas have been instrumental in controlling volume output for producers of high value-adding product, notably PDO cheeses and organic dairy products. In PDO–PGI zones of production that are under-

capacity, abolition of quotas could have the result that production of milk eligible for processing as a PDO product would increase.

The possibility to limit output of processed products (e.g. through an agreement of cheese producers of a cheese benefiting from GI protection) can have a direct impact on farmers trying to sell their raw material. If one wants to maximise sales opportunities for e.g. dairy farmers to sell their milk into higher-value-added production streams like quality cheese as compared to bulk products, output limitations for quality cheeses could be counter productive.

Such output limitations could furthermore reduce the incentive for young farmers to get started, as sales opportunities decrease.

Output limitations may also have an impact on the value of investments undertaken in the past (including investments co-financed by EU funds). For example, output limitations may reduce the possibility to fully use cheese making machinery. Output limitations may also reduce the incentive for farmers or processors to invest.

Further analysis is necessary to assess the potential impact of additional possibilities for producer organisations to limit output on the principle that everyone should be free to enter the market for producing a product bearing a geographical indication.

Producer organisations (PO) and other forms of collective arrangements can be formed around a specific quality of production. Certain POs have been asking for the possibility to control production themselves. This is in particular important in the milk sector, where the part of PDO/PGI products is quite relevant (8 % of the production) and the quota system is set to expire in 2015. Such arrangements are common in the area of PDO-PGI and TSGs, as well as regional initiatives to deliver certain qualities or attributes of products. The impact of POs on quality of production will depend on the role and powers invested in the organisation, the scale of participation, but also whether the PO has power to apply its decisions to non-participating members. A PO might also set the production standard or quality – in particular when developing the specifications – and conditions for marketing products.

Quality can offer farmers a protection against market volatility and prices drops (see the example of Jámón Serrano – Annex III of Impact assessment on Traditional Specialities Guaranteed⁴⁹). A limited capacity of market measures to compensate for market volatility and with market management capacities granted to POs, it can be expected that quality schemes would become very appealing for those producers who are in a position to meet the specifications and join a scheme.

Certain risks have to be highlighted, such as the risk that the rules benefit producers at the expense of consumers, or benefit one class of producers (for example the larger operators having more influence in the organisation) at the expense of others (e.g. smaller ones). Rules might also prevent innovation or marketing of product that has a greater value-added than the standard set by the PO.

⁴⁹ http://ec.europa.eu/agriculture/quality/policy/quality-package-2010/ia-tsg_en.pdf

ANNEX III - DIFFERENCES IN COMPETITIVENESS ACROSS MEMBER STATES

Calculations using Farm Accountancy Data Network (FADN) data highlight differences in competitiveness between Member States in the dairy, wheat and beef sectors by comparing operating costs and total receipts with relation to intervention prices. As can be seen the situation varies widely across sectors and Member States. The methodology for calculating these indicators is as follows⁵⁰:

- Receipts take into account: the value of sales of products, coupled payments, and possible national payments⁵¹.
- Operating costs include specific costs, e.g. purchased inputs as well as inputs produced and used on the farm, other specific costs, water; and non specific operating costs, e.g. contract work (machinery hire), current upkeep of machinery and equipment, motor fuels and lubricants, car expenses, upkeep of land improvements and buildings, electricity, heating fuels, insurance, taxes and other dues, other farming overheads. Other costs, like depreciation, remuneration to external and family labour, are not included.
- Intervention price based on the fat and protein values of raw milk derived from the intervention buying-in prices (at guaranteed levels) of butter and SMP and taking into account the real fat content of milk in each Member State.

In the dairy sector the operating costs are higher than the equivalent intervention price in nine Member States, with the greatest differences to be found in Finland, Greece, Malta, and Sweden (Figure 5). At the same time, average total receipts, including coupled payments and national aids (available for few Member States) are above costs in all Member States. Data has to be analysed with caution because operating costs are being compared with an 'equivalent' intervention price calculated on the basis of intervention prices for SMP and butter, not taking into account the production mix of Member States.

For wheat specialised farms, it comes out that in the wheat sector the intervention price seems to be set at an adequate safety-net level (Figure 6). In Bulgaria, Spain, Romania, Lithuania and Belgium operating costs are slightly below the intervention price but in all cases margins are positive thanks to higher receipts. The only Member State with a negative margin seems to be the Slovak Republic, where operating costs are higher than the receipts.

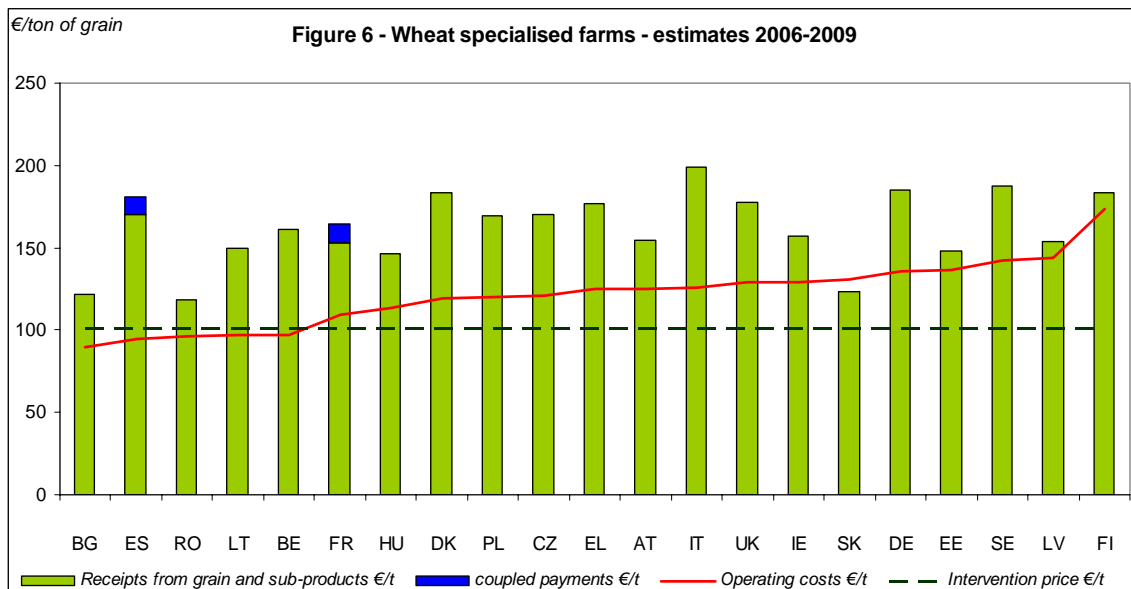
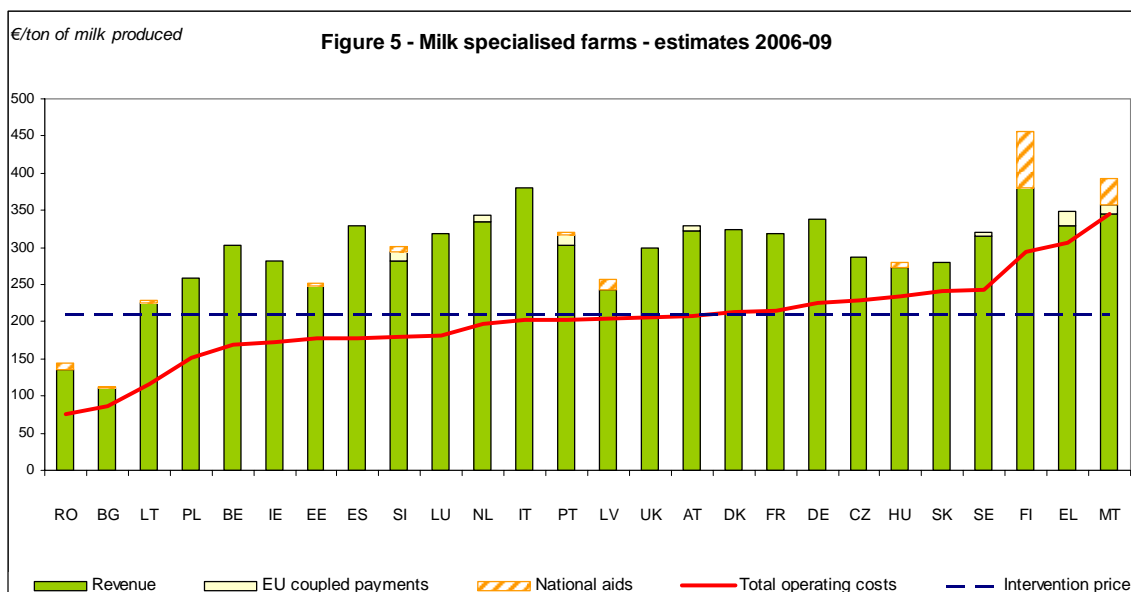
The same simulations made for farm specialised in feed cereals (barley and maize) confirm that the intervention price level is adequate. The only exception is given by Germany, which shows a relative competitive disadvantage in the production of maize

⁵⁰ Years 2008 and 2009 are estimated on the basis of 2007 FADN data. The output, operating costs and gross margin (over operating costs) for 2008 and 2009 are estimated on the basis of output and input price indices. The structures are supposed to remain identical.

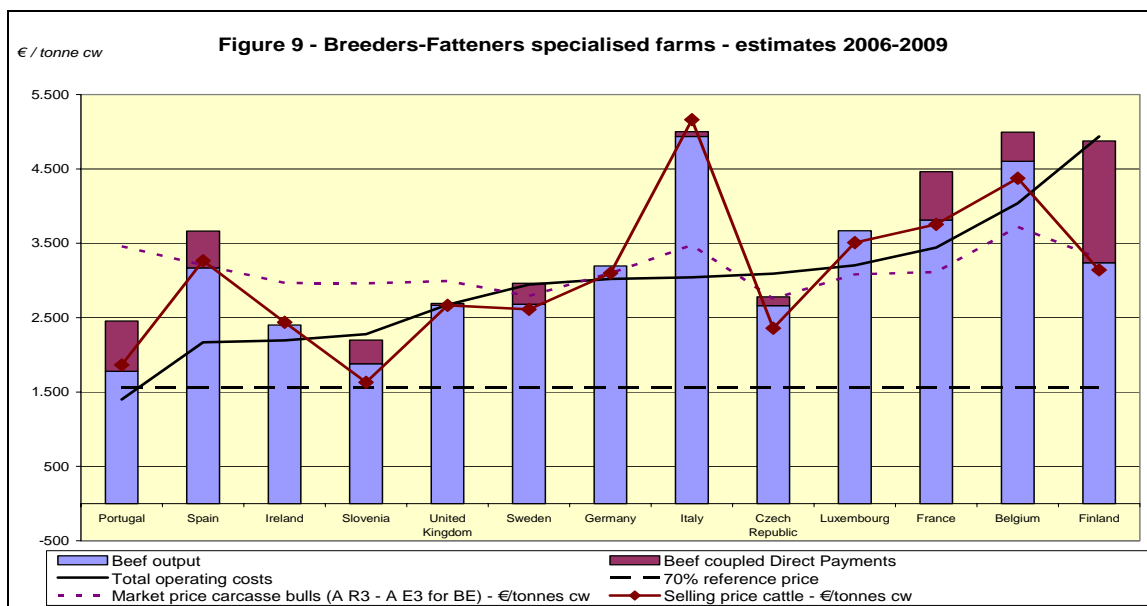
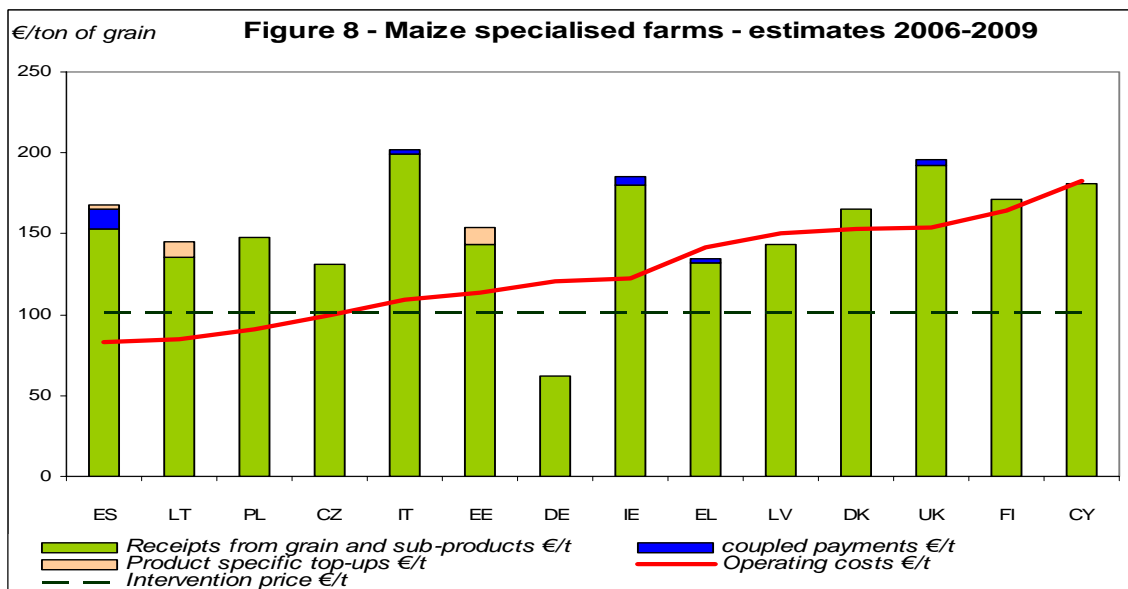
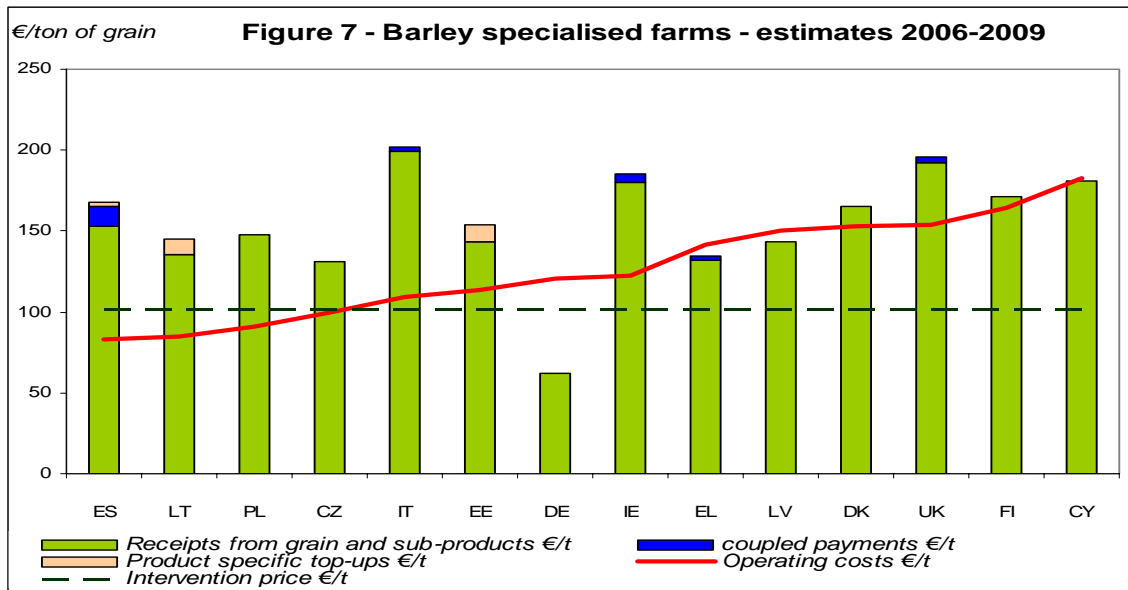
⁵¹ In the case of dairy farms this includes the EU dairy payments until its decoupling and Article 69 payments for dairy (used in Spain). The value of the calves and that of the sales of cull dairy cows are not taken into account, because no satisfactory method has been found to estimate them on the basis of the current data.

and barley, given that margins appear to be negative in the period examined. Indeed, in this country prices are very low and stocks of barley have been accumulating during recent years; intervention was activated until the start of Health Check implementation (July 2009), which established zero ceilings for feed cereals.

Finally, simulations made using data from breeders and fatteners specialized farms (Figure 9) put in evidence that operating costs vary significantly between Member States. As a general pattern, the costs are well reflected in beef market prices. In Spain and Italy, beef prices seem relatively more profitable⁵². Operating costs are higher than the level of intervention in all Member States with the exception of Portugal.



⁵² The results for Italy, where prices of cattle sold in the FADN sample are much higher than the representative prices of A R3 bulls, may require further investigation.



Source: DG AGRI FADN data and elaboration

ANNEX IV – SUGAR MARKET OPTIONS WITH AGLINK-COSIMO

A quantitative analysis has been carried out in DG AGRI in order to measure the likely impact of sugar quota abolition, based on two distinctive scenarios. This annex provides an overview of the methodology, scenarios, main findings and the essential results.

Methodology

The model used for this exercise has been the AGLINK-COSIMO model in the version 2010 including the updates made to the EU and macro-economic data as used for the *Prospects for Agricultural Markets and Income in the EU 2010-2020*. In addition, consumer prices and a food demand system have been introduced in the general model update. This will be included in the AGLINK-COSIMO model 2011. The sugar module of the EU has been revised to be comparable to the rest of the markets. The model works on production seasons, which in the case of EU sugar is from October to September. Some of the changes include:

- Planting decision for sugar beet depend on development of average sugar beet prices, production costs and the relation between return per hectare for out-of quota production to other crop returns,
- Out-of quota production is possible destined for exports and processing mainly ethanol,
- Prices for out-of quota sugar beet are determined by export prices for white sugar and the domestic sugar price in the relation of shares of use,
- Sugar imports are determined by quotas for the Balkan countries and for other countries (CXL), for the imports from EBA and EPA (former ACP) there is only a theoretical limit and they react to the price difference between the EU and world market,
- In the case of an effective support price, exports are limited by WTO limits,
- Isoglucose production is constrained by the production quota,
- Tariffs for molasses and isoglucose are introduced in the import equations of these products.

Scenarios

- The **quota scenario** assumes the continuation of the current quota scheme for sugar and isoglucose as well as support prices for white sugar and sugar beet;
- The **no-quota scenario** assumes that quotas and support prices are abolished as of 2016/17⁵³;

⁵³ From a modelling point of view, given the delay of the planting decision, the abolition of quotas is technically introduced in the preceding quota year

- The **landing scenario** assumes that quotas and support prices are abolished as of 2018/19, following a two year transition period when quotas are increased by 3 % per year, while maintaining the support prices;
- A sensitivity analysis has been conducted on these scenarios, assuming **fixed world market prices at 250 €/t for white sugar** and no feedback from the world market;
- The **reduced import scenario** assumes a stronger reaction of EBA and EPA sugar exports to the EU towards the price *difference* between the EU and the world market prices.

Main findings

- The **abolition of quotas** is expected to result in an **increase** (1.9% in 2020) in sugar beet area in the EU. On the one hand, there will be no restriction due to the quota but on the other hand it is expected that the average producer price for sugar beet will fall.
- The **prices for sugar beet** (-8.2% in 2020) **and white sugar** (-3.5% in 2020) are considerably **below the current support prices**. This limits the expansion of the domestic sugar production and sugar import expansion and at the same time increases the demand for sugar especially from the biofuel industry (7.6%).
- The **effects on world prices** are expected to be **limited** (-0.2% for the world white sugar price) as the price transmission between the EU market and the world market is low due to the trade regime.
- The **effects on the isoglucose market are small** because of limited changes in the sugar market. The domestic demand for isoglucose is expected to increase slightly (1.5% in 2020) and the exports to increase (4.1% in 2020), resulting in a rise in production (2.3% in 2020).
- The effects in the landing scenario for the season 2020/21 are due to the later abolition of the quota and the shorter time to adjust to the new market conditions. In the case of sugar beet production the expansion of the quota including maintaining the support price for three more seasons results in a higher starting base and consequently larger production increase.
- The modelling approach chosen does not allow distinguishing regional effects which might result in different pictures.
- The effect of the abolition of quotas depends to an extent to the application of support prices. In the results presented here it is assumed that support prices will not be in use after the abolition of the quota. Otherwise the production increase of EU sugar would become much more pronounced.
- A **low world market price** (250 €/t of white sugar) alters the situation and results in a slight decline of the sugar beet production in the EU (-3.4%), as the presence of the support price secures the full use of the quota otherwise.
- If **developing countries (EBA and EPA) react stronger** to the difference between the EU and world market price, a further expansion by 2.4% of the EU sugar production can be expected due to lower exports from EBA and EPA to the EU.

Results for selected variables from the different scenarios using AGLINK-COSIMO

	2009/1 0	2014/1 5	quota	no-quota	landing	change to quota		change to 2009/10		
			2020/2 1	2020/21	2020/2 1	no-quota	landing	quota	no-quota	landing
Sugar beet area ('000 ha)	1601	1717	1772	1805	1831	1.9%	3.3%	10.6%	12.7%	14.3%
Sugar beet yield (t/ha)	71	65	65	65	65	-0.2%	-0.1%	-9.1%	-9.2%	-9.2%
Sugar beet production ('000 t)	114235	110799	114942	116888	118649	1.7%	3.2%	0.6%	2.3%	3.9%
Sugar beet price (€/t)	29.2	25.5	25.6	23.5	23.0	-8.2%	-10.0%	-12.6%	-19.8%	-21.3%
..Sugar beet out-of quota price (€/t)	29.2	22.4	23.2	23.5	23.0	1.0%	-1.0%	-20.6%	-19.8%	-21.3%
..Sugar beet support price (€/t)	26.3	26.3	26.3			-100.0%	-100.0%	0.0%	-100.0%	-100.0%
Sugar beet value of production (mill. €)	3159	2663	2768	2583	2571	-6.7%	-7.1%	-12.4%	-18.2%	-18.6%
Sugar production ('000 t)	17468	16841	17471	17767	18035	1.7%	3.2%	0.0%	1.7%	3.2%
..Sugar out-of quota production ('000 t)	4131	3505	4134	17767	18035	329.7%	336.2%	0.1%	330.1%	336.6%
Sugar total use ('000 t)	18330	18718	19615	19967	20013	1.8%	2.0%	7.0%	8.9%	9.2%
..Sugar food and industry use ('000 t)	15674	15344	15503	15542	15578	0.3%	0.5%	-1.1%	-0.8%	-0.6%
..Sugar use for biofuels ('000 t)	2656	3374	4113	4425	4435	7.6%	7.8%	54.8%	66.6%	67.0%
Sugar exports ('000 t)	3063	1322	1105	1181	1232	6.9%	11.5%	-63.9%	-61.4%	-59.8%
Sugar imports ('000 t)	3187	3250	3696	3520	3416	-4.7%	-7.6%	16.0%	10.4%	7.2%
..Sugar imports, EBA & EPA ('000 t)	2177	2240	2686	2510	2406	-6.5%	-10.4%	23.4%	15.3%	10.5%
..Share of white sugar in total imports	0.23	0.19	0.22	0.22	0.22	0.1%	0.3%	-1.7%	-1.5%	-1.3%
Sugar total stocks ('000 t)	3874	3694	4219	3234	3279	-23.3%	-22.3%	8.9%	-16.5%	-15.4%
White sugar producer price (€/t)	482	405	403	389	380	-3.5%	-5.7%	-16.5%	-19.4%	-21.2%
..White sugar support price (€/t)	404	404	404			-100.0%	-100.0%	0.0%	-100.0%	-100.0%
White sugar world price (€/t)	450	292	313	312	312	-0.2%	-0.3%	-30.5%	-30.6%	-30.7%
Isoglucose production ('000 t)	690	690	690	706	702	2.3%	1.6%	0.0%	2.3%	1.6%
Isoglucose use ('000 t)	575	562	495	502	496	1.5%	0.3%	-13.9%	-12.7%	-13.7%
Isoglucose exports ('000 t)	119	136	203	212	213	4.1%	4.6%	70.3%	77.3%	78.2%
Isoglucose imports ('000 t)	4	8	8	7	7	-4.6%	-5.2%	101.3%	92.2%	91.0%
Isoglucose net trade ('000 t)	116	128	196	204	205	4.5%	5.0%	69.3%	76.9%	77.7%
Isoglucose producer price (€/t)	358	322	302	287	285	-4.9%	-5.6%	-15.7%	-19.9%	-20.4%
Isoglucose world price (€/t)	325	251	280	277	277	-1.0%	-1.2%	-13.9%	-14.8%	-15.0%

Results for selected variables from the different scenarios using AGLINK-COSIMO with a fixed world sugar price

	2009/1 0	2014/1 5	quota	no-quota	landing	change to quota		change to 2009/10		
			2020/2 1	2020/21	2020/2 1	no-quota	landing	quota	no-quota	landing
Sugar beet area ('000 ha)	1601	1632	1742	1683	1703	-3.4%	-2.3%	8.8%	5.1%	6.3%
Sugar beet yield (t/ha)	71	65	65	65	65	-0.4%	-0.4%	-9.1%	-9.5%	-9.4%
Sugar beet production ('000 t)	114235	105292	113034	108665	110035	-3.9%	-2.7%	-1.1%	-4.9%	-3.7%
Sugar beet price (€/t)	29.2	25.5	25.5	23.1	22.8	-9.6%	-10.8%	-12.7%	-21.0%	-22.1%
..Sugar beet out-of quota price (€/t)	29.2	21.6	22.9	23.1	22.8	0.8%	-0.6%	-21.6%	-21.0%	-22.1%
..Sugar beet support price (€/t)	26.3	26.3	26.3			-100.0%	-100.0%	0.0%	-100.0%	-100.0%
Sugar beet value of production (mill. €)	3340	2686	2886	2509	2506	-13.1%	-13.2%	-13.6%	-24.9%	-25.0%
Sugar production ('000 t)	17468	16004	17181	16517	16725	-3.9%	-2.7%	-1.6%	-5.4%	-4.2%
..Sugar out-of quota production ('000 t)	4131	2668	3844	16517	16725	329.6%	335.1%	-6.9%	299.8%	304.9%
Sugar total use ('000 t)	18330	18733	20061	20537	20566	2.4%	2.5%	9.4%	12.0%	12.2%
..Sugar food and industry use ('000 t)	15674	15367	15512	15574	15600	0.4%	0.6%	-1.0%	-0.6%	-0.5%
..Sugar use for biofuels ('000 t)	2656	3365	4550	4963	4966	9.1%	9.2%	71.3%	86.8%	87.0%
Sugar exports ('000 t)	3063	1028	721	794	819	10.2%	13.7%	-76.5%	-74.1%	-73.2%
Sugar imports ('000 t)	3187	3898	5148	4761	4642	-7.5%	-9.8%	61.5%	49.4%	45.7%
..Sugar imports, EBA & EPA ('000 t)	2177	2888	4138	3751	3632	-9.4%	-12.2%	90.0%	72.3%	66.8%
..Share of white sugar in total imports	0.23	0.19	0.24	0.24	0.24	0.0%	0.0%	4.2%	4.2%	4.2%
Sugar total stocks ('000 t)	3874	3704	7483	3145	3178	-58.0%	-57.5%	93.1%	-18.8%	-18.0%
White sugar producer price (€/t)	482	404	400	381	375	-4.8%	-6.3%	-17.1%	-21.1%	-22.4%
..White sugar support price (€/t)	404	404	404			-100.0%	-100.0%	0.0%	-100.0%	-100.0%
White sugar world price (€/t)	450	256	250	250	250	0.0%	0.0%	-44.5%	-44.5%	-44.5%
Isoglucose production ('000 t)	690	690	688	701	696	1.9%	1.1%	-0.4%	1.5%	0.8%
Isoglucose use ('000 t)	575	543	496	498	493	0.4%	-0.6%	-13.7%	-13.3%	-14.2%
Isoglucose exports ('000 t)	119	155	199	210	210	5.1%	5.3%	67.0%	75.6%	75.8%
Isoglucose imports ('000 t)	4	8	8	7	7	-4.9%	-5.0%	101.3%	91.5%	91.2%
Isoglucose net trade ('000 t)	116	147	192	202	203	5.5%	5.7%	65.9%	75.1%	75.3%
Isoglucose producer price (€/t)	358	335	298	284	283	-4.9%	-5.0%	-16.7%	-20.7%	-20.9%
Isoglucose world price (€/t)	325	298	272	272	272	0.0%	0.0%	-16.5%	-16.5%	-16.5%

Results for selected variables for import scenarios using AGLINK-COSIMO

	no-quota		red. import	no-quota		red. import	change to no-quota	
	2009/10	2014/15	2014/15	2020/21	2020/21	2014/15	2020/21	
Sugar beet area ('000 ha)	1601	1717	1711	1805	1848	-0.3%	2.4%	
Sugar beet yield (t/ha)	71	65	65	65	65	0.0%	0.1%	
Sugar beet production ('000 t)	114235	110799	110415	116888	119778	-0.3%	2.5%	
Sugar beet price (€/t)	29.2	25.5	25.6	23.5	24.3	0.5%	3.8%	
..Sugar beet out-of quota price (€/t)	29.2	22.4	23.0			2.7%		
..Sugar beet support price (€/t)	26.3	26.3	26.3			0.0%		
Sugar beet value of production (mill. €)	3159	2663	2668	2583	2747	0.2%	6.3%	
Sugar production ('000 t)	17468	16841	16783	17767	18206	-0.3%	2.5%	
..Sugar out-of quota production ('000 t)	4131	3505	3446			-1.7%		
Sugar total use ('000 t)	18330	18718	18665	19967	19801	-0.3%	-0.8%	
..Sugar food and industry use ('000 t)	15674	15344	15295	15542	15472	-0.3%	-0.4%	
..Sugar use for biofuels ('000 t)	2656	3374	3370	4425	4329	-0.1%	-2.2%	
Sugar exports ('000 t)	3063	1322	1240	1181	1074	-6.2%	-9.1%	
Sugar imports ('000 t)	3187	3250	3065	3520	2812	-5.7%	-20.1%	
..Sugar imports, EBA & EPA ('000 t)	2177	2240	2055	2510	1802	-8.3%	-28.2%	
Sugar total stocks ('000 t)	3874	3694	3640	3234	3228	-1.5%	-0.2%	
White sugar producer price (€/t)	482	405	420	389	407	3.5%	4.7%	
..White sugar support price (€/t)	404	404	404			0.0%		
White sugar world price (€/t)	450	292	293	312	312	0.2%	-0.2%	
Isoglucose production ('000 t)	690	690	690	706	711	0.0%	0.7%	
Isoglucose use ('000 t)	575	562	565	502	511	0.6%	1.8%	
Isoglucose exports ('000 t)	119	136	133	212	207	-2.3%	-2.0%	
Isoglucose imports ('000 t)	4	8	8	7	7	2.4%	2.0%	
Isoglucose producer price (€/t)	358	322	330	287	293	2.5%	2.0%	
Isoglucose world price (€/t)	325	251	252	277	277	0.1%	-0.1%	

Note: The scenario (red. import) assumes a stronger reaction of EBA and EPA sugar imports to the EU towards the price differential between the EU price and the world market price.

ANNEX V - SHORT MARKETING CHAINS

Short marketing chains are those which avoid the food supply chain, either by direct sales from producer to consumer or sales via one intermediary acting on behalf of the farmers/producers. Many of these sales also take place over a short distance and could be considered 'local' sales, but this is not necessarily the case especially with the growth of internet sales directly from the farmer.

For many farmers, and in particular small-scale producers, supplying the main commercial commodity markets is particularly difficult and unrewarding, due to the pressures of commodity markets and dysfunction of the food supply chain discussed *supra*. A growing number of farmers are prepared to engage in short-chain marketing, in order to provide continuity for their economic activity and sufficient income.⁵⁴

The issue has attracted the attention of the European Parliament; in 'Fair revenues for farmers: A better functioning food supply'⁵⁵ calls on the Commission to '*propose the adoption of instruments to support and promote farmer-managed food supply chains, short supply chains and farmers' markets, in order to establish a direct relationship with consumers and to enable farmers to obtain a fairer share of the value of the final sale price by reducing the number of middlemen and of the stages of the process*'.

Small-scale farmers have a relatively significant role with regard to the environment, local economy and social cohesion. According to the 2007 Eurostat Farm Structure Survey, 6.4 million out of the 13.7 million agricultural holdings operating in the European Union (i.e. 46.6 %) had an economic size of less than 1 ESU⁵⁶. These holdings employ 23 % of total labour force in agricultural sector.

Close to 40 % of the persons working in the European agricultural holdings work in a farm with less than 1 ESU, which in absolute numbers corresponds to over 10 million people. 4.7 million (34.5 %) of European agricultural holdings have a size from 1 to less than 8 ESU and represent 34 % of agricultural labour force. Agricultural patterns characterised by small farm structures are more present in the EU-12 Member States where 95.5 % of all agricultural holdings are smaller than 8 ESU, employing 81.5 % of agricultural labour force.

Few marketing channels are open to small-scale farmers, whose marketing is hampered by the nature of the production (non-standardised product), processing and storage limitations, lack of infrastructure and access to markets. Their small quantities of production are also not sufficiently interesting to the main buyers (traders, processing companies and/or retailers) that increasingly dominate the marketplace.

⁵⁴ H. Renting, T.K. Marsden, J. Banks: Understanding alternative food networks: exploring the role of short food supply chains in rural development, Environment and Planning A 2003, volume 35

⁵⁵ P7_TA(2010)0302

⁵⁶ 'European Size Unit' is a standard gross margin of 1.200 EUR that is used to express the economic size of an agricultural holding. This corresponds to approximately 1.3 ha of cereals or one dairy cow or 25 sheep or an equivalent combination of these.

Small-scale farmers do have some advantages of their production: artisan - instead of highly industrialised - production methods, the use of traditional techniques, the opportunity for purchasing from local producers, are all attractive 'selling points' or 'qualities' to a segment of consumers. For both small-scale and larger producers, direct sales appeal to a certain group of consumers for various reasons: (perceived) reduction in transport distances and therefore better respect of nature and environment; local sourcing to support the local economy; reconnecting consumers with farmers; and ensuring that a higher margin goes to the farmer. Opportunities for deliveries through short marketing chains are also created through internet sales.

Given the advantages of direct sales and the problems in the functioning of the food supply chain, especially for small-scale producers⁵⁷, this form of marketing should be encouraged, while recognising the role of conventional channels. The objectives of encouraging participation in short marketing chains are:

- Strengthen farmers' possibilities of marketing their agricultural products and foodstuffs through short marketing chains and of communicating the attributes of the product to consumers, in order to increase their returns from the market.
- Increase consumers' knowledge about the characteristics and attributes of agricultural products and foodstuffs sold through short marketing chains.

With a view to further strengthening farmers' possibilities to place their produce on the market and to ensure adequate consumers' information about this produce, options for action range from increasing visibility of existing short marketing chain schemes to promotion of short marketing chains through rural development measures, to development of labelling schemes.

The following possibilities, which do not exclude each other, have been looked at:

Promotion of short marketing chains through rural development support

Member States already assist economic operators at national and/or regional level to place their products on the market via short marketing chains, notably through EU rural development support. These incentives aim at improving the marketing in rural areas of products produced on the farm and by the farmer and sold through short marketing chains. Providing tools for rural development at EU level has been confirmed at creating additional value as compared to action at purely national level.

Currently, the EU rural development policy provides for several measures, including LEADER, that can be used to establish and foster short marketing chains by responding to different needs. This issue is more fully explored in the whole context of rural development in Annex 4 on Rural Development. However, while rural development measures can provide key financing, they do not in and of themselves differentiate product in the marketplace. In this respect the current EU rural development 'toolbox' for supporting short marketing chains may not fully realise its potential. For this a specific labelling tool is needed.

⁵⁷ In adopting the Quality Package on 10.12.2010, the Commission noted the particular difficulties for small farmers to participate in EU quality schemes, and undertook further analysis.

Labelling scheme for short marketing chains

Existing EU quality schemes (organic, geographical indications and traditional specialities) have clearly proven the usefulness of action at EU level. The scheme for geographical indications is even an exclusive one preventing Member States to maintain national system, despite the fact that many products under such schemes are not sold outside the region of origin. However, none of these schemes specifically target direct marketing. Yet, these kinds of quality products are frequently sold through direct mechanisms – as the growth of the ‘organic box’, farmers’ markets selling PDO-PGI product, and internet sales of wine direct from producers, testify.

At the same time, as noted in the 2010 Impact Assessment for geographical indications⁵⁸, the geographical indications scheme is less attractive to small and semi-subsistence producers owing to the constraints of adhering to a specification and costs of certification; similar considerations are likely to apply in the case of the compliance burden for organic certification.

Similarly, very small farmers may not be able to participate in investment related rural development measures or other rural development tools. While some Member States or regions are providing support for short marketing schemes, others do not. Farmers in the latter countries are thus put at a disadvantage. In Member States where tools exist, fragmentation of the approach can make cost-effective promotion campaigns more difficult and/or costly. Furthermore, publicly financed 'buy local' campaigns may easily run foul of EU internal market rules.

The creation of a specific labelling scheme at the EU level⁵⁹ is another possibility to assist producers who market their products through short marketing chains, and in particular in Member States where such tools are not yet available. Such a labelling scheme could be established in two ways:

- eligibility conditions for participating in the labelling scheme are left to the responsibility of the Members States according to the subsidiarity principle. Only the definition of eligible types of marketing ('short marketing chains') is regulated at EU level.
- not only the eligible types of marketing are defined at EU level but also other criteria such as eligibility requirements for economic operators and control mechanisms.

The advantages and disadvantages of an EU scheme are summarised in the table below.

Advantages	Disadvantages
<ul style="list-style-type: none"> • More structured communication enhanced by an EU scheme should allow to better inform European consumers about a part of the reality of agriculture that is not always easily visible to them. • An EU scheme should allow to complement and thus 	<ul style="list-style-type: none"> • Member States that will be responsible to enforce the EU scheme will have administrative costs. In case that the costs are born by the farmers, this may represent a disincentive for them to join.

⁵⁸ http://ec.europa.eu/governance/impact/ia_carried_out/docs/ia_2010/sec_2010_1525_2_en.pdf

⁵⁹ A labelling scheme identifying product of outermost regions is implemented in the sCMO.

<p>further increase the overall positive effect of EU rural development measures in favour of short marketing chains. It could provide an additional incentive for Member States to support short supply chains within rural development measures, and thus further contribute to inclusive growth.</p> <ul style="list-style-type: none"> • An EU scheme could facilitate sales by very small farmers who are not able to participate in other schemes which require financial participation by the farmer. • An EU scheme would allow for more effective promotion campaigns and provide better value for money, as scarce public expenditure could focus on a single scheme instead of a multitude. • An EU scheme reduces / avoids the risk that national logos are used to split the internal market. In the past, Commission had to intervene vis-à-vis many logos / quality schemes set up by regions or Member States that were breaching internal market rules. • An EU scheme could avoid the legal problem that nationally financed "buy local" campaigns easily run foul of EU law. • An EU scheme would put farmers in Member States and regions where no support is currently available for short supply chains at the same footing with farmers already benefiting from such support, and thus contribute to more inclusive growth throughout the EU. • An EU scheme allows for EU wide recognition of products produced at the level of farms and farmers producing these products. An EU scheme can underline the important role of (often very small) farmers to ensure product variety, tradition, cultural heritage, and boost their credibility in the eyes of consumers. • An EU scheme reduces the risk of misleading consumers. Consumer choice will increase as the consumers will be better informed about the labeled products. Labelling at the EU level should help to better inform consumers and meet their expectations. • Participation of farmers in an EU scheme may encourage their collaboration and collective initiatives (internet portals, delivery services, creation of farmers' markets or other selling points). • An EU scheme would create an incentive for all small farmers across Europe to become more market-oriented and thus develop added-value and stimulate growth. 	<ul style="list-style-type: none"> • There will be a need for promotion activities at the EU level in order to make the EU scheme being recognised and understood by consumers. • Consumers might consider an EU scheme as another scheme among many schemes. • Competition between EU scheme and national/regional/local schemes with regard to promotion activities: promotion of an EU scheme might weaken the effects of past and ongoing promotion activities run by MS/regional/local authorities. • Co-existence of stricter schemes at national level with potentially high benefits for producers and an EU scheme.
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Conclusion

With these options – rural development measures and an appropriate labelling tool to identify product sold through a short marketing chain – direct sales will assist to reduce the dependency of farmers on the food supply chain. The benefits should particularly accrue to farmers who organise themselves into groups for the purposes inter alia of direct marketing. For small and semi-subsistence farmers direct marketing channels are a necessity; for more-commercially viable farmers, direct sales through the internet, local farmers' markets, and direct deliveries, should be part of the farmer's and farmer organisation's armoury in responding to globalisation and the inequalities of bargaining power in the food supply chain.

ANNEX VI – CONSUMER ISSUES⁶⁰

The **EU consumer policy** puts consumers' interests and protection at the core of Europe's policy. It aims to provide better and more complete information to consumers, to promote intra-European purchases and make consumers aware of their rights. The goal is to empower consumers by raising awareness and protecting them by making sure that products and services sold in the EU are safe, helping national governments to apply EU rules, building a strong voice for consumer organisations, and understanding consumers better through research and dialogue. Priorities include increasing consumer confidence in the internal market, strengthening consumers' position in the marketplace and ensuring that consumer concerns are taken into account in all EU policies.⁶¹

Food labelling is one of the most effective tools to grant an informed choice to the citizen/consumer. The estimated additional administrative cost⁶² of the EU new food labelling proposal⁶³ is expected to be EUR 104 million⁶⁴. However it is considered that the provision of transitional periods and the fact that the legislation aligns with most of business' current practices will mean the majority of these costs will be absorbed into every day running costs.

As a consequence of changing global diets and lifestyles the world is now experiencing two different nutrition problems - one associated with hunger or nutritional deficiency and the other with dietary excess often in the same country, even community. The focus on food is no longer only related to food safety or quantity but rather what is now deemed the '**dual burden of malnutrition**'. Crucially, both underweight and overweight individuals may lack important dietary nutrients – minerals and vitamins – that are needed for good health.

Both under-nutrition and over-nutrition are linked with a range of adverse health conditions. The underweight are susceptible to poor maternal and infant health as well as childhood growth problems and compromised mental development. Meanwhile, obesity is associated with such chronic diseases as stroke, hypertension, cardiovascular disease, type-2 diabetes, and certain forms of cancer.

⁶⁰ Extract from the DG SANCO contribution to the Impact Assessment on Health and Consumer perspectives

⁶¹ Consumer Policy Strategy 2007-2013

⁶² Administrative burden – keeping records, notifying authorities, applying for approval, providing information to third parties (http://ec.europa.eu/enterprise/policies/better-regulation/administrative-burdens/action-programme/index_en.htm)

⁶³ Regulation of the European Parliament and of the Council on the provision of food information to consumers

⁶⁴ Communication from the Commission to the European Parliament and the Council on the Action Programme for Reducing Administrative Burdens in the EU Sectoral Reduction Plans and 2009 Actions

Together, obesity, cardiovascular diseases (CVD), cancer and diabetes collectively pose the greatest burden of disease (77%) in the WHO European Region⁶⁵.

Scientific evidence shows that the access and availability of healthy food have an immediate and short term positive influence on health and well being. In particular it has been proven to decrease the risk of obesity, reduced risk of chronic illnesses such as cardiovascular diseases, various forms of cancer, type II diabetes and obesity in later life. Studies evaluating fruit & vegetables interventions in schools reveal that such schemes can be a very effective mechanism for improving fruit & vegetables consumption by children.⁶⁶

In order to allow consumers/citizens the choice for **sustainable consumption**, the provision of information on standards for products and production are important as tools of providing transparent information for a risk-aware consumer.

From a consumer policy perspective, it is essential that quality food products are available at affordable prices⁶⁷. Price is obviously an essential criterion for consumers. A recent study showed the different factors of influence on consumer choice for a food store. Price is considered as second most important factor, first is proximity of the food shop, and third is the quality of food products.⁶⁸ Quality food products, including organic products, are considerably more expensive than conventionally produced food because of a higher cost of production.⁶⁹

Consumers find distribution chains often long and they are looking for more overview and transparency. In this respect, there is also an increasing interest in regional products which consumers connect to different aspects, such as fresh food, support of the local economy, short supply chain and knowledge of the origin of the product.⁷⁰

Food consumption patterns are constantly evolving, reflecting changing lifestyles and individual choices of citizens/consumers. Diets have become more diverse and substantial over the last decades. Acceptability requires consumer/citizens knowledge

⁶⁵ WHO Regional Office for Europe: Fact sheet: Tackling Europe's major disease: the challenges and the solutions. World Health Organization, Copenhagen, 2006

⁶⁶ de Sa, J., Lock, K. 2008: Will EU agricultural policy for school fruit & vegetables improve public health? A review of school fruit & vegetable programmes. European Journal of Public Health, 18(6), pp. 558–568.

⁶⁷ In this context, the Commission will develop guidelines for national web-based and easily accessible retail price comparison services for consumer goods (including food) which will be part of a Commission Communication on consumer empowerment planned for 2012.

⁶⁸ CRIOC, Enseignes, Magasins et Consommateurs, <http://www.crioc.be/files/fr/5546fr.pdf>

⁶⁹ For example, a study showed that the price difference for comparable products was approx. 40%, for some products like fruit juices and chocolate, the difference was 80%-100%. GfK, Ergebnisse der GfK-Studie zum Konsum von biologisch produzierten Lebensmitteln, 2008; <http://www.boelw.de/fileadmin/alf/28-bioargumente.pdf>

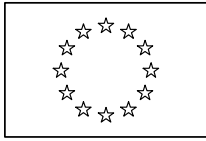
⁷⁰ Nestle (editor) 2011: 'Einfluss gesellschaftlicher Veraenderungen auf das Ernaehrungsverhalten', 2011;

and information to make the **right choice for healthy food**. This includes awareness and education but also product information (labelling); while at the same time, ensuring quality in production including traditional methods preserving our cultural heritage while allowing for responsible innovation.

In a recent survey⁷¹, the majority of respondents considered that public authorities in the EU are doing a good job in protecting them from specific food-related risks, such as animal infections and diseases and bacterial contamination. But the survey also shows that there is room for improvement, in particular with respect to possible risks from chemical contamination and new technologies. Even more so, a majority believes that EU public authorities should do more (>80% total agree) to ensure that food is healthy and to inform people about healthy diets and lifestyles. This view is consistent across all Member States.

Allowing consumers/citizens access by economic means or rights to acquire nutritionally adequate food is especially important for vulnerable social groups, from urban poor to landless rural poor. But it also raises the issue of modern supply chains with its emphasis on global sourcing and long distance transport versus short supply chains and seasonal and local produce and how this affects access to healthy foods.

⁷¹ Eurobarometer No 354 'Food related risks', 2010



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 6

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Annex 6: Risk Management

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1. CONTEXT

The numerous reforms of the CAP in the past two decades have increased the exposure of EU farmers to global markets. This was the intended objective of the reforms, which aimed at increasing market orientation of the sector and thereby contributing to enhancing its competitiveness. While the gradual reduction of intervention prices fostered the convergence of EU prices toward world market prices, direct payments were introduced to ensure a certain degree of income stability for producers.

However, the increased market orientation has also had the effect of exposing EU farmers to more (and occasionally excessively) volatile global agricultural markets. Excessive volatility of prices makes it more difficult for farmers to undertake long-term planning, particularly if market fundamentals are not reflected in prices, as insecure income expectations mean that farmers undertake less long-term investments. As a result, high uncertainty about the future implies that farmers' competitiveness in the long-run is compromised. Excessive income fluctuation also means that farmers that in normal years are competitive and efficient may be forced out of business due to one disastrous event, which is often outside of their control. In addition to the 'traditional' sources of uncertainties, such as animal and plant health related risks, the effects from climate change are a growing concern for farmers as the frequency and intensity of extreme weather events is likely to increase and changes to the seasonal variations in precipitation patterns take place.

The risks inherent in farming are numerous and so different policies (animal and plant health, crisis management, etc.) and approaches are necessary (prevention, response, planning). This document focuses on ways to provide compensation for producers to aid recovery following a crisis.

1.1. The current policy framework

Current CAP instruments play a role in attenuating the risks of agricultural production through market measures available under the single Common Market Organisation (sCMO), direct payments and certain rural development programmes.

Among market measures, intervention/reference prices provide a safety net in times of severe crisis for eligible sectors. When the price of a commodity eligible for intervention drops to the reference price level, intervention buying-in may be used to ensure a 'minimum' price level to producers. Private storage aid (PSA) is triggered, as a general rule, at a price level which is closer to market prices (above the intervention price level) and represents a first layer of market management. In addition, special intervention and other measures in case of market disturbance can be implemented at Member State or regional level under specific circumstances for certain sectors.¹

While direct payments do not have a risk management objective *per se*, as the payment ensures basic revenue for all farmers, it also ensures the inflow of capital in good years,

¹ A more detailed overview of available market instruments under the sCMO is presented in the Annex on Market Measures.

which may be saved and used during crisis years. In bad years, it is a payment that gives the farmer a minimum level of income. Thus, by ensuring a basic income payment, income decline will be limited, because part of the farmers' income is not affected by market developments and price variability.

In addition to market measures and direct payments, the following policy tools under rural development can be used to provide farmers with instruments for managing production risks:

- Globally, agricultural insurance is a widely used risk management tool. In the EU insurance has not been used frequently, but this trend has slowly been reversed over the last decade. With the Health Check in 2008 the possibility of subsidising insurance with EU funds was introduced. Member States may now choose to subsidise premia costs for farmers taking up crop, animal² and/or plant insurance, using up to 10% of the national direct payment envelopes. The insurance should cover the economic losses stemming from the above mentioned risks. Support is provided in case of a minimum loss of 30% of the average annual production of the preceding three years (or Olympic average of five years). Support paid through Article 68 and 70 of Regulation 73/2009 is compatible with the WTO Green Box rules. The insurance premia is subsidised at maximum 65% of the cost (with the subsidy shared between the Community budget and Member States budgets). Farmers pay the remaining 35% of the premia cost.
- Another way in which Member States may deal with production risks is through subsidising mutual funds for animal and plant diseases and environmental incidents by using up to 3.5% of the national direct payment envelopes. As with insurance, the mutual fund may compensate for the economic losses stemming from these risks. Mutual funds consist of contributions made by farmers, matched by public support. Support may also be used to pay the interest on loans taken out by the fund, if there are insufficient funds in the mutual fund itself.
- The Rural Development programmes offer some further possibilities for Member States to help farmers deal with risks. Under Axis 1 "Improving the competitiveness of agricultural and forestry sector" of the Rural Development regulation (2007-2013), there are measures aimed at mitigating natural disasters and climatic risks by providing support for restoring agricultural production potential and promoting innovation. Measures are also available for training farmers in risk-reduction strategies, as well as supporting diversification, which helps spread and hence reduce risks. These measures also include bio-security strategies (investment in infrastructure, advice and training) to reduce animal health risks. See Annex I for more details.

State aid granted at Member State level may also contribute to addressing adverse events, as the possibility exists for Member States to use national funds within an authorised limit and in respect of the existing legal framework for state aid. Aids are allowed which compensate farmers for i) damage caused by natural disasters or exceptional occurrences; ii) losses caused by adverse weather conditions; iii) prevention and combating animal and plant diseases and iv) insurance premia to cover production risks.

² animal diseases listed by OIE and/or the relevant EU legislation

A specific regulation on de minimis aid in the agricultural sector grants Member States flexibility to use state aids to respond to crises at regional or local level.³ This regulation specifies the limit of support which may be awarded to EU farms without being scrutinised and considered as a state aid by the Commission. This allows immediate granting of support to farmers. The money may be used for any purpose, subject to certain limitations.⁴ Some state aids are not compatible with the WTO Green Box rules, and are thus notified as Amber Box. However, it is noted that MS have sometimes used these state aids without due regard to prevention measures. MS sometimes pay compensation repeatedly when prevention would be more rational; for example in the case of production damage due to floods (weak flood prevention measures or production on floodplains, where it should not be the case), forest activities (re-afforestation after the storm, when the species diversification is insufficient, etc), droughts (and follow-up compensations for productivity, which is inappropriate for the land, etc.). MS should rather focus on prevention measures, to reduce the need to pay for compensation and restoration.

Finally, market instruments are available for producers to manage their risk, such as agricultural derivatives markets and forward contracts.

- Agricultural derivatives (both futures and options) markets provide a tool for producers and processors that facilitates price discovery and risk management. Although beneficial, the analytical documents accompanying the Communications on food prices and the food chain, which examined the issue of derivatives (among others), indicated that factors specific to financial markets might have amplified agricultural price changes. Accordingly, as outlined in the communication on '*A better functioning food supply chain in Europe*', it is necessary to improve the overall transparency and oversight in the EU for derivatives on agricultural commodities – including over-the-counter (OTC) markets. In particular, a better overview of the activity of different types of market participants is needed. Efforts are currently under way to enhance the safety and efficiency of derivatives.
- Forward contracts offer a guaranteed price to producers and lock in supply costs for processors and as such, remove the possibility to benefit (or lose) from future market developments. However, forward contracts can be used in combination with agricultural derivatives in order to hedge risks.

1.1.1. Provisions for specific sectors

The fruit and vegetable and wine sectors are dealing with perishable products and are to some extent different from other agricultural sectors in that the main risk for these sectors is over-production and therefore low output prices for the products. The risk and crisis management instruments in place for these sectors therefore aim to prevent crises where possible and to manage the crisis once it has occurred. The following instruments exist for fruit and vegetables: market withdrawal⁵, green harvesting or non-harvesting, promotion and

³ Commission Regulation (EC) No 1535/2007 of 20 December 2007 on the application of Articles 87 and 88 of the EC Treaty to de minimis aid in the sector of agricultural production (OJ L 3337 of 21.12.2007)

⁴ The aid may not be fixed on the basis of price or quantity of products put on the market, favour domestic over imported products, aid to export-related activities or be granted to the undertakings in difficulty.

⁵ Up to a quantitative threshold of 5% of each marketed produce, plus 5% of the total marketed volume for free distribution, per PO

communication, training measures, harvest insurance (adverse climatic events, plant diseases and pest infestations) and support for the administrative cost of setting up mutual funds⁶.

These measures are implemented by producer organisations (POs), so they are co-financed 50/50⁷ by the producers and the EU. EU support is capped at 4.1% of the value of marketed production of the PO.⁸

The current wine CMO foresees four specific intervention measures: preventive 'green harvesting' in the form of a flat rate payment per hectare, potable alcohol distillation in the form of a per-hectare aid and crisis distillation to reduce or eliminate the surplus and the use of concentrated grape must to increase the natural alcoholic strength. At a Community level only the 'green harvesting' measure will remain after July 2012. Crisis distillation will remain possible in justified cases, with national funds only and limited to 15 % of the respective value of the Member State's yearly budget for its national support programme. The wine CMO also foresees a by-product distillation instrument aimed at ensuring quality by avoiding over-pressing, while preserving the environment.

For animal sectors, the veterinary fund covers the economic losses caused by the disposal of animals as well as expenses for cleaning and disinfection on farms concerned by an outbreak or suspicion of animal disease. The expenditure is typically co-financed (Commission/Members States) at 50%.⁹ The Action plan on the Community Animal Health Policy has scheduled a review of the veterinary fund for Commission adoption in 2012. At this stage, it is too early to anticipate which measures will be covered by the new 'Veterinary Fund'.

In addition, the EU co-finances exceptional market support measures for all animal product sectors (meats and dairy).¹⁰ The measures allow compensation for economic losses in case of movement restrictions resulting from measures taken to combat the spread of animal diseases. Exceptional market support measures can only be taken if the Member State(s) concerned should request the introduction of such support measures and has quickly taken the necessary health and veterinary measures to stamp out the disease. EU exceptional market support measures can only operate to the extent and for the duration strictly necessary to support the market. Whenever such measures are applied the EU gives 50% co-financing.¹¹ Member States can also grant an aid financed from the state budget or through state resources for the

⁶ Article 103 c of Regulation (EC) 1234/2007

⁷ 40/60 in some cases

⁸ EU support may be increased to 4.6% if the additional 0.5% is used for crisis prevention and management measures. Crisis prevention and management measures, including any repayment of capital and interest, shall not comprise more than one-third of the expenditure under the operational programme. In order to finance such measures, producer organisations may take out loans on commercial terms. In this case, the repayment of the capital and interest on those loans may form part of the operational programme and so may be eligible for Community financial assistance. Any specific action under crisis prevention and management shall be financed either by such loans, or directly, but not both.

⁹ Managed by DG SANCO

¹⁰ Article 44 of Regulation (EC) No 1234/2007 (single CMO) is the legal basis

¹¹ 60% for measures in case of foot-and-mouth disease

prevention and eradication of animal diseases under the conditions laid down in the applicable state aid rules.¹²

Failure to prevent outbreaks of disease has serious financial consequences not only for the livestock sectors but also for plant production, underlining the importance of preventive action to stop such outbreaks from occurring in the first place. In terms of the whole food chain, the increased emphasis on food safety in EU law must be properly enforced and backed up by supporting measures including training (see Annex II on the costs of measures related to disease outbreaks and the benefits of preventative action).

1.1.2. Uptake of available instruments

With the Health Check in 2008, the Commission included a possibility of subsidising instruments that were directed specifically at the management of risks with the option of subsidising agricultural production insurances and mutual funds with a part of the direct payment envelope. This was a first step towards gearing the CAP in the direction of more risk management focus.

Three Member States have notified their intention of using insurance subsidies in the framework of Article 68 for 2010 (FR, NL, IT), and one Member States (FR) has notified its intention to subsidise mutual funds as from 2011. The total insurance subsidies notified for 2010 amount to 236 million euros (including co-financing), of which 177 million euros come from the Community budget, the rest from the national budgets. Thirteen Member States have notified state aids for insurance premia subsidies since 2002. By far the biggest user is ES, followed by FR and PL. About 700 million euros are notified to the WTO (state aid) as non-product specific Amber Box subsidies for insurances. Thus, total production insurance subsidies in the EU currently amount to slightly less than 1 billion euros.

From 2011, FR will allocate 53 million euros to subsidise mutual funds, of which 40 million euros will come from the Community budget.

1.2. Emerging factors

1.2.1. Increasing production uncertainties

Climatic changes will have complex effects on the bio-physical processes that underpin agricultural systems, with both negative and positive consequences in different EU regions. Rising atmospheric CO₂ concentration, higher temperatures, changes in annual and seasonal precipitation patterns as well as in the frequency of extreme events will affect the volume, quality and stability of food production and the natural environment in which agriculture takes place.

Climatic variations will have consequences for the availability of water resources, soil quality as well as the frequency of pests and diseases, leading to significant changes in the conditions for crop and livestock production. In extreme cases, the degradation of agricultural ecosystems could lead to desertification, resulting in a total loss of the productive capacity of the land in question Pests and diseases adapt continuously to resistant varieties and plant

¹² Points 131-137 of Community Guidelines for State aid in the agriculture and forestry sector ((2006/C 319/01); Regulation No 1857/2006 , in particular in Articles 10 and 16 (TSE)

protection products and will pose growing threats to plant resources for agriculture and forestry. Scientific studies show that this will be exacerbated by climate change. The financial case for investing in prevention of disease rather than paying for eradication is outlined in Annex II.

In the short term the frequency and intensity of extreme weather events and seasonal variations in precipitation patterns are the factors likely to have the most serious consequences for agriculture. Although climate change is a global process, its local impacts are diverse. Overall net effects on farm activities will vary across the EU and between farm types within the same region.

At EU level, no correlation has been established between the warming of the last decades and the evolution of crop yields, which have generally increased, driven by the effects of technology and farm management improvements as well as the continuous adaptation of farming practices, so far largely outweighing the impact of climate change. However, extreme climatic events such as the drought and summer heat of 2003 and the spring drought of 2007 have led to large variations in crop yields in recent years.

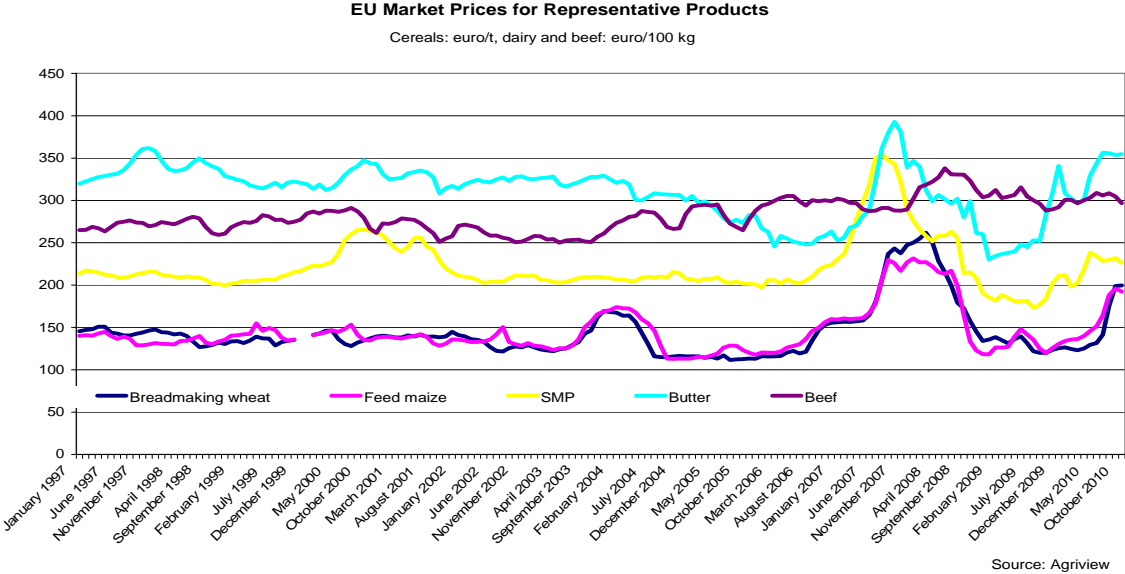
While current agricultural market projections are subject to many uncertainties, including the impact of climate change on agricultural productivity and prices, there is a higher probability of an increase in extreme events that will amplify the volatility of agricultural production because of weather-related supply shortfalls. Even though the ultimate impacts on farm income depend on the interplay of many factors such as the global market and policy support, the higher likelihood of failures in production may lead to increasing instability in the economic situation of farmers affected by extreme climate events. See Annex III for a detailed map with observed agro-climatological changes over 1975-2007.

1.2.2. Increasing exposure to volatile global markets

A certain degree of price variability is a normal feature of commodity markets. However, price volatility in the absence of risk management instruments can be damaging for producers, processors, and consumers.

Figure 1 displays price developments for representative products in the EU over 1997-2010. Actual increases in price volatility over most of the period on both EU and international markets were commodity specific, reflecting changes or expected changes in market fundamentals in addition to other factors. Price volatility measured in terms of coefficient of variation increased over the period 2004-2010 compared to 1997-2004. Although increases in the EU were more dramatic compared to the world markets, in absolute terms volatility remained higher on the world than on the EU markets during 2004 –2010.

Figure 1: EU market prices for representative products, 1997-2010



While continuously receiving attention especially following the "food crisis" of 2007–2008, and an increase of price in the second half of 2010, the issue of volatility of agricultural and food prices is on the agenda of the G-20. In their meeting in Seoul in November 2010, the G-20 leaders requested that Food and Agriculture Organisation, International Fund for Agricultural Development, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations Conference on Trade and Development, World Food Programme, the World Bank and World Trade Organisation work with key stakeholders to develop options for G20 consideration on how to better mitigate and manage the risks associated with the price volatility of food and other agriculture commodities without distorting market behavior, ultimately to protect the most vulnerable. In parallel, France, under their current G-20 presidency, seeks "specifically to address the issue of volatility in the price of agricultural commodities". Based on the report of international organisations, the G-20 Agriculture Ministers in Paris, on 22/23 June 2011, adopted the Action Plan on Food Price Volatility and Agriculture. The Action Plan is divided into five main sections: Agriculture production and productivity, Market information and transparency, International Policy Coordination, Risk Management and Financial Regulation.

Risk management instruments allow farmers to manage risk, by mitigating the impact of production uncertainties. By increasing stability for the agricultural sector, the instruments contribute to achieving the objective of maintaining agricultural production capacity throughout the EU, whereby there is a clear added value at EU level to support risk management instruments.

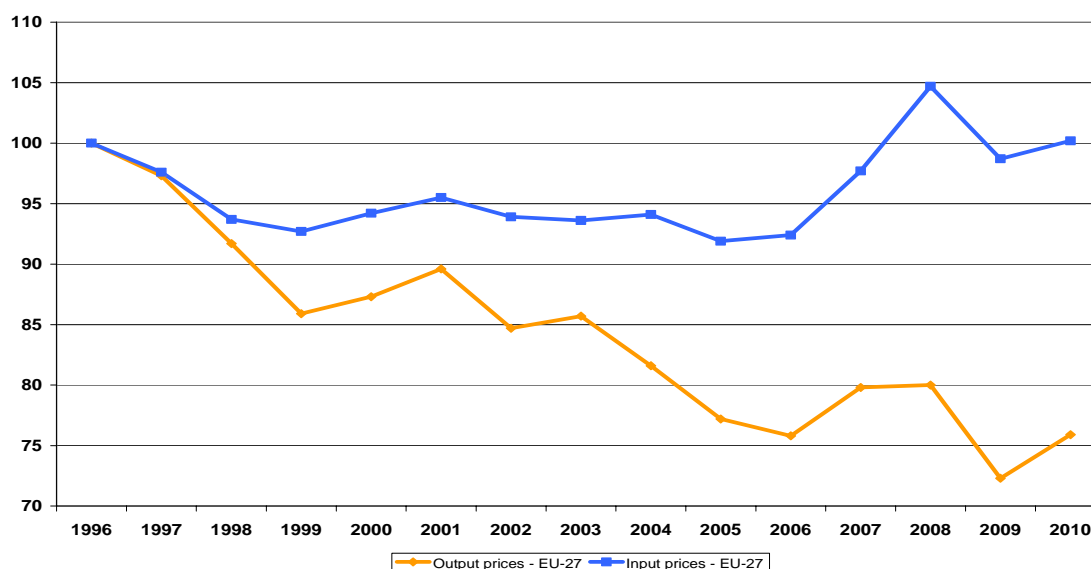
The type of insurances that may be subsidised cover physical production risks. Hence, yield is insured against specified risks such as hail, flooding, drought, frost etc. Current specific risk management instruments do not cover risks related to prices.

1.2.3. Increasing 'squeeze' on producers' margins

The widening gap between the dynamics of producer (output) prices and costs (input prices), partly as a consequence of the growing linkage between agricultural and non-agricultural

prices, is also of concern. Figure 2 displays the recent evolution of agricultural input and output prices for the EU-27.

Figure 2: Recent evolution of agricultural input and output prices for EU-27¹³



Source: Eurostat.

Figure 2 reveals that in the past, input costs (fertilizers, gas prices, etc.) were decreasing on average, albeit at a much slower rate than the decrease in output prices received by farmers. This widening gap between output and input prices was compensated by productivity gains.

This trend has been exacerbated during the 2007-2008 price boom and subsequent price drop, with input prices increasing at a higher rate during the boom and declining at a lower rate during the price drop, compared to output prices. As such, the gap between the two price indexes has widened significantly, causing a margin 'squeeze' for farmers.

1.3. The case for a review

The emerging factors outlined in the previous section, as well as the large number of uncertainties and risks surrounding agricultural market prospects (such as the pace of economic recovery, future changes in the policy environment, the path of technological change, etc.) highlight the need for an effective risk management toolkit, beyond the existing (and proposed¹⁴) safety-net measures.

While current instruments have provided solutions for risk prevention and crisis management alike, there is a strong case for improving the availability of such instruments and adapting measures to emerging factors that can increase the level of risk facing agricultural production and farm income.

¹³ Note that input and output prices are reflected in indexes, thus the actual prices are not comparable.

¹⁴ See the Annex on Market Measures for details.

2. OBJECTIVES

In order to help farmers develop viable risk management strategies with the objective of mitigating the effects of physical production risks (alongside improving farmers' awareness of, and encouraging compliance with, prevention and control strategies in the case of animal and plant diseases) and managing their income variation, the review of the policy framework for risk management should:

- improve the availability of risk management tools, especially prevention tools and those related to price risks,
- adapt the modalities of the current framework to the evolving diversity of needs.

At the same time, the measures proposed should not diminish the market orientation of the sector, be compatible with EU commitments in WTO and provide a cost-efficient and relatively stable budgetary perspective. The proposal should also ensure that risk management tools are used in a complementary way and in coherence with regard to other CAP instruments (market measures, direct payments, etc.) and without overlapping with other community policies (e.g. the Animal Health Strategy).

3. OPTIONS

3.1. Extending current framework for insurances and mutual funds

All sectors that are currently covered would be included under this option. The scope of risks that would be covered by insurance would be broadened. Instead of covering merely physical production risks, as is the situation today, subsidies for insurance covering also economic risks would be possible (for example revenue insurances) or for insurance dealing with physical production risks not linked to a specific yield output (such as index insurance).

In addition the technical requirements for subsidising insurance premia could be changed, for example by lowering the criteria: 30% loss of production and dropping the need for formal recognition of the occurrence of an event by the Member State (as is currently required for subsidies from the direct payment envelope)¹⁵.

The requirements for subsidising mutual funds would be maintained in their current form.

3.2. Income stabilisation tool (IST)

The IST would compensate farmers who experience a severe income drop, compared to the individual's average annual income of the three preceding years (or Olympic average of the previous five years). Income in this case refers to total revenue received from the market minus input costs. The income compensation would be paid regardless of the cause of the income variation, be it yield variation, price fluctuation, or higher input costs. Member States could opt for one or more risk management tools.

¹⁵ This requirement is not a problem for the animal sectors as the listed diseases shall be notified by law anyway, it is rather a problem for the crop sector.

In order to meet WTO Green Box criteria, the IST would have to be open to all producers. To be eligible for compensation, farmers must have an income drop of at least 30%, compared to the average income for the preceding three years (or five year Olympic average) and a maximum 70% of the income drop may be compensated.

Revenue stabilisation scheme:

As the objective is to help farmers manage income variation, then potentially other solutions could be considered. An alternative to the IST could include a revenue stabilisation scheme, which addresses variation in revenue but which takes no account of input costs, similar to the American ACRE-scheme.. The EU equivalent would be an EU revenue stabilization scheme introduced at Member State level, which incorporates national and farm level revenue. The scheme would be based on a revenue guarantee (by crop) at national level, incorporating EU/national prices and national and farm-level yields, to take account of local conditions. The revenue guarantee per crop would be calculated for each year based on a moving average of national yields and national/EU prices. Payments would be triggered within a Member State if there was a shortfall in actual national average revenue compared to the national benchmark. A second trigger would also operate at farm level. Producers suffering an actual revenue loss compared to their own benchmark revenue would be eligible for a stabilization payment equal to the shortfall in revenue at national level, adjusted by a coefficient that takes account of the producer's own yield compared to the national average. Thus the scheme would offer support payments if revenue falls below levels seen in the recent past. Producers would be required to enter all crops into the scheme.

3.3. Crisis fund

Similar to the existing EU Solidarity Fund, this option consists of the creation of a new "Global Agricultural Risk Management Fund". The Fund would allow rapid financial assistance in case of major adverse events occurring in one or very few Member States (e.g. comparable to the BSE-crisis in the UK in 1996). A ceiling on the annual amount available in the Fund would be defined. The portion of the annual amount not entered in the budget would not be rolled over to the following year. It would be necessary to determine the events for which Member States would be authorised to call on assistance from the Fund. Any support under such a fund should not conflict with possible state aid measures.

Table 1: Overview of options considered

	Tools	Changes
Strengthening current tools	Insurance subsidies, mutual funds	Expanding to include revenue and index insurance and reducing the limitations for payouts
IST	Income stabilisation tool	New tool
Crisis fund	Agricultural calamity fund	New tool

4. IMPACTS

4.1. Extending current framework for insurances and mutual funds

4.1.1. Economic advantages and disadvantages

A public/private partnership can help an insurance market start working through demand incentives, institutional arrangements and information sharing and pooling.¹⁶ The agricultural insurance market is bound to be very narrow without public subsidies as only few crops and risks can be profitably insured without any support.

Insurance and mutual funds are tools to manage the impact of catastrophic risks and as such are an alternative to disaster assistance. By linking the payment of *ex post* ad hoc catastrophic aid to the uptake of insurance or mutual funds (if available), the amount paid out as disaster assistance may be limited. Furthermore, by imposing such conditions on disaster payments and by requiring producers to contribute to the scheme, farmers are encouraged to actively manage their own risks, before turning to government. Less rigid requirements, for example lowering the 30% threshold for production losses, may create more interest among farmers to take up insurance. Some argue that the level of loss implied by the 30% threshold is too high for certain sectors.

However, less rigid requirements may make it too advantageous for the farmer to take up insurances, without creating the right incentives to manage the risks at the farm. The difficulty with setting the "right" threshold is that it varies from sector to sector, from region to region and from risk to risk. By involving insurance companies in the delivery of agricultural support there is a risk that not all support benefits the agricultural sector, but may leak out through other channels.

Mutual funds, compared to insurances, counter the risk of adverse selection or moral hazard behaviour.¹⁷ Subsidising mutual funds has benefits outside the scope of ensuring support to farmers when they experience a production problem, as it also encourages the organisation of producers within the food chain. They also have the possibility of compensating for consequential losses, something which is difficult to compensate for with insurances (because of the high premia cost it triggers).

¹⁶ OECD report, Thematic reviews on risk management: Spain, TAD/CA/APM/WP(2010)17/REV1

¹⁷ *Adverse selection*: It describes a situation where an individual's demand for insurance (either the propensity to buy insurance, or the quantity purchased, or both) is positively correlated with the individual's risk of loss (e.g. higher risks buy more insurance), and the insurer is unable to allow for this correlation in the price of insurance. This may be because of private information known only to the individual (information asymmetry), or because of regulations or social norms which prevent the insurer from using certain categories of known information to set prices (e.g. the insurer may be prohibited from using information such as gender or ethnic origin or genetic test results).

Moral hazard: occurs when a party insulated from risk behaves differently than it would behave if it were fully exposed to the risk. In particular, moral hazard may occur if a party that is insulated from risk has more information about its actions and intentions than the party paying for the negative consequences of the risk.

4.1.2. *WTO compliance*

Insurances

Three changes would be introduced concerning insurance subsidies compared to status quo:

- widening the scope to allow for the subsidisation of revenue insurance and index insurance (and potentially other types of insurance)
- lower thresholds for production losses in order to be covered by insurance
- abolishing the requirement of having a public authority declaring that a situation which triggers insurance payments has actually occurred

In principle, this would widen the scope of the insurance schemes beyond the limits of the Green Box criteria; however whether actual support would be notified as Green or Amber Box depends on the implementation of the scheme.

Mutual funds

A similar approach could be followed for mutual funds. The design could allow the administration of different support schemes, compliant with paragraph 7 and paragraph 8 of Annex II of the GATT Agreement on Agriculture (AoA). Even the setting up and running cost of the mutual fund itself could be considered to be compliant with paragraph 2 of Annex II of AoA, since this type of support would not involve payments to producers. All support that does not comply with any of these three categories would be Amber Box.

4.1.3. *Funding and budgetary implications*

Very ambitious scenario:

If all Member States were to subsidise insurance premia and 100% of agricultural production was to be insured, then the total amount of support for arable crops insurance premia is not likely to exceed 1.6-2.3 billion euros¹⁸. The maximum amount that could be expected to be spent on animal insurances is 1 billion euros¹⁹. Hence, the total maximum amount that could be expected to be spent on insurance premia subsidies would be 2.6-3.3 billion euros.

Moderately ambitious scenario:

In reality it is highly unlikely that there would be 100% insurance coverage in the EU after the reform of the CAP. A more realistic scenario, based on past uptake of available subsidies, would be 40% coverage for arable crops and even more limited for animal producers. Following the same logic as above, the costs for subsidising arable crops premia would then

¹⁸ Average value of production (2006-08) for cereals/industrial/forage crops is 78 billion euros (Eurostat). According to JRC study on Insurances, premia cost would be around 3.5-5% of value of production. For 100% coverage this would mean 2.7-3.9 billion in premia. If 65% of the value of the premia is subsidised this implies 1.6 to 2.3 billion in subsidies.

¹⁹ Evaluation of the Community Animal Health Policy 1995-2004 and alternatives for the future. DG SANCO study from 2006.

be 0.7-1 billion euros²⁰ and about 0.3 billion euros for the animal sector. Thus, in total the subsidies would amount to 1-1.3 billion euros²¹.

4.1.4. Administrative burden and simplification

This option would not add to the administrative burden, or complexity, as measures that are already in place in the CAP and are already controlled, could continue to be applied.

In terms of simplification, the impact of this option for farmers is rather similar to the status quo option.. However farmers will initially have to familiarise themselves with the new or adjusted rules, which is a one-off increase in the level of administrative burden. For national authorities too, this option may be associated with one-off costs, requirements to modify national rules, possible organisational changes and time needed to become acquainted with the new setting. Thereafter it is expected that the level of administrative burden for both farmers and national authorities may reduce somewhat over time.

4.2. Income stabilisation tool (IST)

4.2.1. Economic advantages and disadvantages

Subsidising insurance and putting an IST in place would substantially contribute to reducing farmers' income volatility. According to the OECD²², insurance indemnities reduce the income variance for 77% of farmers, while some form of IST²³ reduces variance for 80% of farmers. When the two measures are combined, then reduction occurs for 87% of farmers.

An IST is an alternative to either returning to the 'old CAP' with high intervention prices, or addressing concerns of income volatility with some form of Counter Cyclical Payment. Both solutions offer the advantage of dealing with farmers' income variation, but less effectively than an IST, as they influence farmers' production decisions. Therefore they are not compatible with WTO Green Box rules.

However, there is a risk that by offering a very comprehensive risk management package to EU farmers, there would be limited incentives for the farmer to undertake on-farm strategies and that private initiatives, for revenue insurances in particular, could be crowded out. As the IST would compensate for total farm income, it may also be a disincentive to diversify production. The more sectors a farmer is involved in, spreading risk through diversification, the lower the possibility that the farmer would be compensated from the scheme, as all agricultural production activities would be taken into account.

There is a risk that an IST could push farmers into taking more risky decisions. There is also a risk of delaying uncompetitive farmers from exiting the sector, which may slow down

²⁰ Average value of production (2006-08) for cereals/industrial/forage crops is 78 billion euros (Eurostat). According to JRC study on Insurances, premia cost would be around 3.5-5% of value of production. For 40% coverage this would mean 1.1-1.6 billion EUR in premia. If 65% of the value of premia is subsidised, this would imply 0,7 to 1 billion in subsidies.

²¹ Compared to today's situation of 0.6 billion euros.

²² OECD Report, Thematic review on Risk Management: Canada, TAD/CA/APM/WP(2010)29

²³ In this case CAIS, the previous Canadian IST, constructed much in the lines of what is being considered for the EU

structural adjustment. The scheme is designed so that if a farmer is uncompetitive and his/her income is decreasing over time, then the compensation he/she receives would also decrease over time, since the scheme does not support income at a target level, but only compensates a share of the income compared to the average level of previous years. Hence, in the long-run, the compensation payment could be set to zero. (See Annex IV for an illustration.)

In order for the IST to be 'fair' and functional, it would most likely be based on farmers' yearly income. Therefore the compensation payment for an income drop would always be paid after a delay compared to when the crisis actually occurred, as the income for the whole year would have to be taken into account, before the payment can be calculated. Hence payments may not reach the farmer when they are most needed.

Revenue stabilisation scheme: an alternative to the IST

The major advantage of the scheme is that it would offer a tool for producers to manage the risk of a decline in revenue that extends over a short number of years. Since benchmark revenue would be adjusted downwards in periods of declining revenue (as for an IST), the scheme would provide temporary adjustment assistance, giving producers time to respond to market signals.

The main disadvantage with such a scheme, compared to an IST, is that it would not take account of developments in the cost of inputs. Input cost volatility is one of the major concerns to EU farmers and this tool would not address this challenge. Furthermore, as with any stabilization scheme, including an IST, the budgetary costs are unpredictable and could be high if prices collapsed. The scheme would not provide a safety-net floor for revenue because if prices remained low, then payments would eventually be phased out. Because of the time lag for calculation of payments due, after the crop year, payments might not kick in when they would be needed most. From the producers' viewpoint, payments would not be directly linked to variability in farm-level revenue since they would be based on the shortfall calculated at national level. Hence, the compensation payment may not benefit those most in need.

4.2.2. WTO compliance

In order for the IST to meet the Green Box criteria, farmers that receive compensation must have an income drop of at least 30%, compared to his or her average income for the preceding three years (or Olympic average), and a maximum of 70% of the income drop may be compensated.

The income that may be compensated is defined as 'gross income or the equivalent in net income terms'. The WTO has not defined the term income, so this is left to the members themselves.²⁴ However, there can be no link to prices.

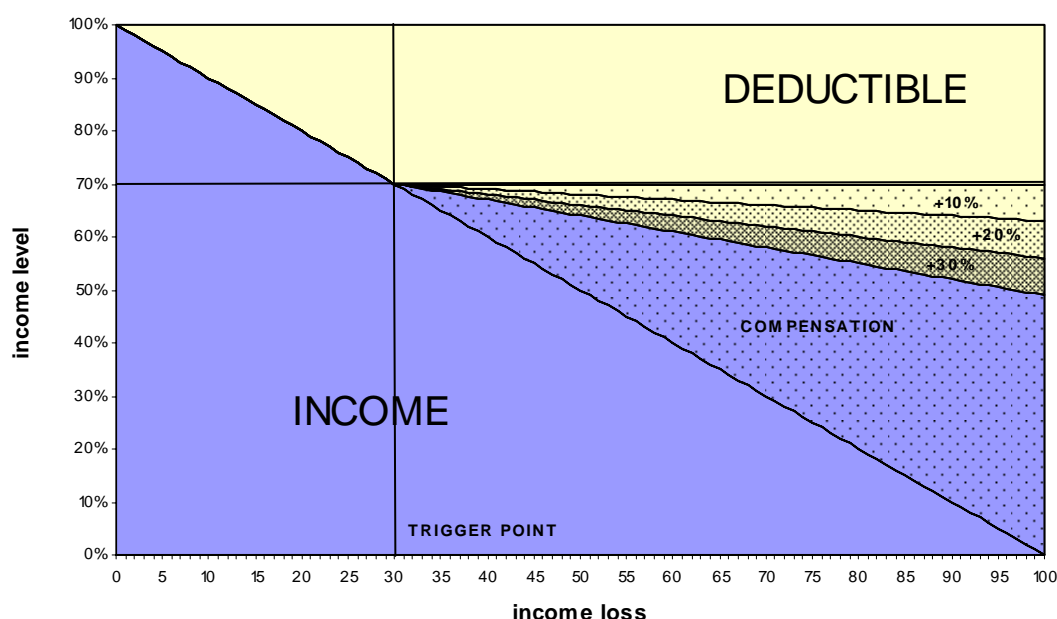
²⁴ DG AGRI's interpretation of the wording in the GATT Agreement, Annex II, para 7, is that the income compensated should exclude payments from the same or similar schemes (which means that payments coming from other schemes that are not explicitly excluded should be considered as being covered by the notion of income derived from agriculture). Furthermore, "income derived from agriculture" should be seen as independent from any particular agricultural production as such and include all the income that a farmer derives from the fact of being engaged in agriculture.

4.2.3. Funding and budgetary implications

Figure 3 below illustrates when the IST compensation payment would be triggered, and to what extent it would compensate for a drop in an individual farmer's income. If the decline in income is more than 30%, then compensation may be paid. However, the level of compensation can never go beyond the 30% drop, i.e. the farmer needs to find alternative means to cover the 30% income drop. Because the farmer's deductible is set to be at least 30% this avoids threshold effects and as a consequence moral hazard behaviour from farmers. This avoids a situation where farmers with a 29% drop do not get compensation, but in the case of 31% drop are compensated for 70% of the income loss, which creates a moral hazard.

The individual farmer's reference income would be adjusted downwards in periods of declining income, and could eventually reach zero. Thus, an IST is not a tool that guarantees a safety net level of revenue (as direct payments do), but rather the farmer's income development. (See Annex IV for an illustration of how the tool would compensate a farmer with declining income over time).

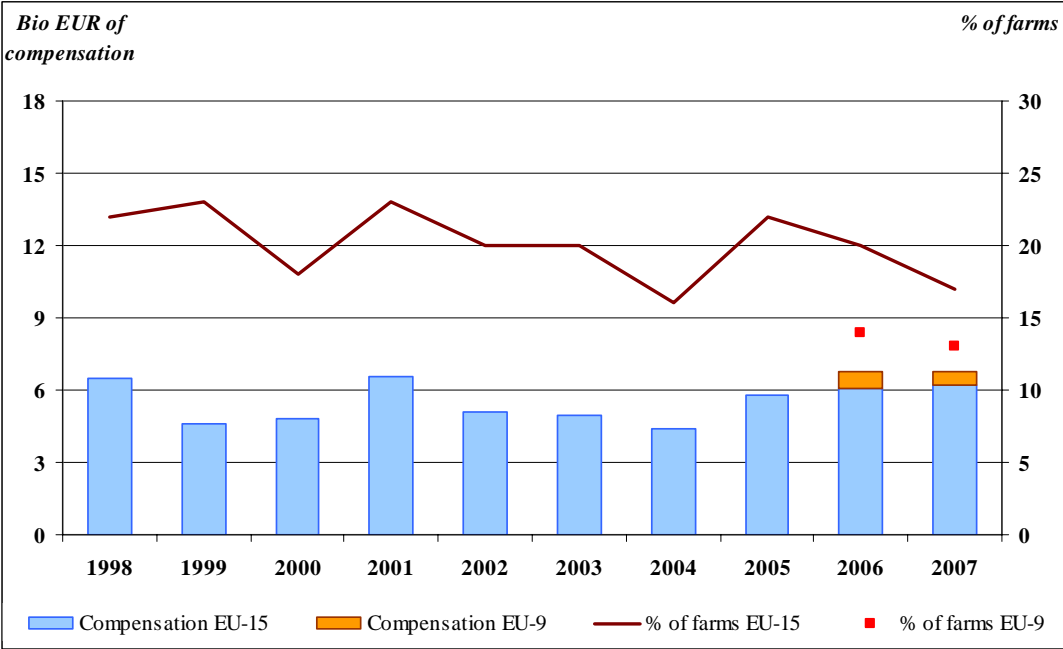
Figure 3: Income compensation limited to 70% of the reference income, with different levels of franchise



An estimation of spending on an IST is shown in Figure 4. This is based on a simulation of what would have happened in the past, had there been an IST in place in the EU and assuming that about 20% of all EU farmers would receive compensation payments each year, because their income drop would be more than 30% compared to their average income. Taking an extreme scenario, assuming that all Member States would implement an IST, and that all farmers would opt to participate in the scheme, the cost of compensation could amount to some 4-7 billion euros for the EU-25.²⁵

²⁵ EU-25 without Malta (no data). Income indicator is Gross Farm Income (total output + subsidies - taxes - total intermediate consumption) and the compensation formula is the one presented in figure 1. The estimate

Figure 4: Share of farms eligible for compensation, and compensation need over time



Note: Gross Farm Income used as income indicator; Average yearly compensation for EU-15 for 1998-2007, for EU-10 (without Malta) average 2006-07
 Source: DG AGRI EU FADN

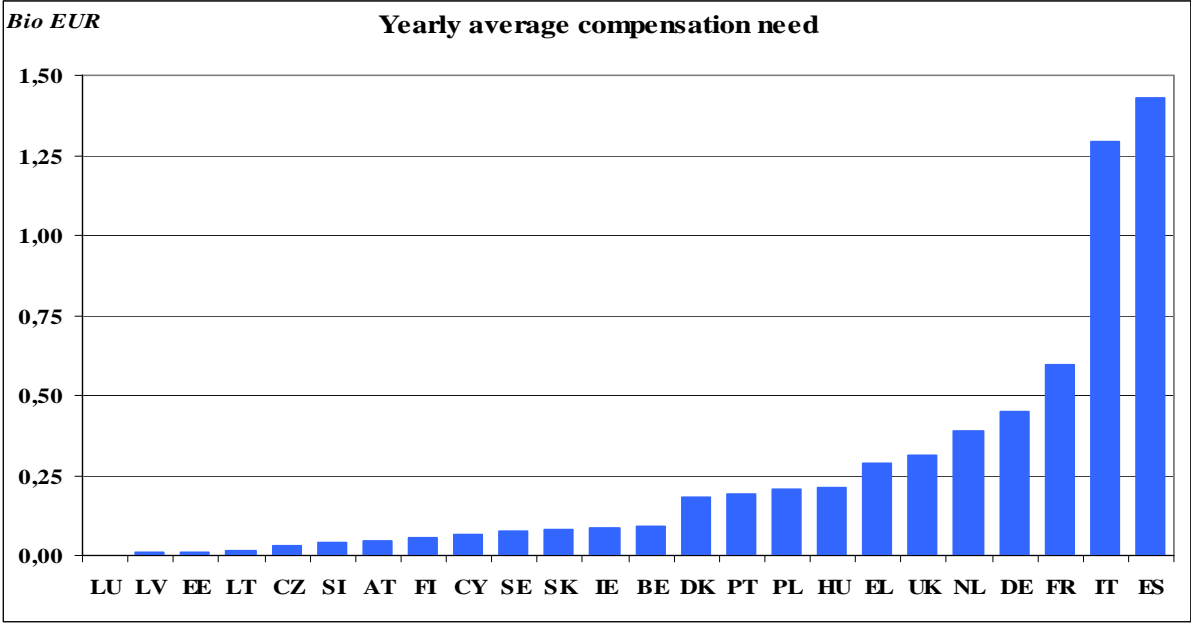
The following graphs illustrate potential budgetary costs by Member State from implementing an IST, based on estimated compensation costs, had the scheme applied in the past. Figure 5 gives an indication of the size of the envelopes that would be required in order to meet compensation needs.²⁶ The highest spending would be in Spain and Italy.

Figure 6 shows the share of farmers in each Member State that would receive compensation on an average basis (again, if future compensation was to reflect historical needs), with some 20% of all EU farmers eligible. Figure 7 shows how much compensation the average recipient would receive in every Member State per year, with producers in most Member States receiving under €10,000.

is based on DG-AGRI internal analysis, and shows what the compensation need would have been on average for preceding years.

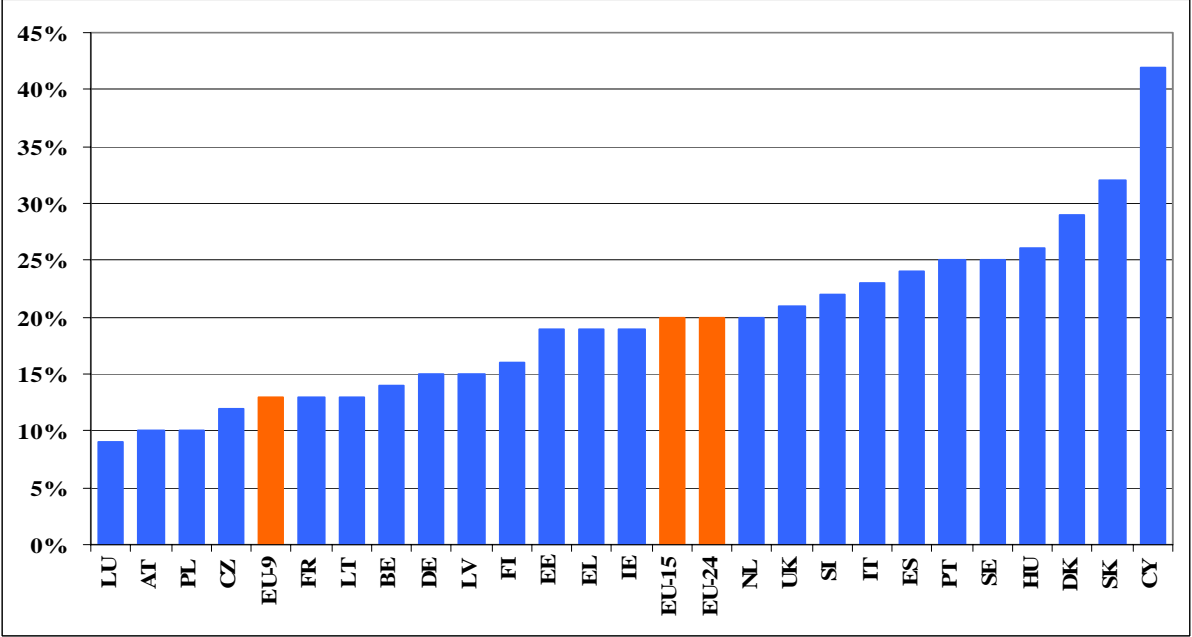
²⁶ The compensation is calculated according to the following: $[70\% * (\text{Average income year } N-3 \text{ to } N-1)] - \text{income year } N$.

Figure 5: Level of compensation required for different Member States (in current Euros)



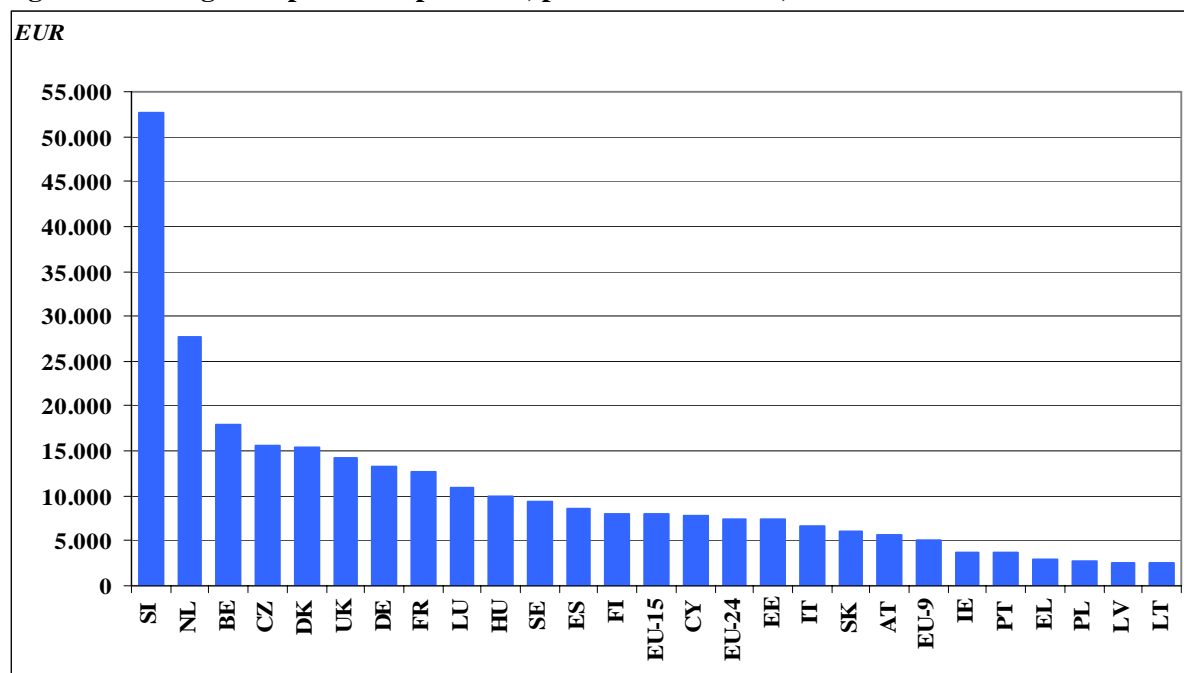
Note: Gross Farm Income used as income indicator; Average yearly compensation for EU-15 for 1998-2007, for EU-9 average 2006-07
 Source: DG AGRI L3 - EU FADN (no data for Malta, Bulgaria, Romania)

Figure 6: Share of farms, per Member States, eligible for compensation with IST



Note: Gross Farm Income used as income indicator; Average yearly compensation for EU-15 for 1998-2007, for EU-9 average 2006-07
 Source: DG AGRI L3 - EU FADN (no data for Malta, Bulgaria, Romania)

Figure 7: Average compensation per farm, per Member States, with IST



Note: Gross Farm Income used as income indicator; 2007 compared to average income 2004-06²⁷
 Source: DG AGRI L3 - EU FADN (no data for Malta, Bulgaria, Romania)

In the future, compensation needs may be greater however, as income levels may fluctuate more due particularly to climate change and increasing price volatility. The estimations for EU-9 are likely to be underestimates, as they reflect only the year 2006-07 when direct payments started to be phased in and prices are on the rise since then. Hence, the share of farms that were eligible for compensation during this period was unusually small.

In order to analyse potential compensation needs in the future, different scenarios were analysed. The objective was to assess the impact of increased price variability on the level of compensation payments required to compensate all farmers with an income drop of more than 30%. The method used was a comparison of the situation in 2007 with the average in 2004-2006, using Gross Farm Income²⁸ as the income indicator.

The scenarios illustrated are the following:

- Status quo (SQ) is the situation in 2007 (compared to average 2004-06)
- (S1) corresponds to a 30% price drop in 2007
- (S2) corresponds to a 10% price drop in 2007

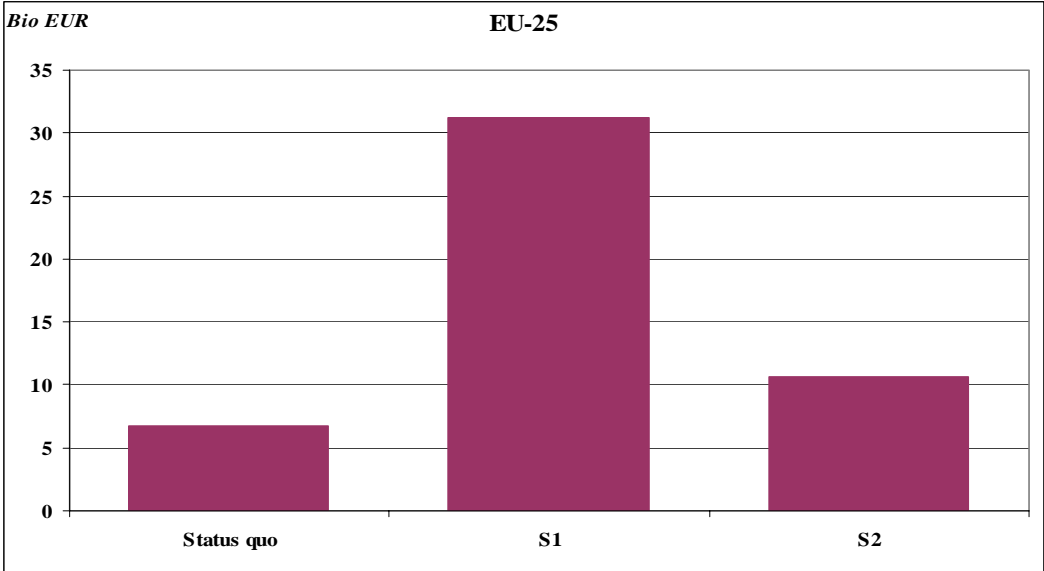
Results show (see figure 8) that price fluctuations have very big impacts on the level of compensation required. The cost of compensating SQ would be 6.8 billion euros, whereas (S2) would cost 10.7 billion euros. This means that if there is an average price drop for all agricultural sectors of 10% and all Member States choose to apply the income stabilisation

²⁷ The compensation is calculated according to the following: $[70\% * (\text{Average income year N-3 to N-1}) - \text{income year N}]$

²⁸ Gross Farm Income = total output + subsidies - taxes - total intermediate consumption.

scheme, then the compensation cost would increase by approximately 60% compared to the status quo. This gives an indication of how sensitive the scheme would be to price fluctuations.

Figure 8: IST – compensation required for three alternative scenarios



Note: Gross Farm Income used as income indicator
 Source: DG AGRI L3 - EU FADN (no data for Malta, Bulgaria, Romania)

Option S1 is an extreme example, as it is highly unlikely that the collective drop of all agricultural products would reach -30% in a given year. However, the other components used for the estimation are rather moderate in their assumptions, in that SQ and S2 are not extreme examples. Instead, these scenarios are based on a very restrictive compensation formula and income indicator. In other words, the cost of applying an IST would be highly sensitive to how income is defined, and to the price variation taking place. Furthermore, this cost only reflects the cost of the compensation itself, not the cost of administrating and/or controlling the scheme.

4.2.4. *Administrative burden and simplification*

Administrative burden: the proposed IST aims at compensating farmers for a substantial income loss. In order to determine what a substantial income loss is, detailed information must be collected and considerable time would be required for processing this information. Furthermore, the information required is not straightforward, as what is used as the income determinant could be very subjective. In the case of Canada (with its AgriStability scheme, which is a form of IST), tax declaration forms are used. However, this is not an alternative for the EU as a whole, as there are no common taxation rules at EU level.²⁹

Therefore an IST would be complex to manage and burdensome to administer. The complexity stems from the difficulty in finding an appropriate measure for income, collecting information verifying the income indicator and controlling the measure. Depending on how

²⁹ OECD report, Thematic review on risk management: Canada; TAD/CA/APM/WP(2010)29

the tool would be implemented, the administrative burden would impact differently upon different parts of the administration chain.

Simplification impact for farmers: in this option farmers are required to submit a substantial amount of information and documents when applying for support and to prove eligibility. Depending on the practicalities of the system this may mean that a farmer will have to spend considerable time collecting the information and preparing the application or, alternatively work with a consultant/accountant. A "light" solution would permit farmers to use already existing documents and information.

Simplification impact for national authorities: this option foresees a case by case processing of data and judging if an applicant is eligible for support as well as deciding upon the level of support. The level of administrative burden to Member States is estimated to be substantial. It is possible that by using existing data sources and flows, as well as finding ways to automate the process, the burden on national authorities may be somewhat reduced.

4.3. Crisis fund

4.3.1. Economic advantages and disadvantages

Limiting government involvement to prevention and crisis tools gives incentives for farmers to take maximum responsibility for managing their own risks at farm level. In the event of a natural disaster, resources could be transferred from other rural development measures, to restoration measures and also preventive measures in case of an anticipated event. This would allow a flexible response to crises.

The fund could be an attractive tool to address specific and extreme problems affecting one or a very limited number of Member States. However, it would need to be carefully designed, notably in terms of financing procedure in order (1) to address the concerns related to farm income volatility to avoid jeopardising the objective of ensuring agricultural production capacity throughout the EU at risk; (2) to guarantee a rapid and effective availability of funds.

There could be a risk of overlapping with many measures already available in the sCMO, therefore its triggering mechanisms should be clearly defined and its benefits should be weighed against the benefits already provided by these measures. Achieving the right design and mechanism would allow avoiding that Member States regularly call for assistance from the fund (thus decreasing farmers' incentives for risk prevention). This would also enable to enhance the effectiveness and efficiency of *ex-post* ad hoc support to farmers versus *ex ante* support for preventive insurance schemes.

A 'Global Agricultural Risk Management Fund' would ensure solidarity between Member States in cases of outbreaks of major adverse events. The main difficulty would be to clarify which criteria should be used to determine "adverse events" for which resources of the fund could be mobilised, in order to ensure that the Fund is applied equitably and effectively.

4.3.2. WTO compliance

The measures are in compliance with WTO Green Box rules, as public involvement would be limited to preventive and response measures and a fund for disasters.

4.3.3. *Budgetary issues, administrative burden and simplification*

The budgetary needs of the 'Global Agricultural Risk Management Fund' would vary substantially between years, depending on the number and severity of events occurring.

For national authorities: the establishment, management and control of such a Fund could give rise to an increase in the burden for the national authorities as the latter are required to set up and maintain an infrastructure, ready to start its operations in case of urgency. Then when an emergency occurs, important resources are required to process demands, grant support as well as verifying the correct spending of the funds.

For farmers: The level of administrative burden for farmers would be dependent on the occurrence of an adverse situation and if they decide to apply for support. The level of burden would then be determined by the modalities of the application procedure as well as the (ex-post) control arrangements.

5. CONCLUSIONS

In terms of economic effects and the functionalities of the tools, enhanced insurance subsidies and the income stabilisation tool contribute to both increasing the stability of income and mitigating the effects of production risks. Care should be taken however, that such tools do not compensate production choices which are not in line with market orientation and discard environmental concerns. The heterogeneity of risks and agricultural structures throughout the EU favours a more decentralised approach to using those instruments best suited to the specificities of particular regions and sectors. Demand for risk management products depends on what type of agricultural production the farmer is involved in and where the farm is located in the EU. Rather than trying to impose a "one size fits all" solution, it is preferable to allow Member States flexibility in addressing risks facing farmers, so that the most appropriate solution may be found.

Therefore, creation of a toolkit within the second pillar would give farmers a possibility of using appropriate instruments in the context of a wider strategic approach favoured in the Rural Development policy. The creation of an ad-hoc fund at EU level could weaken the development of prevention measures if it is not carefully designed and its financial procedures appropriately defined.

Annex I

Risk – management related Measures in Rural Development

On top of the fund, preventive measures would be supported, as is already the case today. Currently, Council Regulation (EC) 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development provides for possibilities for farmers to deal with risks. Even though "risk management" is not mentioned as such in the Community strategic guidelines for rural development, a number of measures can be used for this purpose.

- a) Measures specifically designed for the purpose of prevention and restoration
 - Restoring agricultural production potential damaged by natural disasters and introducing appropriate prevention measures.

The objective is to invest in preventive actions to counter the possible consequences of natural disasters, e.g. restoration of physical capital after floods. (The loss of income resulting from natural disasters is not covered). Eligible expenses can include investments; for example for restoration of agricultural land and soil quality; re-establishment or restoration of dikes, drainage systems; flood prevention and management measures (e.g. projects related to coastal and interior flood protection). This measure is often linked to substantial state aids support, but the result is very often not achieved; prevention tools are less used than restoration tools (especially in floodplain areas and forests); this situation should be improved in CAP post 2013, for example by requiring that prevention measures are put in place at the same time as restoration measures.

- b) Other measures which include risk management / prevention-related actions
 - Knowledge Transfer and Information Actions and Use of advice and setting up of management, relief and advisory services

Support could be given to actions related to training/information on risks and risk management for farmers. This can help improve awareness of current risks, improve risk management strategies and provide know how, for instance on the use of futures and options, which could also lead to a wider use of contracts between the food industry, traders, and farmers. Other operations that could be supported include identification of vulnerable areas and sectors and assessment of needs and opportunities for changing crops and varieties in response to climate trends; building adaptive capacity by awareness raising and provision of salient information and advice on farm management and bio-security strategies to reduce animal health risks.

- Investment in physical assets

Investments aimed at mitigating natural disasters and climatic risks by supporting restructuring and modernisation of physical assets and by promoting innovation could be supported, together with e.g. investments in improved efficiency of irrigation infrastructure and water use technologies; seeds production and storage and preventive mechanisms against adverse effects of climate-related extreme events (e.g. setting up of hail nets).

- Business development, investments and infrastructure

Farmers may diversify in order to reduce their production and price risk. Favourable results in one activity may help to offset losses in another activity. Diversification may include farm-related activities, but also off-farm employment (other gainful activities) which reduces the household's dependency on a fluctuating income from agriculture.

Infrastructure projects related to the development and adaptation of agriculture and forestry and carried out in a collective way could be supported.

- Agri-environment payments

Actions related to environmental services and adaptation to climate change can contribute to preventing risks by protecting and improving the environment in agricultural and forest areas. The reinforcement of the quality of management of these areas offers better prevention against floods, droughts, erosion, landslides, forest fires, storms, climate change, etc. The following operations can be taken as examples of risk management tools: integrated crop and pest management; conservation agriculture and soil management practices (e.g. no or reduced-tillage methods, catch crops, diversified crop rotations); water management and use, including establishment of buffer zones and terraces to target water erosion.

- Animal welfare

The measure shall contribute to encouraging farmers to provide a high standard of animal welfare in animal husbandry which goes beyond mandatory standards. Support can be provided, inter alia, for prevention of pathologies by actions improving stock management practices and by regular monitoring of the welfare conditions.

- Greening of the 1st Pillar

This will also help to ensure more resilient ecosystems, with reduced risk of problems from extreme events and consequently less need for remedial measures.

Annex II

Estimated cost of measures related to outbreaks of livestock and plant diseases and the benefits of preventative action

Costs of Disease outbreak is high

In the area of **Animal Health**, EU measures related to outbreaks of epidemic livestock diseases exist which are now funded by the 'Veterinary Fund'. These include co-financing of veterinary emergency measures for the slaughter of animals (direct losses). Exceptional market support measures provide support under a different legal framework, to farmers/breeders affected by restrictions imposed by the veterinary authorities (consequential losses).

Failure to prevent outbreaks of disease has serious financial consequences. EU expenditure to Member States from the emergency fund ranged from €1.7Mio in 2006 to €24Mio in 2002, the year after the major FMD outbreak in UK. The costs borne by Member States (non-EU compensated part of direct losses) differ between EU Member States. The total costs for the period 1997-2009 are approximately €1.1 Billion, of which 86% are related to the major livestock diseases FMD, CSF (Classical Swine Fever) and Avian Influenza (AI).

The costs of dealing with the Foot and Mouth disease (FMD) outbreak in 2001 in the EU are illustrative. In total some 4 million animals were culled. The total cost of the outbreak in the UK was £3 billion to the public sector and £5 billion to the private sector. In total, the direct economic cost to the UK economy of FMD amounted to over 1% of its GDP. The cost for maintaining the vaccination bank at the EU level is roughly €1,400,000 per year. The total value for antigen stored in the vaccine bank is €10,600,000 from 2012 onwards. These antigens last for 5 years.³⁰ Animal movements were mainly responsible for spreading the disease across the UK before it was detected. The same factors also led to the spread of FMD in the Netherlands and France.

Regarding the **Community Plant Health Regime** (CPHR), the recent evaluation³¹ demonstrates that the entry and spread in the EU of quarantine pests of plants has major impacts on agriculture, forestry, natural environment and landscape. The costs of future non-action have been estimated to be up to billions of euros annually, depending on the quarantine pest involved. In addition, the establishment of quarantine pests in the EU may result in very significant disruption in exports to third countries.

The cost-benefit of rapid preventive action against quarantine, including the necessary financial EU expenditures, is illustrated by the example of *Western corn rootworm* (*WCR/Diabrotica*). This is the most important insect pest of maize in the world (causing US\$1Bio losses annually in the USA) and induces the highest insecticide use in the

³⁰ Anderson, Ian 2008: '*Foot and Mouth Disease 2007 - A Review and Lessons Learned*', 2008

³¹ Food Chain Evaluation Consortium, 2010. *Evaluation of the Community plant health regime*. Final report.

world. Up to 1992, the pest was absent from Europe. Since its introduction, it has spread across most of eastern and central Europe. The damage caused by this new pest for the EU-27 is estimated to amount to €5.6-6.3Bn over the next 25 years³². Costs associated to the eradication of isolated new WCR outbreaks in Member States that are WCR-free vary from €240.000 to €3,610.000. The WCR case shows that effective prevention of the entry of the quarantine pest into Europe would have been by far the most cost-effective measure (billions of euros savings).

Prevention of disease is more cost-effective than cure

The development of resilient systems in plant and animal production and along the food chain embraces the principle that prevention is better than cure. In animal production, the principle of prevention covers measures to decrease occurrence and transmission of animal diseases by farming and food chain practices and animal transport in order to ensure a high level of animal health, public health and food safety including limiting the incidence of Zoonoses in humans and other biological risks. It is enshrined in the Animal Health Strategy, calling for concrete measures to be integrated into the policy and funding framework, thus providing for active surveillance of bio-security and penalties and incentives for all actors along the food chain.

The main tools and instruments of prevention are:

- Monitoring and surveillance (Member States),
- Bio-security measures (disinfection, segregation, cleaning)
- Containment and eradication measures (Veterinary Fund).

In the case of animal disease outbreak (such as FMD), possible prevention and control strategies include import movement restrictions legislation (in line with the OIE International Animal Health Code), control of animal movement across national borders, ban of swill feeding (leftovers of human consumption), international travel facilities (aircraft or ships) and containment of herds to avoid the contact with animals at risk. At the same time, contingency plans should include among other elements training programmes for veterinarians and animal health staff (including stakeholders and traders), strengthening laboratory capacity for a rapid and certain diagnosis, establishing contact with Reference Laboratories and surveillance.

For plant health, the principle 'prevention is better than cure' applies notably to keeping quarantine pests from other continents out of the EU as European plants are generally very susceptible to them. Worldwide, countries make considerable efforts in terms of legislation and financial resources to keep foreign pests out. With regard to common pests, healthy seeds and propagating material is critical to avoid crop losses from and excessive use of plant protection products. The cost-effectiveness of these measures covered by the EU plant reproductive material regime is high. In addition, crop rotation may be applied to suppress soil-borne pests. It is effective against common pests but also helps to prevent the establishment of some quarantine pests. However, the general susceptibility of European agriculture to new invading pests is to a significant degree dependent on the availability and use of pesticides in crop protection that create a barrier to invasion

³² Food Chain Evaluation Consortium (FCEC), 2009. *Analysis of the economic, social and environmental impacts of options for the long-term EU strategy against Western Corn Rootworm*, IA report, Annex

Investment in prevention is highly cost-effective for the EU at longer term. EU co-financing for surveillance for such pests, outbreak eradication and compensation for losses of private operators will generate far bigger savings in the long run. An improvement of the plant health regime is critical for sustainable and competitive agriculture, mitigation of climate change and its impacts, ensuring food security and food safety (less use of pesticides) and for forest and landscape protection. Plant health problems can be damaging to important economic sectors (such as citrus or potatoes) causing enormous economic losses. An eradication strategy requires almost always the availability of authorized pesticides with a high efficacy on the pest to be eradicated. Both the type of pesticide and its use may be different from normal use; Article 53 in the pesticide Regulation 1107/2009 provide for this need.

In plant health, risk mitigation requires reinforced quarantine pest surveillance by Member States, early eradication and effective containment of quarantine pest outbreaks. Establishing a Plant Health Fund (like the EU animal health regime) to introduce EU co-financing for surveillance of priority pests and for compensating losses of private operators as well as costs for Competent Authorities would aim at encouraging private operators to notify outbreaks of quarantine pests, which is essential for early action and eradication.

In addition, incentives could be considered to reduce the probability of quarantine pest outbreaks (e.g. by crop rotation) and prevent subsequent economic and environmental damage. For European pests, specific farming methods (Integrated Crop Management ICM) could be further encouraged.

Food safety underpins EU law

Food safety has emerged as an important concern of EU citizens, largely due to food emergencies, increased consumer awareness, globalisation of food trade and a lack of fully harmonised implementation of food law and official controls. These factors, allied to the need to support the development of the Internal Market, led the EU to overhaul its food law so that Member States' food and feed law, animal health and welfare rules and plant health rules are now almost entirely based on EU-level legislation.

It is necessary to apply this body of law effectively and in a harmonised way across the EU to ensure the same level of protection for all consumers and a level playing field for businesses, thereby allowing the Internal Market to function properly. Training and information exchange of relevant national-level control staff plays a key role in achieving the aim of consistent enforcement and compliance.

As traceability along the food chain becomes more important also in a global market, the EU Food Law fosters the '*one step backwards – one step forwards*' approach that requires operators to identify from whom and to whom a product has been supplied. To ensure that these rules do not distort integration and competitiveness of the agro-food sector, the Commission has launched the 'Better Training for Safer Food' initiative.

The training is aimed primarily at Member States and third country officials involved in verifying compliance with EU food and feed law, animal health and welfare rules and plant health rules. It aims to make controls more efficient and harmonised and ensure that the food industry respects EU regulations safeguarding public, animal and plant health. This will contribute to providing safer food and feed and raising levels of consumer and

animal protection. Also, it provides global partners with the necessary skills and capacities to use EU and international standards not as barriers but as catalysts for development.

The training covers such issues as: Hazard Analysis and Critical Control Point principles (HACCP); Food hygiene and controls for meat, milk and fishery products; Plant health controls; Veterinary and food safety control checks in border inspection posts (BIP); Microbiological criteria and control of zoonoses and eradication; Animal welfare at slaughterhouses, disease control and for religious slaughter and animal welfare during transport; Plant protection products; Feed law; Quality schemes; RASFF, TRACES and other EU-related IT systems.

Annex III

Observed agro-climatological changes based on the MARS meteorological database 1975 - 2007

Lengthening of growing season

As a whole, in Europe a lengthening of growing season (defined as frost-free period) was observed. Even if over the continent the magnitude of increase varied, on average the lengthening is estimable in 0.8-1 day per year during the last 30 years. However, in a few and localized areas, due to particular microclimatic conditions, reductions were recorded instead.

In general a longer growing season is related to an increased crop productivity and allowing for a larger number of options as rotations and cultivable crops.

Increased plant heat stress

In parallel to the increase of annual mean temperatures, maximum daily values were shifted upward and more frequent heat stress events occurred.

Worse conditions were recorded in Spain (mainly southern areas), Italy and Black Sea area (mainly Turkey).

However, it must also be highlighted that locally along the Atlantic coast line and in Greece a reduction of frequency of heat stress was recorded

Increased winter and summer rainfall

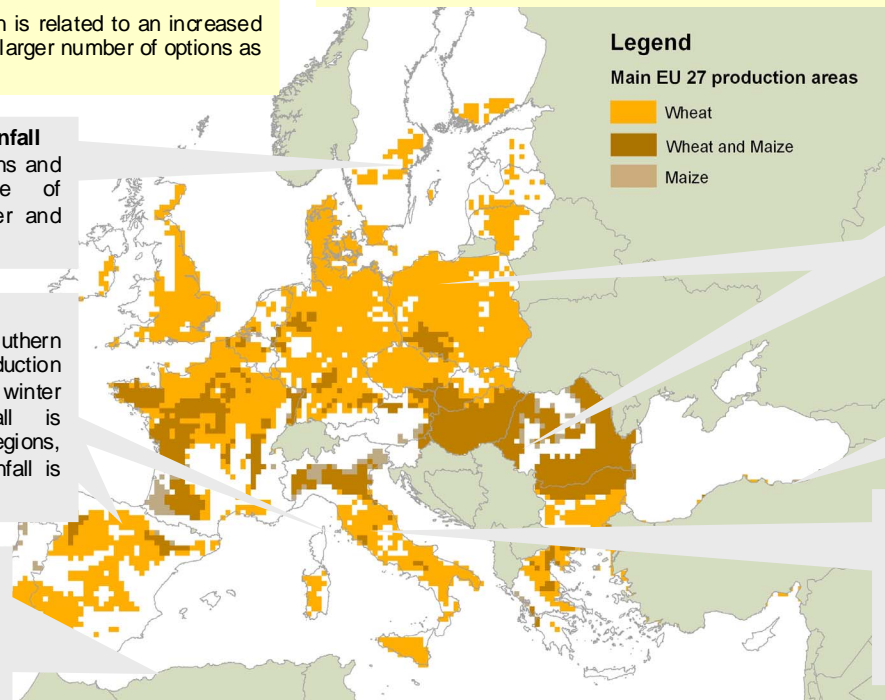
In Scandinavia, eastern EU, Balkans and Austria a significant increase of cumulated rain both during winter and summer was recorded.

Reduction of winter rainfall

In Italy, Portugal, Greece, southern France and Ireland a significant reduction of cumulated values of rain during winter was recorded. Winter rainfall is particularly relevant in southern regions, where the majority of annual rainfall is concentrated in wintertime

Increased irrigation demand

Increase of water deficit (rain-evapotranspiration), mainly due to the reduction of rain during the growing season and partially due to the increase of crops water consumption has been simulated for large parts of southern Europe. Italy, central Spain and southern France presented the largest increases.



Reduction of irrigation demand

In Balkans, Austria, Czech Republic, The Netherlands, Denmark, southern Sweden and northern Poland a reduction of water deficit (rain-evapotranspiration) was recorded, mainly due to the increase of rain during the growing season.

Increased risk of late frosts

The frequency of late frosts has increased westwards of the dotted line bringing a greater vulnerability to this regions.

Reduction of summer rainfall

Italy and southern France show a significant reduction of cumulated rain. In spite of the small contribution of summer rain to the whole year cumulated value the reduced summer rain increased the water deficit noticeably.

Shortening of crop growth cycle (agrophenology)

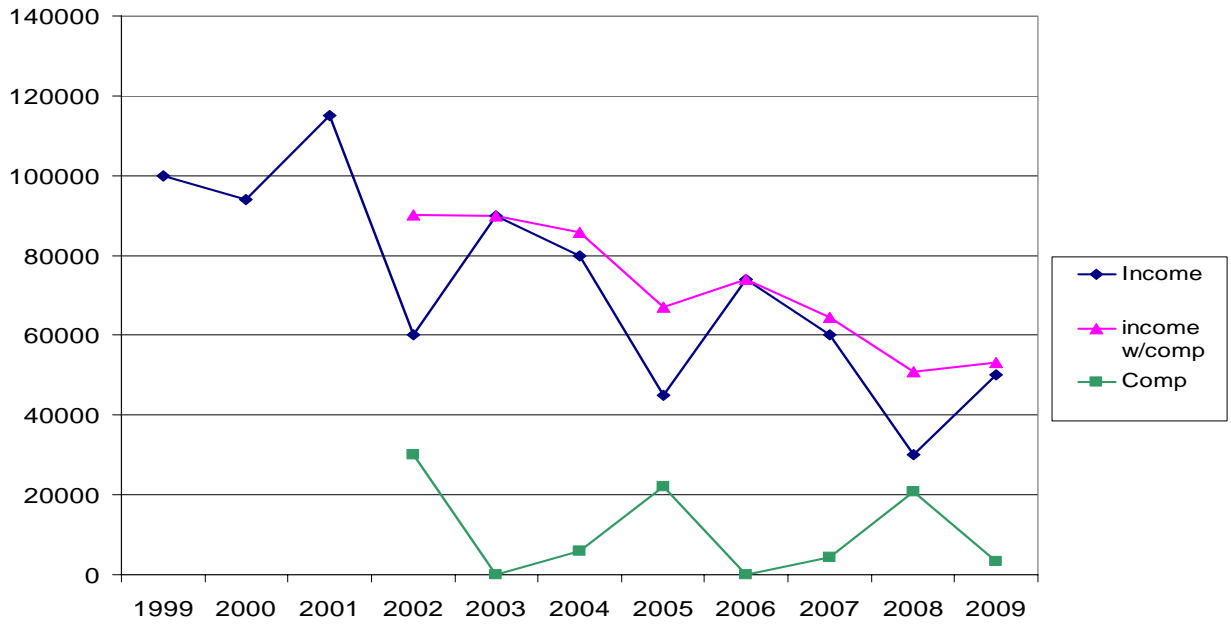
The speed of crop development is mainly influenced by the thermal conditions. Therefore, increase of crops development speed did lead to a shortening of crops cycle over the last decades.

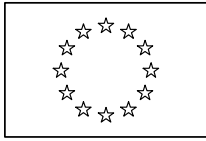
In general short crop cycles are related to a reduced crops productivity, especially if it occurs during the reproductive stages of development (grains/fruits formation). Winter crops were influenced more than summer crops.

Annex IV

Illustrative example, Income Stabilisation Tool, example of an individual farmer

Decreasing income





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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 7

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Annex 7: Research and Innovation

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List of abbreviations

AKIS	Agricultural Knowledge and Innovation System
CAP	Common Agricultural Policy
EIP-A	European Innovation Partnership in Agriculture
ENRD	European Network for Rural Development
ETP	European Technology Platform
EU	European Union
FAS	Farm Advisory System
FP 7	Seventh Framework Programme for Research and Development
GAEC	Good Agricultural and Environmental Conditions
GDP	Gross Domestic Product
ICT	Information and Communication Technologies
mio	Million
NGO	Non-Governmental Group
PO	Producer Organisation
SCAR	Standing Committee on Agricultural Research
sCMO	Single Common Market Organisation
SMR	Statutory Management Requirements

1. STATE OF PLAY OF RESEARCH AND INNOVATION IN THE EU

1.1. The importance of research and innovation in the agricultural sector

The significant role that research plays in agricultural development has been highlighted in various publications. There is a large body of evidence which shows that a substantial part of agricultural productivity growth which took place in the last 50 years was generated by investments in agricultural research and development (e.g. IFPRI, 2000; Alston, 2010).

Research is only one part of what is currently called the **Agricultural Knowledge and Innovation System** (AKIS). The AKIS encompasses the education, the advisory services and the farmers and more and more other stakeholders are considered as part of it as well including the upstream and downstream industry, cooperatives and farmer organisations and NGOs. Among all these actors, the advisory services play an important role in influencing farmers' behaviour and are an important interface for transferring research knowledge to the farm sector. Advisory services have been reformed in many EU Member States in the course of the last two decades with most often a reduced public involvement and budgetary support, leading to the emergence of new actors (e.g. through privatisation). This restructuring has sometimes led to a fragmentation of advisory services through the multiplication of service providers with various ambitions.

1.2. Agricultural research in the EU and in the Member States and coordination with Member States

1.2.1. EU support to research in agriculture under FP 7

The CAP does not finance research programmes. EU scientific research is supported through the Seventh Framework Programme for Research and Development (often referred to as FP 7). Agriculture is covered within FP 7 through the "Food, agriculture and biotechnology" thematic priority, specifically devoted to the technological challenges facing European agriculture. It concerns farm-management policies, food safety and rural development with the following three main activities:

- Sustainable production and management of biological resources from land, forest and aquatic environments
- Food (including seafood), health and well being
- Life Sciences, biotechnology and biochemistry for non-food products & processes

For the whole duration of FP 7, €1.9 bio is earmarked to the "food, agriculture and biotechnology" thematic priority (of which 10% is spent on fisheries/oceans).

With the evolution of cross-cutting issues within research policy, agriculture and rural development finds a growing relation to other programmes of FP7, notably:

- Environment (and Climate Change) for agri-environmental & sustainability issues
- Socio-economic Sciences and Humanities for broader rural development issues
- Energy for bio-fuel issues
- Information and Communication Technologies for rural ICT issues

- Nanotechnologies and New Technologies for agricultural and food applications

European technology platforms (ETPs) were set up in 2004 as industry-led stakeholder forums with the aim of defining medium to long-term research and technological objectives and developing roadmaps to achieve them. Several technology platforms have been established in the framework of FP 7 in the area of agriculture and forestry:

- Agriculture Engineering and Technologies ManuFuture subplatform
- ETPGAH: ETP for global animal health
- European bio-fuels technology platform
- European Technology Platform for sustainable chemistry
- FABRE: sustainable farm animal breeding and reproduction technology platform
- Plants for the future
- Food for life
- Forest based sector technology platform
- There is also TPOrganics, which is a technology platform for organic research, although it is not yet recognised formally as an ETP.

In 2006-2008 (2009 for TPOrganics) these technology platforms have delivered strategic research agendas towards 2025 and also published detailed action plans for research programmes in the first years of implementation. These strategic documents have been utilised in the programming of FP 7 research in agriculture and food and have an important role to play in the programming of the forthcoming Common Strategic Framework for Research and Innovation in their specific technical areas.

1.2.2. Agricultural research in EU Member States

Research and development in agriculture takes place in most Member States. It is financed from public and private sources. However, it is not possible to draw a complete picture of the overall effort since there are no data on private investments. Eurostat provides data only for public spending¹ on research and development. According to those data, in the EU Member States public spending in research and development in the agriculture sector has been increasing in the last years, from €2.8 billion in 2005 in the EU-27 to an estimated €3.3 billion in 2008, it would have declined however in 2009 to reach an estimated €3.1 billion², a decrease probably due to the economic crisis. Six Member States (France, Germany, Italy, the Netherlands, Spain and the United Kingdom) provide 77% of the research effort in the period 2007-2009. Most of the investments take place in the EU-15: out of the EU-27 average of €3.2 billion in 2007-2009, the EU-15 achieved €3.0 billion and the EU-12 €0.2 billion.

On average in 2007-2009, Member State public expenses on agricultural research amount to 2.3% of the gross value added (GVA, an economic aggregate close to the

¹ Government Budget Appropriations on Research and Development (GBAORD), these data refer to budget provisions not actual expenses. Data include both current and capital expenditures and cover not only government-financed research and development performed in Government establishments, but also government-financed R&D in the private sector.

² AGRI estimates for 2008 and 2009 as data are missing for several Member States.

GDP) of the agricultural sector for the EU-27, with 2.5% in the case of the EU-15 and 1.0% for the EU-12.

1.2.3. Coordination with Member States in developing the European Research Area

Coordination of Member State agricultural research is of major importance since more than 90% of research spending is managed by the Member States³. Currently, this is assured by the Standing Committee on Agricultural Research (SCAR), mostly composed of Member State agriculture ministries⁴. The SCAR has played in recent years an outstanding role in the efforts of coordination of Member State agricultural research and in tackling important issues in the field of agricultural research and related areas (such as the functioning of AKIS). As a complement to the SCAR, the European Initiative for Agricultural Research for Development (EIARD)⁵ aims at coordinating the investments of the European Communities and of the Member States in the specific field of Agricultural Research for Development (i.e. agricultural research meant to assist less advanced countries in achieving the Millenium Development Goals).

There have been a number of SCAR initiatives and working groups that have made SCAR a reference point in agricultural research and a governance model often referred to in broader research circles.

These include:

- The Joint Programming Initiative (JPI): the joint programming of research activities between Member States is a major recent instrument in the European Research Area (ERA) policy. Two of the first initiatives relate directly to agriculture: "Agriculture, food security and climate change"; and "A Healthy Diet for a Healthy Life". The Commission has adopted recommendations for Member States to pursue these initiatives, which will become the object of significant collaborative agricultural research efforts in the EU;
- ERA-NET actions, which provide a framework for actors implementing public research programmes to coordinate their activities, in areas such as rural development, ICT, research in the organic sector, animal health, etc.;
- "Foresight" and "Horizon Scanning" exercises on agricultural issues, which provide a broader and longer-term outlook on the challenges facing the EU agricultural sector⁶.

³ The EU budget allocated to research projects in the field of agriculture represents 5.5% of public outlays of Member States in 2009. Yet, Member State support includes infrastructure and running expenses. If one would take only research projects budget in consideration, the significance of EU contribution would appear larger.

⁴ The legal basis of SCAR is the Council Regulation (EEC) 1728/74 regarding the coordination of agricultural research (OJCE L74 of 5 July 1974, p. 1).

⁵ See COM(1997)126 "The European Initiative for Agricultural Research for Development (EIARD)"

⁶ The third foresight exercise was presented in Budapest in May 2011 and the main conclusions for agricultural research were highlighted in the so-called 'Budapest Declaration' which was endorsed by Member States at the SCAR Plenary meeting of June 2011.

- A SCAR collaborative work on AKIS set up in early 2010.

1.3. Current policy measures of the Common Agricultural Policy influencing research and innovation in agriculture

Although the CAP does not deal directly with agricultural research issues several elements of the policy affect some parts of the AKIS. This concerns in particular the Farm Advisory System (FAS) and several rural development measures on knowledge and information dissemination and on cooperation for innovation. This annex does not provide an analysis of the impact of measures such as investment or business development of Rural Development which may have an impact on innovation processes as well.

The CAP does not support directly research projects with however a notable exception in the fruit and vegetable sector: in the single Common Market Organisation (sCMO), the so-called Producer Organisations (POs) can have research projects co-financed by the CAP within the so-called Operational Programmes⁷.

Article 68 of Council Regulation 73/2009 on direct payments allows Member States to provide support to farmers for specific purposes, including: improving the quality of agricultural products, improving the marketing of agricultural products, practicing enhanced animal welfare standards and specific agricultural activities entailing additional agri-environmental benefits. Several Member States have utilised the possibilities under Article 68 to support innovative practices at farm level (e.g. on precision farming).

Before entering into specific policy measures it is important not to overlook the overall impact of the CAP on innovation. Indeed, some measures have a direct impact on AKIS and on innovation, but other measures influence indirectly the capacity of operators to innovate. Research suggests that the CAP as a whole would have a positive effect on the adoption of new technologies by farmers (see in particular CAP-IRE⁸ Policy Brief and Bartolini et al. 2011).

1.3.1. Farm Advisory System

The Farm Advisory System (FAS) was set up as a component of the CAP reform of 2003. Its main purpose was to help farmers comply with cross-compliance requirements via the provision of technical advice. The establishment and use of the FAS is supported by the Rural Development Policy (see below). The advisory activity covers at least the Statutory Management Requirements (SMR) and the Good Agricultural and Environmental Conditions (GAEC). The deadline for setting up a national FAS was 1 January 2007, the start-up period lasted until 2009 due to time necessary for practical implementation of the national legal FAS provisions, e.g. the procedure for certifying

⁷ See Article 21(f)(4) and Annex VIII(1) of Commission Regulation 1580/2007. There is no overview of the use of this possibility as a comprehensive reporting from all Member States, including on this aspect, is in place only as from 2009, for which data are not yet available.

⁸ CAP-IRE research project (supported by FP 7), "Assessing the multiple Impacts of the Common Agricultural Policies (CAP) on Rural Economies", <http://www.cap-ire.eu>.

advisory bodies and mobilising rural development support. The European Commission reported on the implementation of the FAS in the Member States in November 2010⁹.

1.3.2. Rural development measures promoting knowledge and innovation

Several measures of the Rural Development policy provide support to knowledge, advisory services and innovation, directly or indirectly: this concerns especially measures of Axis 1 and also Leader and the European Network for Rural Development (ENRD).

Axis 1 measures:

- Measure 111 on vocational training and information actions.
- Measure 114 on the use of advisory services by farmers and forest holders. The support is provided in order to help farmers to meet costs arising from the use of advisory services for the improvement of the overall performance of their holding. As a minimum the advisory service should cover the SMR and GAEC of cross-compliance and occupational safety standards based on Community legislation. Support is limited to 80% of eligible cost per advisory service with a maximum eligible amount of €1 500 per complete advisory service.
- Measure 115 on the setting up of farm management, farm relief and farm advisory services, as well as of forestry advisory services. Support is provided to cover the costs of setting up and is degressive over a maximum period of five years from setting up.
- Measure 124 on cooperation for the development of new products, processes and technologies in the agriculture and food sector and in the forestry sector. The support is provided to promote cooperation between primary producers in agriculture and forestry, the processing industry and/or third parties. The cooperation has to involve at least two actors of which at least one is either a primary producer or belongs to the processing industry.

Whereas measure 111 on vocational training existed already before the current programming period, the other three measures were created more recently: measure 114 for the use of advisory services has been implemented with the CAP reform of 2003¹⁰, whereas the other two measures were introduced as from 2007.

⁹ Report from the Commission to the European Parliament and the Council on the application of the Farm Advisory System as defined in Article 12 and 13 of Council Regulation (EC) N° 73/2009 (COM(2010) 665 final)

¹⁰ This measure was implemented with Council Regulation EC 1783/2003 amending Regulation (EC) No 1257/1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF).

Leader

Leader (Axis four of the rural development policy) and the European Network for Rural Development (ENRD) are also included in the analysis: Leader contributes to the emergence of innovations, in particular social innovation, at the local level. The ENRD facilitates the flow of information and knowledge.

Leader started as a Community initiative about 20 years ago and was integrated in the Rural Development policy in the current programming period. Leader works in a bottom-up approach and supports local and integrated development strategies.

European Network for Rural Development

The ENRD was established in the current programming period to create a network among EU rural development actors. The objectives are to disseminate information and good practices on various aspects of rural development. The ENRD has established thematic working groups (e.g. linkages between agriculture and the wider rural economy; public goods and public intervention) and has established a sub-committee targeting Leader. The ENRD also provides analysis of Rural Development programmes and organises events and seminars on specific issues of relevance for the development and implementation of the rural development policy.

1.4. Current links between the CAP and the EU research policy implemented within the Seventh Framework Programme for Research (FP 7)

There are currently no formal links between the implementation of the CAP and the implementation of agricultural research within FP 7. Agricultural research used to be managed under the CAP until 1999. The European Commission was assisted in this activity by the Standing Committee on Agricultural Research (SCAR). In 2000 agricultural research was transferred into the umbrella of the Framework Research Programme (FP 6). Secretariat and management of SCAR was maintained in the CAP administration although the Committee no longer played the role of a Programme Committee. It was decided in 2004 to bring SCAR under the management of the Research Programme as from 2005. Although Commission services dealing with the CAP have no longer had responsibility on agricultural research from 2000, links have been maintained with research. An important tool of research programming and follow up is the AGRI-RTD research network, an informal inter-service group composed of DG AGRI staff with research needs for policy development and DG RTD staff of project officers responsible for agricultural research. It serves to submit project proposals submitted to the annual work programmes and to organise the involvement of DG AGRI in ongoing projects. Yet, these informal annual inputs are far from constituting a consolidated and comprehensive approach to research from the side of the CAP.

2. ACHIEVEMENTS AND CHALLENGES

2.1. Delivery of current CAP instruments

2.1.1. Implementation of the Farm Advisory System (FAS)

As the FAS was established quite recently and became fully operational in most Member States in 2008 only, it is still too early to draw definitive conclusions on its implementation. In these early years, the number of farmers having received FAS advice is rather limited in the EU as a whole: 4.8% of farmers receiving direct payments were given one-to-one advice in 2008 in the 20 Member States where information was available. In the Member States / regions where the FAS has been implemented since 2007 or earlier, the outreach stood at around 5-10% with a maximum rate of 20% in some Member States where the FAS is implemented since 2005. The main beneficiaries of the FAS have been large farms¹¹, already familiar with using advisory services. Obviously, the outreach of the FAS will grow with the number of years of implementation and the coverage should reach higher levels.

In 14 Member States, the FAS focused strictly on cross-compliance whereas in the remaining Member States the advice embraces broader issues, such as the competitiveness of the holding, the environmental impact of farming practices and support for the implementation of rural development measures (e.g. agri-environmental measures). Yet, it is difficult at this stage to assess the role that FAS may have played in these areas going beyond cross-compliance. In some Member States, the existing advisory services have been used for this purpose. In this case, a broader approach has been applied, including the economic performance of the holdings.

For a large number of Member States, the FAS does not address comprehensively the various needs of farmers, except cross-compliance. Most often, these needs are covered by the existing advisory services. Yet, the FAS can be used in a much wider perspective than just taking care of cross-compliance as the example of Flanders in Belgium shows where a 'whole farm' advice system approach was adopted.

In any case, it seems that for a number of Member States, the setting up of the FAS has prompted some Member States to rethink the functioning of the AKIS and its delivery to farmers. Within this, the potential role of FAS advisors as interface between the agricultural and research sectors could be significant. Yet as indicated in ADE et al. 2009, it remains mostly untapped. ADE et al. 2009 makes a series of recommendations, of which a) target FAS activities in other areas than cross-compliance, thereby ensuring broader advisory services in Member States where they are lacking; b) better integrate the FAS in networks involving research activities and other advisory services; c) enhance access of small farms to the FAS. In the conclusions of the report on the application of the Farm Advisory System¹², the Commission also highlighted that the FAS should cover issues going beyond cross-compliance.

¹¹ Council Regulation (EC) 1782/2009 introduced a priority for farms receiving more than €15 000 of direct payments. This priority was abolished with the Health Check (Council Regulation (EC) 73/2009).

¹² Report from the Commission to the European Parliament and the Council on the application of the Farm Advisory System as defined in Article 12 and 13 of Council Regulation (EC) 73/2009 (COM(2010) 665 final)

In order to establish exchanges on technical aspects between Member States on these issues, the Joint Research Centre¹³ has organised several workshops with national experts from the Member States. The last one took place in Warsaw in February 2011 with 116 delegates from 19 Member States.

2.1.2. Implementation of Rural Development measures focussing on knowledge and innovation

Among Axis 1 measures (vocational training and information; use of advisory services; cooperation for the development of new products), it is **measure 111** on vocational training and information actions which bears the largest outreach, with 233 000 trained participants in the period 2007-2009, with a total public support (EU and Member States) of €142.3 mio. Most active Member States are Lithuania (approximately 79 000 farmers trained), Belgium (48 000 farmers trained), France (26 000), Finland (21 000), the Czech Republic (16 700) and Germany and Spain (both at about 14 500). However, at the level of the EU and of most Member States, the outreach represents a marginal share of the total number of producers.

The **measure 114** on the use of advisory services was planned in 20 Member States, covering 1.1 mio farmers for a total budget of €870.5 mio for 2007-2013. Yet only 1.9% (€16.9 mio) have been spent in 2007-2009 with an outreach of 32 200 farmers supported: Hungary (around 11 200 producers), Spain (8 200), Italy (5 700), Germany (4 000), the Czech Republic (1 100) and the Netherlands (900).

The **measure 115** supporting the setting up of management, relief and advisory services was planned by seven Member States, with four Member States (Italy, Malta, Portugal and Spain) clearly focusing on the FAS. In the period 2007-2009, only 205 projects have been supported, of which 176 concerning the setting up of advisory services to agriculture or forestry (of which 146 in Spain) for a total public support of €2.5 mio. A total amount of €172.9 mio was earmarked for this measure for 2007-2013, which means that only 1.4% has been spent in the first three years.

In summary, until 2009 measures 114 and 115 have been utilised to a rather limited extent for the provision of knowledge to producers. Measure 111 has the largest outreach, yet it still concerns a minority of producers. Forest-related actions are present in 69 national programmes. It has been pointed out (e.g. University of Gloucestershire, Countryside and Community Research Group, 2008) that the measures are overlapping between each other and that they would need to be integrated within an overall approach for the Member States regarding advisory services to farmers. It has been advocated that, for a more coherent approach and better results, these measures should be merged into a single measure dealing with the provision of knowledge and advice.

The **measure 124** (cooperation for the development of new products) is programmed in 14 Member States with a total allocated budget for 2007-2013 of €349.2 mio. This measure has provided support to 356 projects during 2007-2009 (of which 44% implemented in Austria) for a total public support of €17.7 mio (average public support per project: €49 700), i.e. 5% of the foreseen budget. This slow uptake, with a clear exception in few Member States, stems probably partly from the fact that this measure

¹³ Institute for Environment and Sustainability, unit on "monitoring of agricultural resources" (MARS).

was new for rural development programmes¹⁴. This is a potentially very useful measure for the adoption of innovations in agriculture and rural areas as it takes account of the collective dimension which is often necessary to the innovative process. The potential effectiveness of this measure is high whereas its implementation costs are relatively low. It was recommended (University of Gloucestershire, Countryside and Community Research Group, 2008) that this measure should be best developed as part of an overall development strategy of research and innovation. Measure 124 containing forestry-related actions has also been programmed in 41 national or regional programmes.

The rather low level of use of measures 114, 115 and 124 could be partly attributed to the fact that they are recent measures in the rural development policy. In addition, it is not sure that they have been granted important visibility in the Member States. The fact that Austria was able to have the measure 124 implemented in a sizeable number of projects reflects that implementation is also conditional upon co-financing budgets and the interest displayed by the Member States, influencing the role granted to the measure in the rural development programmes.

2.1.3. Implementation of Leader

An assessment of Leader is provided in the annex dealing with Rural Development to which the reader is referred. Only specific aspects are discussed here. The Leader approach has long proven its high value for delivering local development strategies. Its inclusion in Rural Development programmes as from 2007, often referred as "mainstreaming" has allowed it to extend further (more than doubling the number of local action groups in comparison with Leader + of the period 2000-2006). Yet, the mainstreaming has also led in some Member States to a reduced flexibility for implementation by the Local Action Groups (LAGs). This often perceived too strong interference of Member State bureaucracy is reported to have hindered the bottom-up approach and would have reduced the innovative capacity of the projects.

2.1.4. The European Network for Rural Development

The implementation of the network is supported by rural networks set up at national level and by the European Network for Rural Development at the EU level. These networks gather organisations and administrations for the purpose of exchanging information and experiences, to stimulate joint analysis and cooperation between the actors of the policy. Since 2008 the ENRD has carried out a large number of activities such as stakeholder groups to analyse specific policy implementation issues, information dissemination to the broader public, organisation of events on specific issues. An evaluation expert network has also been set up to bring methodological support to the evaluation of programmes.

2.2. Challenges ahead regarding research and innovation

There is a large body of publications which calls for a **renewed impetus for research in agriculture** in order to make the sector better able to cope with long-term challenges¹⁵.

¹⁴ This measure was previously implemented under the research programme "Multiregional Operational Programme in Objective 1 Regions 1994-1999: Services to the farm sector" (see University of Gloucestershire, Countryside and Community Research Group, 2008)

¹⁵ Among the most recent documents, see in particular the third SCAR foresight exercise "sustainable food production and consumption in a resource constrained world") or the Foresight report of the United

These challenges include catering at world level for the food needs of a growing population, with more resource-efficient and environmentally sustainable practices imposed by the increase in resource scarcities (water, energy, soil depletion, etc.), taking into account the needs to mitigate and adapt to climate change. These challenges are fully reflected in the Europe 2020 strategy for smart, sustainable and inclusive growth¹⁶ which lists among major challenges climate change, resource efficiency and environmentally-friendly production methods and land management. It is among the objectives of the flagship initiative Innovation Union¹⁷ to foster innovation in order to better grasp these challenges.

The scope of necessary research for agriculture and forestry to meet these challenges in the long term is fundamentally different from the one that was developed to support the so-called Green Revolution. It is indeed no longer sufficient to focus on productivity increase. Research has now to address a much broader range of issues. The necessity to cope with complex issues such as maintaining or increasing the productivity and, at the same time, maintaining eco-system services delivery (such as biodiversity), implies to support pluralistic scientific approaches reflecting this complexity. No single avenue will be sufficient. Hence, required innovations will not just be technological, they will also have to be non-technological (e.g. agro-ecological innovations), social and organisational. These innovations will have to respond simultaneously to several objectives (e.g. food security, biomass production, environment preservation) and should help to minimize the trade-offs between reaching these objectives.

Innovations are often defined as the successful implementation of new ideas. Hence, it is not only the scientific research area which is involved, it is the whole complex of interactions between science, knowledge systems (including advisory services), producers and other stakeholders (e.g. NGOs) and markets which is at stake. Evaluations of research programmes in agriculture often report that the research sphere is not sufficiently connected to the implementation level. Therefore, interesting research results do not always find their way to potential users and the users face sometimes difficulties to have new challenges grasped by the research community.

It has to be acknowledged that the interface between research and potential users, among which regional agricultural research institutions and especially the **advisory services to agriculture and forestry**, has been quite neglected in the last decades in most countries in the world, including the EU. Restructuring and privatisation under public budget constraints have profoundly changed the landscape of advisory services in many EU Member States leading to a fragmentation of advisory services with the multiplication of extension organisations.

Kingdom Government Office for Science "The future of food and farming: challenges and choices for global sustainability".

¹⁶ Communication from the Commission, Europe 2020 a strategy for smart, sustainable and inclusive growth (COM(2010) 2020 final).

¹⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Europe 2020 Flagship Initiative Innovation Union (COM(2010) 546 final).

In some instances, this has limited their capacity to deliver to the whole range of commercial farms, including the small ones (Labarthe, Laurent, 2009), or their capacity to deliver advice on public goods such as agri-environment (see Nigel et al. 2002; University of Gloucestershire, Countryside and Community Research Group (2008), Klerkx et al. 2006) and their involvement in back-office activities (construction of knowledge, e.g. field experiments, etc.). It appears that, at a time when farmers are faced with multiple challenges (environmental norms, increased technicality of production processes, necessity to cope with climate change, business management, etc.) which require large amounts of knowledge, they sometimes have access to a more narrow scope of knowledge of sometimes lower quality¹⁸ (see in particular Labarthe, Laurent, 2006). In the absence of a comprehensive approach regarding the role and the objectives of advisory services to agriculture, there is a risk that the trade-offs between various objectives (e.g. maintain or increasing productivity together with eco-system services) and time horizons (short-term objectives regarding income and longer-term objectives regarding sustainability) will not be properly taken care of by the advisory services.

There is a growing consensus that **innovation in agriculture encompasses a plurality of approaches**: the traditional linear process with knowledge flowing from research to farmers ('science push') through advisory services is no longer considered as the most appropriate approach although in some instances it bears fruit. Innovation is also more and more viewed as the outcome of collaborative networks where information is exchanged and a process of learning takes place (Knickel et al. 2008, results of FP 6 research project In-sight¹⁹). Hall (2007) supports that innovation is rarely triggered by agricultural research and, instead, is most often a response of entrepreneurs to new and changing market opportunities. In this context, **a critical role for public authorities is to support the emergence of a plurality of innovation systems and to provide a conducive environment and support to innovation networks and collective approaches** gathering producers and other stakeholders on specific issues requiring innovation. In this context, it is considered that the provision of research and agricultural advisory services should be pluralistic with mixed funding and undertaken by both public and private parties (Klerkx, Leeuwis, 2009). Public involvement and funding is particularly important in those areas (e.g. public goods) which do not attract the interest of the private sector.

The expenses in agricultural research of FP 7 represent less than 10% of the expenses of the Member States. Given the limitations of EU research budget, the question of the purposes and targeting of EU investments in research is a major one. The present impact assessment is not the place for a thorough analysis on this but one could well argue for a concentration around themes and targets which would maximise the capacity of EU research programmes to deliver on public goods.

¹⁸ E.g. quality of proof of a field experiment on pesticide testing carried out by a public research institute versus the proof provided by the cooperative or input company which sells the pesticide to the farmer.

¹⁹ Other research projects financed by the European Union under the Framework Programme for Research and Development investigate the role of networks in the innovation processes as part of their work programmes: the project DERREG (www.derreg.eu) looks at rural areas and globalisation and shows the importance of international networks for rural SMEs; the project NETGROW investigates the role of networks on SME innovativeness (www.netgrow.eu); the project SOLINSA elaborates on the very issue of learning and innovation networks for sustainable agriculture (www.solinsa.eu).

The necessity to rethink the whole complex of the AKIS has been embraced by the Standing Committee on Agricultural Research (SCAR) which set up in 2009 a collaborative working group on the issue. As part of this work, a review of national AKIS in Member States shows in particular that national AKIS are often fragmented and not sufficiently responsive towards changes and to new societal concerns and demands (Dockès et al., 2011). Moreover, many recent publications and reports insist on the importance for countries to invest in agricultural research but also in advisory services (see reports of the SCAR foresight or of the United Kingdom foresight).

In view of the fact that many of the norms and regulations that are implemented in the farm sector are generated by EU policies and that policies to better cope with the challenges the sector face (such as climate change) are also for most in the realm of EU policies, it would appear most effective that, although resting on approaches and tools decided at national level, the capacity of AKIS to deliver on EU priorities be supported and coordinated at the EU level. This would ensure that, with a variety of approaches, all farmers in the EU have access to adequate advisory services (in terms of issues covered, in terms of quality of the advice provided, etc.). An important aspect which should not be overlooked is also the technical capacity of the advisors who have to cover a larger array of issues than some decades ago (capacity to provide integrated advice solutions on cross-cutting issues, capacity on technical issues and on approaches, e.g. participatory approach).

3. HOW COULD THE CAP SUPPORT AGRICULTURAL KNOWLEDGE AND INNOVATION SYSTEMS IN THE EU?

The main policy scenarios used in other parts of this Impact Assessment have been designed with a view addressing primarily the major building blocks of policy intervention within the CAP. The policy options developed herebelow do not all strictly reflect the main policy scenarios. Yet, the policy option depicted under section 3.2 would qualify under the Integration Scenario, whereas the option presented in section 3.3 could be integrated either in the No Policy Scenario or in the Refocus Scenario.

The various options that are investigated below apply to the measures which have a direct impact on the AKIS and on innovation. The overall CAP and instruments like direct payments, which also influence the capacity of operators in the sector to innovate, are only marginally addressed.

The manner by which the challenges the agriculture sector faces currently and will face in the medium to long term will be taken up by the new research and innovation policies and programmes which will succeed to FP 7 is not discussed extensively in this document since it goes beyond the remit of the CAP. Yet some elements are presented under the scenario presented in section 4.2. If it is considered that research will play a more important role in the agriculture sector, partly through the establishment of an European Innovation Partnership "Agricultural Productivity and Sustainability" (EIP-A) aiming at fostering innovation, coherence of policies indeed calls for a coordination of the relevant research with the major objectives of the CAP and with the EIP-A.

3.1. Status quo scenario

3.1.1. Policy measures

Under this scenario no additional initiative for enhancing innovation is taken at the EU level. The existing FAS instrument and current measures under Rural Development are kept unchanged. Advisory services through the FAS still focus on cross-compliance issues and do not take on board other EU objectives (actions targeted towards innovation, biodiversity, etc.).

3.1.2. Potential impact

Given that the obligation to establish a national FAS is recent and the related advisory bodies have only been certified in the last years, the outreach of the FAS would certainly increase, though to perhaps modest levels. In any case, results in terms of knowledge dissemination and innovation adoption would most certainly fall far short of the challenges if not just for lack of a coherent framework for the use of available measures. Farmers would lack knowledge and research support to cope with the new challenges. Post FP 7 European research programming would not be connected to the problems of the farmers and rural entrepreneurs to the necessary extent. Moreover, in the absence of an emphasis on innovation-related measures and on the promotion of higher use, the effective impact of these measures would remain low. The support under rural development for the use of advisory services by farmers and for the delivery of the AKIS across Member States would be maintained, thus affecting the capacity of the agriculture sector to cope with the new challenges.

3.2. EU incentives enhancing actions targeted towards innovation and agricultural knowledge exchange in the agri-food sector and reinforced links with the Framework Research and Innovation Programme

3.2.1. Policy measures

The FAS is reinforced to extend its minimum scope beyond cross-compliance and targets all farmers. Rural development measures supporting knowledge and advisory services are streamlined and strengthened. Innovation is embedded in the CAP through a European Innovation Partnership in agriculture which aims at enhancing innovation in priority areas. Key acting entities would be Operational Groups bringing together farmers, advisors, researchers and enterprises. Furthermore, a specific European Innovation Partnership Network would be established to facilitate communication and the exchange of information.

The Farm Advisory System

The FAS is reinforced from an advisory tool focusing on helping farmers receiving CAP payments to fulfil cross-compliance requirements to an advisory system covering a broader range of issues, linked to innovation and the environment, which is made available to all farmers. Among other issues, the FAS would provide useful inputs to farmers on the potential implementation of a greening of the first pillar. The reinforced FAS ensures that farmers have at their disposal advice reflecting the specific situation of the farm. The minimum scope of the FAS is enlarged to climate change mitigation and adaptation, biodiversity, the protection of water and actions targeted towards **innovation**. Rural development measures supporting the FAS are strengthened (see below). The FAS

also provides information to farmers on the European Innovation Partnership and contributes to disseminate at the farm level innovations developed within the EIP.

A coordination of FAS is established at the EU level, with in particular the view to gain at EU level from the strengths and positive experiences of the different Member States: a regular exchange of experiences and best practices in the Member States related to organisation, certification, monitoring and evaluation of advisory services is organised. The FAS advisory bodies are linked with the whole AKIS system, including other advisory bodies, and research and education institutions, both at national and EU level. In particular, discussion on the improvement of the organisation of advice provision and the availability of adequate advisory tools in the Member States is promoted, e.g. concerning minimum qualification and regular training of advisors, the organisation of regular feedback provision from farming practice to researchers and authorities and vice versa. This regular discussion should cover the implementation of the FAS and the relation of the FAS to the whole AKIS. This coordination may lead when needs arise to suggestions for amendments to the EU legislation (FAS, Rural Development programmes, etc.).

Agriculture European Innovation Partnership

In view of closing the gap between the vast range of innovative research results, on the one side, and the availability of innovative approaches applicable to farming practice, on the other, an European Innovation Partnership Agriculture "Agricultural Productivity and Sustainability" (EIP-A) is set up aiming at an EU agricultural sector that 'produces more with less', thereby overcoming the existing development path of enhancing productivity at the expense of the environment and natural resources. Currently new approaches take too long to reach the ground and the practical needs on the ground are not sufficiently communicated to the scientific community. This EIP-A will ensure a faster exchange of knowledge from research to "practical" farming and provide feedback on practical needs to science via operational groups.

In view of facilitating the information flow between research and practice, **an EIP Network** is created. Via the EIP Network, key actors (farmers, advisors, researchers, enterprises, administrations) in operational groups will share experience, communicate good practice, and give advice at different geographical levels. The EIP Network will also engage in animating the establishment of 'Operational Groups' on the ground. The work of the EIP requires a solid underpinning by national networks as well as networking at regional level. With respect to the latter, farm advisory services and the FAS could play an important role. Furthermore, the EIP Network requires a good interface to facilities existing on the research side. Close interactions with the Standing Committee on Agricultural Research (SCAR) will be necessary.

In order to reach the objectives of the EIP, measures fostering innovation in agriculture are reviewed and strengthened. The new Rural Development framework includes adapted and streamlined measures covering (among other things) cooperation, pilot and demonstration projects, knowledge transfer, innovative investments and the establishment and use of farm advisory systems.

Rural development measures supporting knowledge transfer, advisory services, cooperation for innovation

Measures related to knowledge transfer and advisory services are made more coherent and visible. In addition, measures are granted a larger scope. The new measure on knowledge transfer and vocational training covers courses, seminars, information sessions or workshops and technical, economic or research dissemination. **Support to exchange programmes for farmers and to demonstration projects is introduced.**

In the case of support for advisory services, the scope goes beyond cross-compliance issues and is aligned to the areas foreseen in the minimum scope of the FAS, however with enough flexibility for the farmer to decide on his exact need for advice. Other matters of relevance to the farm which contribute to achieving EU priorities, such as economic profitability, business development, environmental aspects, etc. can be advised upon. In order to contribute to increase the outreach, support covers 100% of the cost (up to the ceiling of €1 500 per advice). Support is also provided for the **training of advisors.**

The measure on cooperation for the development of innovative products, processes and technologies, which has great potential in steering collective actions towards innovation, is reinforced considerably taking on board, for instance, support to pilot projects and support to the **creation of cooperation networks and clusters and for the establishment of their activities.**

The measures are meant to finance the use of advisory services for various purposes (FAS or other types of uses) and to finance some of the activities to be carried out as part of the European Innovation Partnership in agriculture (see 3.2.4 below).

Leader

Leader programmes recover enough flexibility so as to be able to implement better innovative strategies. Whilst the aforementioned EIP has its primary focus on innovation along the supply chain, Leader addresses the wider context of local development strategies.

European Network for Rural Development (ENRD)

The ENRD and the National Rural Networks are strengthened to further reinforce links between administrations and stakeholders, to ensure the appropriate information support for beneficiaries and managers and to boost exchanges between the actors of the policy. Bearing a special focus on innovation along the supply chain, the aforementioned EIP Network will complement the efforts made under the ENRD.

Reinforced links with the EU Common Strategic Framework for Research and Innovation Horizon 2020

Although reinforcing the links with the EU Common Strategic Framework for Research and Innovation Horizon 2020 goes obviously beyond the remit of the CAP, it is worth addressing it for the sake of consistency and coherence with in particular the implementation of the EIP-A. The capacity of the agriculture sector to cope with challenges and the proper implementation of the EIP-A within the CAP obviously depends on a stream of research results originating from the Research Programme. In this

view a coordinated approach is necessary with the EU Common Strategic Framework for Research and Innovation Horizon 2020: 1) appropriate coordination on research programming and priority establishment in the areas of agriculture, forestry, food and the broader bio-economy area; and 2) development of tools better tailored for innovation in agriculture (e.g. flexible research projects; support to innovation brokers / innovation centres).

3.2.2. Potential impact

Reinforcement of the FAS and of the support to farmers for the use of advice increases significantly the number of producers taking advantage of advisory services on a broad range of issues. The setting up of the European Innovation Partnership fosters the involvement of stakeholders (researchers, advisors, agri-business and farmers) in innovation processes contributing to achieving EU goals of sustainable agricultural production. In particular, farmers would be in a better position to adopt intelligent solutions which are generated by research (for instance the European Joint Programming initiative on "Food, Agriculture and Climate Change". The streamlining of Rural Development measures dealing with the AKIS, their enlarged scope and increased visibility within a coherent policy towards innovation lead towards a much higher uptake of the various measures in comparison with what has taken place in the 2007-2013 financial perspectives.

The Agriculture EIP and the creation of an innovation network ensure better flows of information between the stakeholders increasing not only the use of research results by producers but also allowing research programmes to better take the needs of the stakeholders into consideration. The EIP network and the inclusion of actions targeted towards innovation among the services to be provided by the FAS ensure that Member States and concerned national institutions adopt a proactive approach towards innovation. Hence the risk that the EIP gains ground primarily in those Member States and regions where network-based AKIS are already established and producers and other stakeholders are the most proactive (e.g. more organised sector, etc.) is minimised. Exchange of experiences and good practices among Member States promote better delivery of the AKIS in the various Member States on EU priorities.

3.3. The CAP does not cover farm advice and innovation

3.3.1. Policy measures

Under this scenario, no specific initiative for enhancing innovation is taken at the EU level, nor have Member States any obligation to set up a FAS. The supporting measures under Rural Development are abolished.

3.3.2. Potential impact

Without FAS obligations at the EU level, Member States can decide not to organise any coordinated advisory system and leave the provision of advice to farmers completely to the initiative of the private sector. A minimum offer of advice for farmers on the basic cross-compliance rules is not guaranteed. The capacity of producers to improve their competitiveness, to comply with environmental standards and to adapt to climate change is reduced. This translates in an agricultural sector which cannot contribute to a full extent to solving the important challenges of restoring biodiversity or adaptation / mitigation of climate change as the initiatives and supply of AKIS services from the

private sector will most likely fall short of the farm sector demand for the provision of public goods. In particular, the farming sector of Member States where the development of the AKIS is not a priority, or is strictly resource-constrained, is at a strong disadvantage in comparison with other Member States.

Recently completed research (see the Policy Brief of the research project CAP-IRE) indicates that a more radical scenario of abolition of the CAP would entail a lower number of farms adopting innovation.

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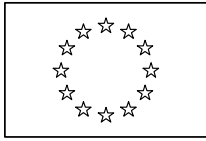
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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 8

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Annex 8: Simplification of the CAP

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1. BACKGROUND AND STATE OF PLAY

For more than 10 years, Commission is constantly monitoring the effects of the EU policy on administrative burden¹. A large number of projects and activities have been carried out with a view to simplifying EU policies and in particular the CAP. In 2009, the Commission published a progress report of the actions undertaken and ongoing to simplify the CAP².

Firstly, it is worthwhile remembering that the CAP, as a harmonised common policy replacing 27 national policies is in itself a simplification. However it is also a dynamic policy that has developed its rules and regulations over 50 years. Many of these applied across different farm sectors and had to accommodate different interests. CAP deals with conditions that vary among the 27 EU Member States. In the reform process, compromise often won out over simplicity and clarity. The CAP has now changed greatly since the early years. Old complex systems supporting various agricultural products have been replaced by a more straightforward tool targeted to producers' support. In the meantime the number of beneficiaries has been multiplied from hundreds of business operators to thousands of farmers.

As the EU's biggest common policy, the CAP takes a lot of managing and it is of great importance to make it as simple as possible for farmers, consumers, as well as the authorities and administrations in charge of its everyday management. This is done both on a continuous basis to check how current legislation can be simplified and in the context of reforms as it was the case for instance during the CAP Health Check process. Member States simplification experts as well as stakeholders are regularly consulted to exchange views on simplification and to share best practices.

The reduction of administrative burden of the CAP has been followed closely by the High Level Group of Independent Stakeholders on Administrative Burdens, commonly referred to as the Stoiber Group. This group issued in March 2009 an encouraging opinion on agriculture, confirming the positive developments of the CAP in terms of reducing red tape for farmers³.

Simplification actions concern for instance reduction of paperwork and other "red tape" as well as duplication of work, more efficient inspection of premises, rules written in clearer language, elimination of obsolete legal acts, a better communication in particular to the general public, etc. These changes make life simpler for farmers, food businesses and civil servants. Taxpayers can see more clearly how their money is spent.

¹ All background documents available on:
http://ec.europa.eu/governance/better_regulation/key_docs_en.htm
http://ec.europa.eu/agriculture/simplification/index_fr.htm

² Communication COM(2009) 128 of 18/03/2009, A simplified CAP for Europe - a success for all

³ http://ec.europa.eu/enterprise/policies/better-regulation/files/hlg_opinion_agriculture_050309_en.pdf

2. ACHIEVEMENTS AND CHALLENGES

2.1. External assessment of the administrative burden of the CAP

The measurement of administrative burden facilitates the debate on simplification. For various measures it provides an order of magnitude of administrative burden and pinpoints the areas with a high level of red tape. Considerable efforts have thus been undertaken at EU level to assess the costs of administrative burden on farms arising from the CAP.

In particular, a study assessing the administrative burden on farms arising from the 2003 CAP reform in 2006 in 5 Member States (DK, DE, FR, IE and IT) and presenting an outlook on future developments was published in 2007⁴. Several elements with an impact on administrative burdens on farms were identified which have been analysed then during the Health Check of the CAP:

- The discretion left to Member States in relation to implementation rules and timing: This relates for example to the MS choices with regard to the SPS model (historic, regional, hybrid) as well as to whether MS chose to decouple fully or maintain certain elements coupled. Other factors are the way the application procedure is set up and the system for transferring entitlements. Certain costs are one-off related to the establishment period; other may change due to information technology evolution e.g. on-line submission of application or administrative set-up (e.g.. the use of information technology in all Member States would achieve a further reduction of administrative burden on farms by more than EUR 400 million).
- The extent of public sector involvement in the application process (the more help provided the lower cost for farmer)
- The involvement of external assistance and the use of technical solutions as a business culture while positive learning curve effect provides a potential for a reduction of recurrent administrative costs over a period of a few years
- The structural differences such as farm size, differentiation in production, number of applicants, etc.

Other studies are on going, one of which is assessing the administrative burden for beneficiaries associated with a number of Rural Development measures⁵ (training, farm modernisation, diversification, organic farming, crop rotation, reduction of fertilizers and catch crops). The contractor has presented a number of *preliminary recommendations* for the reduction of administrative burden which concern:

- Promote eGovernment solutions - introduce and/or encourage the use of online portals, electronic submission of documents, pre-filled forms so that beneficiaries can follow the status of their files: the expected administrative burden reduction would be EUR 25 million per year out of a current administrative burden of EUR 235 million per year;

⁴ http://ec.europa.eu/agriculture/analysis/external/burden/index_en.htm

⁵ References to be added when study is published

- Simplify reporting requirements at Member State level (reducing the number of attachments, documents of proof, etc.): the expected administrative burden reduction would be EUR 17 million per year out of a current administrative burden of EUR 240 million per year;
- Provide concrete guidelines on what information and to what level of detail is expected: the expected administrative burden reduction would be EUR 12 million per year out of a current administrative burden of EUR 240 million per year;
- Streamline the information requirements of national and EU sponsors: the expected administrative burden reduction would be EUR 7 million per year out of a current administrative burden of EUR 240 million per year;
- Simplify of the application procedure for measure 111 (vocational training and information actions): the expected administrative burden reduction would be EUR 2.5 million per year out of a current administrative burden of EUR 10 million per year
- Less burdensome funding schemes, such as lump sums, standardised costs and thresholds for submitting supporting documents: the current administrative burden is EUR 45 million per year
- Give prior notice of on-the-spot controls: the expected administrative burden reduction would be EUR 0.5 million per year out of a current administrative burden of EUR 4.7 million per year

This study points also out that irritation due to administrative procedures plays a big role in the beneficiaries' feeling of complexity. The following irritant factors are often quoted: frequent changes and difficult terminology in the legislation, timing and deadlines, forms and attachments to be submitted with applications/payment claims, provide original receipts of expenditure, providing bank guarantees and statements, disfunctioning of eGovernment solutions, on-the-spot controls, penalties. However, it should be pointed out that these complexities do not systematically stem from EU legislation but also from the choices and modalities of implementation by national or regional authorities.

2.2. Results of the Eurobarometer qualitative survey of July 2010

A qualitative Eurobarometer study was commissioned by DG AGRI consisting of a programme of 81 qualitative group discussions, conducted amongst the general public and farmers in the 27 MS. The aim of this qualitative survey was to follow-up the quantitative Eurobarometer survey on Europeans, agriculture and the CAP published in March 2010. The study set out to get an understanding of how members of the public view the countryside and agriculture and how farmers thought the public might view these issues. Furthermore, it was assessed how the public thought certain groups might view farming and the countryside; and what farmers thought these different groups would think. The farmers offered some suggestions for the simplification of the CAP which related to three main areas: information provision, simplifying the bureaucratic processes, and stability and uniformity in the CAP regulations. Suggestions for simplification are summarised in the table below.

Areas for simplification	Suggestions	Respondents from:
Decreasing / simplifying the paperwork and bureaucracy and introducing greater flexibility	<p>-Simplifying the forms farmers have to submit. -A criticism was that they have to submit the same forms year after year, or to different workers of the same institution. Suggestions for simplification included that farmers should receive prefilled forms and that they should only be reporting changes to the data, not the same information every year.</p> <p>-Less duplication of the workload across European and national authorities, particularly with regard to inspections.</p> <p>-Decentralization of the administration.</p> <p>-Greater flexibility in the system.</p> <p>-Better turnaround time in the payment of S-subsidies.</p>	EL, SK, SE, PL, UK, CZ, FI, DE, IE, IT, LT, AT, BE, DK, EE, FR, HU, LU, NL, ES, BG, HU
Stability and uniformity in the CAP regulations	<p>-Farmers were of the opinion that the regulations change too often which makes it difficult for them to get used to regulations and to make long-term plans.</p> <p>-Farmers felt that the measuring of the acreage of their fields can be simplified. They suggest consistency in the measurements used. This is currently done by air and at different times of the day, which causes the shadows cast on the fields to be different, resulting in different readings and causing disagreement about the size of the land. Photographic mapping of the land was also suggested.</p> <p>-Setting a standard price for products so that farmers will be able to know what the products will be selling for.</p> <p>-Subsidies should be more consistent and fairer by, for example, not just providing subsidies for milk but for apples, for example, if these come under the minimum price.</p> <p>-Equal regulations and subsidies across all EU countries.</p>	FI, NL, PL, UK, ES, BE, HU, LU, DK, SE, SI, FR, EL, PL, BG, PT
How information on the CAP is provided to farmers	<p>-Receiving clear and straightforward instructions written in simple, informal language when participating in the CAP.</p> <p>-Have an organisation/body to which farmers can turn to when information is unclear.</p> <p>-Providing information to farmers through seminars, although there was felt to be a lack of content control of EU supported courses – the content is the same although the courses claim to be different.</p> <p>-Receiving new regulations and information about application periods and timeframes in time.</p>	DK, SI, MT, EE, EL, LT, PL, SK, ES

Respondents from two countries were sceptical about the possibility of making the CAP simpler or the EU's capacity to do so and expected the norms to be stricter in future (CZ, IE)

as the CAP is seen as a “self-perpetuating bureaucracy.” (IE) However, respondents from Portugal and Italy were of the opinion that the CAP had already been simplified over time, especially with the introduction of computers.

2.3. What has been done so far to reduce administrative burden?

Stocktaking of completed or on going simplification actions has been done in the Communication² "A simplified CAP for Europe – a success for all" in March 2009 and an exhaustive rolling Action Plan is regularly updated by DG AGRI and published on Europa website: http://ec.europa.eu/agriculture/simplification/actionplan_update_en.pdf. This chapter reminds the main elements of simplification achieved so far.

2.3.1. The Health Check of the CAP simplified mainly the single payment scheme and market instruments

Simplification was one of the major drivers behind the Commission's Health Check proposals in November 2007⁶. The Health Check simplified the single payment scheme (SPS) provisions and rendered the 2003 CAP reform more efficient. One of the main simplification elements in the Health Check consisted of further decoupling, abolition of set aside and abolishing of several schemes, such as payments for energy crops and durum wheat, as well as the disposal scheme for cream, butter and concentrated butter. As the study on administrative burden indicated, coupled support schemes give rise to additional administrative burden for farmers. Further decoupling leads therefore automatically to a reduction of such burden. The Health Check also simplified the rules on the modulation franchise as well as the provisions concerning the functioning of the National Reserve and payment entitlements that originate from that reserve. Moreover, the rules on set-aside were abolished and the conditions applicable to the transfer of payment entitlements were simplified. The Health Check was assessed to lead to a reduction in administrative burden to farms of around EUR 135 million as result of abolishing the special schemes for energy crops, crop area payment, durum wheat, nuts and starch potatoes. Moreover, the abolition of set-aside was estimated to reduce administrative burden to farms by EUR 146 million.

2.3.2. The Single CMO replaced 78 legal acts

An important accomplishment within the context of legislative simplification of the CAP was the adoption in 2007 of the Council Regulation establishing a common organisation of agricultural markets, commonly referred to as the "Single CMO" regulation. Given its technical character, the single CMO was not about changing the underlying policy but harmonising provisions, thereby making CAP rules easier to navigate, slimmer, more accessible and less burdensome to apply. The Single CMO regulation grouped together and replaced all 21 individual common organisations of the market into one single regulation, thereby reducing the number of articles from around 920 to around 230 and repealing a total of 78 Council acts. On a macro level, the adoption of the single CMO has substantially reduced the number of acts governing the CAP which is now mainly regulated by only 4 legal acts, namely the regulations on Direct Payments, the single CMO, Rural Development and the Financing of the CAP. Finally, the single CMO facilitates further simplification and reduction of administrative burden at the level of Commission implementing provisions.

⁶ http://ec.europa.eu/agriculture/healthcheck/index_en.htm

2.3.3. *Cross compliance has been simplified to lower the irritant factor*

Even though the study on administrative burden on farms (see 2.1 above) and the evaluation report on cross compliance⁷ concluded that the administrative cost accruing from cross-compliance is relatively low, i.e. between 0.3% and 4.3% of the overall burden, farmers nevertheless see cross-compliance as an irritant. To reduce the perceived discomfort and to ease the system, the Commission allowed advance notice for on-the-spot checks. Furthermore, farmers are no longer faced with a reduction of their payments if their infringement is of minor importance or the reduction would be less than the *de minimis* limit of EUR 100. These improvements allow farmers to better plan their activities, demand less paperwork to remedy small infringements and remove the threat to be penalised for trivial infractions. The measure also simplifies the task of national administrations.

As regard the clarification of standards at farm level, following the report of the Court of Auditors on cross-compliance⁸, a full cycle of discussions with Member States' experts on the review of each SMR and GAEC and how they have been translated into standards at farm level has been organised. During the meetings Member States had the occasion to present their own list of standards. DGs SANCO and ENV have been closely associated to these discussions and gave presentations on how legal texts apply at farm level. Each specific meeting was devoted to one or several closely related SMRs and the GAEC to allow ample time for discussion and exchange of best practices. Guidance documents for national authorities have been issued in December 2009 which comprise a summary of obligations at farm level, as well as a section with a list of points clarified during the expert group meetings.

2.3.4. *All in all, the "25%"burden reduction target has been reached for the CAP*

In 2007, the Commission presented an ambitious Action Programme to eliminate unnecessary administrative burdens on businesses in the EU. The European Council endorsed the Programme and agreed that administrative burdens arising from EU legislation, including national measures implementing or transposing this legislation, should be reduced by 25 % in 2012.

Progress made in the various policy fields have been evaluated⁹ in 2009. It was established that for the agricultural sector the level of administrative burden for farmers and companies concerned have been reduced by 36%, so well above the target of 25% (1 891 400 000 € on a total of 5 289 700 000 €). For instance, the reduction of costs for direct payments and common market organisations were assessed to be the following¹⁰:

- (1) Direct payments (estimated overall level of administrative burden: EUR 3.81 billion)

⁷ Evaluation of the application of cross compliance as foreseen under regulation 1782/2003, Alliance Environnement, July 2007, http://ec.europa.eu/agriculture/eval/reports/cross_compliance/index_en.htm

⁸ Special Report No 8/2008

⁹ Communication COM (2009) 544 of 22 October 2009, Actions programme for reducing administrative burdens in the EU sectoral reduction plans and 2009 actions

¹⁰ See detailed list in annex B (page 8) of the Communication COM (2009) 544: http://ec.europa.eu/enterprise/policies/better-regulation/documents/files/com_2009_544_annexes_en.pdf

Description	Estimated reduction in burden
Health Check <i>(see chapter 2.3.1)</i>	250 million
Abolition 10-month rule <i>(parcels declared by a farmer for direct payments had to be at the farmer's disposal for a period of at least 10 months. This provision has been replaced by a single date, which may be determined by the Member State. This means that farmers are no longer required to keep land at their disposal for 10 months to receive support. They gain greater flexibility in their farm management and in responding to market developments.)</i>	21.5 million
Cross-compliance <i>(see chapter 23.3)</i>	5.5 million
Total	277 million or 7.3%

In the context of the action programme for reducing administrative burden, the method followed only allowed for taking into account the reduction of burden resulting from concrete action taken by the Commission. This approach provides the results in the table above.

However, when assessing the overall reduction of administrative burden which farmers will experience, it is also possible to take into account the effects of the fact that part of the overall burden was associated with the setting up of the system and only relevant for one-year, the fact that farmers get used to working with the system (learning curve) and that the use of pre-established forms also simplifies matters. If those elements are taken into account, the level of red tape to farmers is reduced considerably.

Description	Estimated reduction in burden
One-off costs	1.3 billion
Health Check	250 million
Abolition 10-month rule	21.5 million
Cross-compliance	5.5 million
Use of pre-established forms	180 million
Learning curve	90 million
Total	1.847 billion or 48.5%

- (2) Import and export licences (estimated overall level of administrative burden: EUR 12 million)

Description	Estimated reduction in burden
Licence requirements <i>(reduction of number of products requiring a licence)</i>	6 million
Total	6 million or 50%

- (3) Single CMO (estimated overall level of administrative burden: EUR 28 million)

Description	Estimated reduction in burden
Suppression of special support schemes in Health Check <i>(such as disposal scheme for cream and butter, dried fodder and production refund starch)</i>	28 million
Total	28 million or 100 %

2.3.5. *What is still on-going in the DG AGRI rolling Action Plan?*

In 2006, a first version of the "rolling" Simplification Action Plan was presented by DG AGRI. The plan has evolved with currently 62 projects of which 56 have been implemented. This plan includes for instance part of the 39 simplification suggestions put forward by MS and assessed by the Commission services at the end of 2009¹¹.

Among the projects for which work is in progress, there are the following:

- An electronic system to facilitate the necessary exchange of information between Commission's services and Member States, ISAMM (Information System for Agricultural Market Management and Monitoring), which would replace multiple existing systems or current practices: this would rationalise and technically simplify the management of the CAP processes while allowing collection of historical data for impact analysis and support to CAP decision process.
- The harmonisation of provisions on payment deadlines between the first pillar and certain area and animal-related payments under the second pillar: this would bring clarity to farmers, controllers and national authorities, who no longer would have to distinguish between pillars and the various applicable rules.

2.4. What are the challenges for the future CAP as regards simplification?

2.4.1. Challenges ahead

As described in chapters 2.1 and 2.2, assessment and decrease of administrative burden of existing pieces of legislation and rules are done on a continuous basis at EU level. DG AGRI rolling Action Plan is a good indicator of this work and a good follow-up to the results of evaluations as well as inputs coming from expert groups on simplification and from MS¹². In particular there are some calls to further simplify rural development implementing rules and cross-compliance.

As regards the new concepts that the Communication of the future CAP put forward, such as the green payment within the 1st pillar, the notions of active farmers, of small farmers, etc., the right balance needs to be found between simplicity of measures and better efficiency, effectiveness and targeting in view of achieving better value for the use of public money. For instance, reinforcing the use of sustainable practices to all EU farmers via first pillar payments may lead to extra costs for farmers and extra burden in terms of controls and management of the scheme for EU and national administrations. However doing nothing in that field would disregard the society's demand for a more sustainable agriculture and for more environmental public goods and the urgent need to further contribute to climate change mitigation and adaptation. Thus one has to assess and define the simplest way of designing the scheme in order to obtain the better leverage effect.

¹¹ SEC(2009) 1601 of 16.11.2009 "Simplification of the CAP: outcome of assessment of 39 simplification suggestions, submitted at the Council (Agriculture/Fisheries) on 24 April 2009 and state of play of other simplification activities (http://ec.europa.eu/agriculture/simplification/sec2009_1601_en.pdf)

¹² Document (AGRI 196) st07477/11 "Simplification of the Common Agricultural Policy beyond 2013" submitted to the Council by NL and DK in view of Council of 17/03/2011.

In broad terms, the tools of the new CAP should be kept as simple as possible while fulfilling all its assigned objectives. Indeed, the simplification objective should be seen in the context of the challenges that the future CAP must meet, namely

- food security by maintaining the agricultural production capacity throughout the EU,
- environment and climate change by ensuring the sustainable management of natural resources and the provision of environmental public goods such as the preservation of the countryside and of the biodiversity, integrating and promoting climate change mitigation in actions supported by the CAP and enhancing farmers' resilience to the threats posed by a changing climate
- and territorial cohesion by contributing to the vitality of rural areas and territorial balance throughout the EU.

2.4.2. *Results of the stakeholder consultation for the impact assessment*

Following the Communication on the CAP towards 2020, the Commission has launched a stakeholder consultation. To the question n°9 "*What difficulties would the options analyzed [as mentioned in the Communication on the CAP towards 2020] be likely to encounter if they were implemented, also with regard to control and compliance? What could be the potential administrative costs and burdens?*", the most common reflection was that the second option (so-called "integration" – see also section 4.3 below for description) would lead to higher administrative costs. But some respondents also thought that it would not necessarily imply a higher burden on farmers and Member States. Some of the difficulties brought up were today's inefficiency, lack of clarity and the functioning of control and compliance systems. Many found that it is important to reduce the administrative burden.

Many argued that especially greening would increase the administrative burden, but some also said it would be a price worth paying in light of the improvements it yields. Cross-compliance was another area of concern for many respondents. Some highlighted the possibility to simplify cross-compliance if greening mechanisms in Pillar I are introduced; others expressed wishes for an improved sanction system and the need to allow for more regional flexibility in GAEC. Training for both authorities and farmers was suggested as ways to reduce the administrative burden.

There were fewer comments on pillar II than on pillar I measures, and they were also less critical. Some respondents said that strategic targeting is one way to reduce the administrative costs and others believed that more flexibility for regional level decision-making would decrease the administrative burden.

It is worth noting that many respondents did not make any comment on this question.

2.4.3. *Results of the ad hoc simplification consultative group*

Following the Communication on the CAP towards 2020, Commission organised a conference in order to consult the heads of paying agencies and coordination bodies from all Member States as well as farmer representatives as to the simplification, management and controllability of certain key elements in the Communication. They have already rendered a first set of recommendations (see sub-annex below) that have been taken on board as much as possible in this impact assessment. Those recommendations concern the following aspects:

1st pillar

- "Active" farmers
- Eligibility of land
- Greening of direct payments
- Capping of direct payments
- Small farmers scheme

2nd pillar

- Improving the management of payments under pillar II for measures not covered by IACS
- Leader approach
- The management and control of small projects
- The use of standard costs
- The treatment of indirect costs
- Alignment of the management of the IACS-related measures of pillars I and II

There was a clear message from the participants at the Conference that certain of the novel elements being discussed (in particular, a definition of active farmer, a special support scheme for small farmers and greening) would not represent a simplification as such, but would, rather, lead to an increase in the administrative and control burdens as well as in the risk of errors in the transactions (unless corrective measures, such as additional controls, would be taken). The positions represented in the conference conclusions indicate the preference of the participants on how such measures, if introduced, should be implemented. The broad principles which have emerged from the discussions are that:

- the right balance must be found between the desire for simplification and reduction of administrative burden on the one hand and the political objective on the other hand;
- novel elements should be as simple as possible without too many complicated conditions and which Member States' authorities should be able to manage and control as automatically as possible and with existing tools, in particular the IACS;
- while there is agreement that rules and definitions must be established at EU level, the envisaged new elements will only be manageable and controllable if Member States are given the necessary flexibility to adapt to the very different national and regional situations, (e.g. climate, terrain) and are able to make greater use of existing public databases for their control needs;
- farmers must retain the flexibility to be able to adapt to market conditions.

3. OBJECTIVES RELATED TO SIMPLIFICATION

- Simplify the legal framework and ensure that the legal texts are as clear, comprehensible, coherent and easily accessible as possible.
- Reduce administrative burden for farmers and managing authorities (MS and where possible the Commission) of existing tools without watering down their efficiency and increasing the risk of errors;
- Keep level of administrative burden of the new key concepts of the CAP as low as possible.

4. POLICY OPTIONS AND THEIR IMPACTS ON ADMINISTRATIVE BURDEN

The Communication on the CAP towards 2020 has put forward 3 broad policy scenarios. The first one (hereinafter called "adjustment" scenario) builds on the well-functioning aspects of the policy and focus on adjustments as regard distribution of direct payment between Member States. The second one (hereinafter called "integration" scenario) makes major overhauls of the policy to better meet the balance between the different policy objectives by more targeted measures (namely greening, capping, small farmer scheme, specific natural constraint payment, etc.). The third option (hereinafter called "refocus" scenario) strongly focus on environmental and climate change objectives by a moving away of income support and most market measures and providing a clear financial focus on rural development policy.

This chapter first assesses qualitatively and separately the simplification impacts of the possible evolution of existing tools and of the new key concepts mentioned in the Communication on the CAP towards 2020. An attempt of quantitative assessment of 2 main elements (greening and small farmer scheme) is also done in section 4.2. The last section puts the tools together in the 3 policy scenarios for their overall assessment.

4.1. Qualitative assessment of existing policy tools and new key concepts

4.1.1. Direct payments

a) New model of direct payments

Maintaining the current well established rules would be easy for the Member States applying the Single Payment Scheme (SPS). However, the coexistence of different SPS models (historic, regional, hybrid) which makes the policy frame more complex at EU level would also persist. The move to a common model for all MS for the distribution of direct payments at farm level, such as a flat rate, would very much simplify the policy framework even if applicable at regional level (i.e. like the current SPS regional model). In the first year of implementation of the new system, there would be administrative burden associated with the redistribution (recalculation of their value) and possibly transition (i.e. defining steps for progressive modifications in following years for each farmer) as well with allocation of new entitlements.

For those MS currently applying the Single Area Payment Scheme (SAPS), the administrative burden associated with the transition to regional SPS would be significant in the first year and is related to the establishment and allocation of entitlements. However those MS would have had in any case to set up a new system of entitlements when shifting

to SPS (planned for 2014 at the latest) implying significant administrative burden for the national authorities as well as for farmers. Farmers would however also benefit from the flexibility offered by entitlements, i.e. the possibility to sell, lend or activate the entitlement on different hectares. The transition period would allow farmers to adapt to the new system.

For the farmers, the introduction and application of a new model is burdensome as such and possible additional control requirements could create an additional burden/irritant.

Moreover, the daily management and control of several additional layers of payments may be burdensome at both EU and national level. A certain degree of flexibility for MS in application of the different components of the direct payment may help MS to choose the best solution also in term of reducing administrative burden.

Complexity in the current policy framework stems also from the fact that supports for coupled production and supports to agri-environmental measures of pillar II may also be paid via Article 68 of Council Regulation 73/2009. This creates “grey zones” of support and additional administrative burdens in particular for Member States due to the necessity of defining consistent rules which do not lead to duplication of payment for a same operation.

By setting only one mechanism for all coupled payments and by shifting to rural development elements of article 68 that better fit in pillar II, the current administrative burden to avoid the overlapping would disappear and the management of coupled aid would be simplified.

Of course, the opposite option of phasing out of direct payments would bring in the long run administrative facilitation since the scheme would not have to be administered anymore (provided Member States would not replace the direct payment system by national policies).

b) Active farmers

Improving the targeting of payments to active farmers would require careful fine tuning of definitions in cooperation with MS and selecting criteria at MS level to be integrated into the IACS register which would require substantial administrative effort for them and certainly for farmers to prove eligibility, as they would have to provide supplementary detailed information and possibly submit accompanying documents with their application. It is likely that this rule may lead to a considerable increase of administrative burden for both farmers who would need to provide the relevant information and national/regional authorities who would have to control them. The expected benefit of the rule is hardly quantifiable (i.e. number of non genuine farmers excluded from the payments and corresponding "saved" amount). Leaving space for national adaptation of the definition of active to choose the most easily accessible information (while keeping the requirements WTO compatible) would ease the implementation of such a rule both for farmers and for managing authorities.

c) Capping of direct payments

It can be expected that the new provisions, especially the ones regarding the progressive capping (refer to experience with modulation), mitigation of capping for large farmers with high employment and provisions related to the artificial conditions created to avoid capping will be complex to draft and to implement/control or enforce by Member States.

d) Small farmers scheme

An approach built on the assumption that the DP for small farmers would be generally increased does not require any additional control but cross-reporting from existing controls. Depending on the share of farmers concerned and on the rules that would be simplified for the small farmers, this would in turn simplify the overall management of the direct payments scheme for MS.

e) Green payment

“Greening” direct payments would not have simplification effects and is likely to increase administrative burdens for managing authorities and farmers in particular due to additional controls, but this depends strongly on details of the implementation and on possibilities of using existing and well functioning tools such as IACS. A generalised application leaving little room for Member States would make the administrative burden lighter, e.g. not demanding to scrutinise or approve single actions applied by Member States. However, in the light of the sensitivity of greening the CAP it might be advisable to provide for appropriate monitoring and evaluation mechanisms which might be administratively cumbersome for Member States. As a generalised first pillar payment it would be administratively very complex to base the payment on cost incurred/income foregone while a lump sum per hectare would be less burdensome to implement.

For the farmers, greening would indeed lead for some of them to change their practices which in the first years may be irritant and costly. However even if not immediately quantifiable at individual level, the environmental benefits of the scheme (see annex 2 on "Greening of the CAP") are likely to be considerable.

f) Cross compliance

As regards cross compliance, the Communication foresees the need for providing farmers and administration with a simpler and more comprehensive set of rules. Indeed the rationalization of the scope of cross compliance and its focus on the most important existing standards and to GAEC would make it clearer and more understandable for farmers. Changes to the sanction and control provisions are also envisaged so as to reduce the administrative burdens of both farmers and national authorities.

As regard the immediate inclusion of the Water Framework Directive in the scope of cross compliance, this is likely to cause administrative complications as a system of management, controls and sanctions of this environmental legislation is not yet fully in place and well-known by farmers.

4.1.2. *Market instruments*

a) Simplifying and streamlining of market intervention

Removing the fixed price in the intervention system allows intervention to act only when necessary in the marketplace so avoiding in some cases unnecessary expenditure. Open tenders need to be run, with the corresponding administrative costs for the national administration, even when this is not necessary when prices are well above the intervention limit. The red tape would include, for example publishing tendering regulations and notifications by 1 November every year.

From the point of view of legislative simplification, provisions covering more than one sector (as is the case with for example rules on intervention schemes, exceptional/emergency measures, POs and IBOs) should be streamlined as far as possible, so as to render the legal framework more user-friendly and accessible. A number of elements could be transferred to delegated acts. This would concern elements not considered essential but that are necessary to the proper functioning of the system, for example buying in periods, rules on disposals and rules on storage, detailed granting conditions.

It is also envisaged to remove from the single CMO certain elements which do no longer fulfil any obvious market objective and which are burdensome and costly to manage for national administrations.

For instance, the expiry of the sugar quota scheme will lead to a significant reduction in administrative costs for national administrations as well as for the operators in the sugar sector (including sugar beet growers), who will no longer have to deal with the administrative issues associated with the management of the quota system.

From a control point of view, every market measure has an inherent risk and current policy instruments are generally to have ex-ante examination of all applications with a limited amount of ex post controls. The measures dealt with by Commission auditors of market measures are of a large number and diverse character and pursue different policy objectives. The different nature of measures (market stabilisation, social measures, emergency measures etc.) seem to limit the possibility to streamline their control¹³.

From a control viewpoint the tendering procedures are quite important as they are transparent. They are a tool to avoid corruption and hidden state aid.

b) Improve the food chain functioning

New measures in relation to producer organisations, associations of producer and Interbranch organisations, depending on how they are implemented, as well as contractualisation are likely to increase the administrative burden level both for Member States authorities and for beneficiaries.

¹³ For example, while in the case "classical CAP" measures (e.g. intervention storage) it is much easier for Member States to deal with the administrative requirements, in an emergency situation, the main focus would be on fighting the spread of an animal disease and this may be much more complex. Furthermore, in the case of social measures (aid for the most deprived) a lot of the work is often done by voluntary workers not necessarily being always well acquainted with public administration and accounting.

However, it could make the regulation more effective and adapted to the huge diversity of the agricultural situations in the enlarged Union, allowing subsistence and semi-subsistence farmers to benefit from EU schemes and easing the participation of family farmers¹⁴.

c) Strong focus on the market

There will be a substantial slimming down of the legal framework, with a significant reduction of burden on Member States authorities. Beneficiaries are not requested to submit data and information, with the exception of situations of crisis. Time spent on meeting information obligations will be significantly reduced.

From a control point of view, the associated risks would only relate to administration of crisis situations and to supervise that emergency measures are only used when facing crisis situations and not as hidden state aids. The pure reduction of measures should imply for Member States reduction of administrative burden and simplification.

4.1.3. Rural development

a) Minimum funding per axis

The maintenance of the axis system would provide a crude guarantee of a minimum level of spending per objective, but may unduly constrain the development of a full-fledged strategic approach in combining measures in the best possible way to meet the policy objectives.

The abolition of the axis system may lead some Member States to change their spending patterns, but provided that strategic programming works effectively, these changes should be appropriate to their situation. The abolition of the axes would also reduce the burden on financial management.

b) Common Strategic Framework

If designed with the correct level of ambition, a Common Strategic Framework (CSF) will help to coordinate rural development policy with the other European policies covered (i.e. the ERDF, the Cohesion Fund, the ESF and the EFF), especially in the case of Member States / regions that have struggled with coordination in the current period. The CSF will also help to link the policies covered to the objectives of the Europe 2020 strategy.

There will be additional administrative burden involved in putting new systems in place, which nonetheless should be compensated by the resulting better synergies and increased efficiency of the new management system.

c) Focus on environmental and climate change objectives

The programming will be simplified, as there would no longer be any competition for funding between objectives.

¹⁴ Official Communication to the European Commission from the Netherland Ministry of Agriculture (17 January 2011).

4.1.4. Risk management

a) Extending current framework for insurances and mutual funds

This option would not add to the administrative burden, or the complexity, as measures that are already in place in the CAP, and that are already controlled, could continue to be applied.

For farmers, this option is rather similar to the option of status quo. Farmers will however have to familiarise themselves with the new or adjusted rules, which is a one-off increase in the level of administrative burden. Once acquainted with the policy and more experienced with the system it is expected that the level of administrative burden to farmers may reduce somewhat over time.

Also for national authorities, this option may be associated with one-off costs, required to modify national rules, possible organisational changes and time to become acquainted with the new setting. Once past that stage, with some experience, it is likely to become easier.

b) Income stabilisation tool

An income stabilisation tool (IST) aims at compensating farmers for a substantial loss. In order to determine what a substantial loss is, a lot of information must be collected and a lot of time would be required for processing. This information is not straight forward, as what is used as the income determinant could be very subjective. In the case of Canada (who has a scheme called AgriStability, which is a form of IST), tax declaration forms are used. However, this is not an alternative to the EU as a whole, as there are no taxation rules at EU level.

Thus an IST could be complex to manage and burdensome to administer. The complexity stems from the difficulty in finding an appropriate measure for income, collecting information verifying the income indicator, and control of the measure. Depending on how the tool would be implemented, the burden of administering it would impact differently upon different parts of the administration chain.

In this option farmers are required to submit a substantial amount of information and documents when applying for support and to prove eligibility. Depending on the practicalities of the system this may mean that a farmer will have to spend considerable time collecting the information and preparing the application or, alternatively work with a consultant/accountant. It would be a "light" solution if the farmer could use already existing documents and information.

For national authorities, this option foresees a case by case processing of data and judging if an applicant is eligible for support as well as deciding upon the level of support. The level of administrative burden to MS is estimated to be substantial. It is possible that by using existing data sources and flows, as well as finding ways to automate the process, the burden on national authorities may be somewhat reduced.

c) Crisis fund

The budgetary needs of the 'Global Agricultural Risk Management Fund' would vary substantially between years, depending on the number and severity of events occurring.

The setting up of a fund, managing it and carrying out controls do increase the burden to the national authorities. These are required to set up and maintain an infrastructure, ready to start its operations in case of urgency. In addition, when an emergency occurs, resources will be required to process demands, grant support as well as verifying the correct spending of the funds.

The level of administrative burden for farmers is dependent on the occurrence of an adverse situation and if they decide to apply for support. The level of burden would then be determined by the modalities of the application procedure as well as the (ex-post) control arrangements.

4.2. Quantitative assessment of administrative costs and administrative burden of options for future direct payments

4.2.1. The EU Standard Cost Model

The assessment has been done on the basis on the EU Standard Cost Model (EU SCM). The EU SCM breaks down administrative costs imposed by legal acts into components that can be assessed with reasonable accuracy. Thanks to this analytical approach, it is possible for farmers, national or regional authorities, paying agencies to situate themselves according to the assumptions done and measure the real impact on their own fields. The SCM does not aim at producing statistically valid results, but rather estimates¹⁵.

The measurement focuses only on the administrative activities that must be undertaken in order to comply with information obligations (IO) laid down in the legislation and not on the fulfilment of the legislation as such. For instance, the time spent by farmers to fulfil eligibility conditions on farm is not considered as administrative costs or burden. Other important element is that the EU SCM is based on a perfect compliance with the legislation. For instance, dealing with errors found in administrative checks of applications for subsidies is not part of the model¹⁶.

Administrative costs are defined as the costs incurred by "businesses" (i.e. farmers) in meeting legal IO. An IO is a legal obligation placed on businesses to provide information on their activity or production to public authorities. Every IO has attributes that describe the:

- content of the data required (what must be provided)
- target group (the population that must provide it), and
- frequency (how often per year it must be provided and how long it takes to provide it).

When analysing the administrative costs, a distinction should be made between information that would be collected and processed by businesses even in the absence of the legislation and information that is solely collected because of a legal obligation. The former are called “business-as-usual” costs, the latter administrative burdens. Added together the administrative burdens and business-as-usual costs constitute the administrative costs.

¹⁵ Considering the level of detail and the number of parameters involved, conducting statistical measurements would not be cost-efficient.

¹⁶ However, even if the number of errors may increase in the first years of a new system, it is likely that it will decrease after some years.

This model is firstly used for assessing the administrative costs of business, i.e. as regards direct payments, for farmers. It may also be used for assessing the administrative costs for public authorities. However the distinction between business-as-usual and administrative burden is not straightforward for public authorities. For instance, the introduction of the applications of farmers into the IT systems and the whole process of payment (administrative checks, on-the-spot controls, etc.) are generally considered as the core business of the public authorities and may thus not be considered in the EU SCM. Assumptions taken for the present assessment are detailed in the following section.

The EU SCM uses as a basis the average EU tariffs per hour corresponding to different employee types. Those tariffs cover both wages and non-wage labour costs, as well as a standard proportion of so-called overheads costs (i.e. 25%) linked with individual employees and borne by businesses but not included in their salaries (i.e. fixed administration costs such as premises, telephone, heating, electricity and IT equipment).

4.2.2. *Options and assumptions*

It is important to note that DG AGRI made use of the EU SCM to calculate the net administrative costs, i.e. reduction of costs due for instance to small farmers scheme or clarification of cross compliance scope has also been estimated.

Only the main changes in information obligations stemming from policy changes for direct payments have been assessed for the purpose of this impact assessment. They are shortly described below (for more details, cf. section 4.1.1 above and annex 3 on direct payments). The description concern first the farmers and then where relevant the impact for public authorities.

- **Basic income support based on payment entitlements:** In MS using SAPS, familiarisation with payment entitlement would be required and the application for payments may take more time to be filled in. Public authorities would thus e.g. receive additional calls and would need to hold more information meetings for beneficiaries.
- **Active farmer:** The administrative verification of the eligibility criteria "being an active farmer" would be done automatically (the updating of the IT system to the new direct payments is considered as a "one-off" cost) on the basis of the share of agricultural activity in income based on fiscal declaration to be provided to paying agencies. The particular complexity of the information which needs to be first identified and then introduced in the IT systems may lead to an additional administrative cost for public authorities.
- **Small farmer scheme:** Small farmers would receive a lump sum of maximum 1000 Euros (or of an amount corresponding to maximum 5% of the direct payment envelope of the MS – c.f. chapter 7 of annex 3 on direct payments, option 3 "max 1000 EUR and max 5% of DP envelope") replacing all components of direct payments and would be exempted from greening measures and cross compliance controls and sanctions. The application for direct payments and the controls would be simplified.
- **Young farmer scheme:** Farmers of age below 40 years with relevant occupational skills and competences, commencing their agricultural activity, would receive an additional amount on their eligible hectares (with a maximum of hectares that can be paid) during a period of 5 years. Most of the information relevant for this new scheme is part of the usual information gathered by paying agencies for the access to the basic payment

scheme. It is thus considered that no additional information obligation exist for this scheme. For paying agencies, once the controls are introduced in the IT systems, there would be part of the normal processing of the claim.

- **Greening:**

Crop diversification and ecological focus area: Crops would have to be declared in the application for direct payments. The areas would have to be declared and localised in the application for direct payments. However, a part of this IO may be considered as "business as usual"¹⁷ as farmers know *de facto* how their land is used and may use parcel maps etc. as part of their regular farm management practice. The particular complexity of the information which needs to be introduced in the IT systems may lead to consider a specific administrative cost for public authorities.

Administrative checks would be done with updated IT systems and on-the-spot checks would be integrated into existing field controls for income support which therefore might be longer. Administrative checks might lead to higher rate of errors that paying agencies would need to deal with manually, number of errors that would certainly decrease over the years. As the EU SCM is based on a perfect compliance with the legislation, those costs are not considered.

Organic farmers would automatically benefit from greening payment if they submit the organic certificate or prove that they are in conversion.

Greening would lead to additional phone calls from farmers and familiarisation activities (information meeting) of public authorities, likely to decrease in time.

- **Degressivity and capping:** Mitigation of capping and degressivity would be done on the basis of the wages paid in the previous year to the on farm employees. Farmers would have to provide relevant information to the public authorities annually. Recapitulative of wages may be quite time consuming in particular in case of seasonal employment. It would be the same for introducing of the information in the IT system and its processing for public authorities.
- **Cross compliance** scope and requirements would be clarified and a better integration and coordination of cross compliance controls with controls of existing legislations would be achieved. Duration of controls of cross compliance requirements would thus decrease.
- The changes in information obligations associated with the natural constraint payment or the coupled supports have not been assessed as there modalities of application may be very different from one MS to the other. However they are likely to increase administrative costs for both farmers and public authorities.
- Administrative costs stemming from the evaluation of effects of direct payments at MS level by MS public authorities has not been assessed.

¹⁷ The obligation of declaration of permanent grassland already exists in the current legislation.

The following assumptions have been used:

- **Number of beneficiaries in EU 27:** 7 868 471
(source: CATS data for budget year 2009, i.e. mainly for claim year 2008)
- **Number of beneficiaries in MS using SAPS:** 3 097 688
(CATS data for budget year 2009, i.e. mainly for claim year 2008)
- **Number of "small" farmers** in the small farmers scheme: 29% of the beneficiaries
(AGRI calculation based on CATS data 2009 - see annex 3 on Direct Payments, chapter 7, option 3)
- **Number of organic farms:** 197 000 (source: Eurostat).
No official figures exist for number of farms in in-conversion process, thus they are not counted whereas the same exemption for greening requirements may also apply to them.
- **Share of farms with paid labour:** 37% (source: FADN)
- **Rates of controls:**

Cross compliance: 1% on-the-spot checks of all farmers subject to cross compliance (not the small farmers); Greening: 5% of on-the-spot checks of all farmers subject to greening.

- **Average wages rate per hour:**
(source: SEC GEN, Administrative burden calculator)

It is considered that farmers fulfil by themselves all the information obligations, thus only one average rate of wages is used for "manager" (i.e. 31.29 Euros/hour). Controls of public authorities are done by specialised technicians whose rate is 18.47 Euros/hour; Introduction of data in the IT system is "elementary occupation" whose rate is 10.89 Euros/hour.

Note that those rates are applied for farms and public authorities of entire EU 27 whereas some major differences may exist in reality (cf. below estimates based on adjusted rates).

- No outsourcing, nor specific equipments needed to fulfil the information obligations. However updating of IT systems by public authorities will be needed (one-off cost for the first year and regular and usual update the following years)
- Administrative burden versus "business as usual": it is considered the IO for farmers stemming from the policy changes are generally administrative burden whereas for public authorities, a large share is business as usual (thus only administrative costs).

4.2.3. *Results of the quantification of administrative costs of changes in the legal obligations for direct payments post 2013*

The results are the following (detailed tables 1-4 below):

	Total administrative costs	Total administrative burden
Businesses	452 389 937.84 €	367 191 949.28 €
Public authorities	38 612 002.38 €	1 972 454.88 €

Source: AGRI calculation made with the SEC GEN Administrative burden calculator

When the average wage per hour is adjusted to take account of the differing wage levels in the various EU Member States (based on PPS coefficients), the above table reads as follows

	Total administrative costs	Total administrative burden
Businesses	353 818 877.90 €	282 705 464.62 €
Public authorities	32 268 676.15 €	1 471 925.44 €

These results, based on the above-mentioned assumptions, show that the overall administrative cost of the future direct payment system would approximately represent a 15% increase in the administrative cost.

Table1: Detailed calculation of administrative costs and administrative burden calculation for farmers

No	Policy tool	Type of obligation	Description required action(s)		Entities concerned	Tariff	Time	Price	Freq	Nbr entities concerned	Total administrative costs	Business as usual costs (% of ACT)	Total administrative burdens (Admin Cost - Business as usual)
			per hour	minutes		per action	per year						
1	Basic payment scheme	Application for subsidy or grant	Familiarizing with the information obligation	Going from SAPS to SPS - getting used to the entitlements	Farmers in MS using SAPS (source: CATS 2009)	31,29 €	30	15,65 €	1	3.097.688	48.463.328,76 €	0	48.463.328,76 €
2	Basic payment scheme	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Going from SAPS to SPS - application for payments may take more time	Farmers in MS using SAPS (source: CATS 2009)	31,29 €	30	15,65 €	1	3.097.688	48.463.328,76 €	0	48.463.328,76 €
3	New Active farmer eligibility condition	Application for subsidy or grant	Submitting the information	Active farmers - providing fiscal declaration	100% of farmers (source: CATS 2009)	31,29 €	10	5,22 €	1	7.868.471	41.034.076,27 €	0	41.034.076,27 €
SUB-TOTAL BASIC PAYMENT SCHEME											137.960.733,79 €		137.960.733,79 €
4	New Small farmer scheme	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Small farmers - simplified application	29% des agriculteurs (source: AGRI calculation based on CATS)	31,29 €	-120	-62,58 €	1	2.291.909	-143.427.665,22 €	0	-143.427.665,22 €
5	New small farmer scheme	with audits & inspection by public authorities	Inspecting and checking	Small farmers - simplified controls	5% of the small farmers	31,29 €	-90	-46,94 €	1	114.595	-5.378.537,45 €	0	-5.378.537,45 €
6	New small farmer scheme	with audits & inspection by public authorities	Inspecting and checking	Small farmers - no time spent for cross compliance controls	1% of the small farmers	31,29 €	-180	-93,87 €	1	22.919	-2.151.414,98 €	0	-2.151.414,98 €
SUB-TOTAL SMALL FARMER SCHEME											-150.957.617,64 €		-150.957.617,64 €
7	New greening payment	Application for subsidy or grant	Submitting the information	Organic farmers: providing certificate to paying agencies	Organic farmers (source: Eurostat), excl. small farmers	31,29 €	5	2,61 €	1	130.861	341.220,65 €	0	341.220,65 €
8	New greening payment	Application for subsidy or grant	Familiarizing with the information obligation	Greening - familiarization with requirements	100% of farmers subject to greening (not the small and not the organic farmers)	31,29 €	30	15,65 €	1	5.445.701	85.197.988,56 €	0	85.197.988,56 €
9	New greening payment	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Greening - declaration of ecological focus area and crops	100% of farmers subject to greening (not the small and not the organic farmers)	31,29 €	120	62,58 €	1	5.445.701	340.791.954,26 €	25	255.593.965,69 €
10	New greening payment	with audits & inspection by public authorities	Inspecting and checking	Greening - increase of duration of on the spot controls	5% of farmers subject to greening (not the small and not the organic farmers)	31,29 €	60	31,29 €	1	272.285	8.519.798,86 €	0	8.519.798,86 €
SUB-TOTAL GREENING PAYMENT											434.850.962,33 €		349.652.973,77 €
11	New Capping of direct payments	Application for subsidy or grant	Submitting the information	Capping - providing on farm employment wages to paying agencies	Farms with on-farm employment (not the small farms) (source: FADN)	31,29 €	30	15,65 €	1	2.063.328	32.280.765,62 €	0	32.280.765,62 €
SUB-TOTAL CAPPING											32.280.765,62 €		32.280.765,62 €
12	Cross compliance	Cooperation with audits & inspection by public authorities	Inspecting and checking	Cross compliance - simplification of controls	1% of farms subject to cross compliance (not the small)	31,29 €	-60	-31,29 €	1	55.766	-1.744.906,25 €	0	-1.744.906,25 €
SUB-TOTAL CROSS COMPLIANCE											-1.744.906,25 €		-1.744.906,25 €
TOTAL											452.389.937,84 €		367.191.949,28 €

Table2: Detailed calculation of administrative costs and administrative burden calculation for public authorities

No	Policy tool	Type of obligation	Description required action(s)		Entities concerned	Tariff	Time	Price	Freq	Nbr entities concerned	Total administrative costs	Business as usual costs (% of ACT)	Total administrative burdens (Admin Cost - Business as usual)
			standard description	detailed description		per hour	minutes	per action	per year				
1	Basic payment scheme	Application for subsidy or grant	Familiarizing with the information obligation	Going from SAPS to SPS - increase in phone calls and information meetings for beneficiaries	+10% of calls of farmers in MS using SAPS (source of farmers in MS using SAPS: CATS 2009)	18,47 €	15	4,62 €	1	309.769	1.430.357,43 €	50	715.178,72 €
2	New Active farmer eligibility condition	Application for subsidy or grant	Inspecting and checking	Active farmers - introduction of fiscal declaration in the IT system	100% of farmers (source: CATS 2009)	10,89 €	15	2,72 €	1	7.868.471	21.421.912,30 €	100	0,00 €
SUB-TOTAL BASIC PAYMENT SCHEME											22.852.269,73 €		715.178,72 €
3	New small farmer scheme	Application for subsidy or grant	Inspecting and checking	Easiest introduction of the simplified applications in the IT system	All the small farmers	10,89 €	-30	-5,45 €	1	2.291.909	-12.479.444,51 €	100	0,00 €
4	New small farmer scheme	Inspection	Inspecting and checking	Small farmers - simplified controls	5% of the small farmers	18,47 €	-90	-27,71 €	1	114.595	-3.174.866,94 €	100	0,00 €
5	New small farmer scheme	Inspection	Inspecting and checking	Small farmers - no cross compliance controles	1% of the small farmers	18,47 €	-180	-55,41 €	1	22.919	-1.269.946,78 €	100	0,00 €
SUB-TOTAL SMALL FARMER SCHEME											-16.924.258,22 €		0,00 €
6	New greening payment	Application for subsidy or grant	Inspecting and checking	Organic famers - introducing organic certificate in IT system	Organic farmers (source: Eurostat) excl. Org small farmers	10,89 €	1	0,18 €	1	130.861	23.751,31 €	100	0,00 €
7	New greening payment	Application for subsidy or grant	Inspecting and checking	Greening - introducing of datas on ecological set aside and crops in IT system	100% of farmers subject to greening (not the small and not the organic farmers)	10,89 €	15	2,72 €	1	5.445.701	14.825.920,35 €	100	0,00 €
8	New greening payment	Application for subsidy or grant	Familiarizing with the information obligation	Greening - familiarization with requirements	10% of farmers subject to greening (not the small and not the organic farmers)	18,47 €	15	4,62 €	1	544.570	2.514.552,33 €	50	1.257.276,17 €
9	New greening payment	Inspection	Inspecting and checking	Greening - increase of duration of on the spot controls	5% of farmers subject to greening (not the small and not the organic farmers)	18,47 €	60	18,47 €	1	272.285	5.029.104,66 €	100	0,00 €
SUB-TOTAL GREENING PAYMENT											22.393.328,66 €		1.257.276,17 €
10	New Capping of direct payments	Application for subsidy or grant	Inspecting and checking	Capping - introducun on farm employment wages sent by farmers in IT system	Farms with on-farm employment (not the small farms) (Source: FADN)	10,89 €	30	5,45 €	1	2.063.328	11.234.820,63 €	100	0,00 €
SUB-TOTAL CAPPING											11.234.820,63 €		0,00 €
11	Cross compliance	Inspection	Inspecting and checking	Cross compliance - coordination of controls	1% of farms subject to cross compliance (not the small)	18,47 €	5	1,54 €	1	55.766	85.832,58 €	100	0,00 €
12	Cross compliance	Inspection	Inspecting and checking	Cross compliance - simplification of controls	1% of farms subject to cross compliance (not the small)	18,47 €	-60	-18,47 €	1	55.766	-1.029.991,00 €	100	0,00 €
SUB-TOTAL CROSS COMPLIANCE											-944.158,42 €		0,00 €
TOTAL											38.612.002,38 €		1.972.454,88 €

Table 3: Detailed calculation of administrative costs and administrative burden calculation for farmers (adjusted hourly wage)

No	Policy tool	Type of obligation	Description required action(s)		Entities concerned	Tariff	Time	Price	Freq	Nbr entities concerned	Total administrative costs	Business as usual costs (% of ACT)	Total administrative burdens (Admin Cost - Business as usual)
			per hour	minutes		per action	per year						
1	Basic payment scheme	Application for subsidy or grant	Familiarizing with the information obligation	Going from SAPS to SPS - getting used to the entitlements	Farmers in MS using SAPS (source: CATS 2009)	18,48 €	30	9,24 €	1	3.097.688	28.630.055,88 €	0	28.630.055,88 €
2	Basic payment scheme	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Going from SAPS to SPS - application for payments may take more time	Farmers in MS using SAPS (source: CATS 2009)	18,48 €	30	9,24 €	1	3.097.688	28.630.055,88 €	0	28.630.055,88 €
3	New Active farmer eligibility condition	Application for subsidy or grant	Submitting the information	Active farmers - providing fiscal declaration	100% of farmers (source: CATS 2009)	26,22 €	10	4,37 €	1	7.868.471	34.384.263,02 €	0	34.384.263,02 €
SUB-TOTAL BASIC PAYMENT SCHEME											91.644.374,78 €		91.644.374,78 €
4	New Small farmer scheme	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Small farmers - simplified application	29% des agriculteurs (source: AGRI calculation based on CATS)	26,21 €	-120	-52,41 €	1	2.291.909	-120.124.634,74 €	0	-120.124.634,74 €
5	New small farmer scheme	with audits & inspection by public authorities	Inspecting and checking	Small farmers - simplified controls	5% of the small farmers	26,21 €	-90	-39,31 €	1	114.595	-4.504.673,80 €	0	-4.504.673,80 €
6	New small farmer scheme	with audits & inspection by public authorities	Inspecting and checking	Small farmers - no time spent for cross compliance controls	1% of the small farmers	26,21 €	-180	-78,62 €	1	22.919	-1.801.869,52 €	0	-1.801.869,52 €
SUB-TOTAL SMALL FARMER SCHEME											-126.431.178,06 €		-126.431.178,06 €
7	New greening payment	Application for subsidy or grant	Submitting the information	Organic farmers: providing certificate to paying agencies	Organic farmers (source: Eurostat), excl. small farmers	30,69 €	5	2,56 €	1	130.861	334.702,85 €	0	334.702,85 €
8	New greening payment	Application for subsidy or grant	Familiarizing with the information obligation	Greening - familiarization with requirements	100% of farmers subject to greening (not the small and not the organic farmers)	26,12 €	30	13,06 €	1	5.445.701	71.113.413,28 €	0	71.113.413,28 €
9	New greening payment	Application for subsidy or grant	Filling in forms and tables, including recordkeeping	Greening - declaration of ecological focus area and crops	100% of farmers subject to greening (not the small and not the organic farmers)	26,12 €	120	52,23 €	1	5.445.701	284.453.653,10 €	25	213.340.239,83 €
10	New greening payment	with audits & inspection by public authorities	Inspecting and checking	Greening - increase of duration of on the spot controls	5% of farmers subject to greening (not the small and not the organic farmers)	26,12 €	60	26,12 €	1	272.285	7.111.341,33 €	0	7.111.341,33 €
SUB-TOTAL GREENING PAYMENT											363.013.110,55 €		291.899.697,28 €
11	New Capping of direct payments	Application for subsidy or grant	Submitting the information	Capping - providing on farm employment wages to paying agencies	Farms with on-farm employment (not the small farms) (source: FADN)	26,22 €	30	13,11 €	1	2.063.328	27.055.003,24 €	0	27.055.003,24 €
SUB-TOTAL CAPPING											27.055.003,24 €		27.055.003,24 €
12	Cross compliance	Cooperation with audits & inspection by public authorities	Inspecting and checking	Cross compliance - simplification of controls	1% of farms subject to cross compliance (not the small)	26,22 €	-60	-26,22 €	1	55.766	-1.462.432,61 €	0	-1.462.432,61 €
SUB-TOTAL CROSS COMPLIANCE											-1.462.432,61 €		-1.462.432,61 €
TOTAL											353.818.877,90 €		282.705.464,62 €

Table 4: Detailed calculation of administrative costs and administrative burden calculation for public authorities (adjusted hourly wage)

No	Policy tool	Type of obligation	Description required action(s)		Entities concerned	Tariff	Time	Price	Freq	Nbr entities concerned	Total administrative costs	Business as usual costs	Total administrative burdens
			standard description	detailed description		per hour	minutes	per action	per year			(% of ACT)	
1	Basic payment scheme	Application for subsidy or grant	Familiarizing with the information obligation	Going from SAPS to SPS - increase in phone calls and information meetings for beneficiaries	+10% of calls of farmers in MS using SAPS (source of farmers in MS using SAPS: CATS 2009)	10,91 €	15	2,73 €	1	309.769	844.993,82 €	50	422.496,91 €
2	New Active farmer eligibility condition	Application for subsidy or grant	Inspecting and checking	Active farmers - introduction of fiscal declaration in the IT system	100% of farmers (source: CATS 2009)	9,13 €	15	2,28 €	1	7.868.471	17.954.032,23 €	100	0,00 €
SUB-TOTAL BASIC PAYMENT SCHEME											18.799.026,05 €		422.496,91 €
3	New small farmer scheme	Application for subsidy or grant	Inspecting and checking	Easiest introduction of the simplified applications in the IT system	All the small farmers	9,12 €	-30	-4,56 €	1	2.291.909	-10.451.879,77 €	100	0,00 €
4	New small farmer scheme	Inspection	Inspecting and checking	Small farmers - simplified controls	5% of the small farmers	15,47 €	-90	-23,20 €	1	114.595	-2.659.038,83 €	100	0,00 €
5	New small farmer scheme	Inspection	Inspecting and checking	Small farmers - no cross compliance controles	1% of the small farmers	15,47 €	-180	-46,41 €	1	22.919	-1.063.615,53 €	100	0,00 €
SUB-TOTAL SMALL FARMER SCHEME											-14.174.534,14 €		0,00 €
6	New greening payment	Application for subsidy or grant	Inspecting and checking	Organic famers - introducing organic certificate in IT system	Organic farmers (source: Eurostat) - small org farmers	10,61 €	1	0,18 €	1	130.861	23.139,23 €	100	0,00 €
7	New greening payment	Application for subsidy or grant	Inspecting and checking	Greening - introducing of datas on ecological set aside and crops in IT system	100% of farmers subject to greening (not the small and not the organic farmers)	9,09 €	15	2,27 €	1	5.445.701	12.374.961,18 €	100	0,00 €
8	New greening payment	Application for subsidy or grant	Familiarizing with the information obligation	Greening - familiarization with requirements	10% of farmers subject to greening (not the small and not the organic farmers)	15,42 €	15	3,85 €	1	544.570	2.098.857,05 €	50	1.049.428,53 €
9	New greening payment	Inspection	Inspecting and checking	Greening - increase of duration of on the spot controls	5% of farmers subject to greening (not the small and not the organic farmers)	15,42 €	60	15,42 €	1	272.285	4.197.714,10 €	100	0,00 €
SUB-TOTAL GREENING PAYMENT											18.694.671,56 €		1.049.428,53 €
10	New Capping of direct payments	Application for subsidy or grant	Inspecting and checking	Capping - introduc in farm employment wages sent by farmers in IT system	Farms with on-farm employment (not the small farms) (Source: FADN)	9,13 €	30	4,56 €	1	2.063.328	9.416.074,95 €	100	0,00 €
SUB-TOTAL CAPPING											9.416.074,95 €		0,00 €
11	Cross compliance	Inspection	Inspecting and checking	Cross compliance - coordination of controls	1% of farms subject to cross compliance (not the small)	9,13 €	5	0,76 €	1	55.766	42.414,75 €	100	0,00 €
12	Cross compliance	Inspection	Inspecting and checking	Cross compliance - simplification of controls	1% of farms subject to cross compliance (not the small)	9,13 €	-60	-9,13 €	1	55.766	-508.977,02 €	100	0,00 €
SUB-TOTAL CROSS COMPLIANCE											-466.562,27 €		0,00 €
TOTAL										32.268.676,15 €		1.471.925,44 €	

4.3. Assessment per broad policy scenarios

Table 5 distributes the various tools and concepts described in section 4.1 in the 3 broad policy scenarios of the Communication.

Table 5: Description of policy scenarios

	Direct payments	Market instruments	Rural development
Adjustment	Redistribution – regional model	Streamlining (exceptional measures, public intervention and private storage)	Moderate budget increase Current management system unchanged
Integration	Redistribution – regional model with different layers: Capping – Small farmer Greening Specific natural constraints Coupled support Cross compliance: streamlined and more climate change	Streamlining (exceptional measures, public intervention and private storage) Focus on food chain functioning Risk management strategies (insurances and mutual funds)	Redistribution Common Strategic Framework Strengthened strategic targeting Streamlined toolkit No axis system
Refocus	Phasing-out of direct payments	No market instrument, only exceptional measures	Doubling of funding Environmental and climate change focus Significantly reduced toolkit No Leader Simplified management system

Tables 6 and 7 have been done along the description of impacts in section 4.1 for cruise rhythm (implementing one-off costs have been considered separately – see table 6). Positive figures mean more simplification achieved compared to status quo while negative figures mean more "complexity" and increase in administrative burden level. "0" means that the expected effects on administrative burden would be negligible compared to status quo. The evaluation takes into account the balance of administrative burden increase or decrease with the benefits in terms of reaching the policy objectives.

Table 6: Costs in cruise rhythm, compared to the status quo

(F = Farmers MS= Member States → achievement of objective)

		Adjustment	Integration	Refocus
Direct payments	New distribution	+1 F: keep the well-know system of entitlements (simplification effect differs between MS with SPS or SAPS) one single rate per hectare at regional / national level MS: one single rate per hectare at regional / national level (simplification effect differs between MS with regional or historical model)	+1 F: keep the well-know system of entitlements (simplification effect differs between MS with SPS or SAPS), one single rate per hectare at regional / national level MS: one single rate per hectare at regional / national level (simplification effect differs between MS with regional or historical model); management of different layers of payments → better targeting to needs	+2 F: no paper MS: no payment to manage, no control, etc.
	Capping	N/A	-1 F: necessity to provide information on labour on farm to mitigate the capping MS: necessity to control the additional information and integrate them in the payment calculation → better equity of the distribution of payments and money available for innovation	N/A
	Small farmer	N/A	+2 F (small): less red tape MS: lump sum payment and light controls for a share of farmers	N/A
	Greening	N/A	-1 F: changes in practices, additional controls MS: additional controls (administrative and on the spot) → environmental benefits	N/A
	Active farmers	N/A	-2 F: necessity to provide information to prove farmers' status MS: additional controls (administrative)	N/A
	Cross compliance	0 F, MS: No change	0 F: clearer set of rules, additional requirements linked to climate change MS: clearer set of rules to be controlled, articulation with greening requirements	+2 F: less irritant factors, no control of GAEC MS: no control
Market instruments	Intervention	+1 MS: streamlining of intervention	+1 MS: streamlining of intervention	+2 MS: only crisis situation
	Food chain	0 F, MS: No change	-1 F: costs of maintenance of the producers' organisations, interbranches, etc., costs of diffusing information to members, etc. MS: costs of controls	N/A
	Risk management	0 F, MS: No change	0	N/A
		0	+1	+2

Rural development	F, MS: No change	F: single "guichet" for all the EU funds MS: streamlined toolkit, no axis	MS: no axis, only 1 objective, no LEADER
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Table 7: Summary of impacts on administrative burden per scenario

	Direct payments	Market instruments	Rural development	CAP as a whole
Adjustment	+ 1	+ 1	0	+ 2
Integration	- 1	0	+ 1	0
Refocus	+ 4	+ 2	+ 2	+ 8

All in all, the expected effect of adjustment and refocus scenarios is a decrease of administrative burden while the integration scenario may lead to a slight increase of administrative burden. Expected increase of administrative burden for some new key concepts allowing a better targeting of the 1st pillar payments (greening and active farmers) are likely to be partly offset by the simplification achieved with the small farmer scheme and the new distribution of direct payments via a flat rate per hectare at national or regional level.

In any case, those effects have to be seen in the broader context of the 3 objectives recalled in section 2.3.1 above namely food security, environmental sustainability and territorial cohesion.

Table 8: One-off costs due to first implementation, compared to the status quo (F = Farmers MS= Member States)

		Adjustment	Integration	Refocus
Direct payments	New distribution	MS: new calculation of entitlements MS (SAPS): time to become familiar with entitlements F (SAPS): time to become familiar with entitlements	MS: new calculation of entitlements MS (SAPS): time to become familiar with entitlements F (SAPS): time to become familiar with entitlements	None
	Capping	N/A	MS: Adaptation of IT payment system F: irritant factor of cutting	N/A
	Small farmer	N/A	MS: Adaptation of IT payment system	N/A
	Greening	N/A	MS: Adaptation of IT payment system and control procedures Articulation with cross compliance	N/A
	Active farmers	N/A	MS: Adaptation of IT payment system and administrative control procedures	N/A
	Cross compliance	None	MS: Adaptation of control procedures	None
Market instruments	Intervention	None	None	None
	Food chain	None	F: costs of getting organised MS: costs of recognition of producers' organisations, etc.	N/A
	Risk management	None	MS: Modification of national rules, possible organisational changes and time to become acquainted with the new setting	N/A
Rural development		None	MS: Increased coordination with the other EU funds Definition of measures due to the new baseline of greening	Definition of additional measures for environment and climate change

SUB-ANNEX: RESULTS OF THE SIMPLIFICATION CONFERENCE

ACTIVE FARMER and ELIGIBILITY OF LAND

A: ACTIVE FARMER

Issue description

An active farmer is addressed in the Communication on the CAP towards 2020 as a tool to better define the beneficiary of direct payments. The aim is to improve the targeting and by that the efficiency of the direct payment policy.

The introduction of decoupled payments with the 2003 reform represents an important step towards market orientation. Farmers are free to produce whatever is more profitable for them while still having a stable income. From an international perspective, the decoupled payments are not causing trade distortion. However, there are also unintended side-effects. As the link between the production and the support is gone¹⁸, there are cases where payments under the SPS or the SAPS are made to non-farmers, sofa-farmers, non-agricultural companies etc. Therefore, the CAP is faced with critics about the distribution of aid, for example by the European Court of Auditors.

During the Health-Check, an attempt has been undertaken by establishing obligatory minimum requirements and by giving the Member States the possibility to exclude those who primarily are not involved in farming (Article 28(2) of Regulation (EC) No 73/2009¹⁹). Since no Member State so far has made use of additional criteria²⁰, alternatives have to be examined. The Commission is currently exploring the ways how to define criteria in order to reinforce the link to "real" active farmers, including part-time farmers. The aim is to ensure a proper targeting without generating unintended effects or unnecessary administrative burden. Therefore, feasible solutions have to be found jointly with Member States to get better insight into situations in the Member States and thus explore possibilities.

¹⁸ Currently, "farmer" is defined as "...a natural or legal person, or a group of natural or legal persons, whatever legal status is granted to the group and its members by national law, whose holding is situated within Community territory, as defined in Article 299 of the Treaty, and **who exercises an agricultural activity.**" The definition of "agricultural activity" - "the production, rearing or growing of agricultural products including harvesting, milking, breeding animals and keeping animals for farming purposes, or maintaining the land in good agricultural and environmental condition..." - expresses the fact that direct support is decoupled.

¹⁹ The provision states that "from 2010, Member States may establish appropriate objective and non-discriminatory criteria to ensure that no direct payments are granted to a natural or legal person:

- (a) whose agricultural activities form only an insignificant part of its overall economic activities; or
- (b) whose principal business or company objects do not consist of exercising an agricultural activity."

²⁰ As explained by MS, the reasons are: it is very complicated to define the appropriate criteria which exclude only sofa-farmers and at the same time do not exclude other groups of farmers, it would lead to exclusion of small and/or part-time farmers which in some MS constitute a significant part of the farmers, criteria would most likely be challenged by farmers in court, controls appear to be difficult (in addition, the income share from agricultural activity may oscillate over the years and administrative task is disproportionate.

Possible approaches

The first analysis of the Commission services has indicated some possible criteria, indicated below in a non-hierarchical sequence, which could be used:

- a) Proportion of working time invested in the farm
- b) Proportion of management contribution
- c) Proportion of income
- d) Proportion of capital invested
- e) Professional qualification and/or practical experience
- f) Residence on or close to farm
- g) Presence of farm machinery or relevant facilities

B. ELIGIBILITY OF LAND

Issue description

The issue of eligibility is sensitive in that it touches on the fundamental question of what the first pillar of the CAP shall support. The Management Committee for Direct Payments has recently discussed the eligibility of areas for decoupled support. The discussion has shown that in the vast majority of cases the assessment of eligibility of an area is beyond doubt.

However, the Single Payment Scheme (SPS) is faced with criticism from the Court of Auditors about the lack of minimum activity and about the activation of (high values) entitlements on marginal land (un-cultivated or un-grazed areas). This is linked to the criticism that beneficiaries of the SPS are not always "real" farmers, but companies, landlords, investors etc. At the same time, the land fulfils the eligibility criteria by being kept only in GAEC, even if it might be questionable whether there is a real grazing activity (e.g. areas under heather).

In order to better target the aid to active farmers and to exclude potential "sofa-farmers", the rules on eligibility of the land, in particular in relation to areas not being cultivated or grazed²¹, should be strengthened. Areas which do not fulfil the first pillar eligibility criteria could nevertheless be eligible for support under certain measures of the second pillar as declared by the Commission during the Health Check.

Possible approaches

Due to the fact that direct support is decoupled, there are basically two options through which a certain level of activity by beneficiaries could be required. The first option is a yearly activity as such and the second one is the maintenance state of the area.

²¹ The eligibility of areas used for production or rearing of animals is not under question. Moreover, it is not the intention to change the rules which currently provide for the eligibility of areas in the specific situations mentioned in Article 34(2)(b) of Regulation (EC) No 73/2009, e.g. areas afforested under the second pillar or areas no longer complying with the eligibility condition because of Natura 2000 obligations. In general, it remains however that e.g. forest and scrubs are ineligible. Consequently the current recommendations for dealing with "mixed areas" partly covered by such ineligible elements, e.g. the 50 trees-guidance, landscape features etc., remain valid.

As regards "a yearly activity criterion", the determining factor to assess the eligibility of areas is the "activity" carried out by the farmer on these areas. Areas would have to be cultivated, grazed or mowed on a yearly basis in order to remain eligible. Member States could by way of derogation be allowed to establish that the activity may take place only every 2nd or 3rd year when this is justified for environmental reasons or where such derogation would not imply that the nature and plant cover of the area would change. For control purposes, a date of mowing prior to the control period must be fixed. Nevertheless, checking a specific activity is not always possible as traces on the spot might have disappeared implying thus a risk of conflict between farmers and controllers and risk of errors. Furthermore, the possibility of derogations providing for activities only every 2nd or 3rd year would complicate the implementation and increase the risk of errors.

In the second option, "the maintenance state of the area", the determining factor is the "state" of the area and not that a particular activity is carried out. This means that areas are eligible if the state of the area is such that they are suitable for grazing or cultivation, without any heavy preparatory actions, i.e. ploughing to prepare sowing should be possible on arable land and animals should be able to enter areas of permanent pasture on which plants of forage value should grow. The principle would be common for the entire EU, but there would be a margin of appreciation for each Member State to establish, if needed, more detailed criteria reflecting e.g. traditional agricultural method and machineries²².

Based on preliminary and non-committal reactions from Member States in the Management Committee, this second option received the most support, though not univocal²³. In terms of simplification, a clearer link to the state of the area would probably improve the controllability and reduce the number of doubtful cases, whilst the controls would stay at the same level, as eligibility checks are already standard. Furthermore, the controls can be done at any time of the year.

OUTCOME OF THE CONFERENCE

During the consultations, it has become clear that no single one of the criteria suggested as a possible approach for definition of an active farmer would serve as a common indicator at EU level due to the unique nature of the structures and situations which prevail at national level.

Recommendations

Without prejudice to the political advisability of introducing a definition of active farmer or strengthening the definition of what is eligible land, the Conference recommends that

²² Note however that excluding farmers because they dispose of areas which do not require significant maintenance efforts, but otherwise are suitable for agricultural production would be difficult as the farmer, at any moment, could decide to e.g. place animals on the areas.

²³ The discussion at the Management Committee included also an examination of four possible alternative scenarios to the current rules: "Yearly applicable EU-wide criteria" (scenario 1), "EU-wide criteria applicable every 3rd year" (scenario 2), "The area should be suitable for cultivation or grazing without any exceptional intervention" (scenario 3), "Applying a reference year and linking the eligible area to an approval and registration in the LPIS" (scenario 4). The preferences and arguments presented by the delegations did not point towards the existence of "one perfect solution", which would please all and avoid any "grey zones", but they gave nevertheless some indications of aspects which are important in the views of the different Member States.

the objective of determining which farmers are really active should be achieved by linking this to the definition of what is eligible land.

For determination of what constitutes eligible land the option of "the maintenance state of the area" was considered to be the most viable. This means that area is eligible if the state of the area is such that it is suitable for grazing or cultivation, without any heavy preparatory actions. An active farmer would, nevertheless, have to maintain the eligible land under him in good condition to maintain the farming potential of each hectare of land at an interval to be determined depending on national situations. A list of exclusions to "eligible land" should be determined at EU level (with additional exclusions at the discretion of the Member States). The principle should be common for the entire EU, but there should be a margin of appreciation for each Member State to establish, if needed, more detailed criteria reflecting e.g. traditional agricultural methods²⁴.

The Conference also recommended that there should be sufficient flexibility for the farmer to respond to market developments, requiring the farm level approach as opposed to an annual maintenance activity at each individual hectare.

A separate definition of active farmer would require additional controls and increase the management burden of the paying agencies and, thus, not be a simplification as such. The costs of such additional controls should therefore be proportionate to the objective of better targeting the support and excluding beneficiaries who are not "real" farmers.

There could be a need to have case-by-case analysis to allow excluded persons back into the system in exceptional cases.

It should also be borne in mind that the various greening measures which may become mandatory will also be indicators of eligibility of land and farming activity.

²⁴ Note however that excluding farmers because they dispose of areas which do not require significant maintenance efforts, but otherwise are suitable for agricultural production would be difficult as the farmer, at any moment, could decide to e.g. place animals on the areas. This could be dealt with at national level.

CAPPING

Issue description

In the Commission Communication on the future of the CAP after 2013, a "capping" of direct payments is considered, which would consist in introducing an upper ceiling for direct payments received by large individual farms to improve the distribution of payments between farmers. Capping was part of the Commission's initial reform proposals in each of the past major CAP reforms – the 1992 MacSharry reform, the 1999 Agenda 2000 reform, the 2003 Mid-Term Review and the Health Check. Although on a large scale capping has not yet been implemented, there are some measures which include already elements of the currently considered payment limitation, such as progressive modulation or the 90-head rule for the special premium for male bovine animals.

The goal is to examine the feasibility of such capping and to get views on the possible requirements to make such measure work, especially as regards the administration of the scheme, the mitigation and the circumvention of the cap.

Possible approaches

The capping could be made either as an absolute cap with which the risk of circumvention would be higher (option 1) or a progressive cap with several thresholds and several reduction rates, where circumvention would probably be lower (option 2).

Under both options, to avoid disproportionate effects on large farms with high employment numbers, capping could be mitigated by taking into account salaried labour intensity.

For deductions to take the labour intensity into account there would basically be two relevant methods:

- full time equivalent of the number of people working on the farm (with or without remunerations),
- the amount salaries effectively paid and declared.

Recommendations

Without prejudice to the political advisability of capping, the Conference recommends that :

- the measure would have to take account of the need for flexibility at national level due to the unique systems at national level and the different databases and information available to the paying agencies;
- any capping implies the risk of circumvention by splitting of farms, which could lead to additional administrative and control burden for the paying agencies;
- while an absolute cap is simpler to administer, a progressive cap would also be manageable for the paying agencies and would be more appropriate as it reduces the risk of circumvention;
- mitigating the impact of capping has its merit, but any criteria used for such mitigation would have to be controlled and, thus, imply additional administrative burden for the paying agencies. One possible criterion could be labour intensity, provided relevant databases are available and exploitable, but

the assessment and management of this criterion could be complicated by, for instance, seasonal employment, contractors and the degree to which family members should be included in the labour force. Another criterion could be farm investment, even if investments are sometimes associated with a highly mechanised farm with a low labour input.

GREENING OF THE FIRST PILLAR

Issue description

As indicated by the Communication CAP towards 2020, the greening of both pillars of the CAP is a key objective of the next reform aiming at meeting the climate change and other environmental challenges, as well as making a strong case for the added value of the policy as an integral part of the Europe 2020 strategy.

The two CAP pillars should work together in a complementary way, with simple measures of general application required for direct payments in the first pillar, and incentives for more targeted measures offered in rural development programs in the second pillar

With a view to further strengthening the role of direct payments for the provision of public goods, it is envisaged to put in place a 'greening' component by supporting, across the whole of the EU territory, generalized, non-contractual, annual environmental measures that go beyond cross compliance.

The introduction of this new component should not significantly complicate the management of direct payments, notably in terms of administrative burden for farmers and paying agencies, nor significantly increase the risk of error. It will therefore be necessary to find the right balance between the environmental benefits of the greening and the burden which its administration implies.

Possible approaches

The measures currently under consideration for the 'greening' component include:

- **permanent grassland**, which concerns grassland (around 50 mio ha),
- **green cover and crop diversification**, which concern arable land (around 100 mio ha) (with green cover also potentially applicable on permanent crops)
- **ecological set aside**, which is potentially applicable on all eligible land (around 160 mio ha), and
- Support to designated **Natura 2000** areas (around 17 mio ha).

Example for an action: Crop diversification

- Reasoning of the measure: Monocultures can exhaust soils and favour selectively the presence of certain pests and weeds, triggering high use of pesticides and herbicides.
- As elements for the design the measures, it would require that e.g. the main crop would not exceed [70] % of the utilized agricultural area of the farm. A possible additional obligation would be a minimum of 3 or 4 crops at the same time.

- The measures should be mandatory at the farmer level:

Each farmer will be required to undertake environmental actions, such as permanent grassland, green cover, crop rotation and ecological set aside; some of these would apply to all potentially eligible area, while others would apply only to grassland or to arable land (the reflection on possibilities for other crops, such as permanent crops, is ongoing).

- These measures covering the whole EU territory will be defined as uniformly as possible:

Discretion will be left to the Member States in some limited conditions e.g.: either general framework for the measures at EU level with the possibility for Member states to specify at regional level alternative conditions or more well defined greening component at EU level including a choice for Member States to leave out [one] measure from the list.

- These measures must not replace cross compliance-obligations or AEMs:

The 'greening' component needs to find its right place in the overall direct payment structure without unduly duplicating similar measures that are part of cross compliance and rural development or making agri-environmental measures less attractive to farmers.

Cross compliance rules form the baseline for these actions, i.e. the level of actions only above which the payments are made. The level of ambition of the GAEC must be adapted consequently after the definition of these new agri-environmental actions. In this respect certain evolutions of the GAEC framework are envisaged.

A not mutually exclusive existence of agri-environment measures and the environmental actions seems appropriate. There are clear cases where rural development measures add value by being more ambitious or better tailored to the local situation. In such cases, the possibility should be granted to go beyond the 'greening' component.

- The level of the payments will be relatively low, the measures shall be simple

The budget for the 'greening' component would have to be set as a % of the total budget for direct payments. All farmers in a Member State (or region) will get the same payment corresponding to the share of direct payments allocated to the 'greening' component. Above basic payment, green payments will be an annual flat rate. Therefore the level per ha of the green payments will be relatively low, compared for instance to the level of payments of the agri-environmental measures of the second pillar. The level of the requirements to meet the eligibility criteria will have to be adjusted accordingly.

Recommendations

1. General issues

Without prejudice to the political advisability of introducing a greening component under the first pillar or other possible options in this respect (such as through reinforcing cross-compliance or support under the second pillar), the Conference recommends that:

- the greening component should be kept simple, annual and managed under the existing control framework of the IACS (with control as much as possible under the LPIS and via remote sensing and together with the controls for the base premium);
- in order to ensure the controllability of the greening component, given the differences between the Member States, it is necessary to allow a certain flexibility for Member States and, possibly, farmers in the choice of the measure(s) to be implemented, taken from a limited and exhaustive list laid down at EU level (especially due to climatic or soil differences in the Member States);
- the greening component should aim at a balanced impact on farmers in all Member States with a view to avoiding distortions of competition;

- the impact which the introduction of a greening component under pillar 1 could have on what is already done under pillar 2 should be minimized as much as possible in order to avoid any overlap between both pillars and currently existing cross-compliance requirements should be deleted if they are taken up under the new greening component;
- greening commitments should be determined at the level of the farm rather than for the individual parcel (whole farm approach);
- the control obligations, including any possible reduction of the control rates, for the greening component should take into account the quality of the existing control systems, bearing in mind that the introduction of the component will in any case increase the burden for both farmers and the national administrations;
- the greening payment should not be differentiated by measure chosen.

2. **Permanent grassland**

The Conference recommends that:

- area under grassland is controllable via the LPIS, supplemented by remote sensing where necessary;
- there should be no additional requirement (such as animal density or certain maintenance practices) other than the long-term presence of grass;
- flexibility (including exchange/substitution of the land concerned) is necessary, via an all-farm approach, in order to allow farmers to adapt to climatic conditions, market or other needs.

3. **Crop diversification**

The Conference recommends that:

- diversification could be defined preferably as a maximum % of one crop, but possibly also as a minimum number of crops existing on the holding or a combination of both;
- a genuine crop rotation over several years could not be manageable and should therefore remain confined to pillar 2;
- diversification would be difficult to apply to farms with only a limited amount of arable land and to specific cultures (for example permanent crops, for example vineyards or orchards, horticulture) and should not therefore be applied to these categories;
- the possibility to control via remote sensing would depend on the definition of diversification at *crop level group*.

4. **Green cover**

The Conference is of the opinion that:

- green cover would be one of the more difficult greening components to control due to the limited possibility of remote sensing (climatic conditions) and the specific issue of timing for on-the-spot controls (cover being required some six months following the aid application) and, thus, not be recommendable from a simplification point of view;
- the timing issue also applies to the payment date which may have to be delayed in order to carry out the additional ex-ante controls required.

5. **Natura 2000**

The Conference recommends that:

- this measure would be simple to control only if the eligibility condition for receiving the greening component consists merely of the parcel already being in a designated *Natura 2000* zone, without respect of the conditions of *Natura 2000* (which would have to be controlled under other systems such as the cross-compliance regime) being added to the eligibility conditions.

6. **Ecological set-aside/ green infrastructure**

The Conference recommends that:

- this measure would be manageable and controllable, provided that the eligibility condition would be limited to the land being set aside and not include any additional requirements (such as the complete prohibition of production, grazing or the use of pesticides);
- under this scenario, remote-sensing could generally be used for the controls, though there would be certain limitations for such use which in some cases would require classical on-the-spot checks;
- the set-aside obligation should not concern grassland areas (focus on arable land);
- buffer strips and certain other elements such as landscape features should only be taken into account for compliance with the set-aside obligation if they are included in the LPIS (which implies a certain minimum size/width);
- certain transitional rules should be foreseen in the second pillar to avoid possible overlapping with the new set-aside obligation.

7. **Sanctions**

The Conference recommends that:

- the sanction system for non-respect of the greening measures should be established at EU level and, as far as possible, follow the approach currently foreseen in the IACS (including the respect of the proportionality principle);
- the sanctions for such non-respect should not have any impact on the eligibility of the basic payment.

8. **Other issues**

The Conference recommends that any possible evaluation mechanism of the effect of the greening component would imply additional work and, if considered necessary at all, should be kept simple and not duplicate the requirements of pillar 2.

SUPPORT FOR SMALL FARMERS

Issue description

In the Commission Communication on the future of the CAP after 2013 a simple and specific support scheme for small farmers is considered that should replace the current regime in order to enhance the competitiveness and the contribution to the vitality of rural areas and to cut red tape. A scheme for small farmers was implemented in the past in Article 2a of Regulation (EC) No 1259/1999. Besides, a "semi-subsistence" farming scheme is currently available in Rural Development.

The goal is to examine the feasibility of such small farmers scheme and to get views on the possible requirements to make such measure work in an effective and efficient way, especially as regards the administration of the scheme and the possible abuses related to such scheme.

Possible approaches

The scheme could be made general (setting a direct payment threshold under which beneficiaries would automatically get a bonus) or targeted (certain range of farmers fulfilling additional criteria (e.g. competitiveness potential) farmers in a specific zone would get a bonus).

The reference for eligibility could be historical or based on a yearly assessment.

The threshold could be EU-wide or national.

The bonus could consist in a completion of the payment to the threshold amount, the attribution of a flat-rate amount and the increase by a progressive percentage the lower the payment is (with possibly several bands).

The bonus could be attributed as a top up (an additional payment) or through an increase of the value of entitlements.

Recommendations

Without prejudice to the political advisability of introducing a special support scheme for small farmers under the first pillar, the Conference recommends that:

- support to small farmers can be and is already granted under pillar 2 and that such support can be designed in such a way that it promotes investment, restructuring and growth or facilitates phasing out of activities or specifically targets those farmers who are considered necessary for the maintenance of the vitality of rural areas;
- any support scheme for small farmers under pillar 1 should take account of and avoid duplicating support already granted under pillar 2 and, thus, could possibly remain optional for those Member States which are granting support to small farmers under pillar 2;
- any support scheme for small farmers under pillar 1 should be limited to a certain number of general principles, while leaving flexibility to Member States, within a framework established at EU level to allow them taking the specificities and organisation of each national/regional situation into account and to avoid giving a bonus to those who do not need it or who are merely

holding on to their land and are maintaining the status quo. It should also be left to the Member States to determine the precise thresholds for defining small farmers, possibly within a range set at EU level;

- support for small farmers under pillar 1 should be considered part of the national envelope.
- for any support for small farmers under pillar 1 the existing direct payments/IACS should be used and the management should be as automatic as possible so as to limit to the extent possible the administrative burden for both farmers and paying agencies;
- a support scheme for small farmers could be designed in such a way that entry into the scheme would depend on the on-farm situation (in terms of hectares and other criteria such as income) remaining stable for a certain reference period (3 years). This would allow a simplified application system. To further simplify the application, farmers below a certain threshold could be sent pre-filled applications based on that of the previous year and then check one box to indicate that they have not changed their situation;
- the control burden for the paying agencies for small farmers should be limited, without compromising the effectiveness of the controls;
- as regards the precise way to deliver the aid, it could be a flat rate amount or a percentage/absolute increase to the base amount of aid as all these options could easily be handled through the existing IT systems. However, it would be difficult to dispense with entitlements for small farmers because without entitlements problems would arise for farmers who outgrow the small farmers' category.

ALIGNMENT OF THE MANAGEMENT OF THE IACS-RELATED MEASURES OF PILLARS 1 AND 2

Issue description

In its Communication on the future of the CAP after 2013 the Commission confirms its view that the two pillars structure should be maintained in the future. It also states that the better targeting of the direct payments should not result in an overall increase of the administrative burden.

IACS tools govern the management of first pillar measures (direct payments) and second pillar measures (currently essentially Axis 2 measures). However, the IACS rules currently vary between the two pillars, both as regards the relation between the national authorities and the final beneficiaries and between the Member State and the Commission. The goal is to examine where the harmonization of the IACS rules between the two pillars would lead to a reduction of the overall administrative burden for farmers and for the administration and where it would rather lead to an increase of such burden, taking into account the objective of better mitigating the risk of errors.

Possible approaches

One possible approach could be to fully align the rules with the ones currently applicable for direct payments, which have proved their efficiency. This approach would have the advantage of full coherence of a single set of rules.

Another approach would be to assess the specific simplification impact of each possible alignment between the two pillars, or of further simplification to the existing rules, and to retain the ones that would have the best impact in terms of reducing the administrative burden.

Recommendations

The Conference recommends that:

- rules should be aligned "as much as possible" as an important contribution to simplification, but there are limitations to the possibility of doing so, which would plead for the second approach identified above;
- alignment is generally possible for claims, controls and payment deadlines (1/12/n – 30/6/n+1).
- it could also be considered whether to align the definition of what is eligible land, which is currently different in the two pillars. Such alignment would also be simplification, but would have to be considered against the potential loss of the possibility of supporting certain environmentally valuable land under the second pillar;
- all control provisions for both pillars should be integrated into one single regulation, though certain specific control requirements will have to remain for the second pillar;
- the respective roles of the paying agencies and the managing authorities should be clarified, the latter being responsible for establishing the programmes, selecting the projects, monitoring and evaluation, while the entire management and implementation of the measures would be the responsibility of the paying agencies;

- the payment of advances generally creates significant additional administrative burden for the paying agencies and, thus, can significantly delay the final payment. Therefore, the simplest and most efficient approach to speed-up payments would be to finalise controls as quickly as possible and, thus, avoid the need to pay advances. Nonetheless, it may not always be possible to completely eliminate the possibility of advances (as of 16/10/n) to meet some specific circumstances and there should be room for sufficient flexibility;
- as regards the rhythms of payments from the Commission to the Member States, the current situation is generally satisfactory and does not pose any significant management problems.

IMPROVING THE MANAGEMENT OF PAYMENTS UNDER THE SECOND PILLAR OF THE CAP FOR MEASURES NOT COVERED BY THE IACS

Issue description

Given the variety and specificities of the rural development instruments, the administrative burden for the farmers and the administration as well as the risk of errors differ widely. The goal is to identify where the main difficulties are and which improvements could be made to reduce the administrative burden, taking into account the objective of mitigating the risk of errors.

Some general issues are set out below. More specific issues for discussions are set out in the three attachments relating to

- the Leader approach (Annex 1),
- the management and control of small projects (Annex 2),
- the use of standard costs (Annex 3),
- the treatment of indirect costs (Annex 4).

Recommendations

The Conference recommends that:

- the respective roles of the paying agencies and the managing authorities should be clarified along the general principles that the latter being responsible for establishing the programmes, selecting the projects, monitoring and evaluation, while the entire management and implementation of the measures would be the responsibility of the paying agencies;
- applicants for support under the second pillar should preferably have a single entry gate in the administration responsible for managing the relations with the applicants.
- eligibility rules for all the structural funds and for the rural development should be aligned as much as possible.

THE LEADER APPROACH

Issue description

Leader is characterized by the implementation of local development strategies through projects. It is characterized by bottom-up approach where a decision-making is carried out through local public-private partnerships and is therefore a distinctive multi-governance tool for the implementation of parts of the rural development programs. The participation of the LAGs (Local Action Groups) in the administration of funding, taking onboard some of the tasks reserved in the traditional (top-down) system for management authority and paying agency, needs to be compatible with the principles of sound financial management.

The “administrative mainstreaming” of Leader into the management and control system of agricultural funding in the current period has brought along challenges for all actors involved. An unclear division and overlapping tasks between LAGs, management authorities and paying agencies in several Member States are seen as a constraint to the smooth and genuine implementation of the Leader approach.

Still, it has to be taken into account that the implementation systems differ very much between programs, dividing the tasks in different ways. The diversity of the solutions used also reflect different administrative traditions as regards multi-level governance: LAGs have at least to have the competence to select projects. They decide which project has to be funded. In many Member States, LAGs are also in charge for the formal approval of projects or might even have certain tasks in the payment of funding.

Possible approaches

The division of labour between the managing authority, the paying agency and LAG could often be defined in a clearer way than it is now the case. This could be done through the establishment of common principles on task-sharing, and responsibilities after an identification of the practical difficulties.

In Leader, one role of the paying agency is to make an eligibility check of projects. The local development strategies are a decisive element for this eligibility checks. They need therefore to have an appropriate level of precision, and have to set clearly which type of actions corresponds to the objectives. They can be considered as "mini programs". Requirements could be established at EU level to describe minimal obligatory elements of the strategies in the sense of strategic objectives and priorities.

The delegation of tasks to the LAG going beyond the task of project selection is possible, but needs to be formalized. The administrative checks on measure 431 (running the LAG, acquisition of skills and animation) for operations implemented by the LAG themselves and the on-the-spot checks are the only tasks which should not be able to be delegated to the LAGs.

Recommendations

The Conference recommends that:

- within an EU framework, LAGs should establish their own administrative principles (such as rules of procedure, selection of projects) which they have to respect;

- the administrative role and concrete tasks which a LAG is to perform should be clearly defined and proportionate to its administrative capacity;
- in cases where some of the paying agency's responsibilities are delegated to a LAG, the delegation has to be in conformity with the provisions of Annex I of Regulation (EC) No 885/2006.

THE MANAGEMENT AND CONTROL OF SMALL PROJECTS

Issue description

Beneficiaries with small projects often hesitate to apply for support since the efforts of producing an application are too burdensome compared to the aid received. The administrative costs for treating and controlling these small projects may sometimes exceed the amount of aid granted. Cutting excessive paperwork and simplification of the procedures are often mentioned as solutions to these problems of small grants and contracts.

In the current rural development legislation there are no specific provisions for small grants/projects. An exception is a provision under Regulation 1975/2006²⁵, which provides for the possibility for Member States not to carry out *in situ* visits to verify the realisation of smaller investment. There is no definition of "smaller investments" in the current rural development legal framework; it is in the competence of the Member States to define it.

It is also the competence of the Member States to define the eligibility conditions for a given payment under a given measure/programme.

Initiatives to reduce the administrative burden for beneficiaries of small grants have to find balance between simplification and efficient management of public funds.

Possible approaches

There are several steps in the project management where simplification issues could be discussed:

Eligibility conditions for the payments

The normal rule is that eligible costs are to be determined for each payment on the basis of the costs occurred, i.e. on the basis of individual invoices. The reimbursement based on invoices is burdensome both for the beneficiaries and the administration

In the future Member States may decide paying small grants as a lump sum. The pre-established lump sum shall cover all eligible costs or part of eligible costs of an operation in accordance with pre-defined terms of agreement on activities and/or outputs. The grant is paid if the pre-defined terms are completed. The calculation of the lump sum shall be fair, equitable and verifiable. Supporting documents will be required from the beneficiary to verify that the actions claimed were in fact realised.

Administrative checks

Currently, administrative checks shall be carried out on all applications for support, payment claims and other documents required. Administrative checks on applications for support shall include:

- the eligibility of the operation,
- compliance with the selection criteria,

²⁵ Commission Regulation (EC) No 1975/2006 laying down detailed rules for the implementation of Reg. (EC) 1698/2005, as regards the implementation of control procedures as well as cross-compliance in respect of rural development support measures

- compliance with applicable national and Union rules on e.g. public procurement and State aid,
- the reasonableness of the costs submitted and
- the reliability of the applicant.

One could consider that the administrative checks on applications for small grants/projects, under a certain level of amount, could be simplified by taking away the parts concerning rules on public procurement and State aid as well as the reasonableness of the costs. Member States already often have simplified rules for small projects and the EU rules for public procurement are often only binding for very big projects. For small projects, Member States also often have simplified rules to assure the reasonableness of costs.

Currently, administrative checks on payment claims shall include in particular, and where appropriate for the claim in question, verification of:

- the delivery of the products and services co-financed
- the reality of expenditure claimed
- the completed operation compared with the operation for which the application for support was submitted and granted.

It could be considered that beneficiaries of small grants would have the possibility not to send the original invoices to the Paying Agency and instead provide a list of the items to prove the reality of expenditure and keep the actual invoices on their premises for the possible on-the-spot check. Supporting documents should still be required from the beneficiary to verify that the products and services were delivered as planned.

Administrative checks related to investment operations shall include at least one visit to the operation supported or the investment site to verify the realisation of the investment. However, Member States may decide not to carry out *in situ* visits for smaller investments (Article 24 of Regulation 1975/2006). In the future the possibility of not having *in situ* visits for smaller investments should remain.

On-the-spot-checks

Sampling:

Member States are required to organise on-the-spot checks on approved operations using an appropriate sampling basis. These checks shall, as far as possible, be carried out before the final payment is made. The expenditure covered by on-the-spot checks shall represent at least 4 % of the annual expenditure financed by the EAFRD. For the whole programming period 5 % of the EAFRD expenditure shall be controlled on-the-spot.

Currently the sample of approved operations chosen for on-the-spot checks shall take into account in particular

- the need to check an appropriate mix of types and sizes of operations,
- any risk factors identified following national or Union checks,
- the need to maintain a balance between axes and measures and
- the need to select randomly between 20% and 25% of the control sample (i.e. the risk-based sample represents 75-80%).

It could be considered whether small grants/projects could be taken into account only in the random sample.

Content of the check:

During the checks Member States shall endeavour to verify that:

- payment claims submitted by the beneficiary are supported by accounting or other documents

- the nature and the timing of the relevant expenditure (for an adequate number of expenditure items) comply with Union provisions and correspond to the approved specifications of the operation actually executed
- the use or intended use of the operation is consistent with the use described in the application
- the public funded operations have been implemented in accordance with Union rules and policies, especially the rules on public tendering and relevant mandatory standards established by national legislation or in the Rural Development Programme.

For small grants/projects the second and last point could in the future be taken out from the checks.

We have also to have in mind that small projects could be more risky because the beneficiaries are less aware of all the rules to be respected.

In general a special clause saying that Member States may take into account the cost/benefit relation when doing checks for small grants/projects could be introduced.

Calculation of payment

Concerning the calculation of payments one option which could constitute a considerable simplification for small projects, would be to pay the grant on a standard cost. Standard cost is a predetermined cost which in advance establishes the cost of products or services. The total standard cost typically includes direct materials, direct labour and overheads. In the current Rural Development legislation the use of standard costs is already permitted in certain measures under axis 1 and 2. The move towards the standard costs is seen to reduce administrative burden, as well as to be more compatible with electronic applications. For further details, please see also Annex 3 on standard costs.

Recommendations

The Conference recommends that:

- a threshold for small projects should be fixed by the Member States within a range determined by EU legislation;
- the simplification of eligibility conditions through the use of lump-sum payments, standard costs and the treatment of indirect costs (see Annex 3) are promising way of reducing the administrative burden for the management of small projects without increasing the risk of errors;
- limitation of *in situ* visits for small projects should continue to be possible;
- the minimum level of on-the-spot controls should be determined on the basis of the number of beneficiaries (as it is the case for IACS) rather than the amount of the grants involved.

THE USE OF STANDARD COSTS

Issue description

Definition: Standard cost is a predetermined cost. It establishes in advance the cost of products or services under given circumstances. The total standard cost typically includes direct materials, direct labour and overheads. The calculation of total standard cost is based on estimated standard scales of unit costs (e.g. average hourly salary).

In standard costing it is fundamental that the final payment remunerates the outcome, not costs occurred.

Current situation: Article 53 of Regulation (EC) No 1974/2006 permits the use of standard costs for certain Axis 1 (meeting standards) and Axis 2 measures (e.g. LFA, Natura 2000, AEM, animal welfare, non-productive investments, and some forestry measures). The permitted standard costs must only contain verifiable elements, be based on expert knowledge, have sources clearly indicated, and be differentiated as appropriate. For some of the measures, the calculations may not contain elements linked to fixed costs.

Importance: The ESF²⁶ and ERDF²⁷ regulations include the possibility of applying standard scales of unit costs for support given in the form of grants. On the other hand, EAFRD beneficiaries must document all financial transactions and present receipts upon request.²⁸ In order to align the rules within the EU funds, several Member States have requested the adoption of standard costing to investment measures. Standard costing is seen to reduce administrative burden for the beneficiaries and the administration through the reduction in handling of invoices and changes in project support decisions. It is also more compatible with electronic applications. Yet, the application of standard costing is initially very work-intensive for the administration. Setting the standards requires time, expertise, and staff training. Also audit focus and practises must be changed.

Implications:

1. Calculation of standard costs

Process: The process of setting cost standards is very technical, time-consuming, and burdensome. Preliminary studies may have to be conducted, and suitable experts must be found. Staff capacity and knowledge must be ensured well in advance. Legal provisions for updating/indexing the standard scale of unit costs must be put in place.

Contents: The standard costs must have a clear and direct link with the operation in question. The basis for calculating the standard scale of unit costs must be fair, equitable, verifiable, and justified, as well as established in advance. Over- and under compensation must be avoided. The calculation of standard costs should cover fixed and variable costs. The calculations may also include a component of indirect costs (overheads). The standard costs of a project can be differentiated according to activities or types of costs (e.g. qualified/unqualified labour costs).

²⁶ Article 11.3(b) of Regulation (EC) No 1081/2006 as amended by Regulation (EC) No 396/2009

²⁷ Article 7.4 of Regulation (EC) No 1080/2006 as amended by Regulation (EC) No 397/2009

²⁸ Article 26(5) of Regulation (EC) no 1974/2006

The standard costs for a project can either be calculated on the basis of

- a. *process* (average hourly salary x number of hours worked); or
- b. *outcome* (payment is conditional upon quantified outcome, e.g. number of training participants who obtained a job and retained it for a certain period after the course)

The outcome-based standard costs are more risky for the support recipient, as the attainment of the agreed outcomes may not depend solely on the beneficiary. Clear rules on allowed variance in outcome must be agreed beforehand. It may be beneficial to tie parts of the payment into outcome, parts into process. In general, it is recommended to use standard costing only for that part of variance which can be controlled by the beneficiary. The outcome-based approach may not be suitable for all RD measures due to WTO rules linking payments to agricultural output, controllability issues, and the amount of uncontrollable variance.

2. *Controls and audits*

Focus: The focus of verifications and audits moves towards from financial audit to the technical and physical aspects of operations. The importance of *in situ* controls increases. The audit departments must also define new procedures and methods for verifying the calculation methods underlying the standard costs and for checking whether the units declared by the beneficiary correspond to delivery.

The audits seek to confirm that the conditions set in terms of outputs for the reimbursement of costs are fulfilled. Furthermore, the audits seek to verify whether the amount declared equals the standard rate per unit of product or service multiplied by the actual units delivered. The focal point of audits at Member State level is in the calculation method for arriving at the standard scales of unit costs. On the level of the beneficiary, on the other hand, the audits centre on the correct application of the method in individual projects.

Documentation: The PA/MA responsible for the calculations must document the method and data used in the standard cost calculations. The beneficiary must certify, justify, and archive documents on the declared quantities.

Detailed supporting documents (e.g. time sheets in case of labour costs) are necessary only for direct costs as indirect costs (overheads) could be paid as a fixed percentage of operations.

Possible approaches

Under the ESF and ERDF regulations, standard scales of unit costs are defined by the Member State. These costs are to be established in advance on the basis of a fair, equitable, and verifiable calculation. These costs apply typically to easily identifiable quantities (training hours/days, hours worked, hotel nights, meals, certificates obtained etc).

For EARDF, the current Article 53 could be expanded to include also grant-based Axis 1 and 3 investment measures. However, the standard costing is only suitable to those operations where it is possible to define quantities and standard scale of unit costs related to an activity. Standard costing is more difficult to apply for non-standard investments.

The Member States could choose in which measures to apply real costs (checked against invoices) and in which estimated standard costs (checked against outcomes). The control provisions related to these two cost types would be different.

Recommendations

The Conference recommends that:

- there should as much as possible be common EU rules on standard costs for the second pillar of the CAP and the Structural Funds;
- the use of standard costs may simplify the management, though not for all measures, and that, therefore, a certain flexibility in using such costs should be left to the Member States;
- the extent to which the use of standard costs could reduce the administrative burden for the paying agencies depends on whether it is made compulsory for the beneficiaries.

THE TREATMENT OF INDIRECT COSTS

Issue description

Definition

There are two types of costs related to a project/investment, namely:

a) Direct costs

- directly related to an individual activity of the entity; link can be demonstrated
- consist of
 - investment costs
 - general costs (e.g. architect fee, license fees)

b) Indirect costs

- are not/ cannot be connected directly to an individual activity of the entity in question
- can only be allocated to the project on a pro rata basis
- consist of
 - administrative costs (e.g. human resources, security, accounting)
 - overheads (e.g. rent, utilities, supplies, employee fringe benefits and social security contributions)

Current situation

During the current programming period, a number of Member States and Regions have requested authorisation of indirect costs (especially overhead costs) for certain types of projects. Recently the issue has been raised as regards the provision of training to businesses and farmers. These indirect costs are not listed in Article 55 of Commission Regulation (EC) No 1974/2006, which defines the concept of general costs for investment projects. The lack of definition triggers interpretation issues and creates ambiguity on the eligibility of the costs.

Currently the indirect costs have been accepted by the Commission under the condition that they are applied in duly justified cases. Furthermore, the indirect costs must be limited as a percentage of the eligible costs of the project or a lump sum, or both taken together. The need for having such costs must be justified by the Member States.

The implementing rules of the EU financial regulation (Article 181 of the Commission Regulation (EC) No 2342/2002) foresee, in the case of grants, the funding of beneficiary's indirect costs up to a maximum of 7% of total eligible direct costs for the action. The 7% ceiling may be exceeded by reasoned decision of the Commission. The same article also permits the use of lump sums up to €25 000 to cover one or more categories of eligible costs.

Importance

The ESF²⁹ and ERDF³⁰ regulations include the possibility of refunding indirect costs, declared on a flat-rate basis, of up to 20% of the direct costs of an operation for support given in the form of grants. The same regulations also permit, for grants, the use of lump sums to cover all or part of the costs of an operation. Simplification related to indirect costs is important because of alignment of the rules within the EU funds and for reducing administrative burden for the beneficiaries.

Implications

The option for declaring indirect costs on a flat rate or lump-sum basis must be foreseen at the stage of programming of the operations. The preparations must start early, both on the Member State and EU level. Preliminary studies based on data from current programming period operations are required for arriving at a suitable flat rate or lump sum. The calculations must be reasonable (so as to not raise/decrease the indirect costs declared), fair (treating all projects and beneficiaries equally), and verifiable (the MA must demonstrate how the model has been chosen).

The objective is to get rid of the need to justify the individual costs which make up the indirect costs in a detailed manner. However, this simplification implies that the declared direct costs must be verified carefully since they form the basis of a careful verification of the declared direct costs, in accordance with the granting decision. This verification of direct costs allows justifying the amount of declared indirect costs and constitutes a part of the management checks and of audits on operations.

Possible approaches

- EU-level definition of a fixed percentage/lump sum for indirect costs by the implementing rules, as well as the listing of cases where these costs could be used.
- Definition of indirect costs and the model of calculation on the EU-level. Member States would use their own certified data to come up with a fixed percentage/lump sum for indirect costs.
- Definition of indirect costs on the EU-level, clearly outlining the conditions under which these costs could be used. Member States would be granted flexibility in deciding upon the implementing rules and concrete parameters, including:
 - measures/actions where applied
 - model of calculation
 - basis of calculation (personnel costs or total project costs) in case of flat-rate
 - limited percentage of eligible costs in case of flat rate
- No EU-level definition of indirect costs, only maximum allowed percentage for flat rate. This leaves the Member States with flexibility on definition, implementing rules and concrete parameters but obliges them to define direct/indirect costs or have a pre-established list of all eligible direct costs on which the flat rate is based.

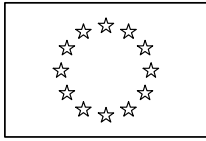
Recommendations

The Conference recommends that:

²⁹ Article 11.3(b) of Regulation (EC) No 1081/2006 as amended by Regulation (EC) No 396/2009

³⁰ Article 7.4 of Regulation (EC) No 1080/2006 as amended by Regulation (EC) No 397/2009

- there should as much as possible be common EU rules on indirect costs for the second pillar of the CAP and the Structural Funds;
- the treatment of indirect costs would be simplified by setting them as a percentage of total eligible costs.



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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 9

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Annex 9: Report on the Public Consultation

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INTRODUCTION

As part of the preparation of the legislative proposals for the Common Agricultural Policy after 2013 the Commission Services solicited input from interested parties to complete the diagnosis and exploration of the options for reform outlined in the Communication "*CAP towards 2020: meeting the food, natural resources and territorial challenges of the future*" and in the consultation document for the impact assessment. The consultation process called on parties representing all interests of the society to express their opinion on the relevance of the described elements, the consistency of the approach and possible improvements that could be made.

This process builds on a broader public discussion which included: an inter-institutional debate on the Communication, a wider public debate (April-June 2010), a stakeholders' conference in July 2010, two enlarged advisory committees (one in 2010 and one in 2011), and involvement of the European Network for Rural Development.

The report summarises the contributions and the process and provides information on the methodology and the participants.

1. STAKEHOLDER CONSULTATION ANALYSIS

1.1. Stakeholder consultation

In November 2010, the European Commission released a Communication on the Common Agricultural Policy towards 2020 to launch the inter-institutional debate with the other European institutions.

In the context of the Impact Assessment accompanying the legislative proposals prepared for the period post 2013, the Inter-Service Steering Group (ISSG) sought to consult the interested parties on preliminary formulation of the issues to tackle, objectives of the policy, scenarios and expected impacts in order to provide a comprehensive evidence-base for high quality and credible policy proposals.

The consultation aimed at:

- informing and allowing stakeholders to submit their views on the problem definition, reform objectives and scenarios proposed, and
- gathering facts and analytical data on the expected impacts of assessed options.

The consultation document, used as a basis for the consultation, gathered valuable information on the problem definition and the description of the proposed reform scenarios through 11 questions related to these issues. The consultation document can be found in annex II to this report.

Interested parties were invited to submit their contributions and additional analytical elements between the 23rd of November 2010 and the 25th of January 2011. The consultation was very successful. An overwhelming number of 522 contributions were received by the Commission.

2. ANALYSIS OF RESPONSES

The main trends in the opinions received in the public consultation can be summarised as follows:

- Most stakeholders agree with the challenges for the future of the CAP and objectives of the reform.
- There is a broad agreement among stakeholders on the need for a strong Common Agricultural Policy based on a two-pillar-structure in order to address the challenges ahead. The majority of stakeholders found the policy scenarios consistent with the objectives of the reform.
- Stakeholders have strong and diverse opinions concerning the targeting of aid. Redistribution of both Pillar I and Pillar II payments between and within Member States, capping and targeting payments towards groups of farmers are the issues where the main concerns were expressed.

- There is agreement that both pillars can play roles in providing public goods to the benefit of the EU society. Whereas many farmers' organisations believe that this already takes place today, the broader public argues that Pillar I payments can be more efficiently used to step up environmental performance.
- Most respondents find that the CAP should play a role in stabilizing markets and prices, although there are diverse opinions on how this is done most efficiently.
- The respondents want all parts of the EU, including less favoured areas, to benefit from growth and development.
- Innovation, development of competitive businesses and provision of public goods to the EU citizens are seen as the ways towards aligning CAP with Europe 2020 strategy.

The following parts provide a summary of the replies received for each of the questions raised in the consultation document.

2.1. Policy scenarios

- (1) Are the policy scenarios outlined consistent with the objectives of the reform? Could they be improved and how?

The majority of the stakeholders found that the policy scenarios were consistent with the objectives of the reform. Food security, provision of public goods, environmental protection, rural development and social aspects came up as examples of challenges that the scenarios deal with. A number of respondents found that there is too little and too general information on the scenarios provided.

The integration scenario was considered to be the most balanced and sound one with respect to the challenges. The adjustment scenario was much less popular, while yet more popular compared to the refocus scenario. Those opting for the former, did so with respect mainly to policy continuity and less bureaucracy while those who preferred the latter, did it mainly referring to the better targeting of measures towards public goods. Many respondents recognized positive elements in more than one scenario, and suggested different combinations of instruments and measures that would optimize the benefits of the CAP.

A number of stakeholders argued that the scenarios did not correspond to the challenges outlined in the problem analysis.

Some of the organizations criticized the CAP reform process by having deregulated agricultural markets too much, and proposed instead a fourth scenario. This scenario aims at ensuring higher and more stable and would be mainly focused on price support policies. This would be done by a combination of public supply management and management of agricultural imports in order to avoid imports at prices below EU average production costs. In consequence, such scenario would need to substantially renegotiate the current international trade agreements. Direct payments would play a far less important role than in today's policy, and would be based on criteria of high environmental and social standards and the number of people working on the farms. High environmental standards and respecting food markets and food security in developing countries are other important parts of the fourth scenario.

Suggested improvements to the scenarios related mainly to the alignment of the future CAP to the Europe2020 strategy and the strengthening of the link between environmental and economic and social challenges. There was consensus on the importance of income support among the stakeholders, but how and when the redistribution of aid should be carried through seemed to be less simple to agree on. Other areas of improvement related to trade issues, subsidiarity at regional and local level, food safety, consumer perspectives, incorporation of public health and innovation and competitiveness.

- (2) Are there other problems apart from those set in the problem definition section of this document that should be analyzed when considering the architecture of the CAP in the post 2013 period? What causes them? What are their consequences? Can you illustrate?

While stakeholders generally found that the scenarios would allow tackling the main problems, many found that there is still room for improvement. Several respondents found that there was too little discussion on how the CAP integrates with other relevant policies. This related both to other EU policies and national policies. Bio-technology and bio-energy policies drew particular attention. Some stakeholders pointed out that there was too little integration proposed, and others thought that the relations between them and the cross-effects of policies should be better analyzed. Some found conflicting goals within the CAP i.e. the need to achieve food security while responding to environmental concerns. Others mentioned that there was too little discussion on the financial framework.

Food security gained attention of many stakeholders. Some of them did not agree with the Commission's definition of food security and others thought that the role of the CAP in meeting the global food security challenges had been underestimated in the text.

Many stakeholders also found that the global perspective and the CAP's role on global markets were not analyzed enough. Some, mainly development organizations, requested better analysis of the effects of the CAP on developing countries. Others instead pointed out that third country producers do not need to meet the same high requirements on production as the EU producers, and raised the need of a level playing field or the need to better compensate EU farmers for the provision of public goods. The dependency on imported protein feed was another issue that many would have wanted to be analyzed.

Some replies brought up certain environmental concerns as being insufficiently or not at all dealt with in the documents e.g. cultural heritage in the environment, but also to issues they found should have been given more attention, e.g. climate change adaptation and water management.

A number of stakeholders thought that there was insufficient discussion on the food chain. Consumer interests and demand patterns, the food chain gained attention in combination with food prices and the effect of the CAP on consumers' health and well-being. Several stakeholders found also that the impact of high price volatility had not been sufficiently analyzed.

- (3) Does the evolution of policy instruments presented in the policy scenarios seem to you suitable for responding to the problems identified? Are there other options for the evolution of policy instruments or the creation of new ones that you would consider adequate to reach the stated objectives?

The majority of stakeholders found the evolution of the CAP policy instruments in line with its reform path and with the objectives laid out in the Communication. Many also underlined the need to keep the two-pillar structure. A small number of stakeholders proposed instruments more in line with the fourth scenario which they proposed. Simplification and the reduction of the administrative burden were also brought up as an important element to take into account in the development of new policy instruments.

Several stakeholders pointed to the importance of income support under Pillar I. Some found that direct payments have contradicting goals and therefore it is hard to find policy instruments which fulfill these objectives at the same time. Targeting support to active farmers was overall positively received with a couple of respondents pointing out that part-time farming should be excluded from the definition. The application of capping to direct payments received mainly negative reactions.

The greening component in Pillar I was welcomed among some, but questions were raised with regards to possible implementation difficulties. While some found that cross-compliance should be kept and/or strengthened, others wished for its simplification. A few stakeholders pointed out the need to clarify the aims of the greening measures in Pillar I compared to the environmental measures in Pillar II, and underlined the possibility of weakening or overlapping the two-pillars.

Some stakeholders argued that the CAP has an important role in stabilizing markets and prices, and therefore welcomed the introduction of instruments relating to risk management. Several stakeholders supported the continuation of coupled support.

Strengthening rural development measures was emphasized by many stakeholders, and a special appreciation was expressed for the Leader method. The instruments most appreciated in Pillar II relate to the promotion of public goods provision, competitiveness, innovation, employment, diversification and skills acquisition. A few stakeholders wanted the payments within the agri-environmental schemes to better reflect the value of the public goods provided, while allowing Member States to cover more than costs incurred and income forgone.

2.2. Impacts

- (4) What do you see as the most significant impacts of the reform scenarios and the related options for policy instruments? Which actors would be particularly affected if these were put in place?

The most significant impacts of the reform, as expressed by the stakeholders, relate to the equity both between farmers and between Member States, as well as sustainability and territorial impacts. However, most respondents found that the reform will have significant impacts, but a few thought that external factors i.e. tax policies and international trade agreements are more important and hence the reform will have limited effects. The reform is believed to have mainly an impact on farmers and on rural population, but also on other actors in the food chain, including consumers. Some also mentioned impacts on agricultural markets and markets with strong links to agriculture as well as effects on the rest of the world, including developing countries.

Many respondents found that the adjustment scenario does not bring much change or that it will lead to a strengthening of the current trends. For some respondents, this implies the continuation of unsustainable agriculture and territorial inequalities. Some

respondents found that the scenario does not respond to the needs to stabilize incomes and prices.

The integration scenario received more comments than the other two. The most prominent impacts were related to the direct payments redistribution (equity and effects on income) and impacts on market power, e.g. the bargaining power in the food chain. Potential transition period schemes were also discussed, as many respondents wished for a smooth transition. The expected impacts were very different depending on the local circumstances of stakeholders and no uniform global vision emerged. Capping was brought up as a negative element impacting on competitiveness, the functioning of markets and to some extent farmers' incomes. Farmers' incomes were mentioned several times as a main impact of the scenario, often relating to greening. Several stakeholders found that the scenario does not sufficiently deal with increased price volatility, market instability and increased exposure to speculation. On the other hand, there were also those who thought that incomes would increase under the integration scenario.

Greening was mentioned by many as an appropriate way to reach better environmental quality, increasing the delivery of public goods and creating opportunities for sustainable agriculture. A few thought that the environmental quality would decrease under the integration scenario due to the fact that measures in Pillar I are less efficient than the targeted measures in Pillar II. The administrative burden is believed to increase in this scenario, mainly due to the greening of Pillar I.

The main criticism on the impacts of the refocus scenario was that it will decrease farmers' income and competitiveness. Some thought that the environmental quality would increase and others that it would decline due to the specialization and intensification in some areas and land abandonment in others. There were also many comments on the negative impact with regards to territorial aspects. Some found that innovation would increase in the less distorted markets of the refocus scenario, leading to a more competitive agricultural sector.

- (5) To what extent will the strengthening of producer and inter-branch organizations and better access to risk management tools help improve farmers' income levels and stability?

Overall there was strong support for the CAP to play a role in agricultural markets among the stakeholders. The reasons for that were linked mainly to existing price volatility, climate change and the insecure economic situation of many farmers. Meanwhile, some stakeholders argued against the rationale for using taxpayers' money for protecting private interests, and others considered that the proposals in the Communication did not go far enough.

Many welcomed the strengthening of producer organizations for various reasons. Producer organizations were believed to, if properly developed, improve incomes, strengthen local markets and encourage innovation. On the opposite, some brought up examples from the past, such as the shortcomings of the Fruit and Vegetable CMO, or the low uptake for setting up producer organizations in the Rural Development Programme (measure 142).

Fewer organizations reflected over the inter-branch organizations and their roles. Those who did, were rather positive towards the proposals, although several of the processing organizations did not agree. Instead, they thought that it might distort the market. A few

respondents wanted the discussion to focus on competition laws rather than on vertical integration.

Risk management gained more attention than the market management tools discussed above. Most respondents welcomed the Commission's approach. Those being against it thought that diversification or the use of private insurance schemes are more efficient, that the risk management tools might create dis-incentives or that private interests should be protected by private means. Some thought that sector specific price policies would be a better way to address the problem.

(6) What environmental and climate-change benefits would you expect from the environment-targeted payments in the first and the second pillar of the CAP?

Almost all responding organizations were positive towards CAP responding to agri-environmental concerns. The most frequently mentioned benefits in a greener future CAP were improvements with regards to climate change mitigation and adaptation, biodiversity, soil protection, open landscape values and water (quality and quantity).

Both environmental organisations and think-tanks/research institutes were generally in favour of greening Pillar I, although a few wanted to see the green top-ups further developed. Others were concerned that the proposed Pillar I measures may not be cost-efficient. There was a great diversity of answers among the responding organisations from the farming and the processing sectors. Only a few explicitly welcomed a greener Pillar I, although many expressed opinions on principal topics in which greening is pursued.

A substantial number of respondents were explicitly against greening the first pillar, or concerned with the effects it would have on the competitiveness of EU farmers. A few mentioned that there are already greening measures in the first pillar, such as cross compliance,.

Many expressed strong support for targeted agri-environmental measures in Pillar II.

(7) What opportunities and difficulties do you see arising from a significant increase of the rural development budget and a reinforcement of strategic targeting?

Many respondents were positive towards a larger Pillar II budget and pointed towards different opportunities coming from this. The most frequently mentioned opportunities were:

- supporting sustainable farming and/or further developing agri-environmental measures,
- supporting modernization, innovation, research and development in agriculture and
- enhancing rural development through both agricultural and non-agricultural measures.

Less difficulties than opportunities were mentioned by the responding organizations. However, many respondents draw the conclusion that an increased rural development budget would have to come from a decrease in spending on Pillar I measures, and found this to be a major drawback for the competitiveness of agriculture and the vitality of rural areas.

Environmental and development organizations expressed concerns over Member States' ability to co-finance, their willingness to pursue effective Rural Development Programmes and their possibility to reach out to the farmers. Farmers were mainly concerned over the effects of a reduced funding of Pillar I, but also over co-financing and the risk of increased administrative burden. Several producer organizations identified a risk of policy renationalization.

There was no consensus on strategic targeting. Of those organizations replying, most were positive, but there were also those concerned with delivery difficulties, decreased subsidiarity and the definition of appropriate cross-country criteria. A few organizations would prefer if spending on agriculture and rural development were kept in different funds.

- (8) What would be the most significant impacts of a "no policy" scenario on the competitiveness of the agricultural sector, agricultural income, environment and territorial balance as well as public health?

The vast majority was concerned over the effects of a no-policy option. Many drew the conclusion that a no-policy option would lead to increased agricultural production in some, already productive, areas while leading to land abandonment in others. The main concern in relation to this seemed to be the effect it would have on the environment and the provision of public goods. The environmental quality would decrease due to intensified, more "industrialized" agriculture in the productive areas, leading to soil and water degradation and biodiversity loss. In the less productive areas, land abandonment and related problems such as loss of biodiversity and cultural heritages was assumed to be the result of a no-policy option.

Lower agricultural incomes, a sharp decrease in the number of farmers and in the competitiveness vis-à-vis third countries as well as increased price volatility were other likely effects of this option according to many respondents. This would impact negatively on food security and self-sufficiency, as well as on product quality. Many respondents were also concerned over the effects on the rural society in general. Few, but some, commented on the lack of consistency between a no-policy option and the Europe 2020 strategy and on the risk of this leading to the re-nationalization of agricultural policy.

Very few stakeholders opted for the no-policy option. A small number recognized benefits with the no-policy scenario, primarily relating to competitiveness and input prices, but were concerned with the effects it would have on the environment and the vitality of rural areas.

2.3. Monitoring and evaluation

- (9) What difficulties would the options analyzed be likely to encounter if they were implemented, also with regard to control and compliance? What could be the potential administrative costs and burdens?

The most common reflection on implementation aspects was that the integration scenario would lead to higher administrative costs, but there was also some who thought that it would not necessarily imply a higher burden on farmers and Member States. Some of the difficulties related to current inefficiencies, lack of clarity and the functioning of control

and compliance systems. Many found that it is important to reduce the administrative burden.

Many argued that especially greening would increase the administrative burden, although some found that it would be a price worth paying in light of the improvements it would yield. Cross-compliance was another area of concern for many respondents. Some highlighted the possibility to simplify cross-compliance if greening mechanisms in Pillar I were to be introduced; others called for an improved sanction system and the need to allow for more regional flexibility in GAEC. Training both for public authorities and farmers was suggested as a way to reduce the administrative burden.

There were fewer and less critical comments on Pillar II measures. Some respondents said that strategic targeting is one way to reduce the administrative costs and others believed that more flexibility for regional level decision-making would decrease the administrative burden.

Many of the respondents did not address this question.

(10) What indicators would best express the progress towards achieving the objectives of the reform?

The indicators proposed by the stakeholders can be grouped into three broad categories responding to the economic, environmental and territorial challenges addressed in the consultation document.

- To follow the economic development, competitiveness, farmers' incomes and employment levels were considered key indicators. Indicators on farmers' incomes and the share of incomes coming from agricultural support, the number of farmers, the employment levels and the structural development of farms were frequently mentioned. Many also found it important to follow markets, prices and market power closely, the latter for example in terms of primary producers' shares of final consumer prices. Trade balance, export levels and self-sufficiency on EU level were also proposed.
- Environmental indicators were brought up very frequently, and all categories of respondents were interested in following agri-environmental developments. Stakeholders were interested in agri-environmental indicators including biodiversity, farmland species (birds and butterflies most frequently mentioned), landscape protection (both natural and cultural elements), Natura 2000, the number of organic farms and the amount of arable land under agri-environmental schemes. Water and soil related indicators also gained attention. Many respondents commented on various aspects of water, such as nutrient run-off, chemical residues, and indicators of amount of water used for agricultural production. Climate change, both with respect to green house gas emissions and carbon sequestration in land also were mentioned.
- The third category, relating to the territorial and broader rural development challenges was considered less than the previous two. Following the demographic transitions with respect to population density and composition seems to be the main concern. A few organizations pointed out that an effort should be made so that the joint impact of the EU funds can be better measured. There was also some interest for following the number of enterprises, the employment levels and the diversification of rural areas.

Few respondents reflected over difficulties with using indicators, but those who did brought up lags between action and environmental outcome, the challenge of capturing the actual effect of a policy and how to align the indicators with the Europe 2020 strategy. The indicator systems that came up were SEBI (Streamlining European 2010 Biodiversity Indicators), IRENA (Indicator Reporting on the integration of Environmental concerns into Agricultural policy) and CMEF (the Common Monitoring and Evaluation Framework for the Rural Development Programme).

- (11) Are there factors or elements of uncertainty that could significantly influence the impact of the scenarios assessed? Which are they? What could be their influence?

Stakeholders referred to uncertainties relating to external factors and to the policy framework.

The main external uncertainties were market volatility, climate change and the economic crisis. Market volatility, primarily for agricultural commodities seemed to be the main source for concern, and attention was also given to energy and other input prices. Climate change was another main area of concern, where the effects for agricultural production locally as well as globally were seen as highly unpredictable. Other environmental problems, such as pesticide resistance and ecosystem resilience gained much less attention. The financial crisis and the recovery path worried many of the stakeholders, and there were also some mentioning the risks of future financial crises.

Within the policy framework, many considered the size of the future CAP budget as the main uncertainty, and some also referred to the future CAP, primarily the potential introduction of greening and new market instruments, as uncertainties. Many organizations mentioned trade agreements, in particular the outcome of the Doha round but also the developments of the Mercosur agreements as a major source of uncertainty. A few brought up EU Member States' willingness and capability to co-finance rural development measures and the policy development in other countries as major uncertainties. Competition law, GMO and bio-energy policies gained some, though lesser, attention.

3. ANALYSIS OF RESPONDENTS

The Commission services received in total 522 contributions¹ (of which 72 from private persons). From the contributions from organisations, a large fraction came from the farming sector (37%) followed by regional and local authorities (16%) and environmental organisations (11%), think-tanks and research institutes (8%) as well as organisations from the processing sector (6%), development organisations (4%), the trade sector (3%), national authorities (3%) and consumer organisations (1%). Other organisations (12%) participating in the consultation included health protection organisations, water management bodies or civil society representations.

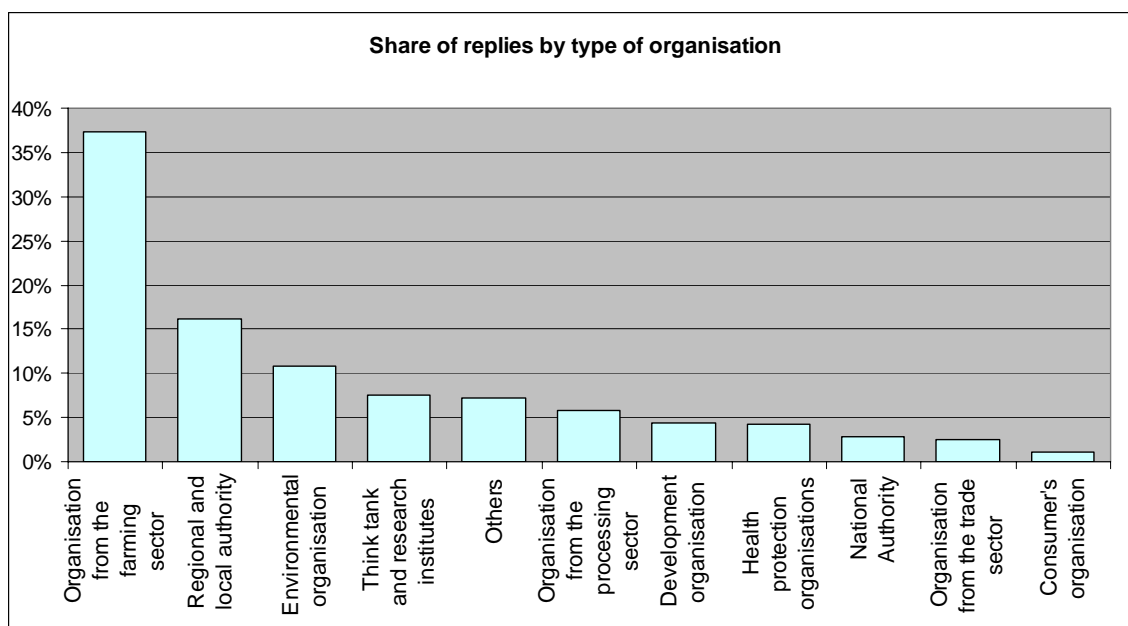
Each contribution was individually analysed by the Commission services. Information was sorted in categories responding to the question asked and to the type of issues

¹From these 18 were empty and 69 were repetition from the same organisations.

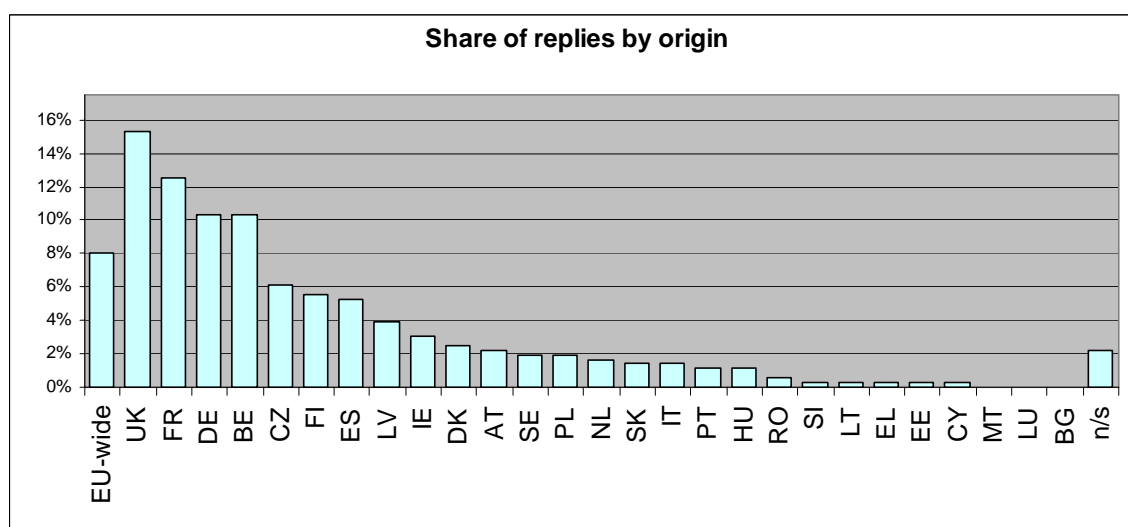
discussed. Analytical elements were extracted and introduced into the impact assessment analysis.

Contributions can be found at a Europa webpage² which will be open until the end of 2012.

Graph 1. Stakeholders breakdown according to organisational type. Total number of organisations 363.



Graph 2. Stakeholders breakdown according to origin. Total number of organisations 363.



² http://ec.europa.eu/agriculture/cap-post-2013/consultation/index_en.htm

ANNEX 1: LIST OF RESPONDENTS

AAF
AEM
Agency of the Slovak Academy of Agricultural Sciences (ASAAS)
AGPL (Association Générale des producteurs de Lin)
Agrodružstvo Zábřeh
AGROSPOL HOSTOVICE a.s.
Agro-Think-Tank
AGRYA (Agricultural and Rural Youth Association)
Aktion Österbotten
Almwirtschaftlicher Verein Oberbayern
Alūksnes vietējās rīcības grupa
ANPOC - Associação Nacional de Produtores de Cereais
APRODEV
Arbeitsgemeinschaft Pro ländlicher Raum
ARC
Archaeology Scotland Educational Charity
AREPO (Association des Régions européennes des Produits de qualité)
Argyll and Bute Council
ASAJA
ASAJA ANDALUCIA association of Farmers
ASBL NATAGORA
Assemblée des Régions Européennes Fruitières, Légumières et Horticoles
Assemblée permanente des Chambres de métiers et de l'artisanat
Assembly of European Regions
Association des Régions de France
Association nationale des Organisations de Producteurs de pruneaux de France
Association of Directors of Public Health
Association of the Plant Protection Industry in Romania
Associazione per la Lotta alla Trombosi
Austrian Chamber of Agriculture
AVEC
BABF (Bundesanstalt fuer Bergbauernfragen)
Bauernverband Altmarkkreis Salzwedel
Bauernverband Nordharz
Bayer
beefproducers of Sweden
Beefproducers of Sweden
Biedrība „Saldus lauksaimnieku apvienība”
Biedrība Laidu pils attīstībai
Biedrība Liepājas rajona partnerība
BIO AUSTRIA Organic Farmers Association
Birdlife
BirdLife Finland
Board of National Council of Agricultural Chambers (Poland)
Boerenbond
Borenbond
British Heart Foundation
Budapest declaration
Bundesarbeitskammer (BAK)
Butterfly Conservation Europe
CAP-IRE
Carbon Cycles and Sinks Network
CEEweb for Biodiversity
CEFS (Comité Européen des Fabricants de Sucre)
CEJA
CEMR: The Council of European Municipalities and Regions
Central Association of Agricultural Valuers (CAAV)
Central Union of Agricultural Producers and Forest Owners (MTK)

Centre for Economic Development, Transport and the Environment
 CER France
 CEV (Centre d'éco-développement de Villarceaux)
 CEVI - European Confederation of Independent Winegrowers
 CGB (Confédération Générale des Planteurs de Betteraves)
 Chambre d'Agriculture de Lozère
 Chambre d'agriculture des Bouches-du-Rhône
 Chambre d'agriculture du Gard
 Chambre interdépartementale d'agriculture de l'Ile-de-France
 Chambre Régionale d'Agriculture du Languedoc Roussillon
 chambre régionale languedoc roussillon
 Chambres d'agriculture françaises
 ChaMPs Public Health
 CIDE (Commission Intersyndicale des Déshydrateurs Européens)
 CNP (Campain of National Parks, UK)
 COAG
 COAG Canarias
 Coalition Clean Baltic
 Coceral
 Comhar na nOileán
 Comité National des Interprofessions des Vins
 Commission Permanente du Comité de Massif
 Compassion in World Farming Animal welfare
 CONCORD European Food Security Group (EFSG)
 CONFEDERAÇÃO NACIONAL DA AGRICULTURA - CNA
 Confédération des Betteraviers Belges
 Confédération française démocratique du travail (CFDT)
 Confédération Générale des Planteurs de Betteraves
 Confederation of the Food and Drink Industries
 Confédération paysanne, FR
 Confédération paysanne, Languedoc-Rousillon
 Confederazione Italiana Agricoltori
 Convention of Scottish Local Authorities
 Conwy County Borough Council, UK
 Cooperativas Agro-alimentarias
 Cooperativas alimentarias, ES
 Copa-Cogeca
 COSLA The Convention of Scottish Local Authorities
 Countryside Council for Wales
 CPMR
 Cumbria County Council
 Czech Agrarian Chamber
 Czech-Moravian Union of Agriculture Entrepreneurs
 Dairy UK
 Danish Agriculture & Food Council
 Danish Regions
 Department for Environment, Food and Rural Affairs (Defra), UK
 Der Bayerische Bauernverband
 Derbyshire County Council
 Die Grünen, Berlin
 Die LandGestalter
 dr Robert Mroczek mgr Mirosława Tereszczuk
 DRV, DE (Deutscher Raiffeisenverband)
 Dutch Northern Provinces
 Dutch Organisation for Agriculture and Horticulture
 DVGW German Technical and Scientific Association for Gas and Water
 DVL (Deutscher Verband für Landschaftspflege)
 East Riding of Yorkshire Council
 Eco Ruralis
 Ecologistas en Acción
 ECOVAST (European Council for the Village and Small Town)

EEB
 EFG (European Fermentation group)
 EFOR (European Federation of Origin Wines)
 ELARD
 ELO - European Landowners' Organization
 ENCA
 ENCA IG sustainable Land Use and Agriculture
 English Heritage
 English National Park Authorities Association (ENPAA)
 Espace interrégional européen
 EUCOLAIT
 EUREAU (European Federation of National Associations of Water and Wastewater Services)
 Euro Coop (European Community of Consumer Cooperatives)
 EUROCARE
 EuroGites
 Eurogroup for Animals
 EUROMONTANA
 European Crop Protection Association
 European Dairy Association
 European Forum on Nature Conservation and Pastoralism
 European Heart Network
 European Initiative for Sustainable Development in Agriculture (EISA)
 European Milk Board
 European Potato Trade Association
 European Public Health Alliance
 European Public Health and Agriculture Consortium
 Evangelische Brüder-Unität
 FACE (Federation of Association for Hunting and Conservation of the EU)
 Fair Trade Advocacy Office
 Fairtrade Africa
 Farmers Parliament
 Farmers' Union of Wales
 FDSEAIF (Fédération Départementale des syndicats d'Exploitants Agricoles de l'Ile de France)
 Federação Portuguesa de Associações de Desenvolvimento Local
 Fédération des Parcs naturels régionaux de France
 Fédération Inter-Environnement Wallonie
 Fédération Nationale d'Agriculture Biologique
 Fédération Nationale des Chasseurs de France
 Fédération Unie de Groupements d'Éleveurs et d'Agriculteurs
 Federazione Trentina della Cooperazione
 FEDIOL is the European federation representing the EU Oil and Proteinmeal Industry
 FEFAC
 FERN
 Fertilizers Europe (European Manufacturers Association of Fertilizers)
 FGA-CFDT
 FIAB (Spanish Federation Of Food And Drink Industries)
 Finnish Rural Network
 Finnish Rural Network, Leader working group
 FNAB, Fédération Nationale d'Agriculture Biologique des Régions de France
 FNCUMA
 FNE (France Nature Environnement)
 Food and Drink Federation's
 FoodSovCap Network
 Frie BOender - Levende Land
 Friends of the Earth Cyprus
 Friends of the Earth Europe
 FRSEA
 FSB (Federation of Small Businesses)
 German Landowners Organization
 Germanwatch
 Grundbesitzerverband NRW

Grüne Bäuerinnen und Bauern (GBB)
Hampshire County Council
HANGYA Association of Hungarian Producer's Sales and Service Organisations and Co-operatives
Havlíková Justa
Heart of Mersey
Helmholtzzentrum für Umweltforschung
Herefordshire Council
Highland Council
IFAB (Institute for Agroecology and Biodiversity)
IFOAM
Infarm
Institute for Agroecology and Biodiversity
Institute of Agricultural and Food Economics
Instituto de Desarrollo Comunitario
Interchanvre
International Confederation of European Beet Growers
Interprofession des fruits et légumes transformés de France
IPO (Dutch provinces)
Irish Cattle and Sheep Farmers' Association
Irish Co-Operative Organisation Society
Irish Dairy Industries Association
Irish Farmers' Association
Irish Heart Foundation
Irish Islands Federation
Irish Rural Link Policy
JARC (Joves Agricultors i Ramaders de Catalunya)
Jeunes Agriculteurs
Karhusetu
Karki
KEPKA - Consumers Protection Centre
Kmetijsko gozdarska zbornica Slovenije
Kreisbauernverband Borna, Leipzig
Kreisbauernverband Marburg
Kreisbauernverbandes Böblingen
Kuusiokunnat
Läänemaa Mahetootjate Selts - Society of Ecological Farmers of Läänemaa County, Estonia
Landesbauernverband Baden
Landesbauernverband Brandenburg
Landesbauernverband in Baden-Württemberg
Landesbauernverband Sachsen
Landesnaturschutzverband
l'Association Blé Dur Méditerranée
Latvian Rural Advisory and Training Centre Saldus
Latvian State institute of agrarian economics
Le groupe Pac 2013
LEAF (Linking Environment And Farming)
LINK
Lithuanian Free Market Institute
LVAEI (Latvia State Institute of Agrarian Economics)
Madonas rajona lauksaimnieku apvienība
Marches Local Enterprise Partnership
Meat Promotion Wales'
MEG Milch Board
Ministry of Employment and the Economy
Mitglied des Vorstandes des Kreisbauernverbandes Karlsruhe
Mitglied Interessenvertretung der deutschen Bauern
MTT Agrifood Research Finland
NATAGORA
National Association for Areas of Outstanding Natural Beauty
National Farmers Union of Scotland
National Farmers' Union of England and Wales

National Federation of Agricultural Co-operators and Producers (MOSZ)
National LAG Network of the Czech republic
National Rural Development Network Slovakia
Naturschutzbund (NABU)
Natuurmonumenten
Network for Food and Agriculture
NFU Cymru
NHF (National Heart Forum)
North West Health
North West Regional European Partnership
Northern Ireland Agricultural Producers Association
Northern Ireland Environment Link (NIEL)
Northern Ireland Region
OEIT (European Organisation of Tomato Industries)
Okresní agrární komora, nevládní agrární organizace, ředitelka
OPERA Research Center
oriGIn
Orkney Islands Council
PAN Europe (Pesticide Action Network Europe)
PFSA (Plate Forme Souveraineté Alimentaire)
Piena kooperatīvu sabiedrība "Vērgale"
Pohjois-Kymen Kasvu
PoKo
Präsident Hessischen Bauernverband
Preiļu lauksaimnieku apvienība
Preston City Council
Primary Food Processors
PROFEL
Providus et al
PURPLE (Peri-Urban regions Platform Europe)
Region jaelland, DK
Région Languedoc-Roussillon
Région Plzeňského CZ
Région Provence-Alpes-Côte d'Azur
Region Rhones-Alpes
Regional Ministry of Agriculture and Fisheries of Andalusia
Réseau Rural Languedoc Roussillon
ROSTĚNICE
Royal College of Physicians of Edinburg
Royal Society of Wildlife Trusts
Ruralité-Environnement-Développement
SAEPR PL
SAVE Foundation
Scottish Borders Council
Scottish Environment Protection Agency
Scottish Government
Sepra
Shetland Islands Council
SIA (Latvijas Lauku konsultāciju un izglītības centrs)
SLC (Swedish farmers)
Slovak Agricultural and Food Chamber
Slovenská poľnohospodárska a potravinárska komora
(Slovak Agricultural and Food Chamber)
SNH (Scottish Natural Heritage)
SNIA (Syndicat National de l'Industrie de la Nutrition Animale)
Soil Science and Conservation Research Institute
Somerset County Council
Spanish Association of Beef Cattle Producers
Spanish Heart Foundation
Spanish National Rural Network
Spanish Society for Organic Farming (SEAE)

Suaci Alpes du Nord
 Svenska lantbruksproducenternas centralförbund SLC
 Swedish Consumers' Associations
 Swedish Society for Nature Conservation
 Tate & Lyle Sugars
 Thames Water
 The Autonomous Community of Galicia
 The Confédération Européenne des Entrepreneurs de Travaux Techniques, Agricoles, Ruraux et Forestiers (CEETTAR)
 The European Flour Millers
 The Finnish Association for Organic Farming
 The Highlands and Islands of Scotland European Partnership
 The Northern Netherlands Provinces
 The Soil Association
 The Swedish association for Transhumance and Pastoralists
 The Village Action Association of Finland
 The Village Action Association of Finland
 UEAPME (the European craft and SME employer's association)
 UFU (Ulster Farmers' Union)
 UK Faculty of Public Health
 Ulster Wildlife Trust
 Union de Pequeños Agricultores y Ganaderos
 Unión de Pequeños Agricultores y Ganaderos (UPA)
 Union des Associations des Semouliers de l'Ue
 Union for Morava River
 Union of Towns and Municipalities of the Czech Republic (SMO ČR)
 Unioncamere Calabria
 United Federation of Danish Workers
 Universidade dos Açores
 University of Copenhagen
 University of Economics Poznań
 University of Liverpool
 University of Madrid
 University of Rostock
 Uudenmaan ympäristönsuojelupiiri ry
 Územní organizace Zemědělského svazu Kolín a Praha východ tajemník
 Väinamere Pärändkoosluste Säilitajad - Upkeepers of Väinameri Heritage Landscapes
 Verband der Bayerischen Grundbesitzer
 Verband der Landesarchäologen in der Bundesrepublik Deutschland
 Vereins zum Schutz der Bergwelt
 Via Campesina
 Via Campesina AT
 Vladimír Mareš
 Welsh Local Government Association
 Wirtschaftliche Vereinigung Zucker e.V.
 Women's Food and Farming Union (WFU)
 WWF
 Yara International
 ZEA Světice a.s.
 Zemědělská akciová, CZ
 Zemědělské družstvo vlastníků Štichovice
 Zemedelske obchodni družstvo Brniste
 Zemědělske obchodni, CZ
 Zemědělský svaz ČR
 Zemědělský svaz Domažlice
 Zemnieku saimniecības „Liepas” īpašniece, Lauku attīstības speciāliste
 Zentralverband des Deutschen Handwerks
 Zivildourage
 ZS ČR Pelhřimov

ANNEX 2: PUBLIC CONSULTATION DOCUMENT

THE REFORM OF THE CAP TOWARDS 2020

CONSULTATION DOCUMENT FOR IMPACT ASSESSMENT

1. CONTEXT

- The successive reforms of the Common Agricultural Policy (CAP) during the past decade have established an overall policy basis to be fully consolidated by the end of current financial framework in 2013.
- On 12 April 2010, the Commission launched a public debate on the future of the CAP beyond that date, culminating in a public conference on 19 and 20 July 2010. The debate generated some 5600 contributions and the conference attracted over 600 participants. The European Parliament, the European Economic and Social Committee and the Committee of the Regions contributed to the public debate by issuing own-initiative opinions. The Council also discussed the future of the CAP during specific meetings held during the previous Presidencies.
- The Commission's response to the debate on the future CAP comes in the form of the Communication "The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future", which outlines the broad options for guiding the next CAP reform.
- An adapted legislative framework will be prepared for the period post 2013, corresponding with the new financial perspectives, in accordance with the priorities of the "Europe 2020" strategy. It will be accompanied by an Impact Assessment, which is steered by an Inter-service Group (ISSG) within the Commission. In this context, preliminary formulation of the issues to tackle, objectives of the policy and scenarios are presented here by the ISSG and consulted with the interested parties in order to provide a comprehensive evidence-base for high quality and credible policy proposals.

2. ISSUES

The reform path of the CAP since the early 1990s included two major reforms (1992 and 2003) and two significant adjustments (1999 and 2008), which allowed the policy to adjust and adapt to the challenges it faced during the past two decades. Direct payments make an important contribution to keeping sustainable farming in place through the combined effect of the provision of basic income support and the link to cross-compliance. Decoupling of direct payments has improved market orientation, while adjusted market measures form price safety-nets in cases of significant price declines, limiting instability. Rural development serves a wide range of objectives promoting

competitiveness of the EU's agricultural sector, improving the environment and the countryside, and the balanced development of rural areas.

The new financial framework for the EU and the "Europe 2020" strategy priorities of smart, sustainable and inclusive growth offer an opportunity to define the vision for European agriculture by 2020 and to prepare a reform path for the Common Agricultural Policy accordingly. The Lisbon Treaty reaffirmed the objectives of the CAP, although these objectives are today played out on a much wider legal and political stage than when they were written, with other issues such as environmental integration now playing a crucial role. The public debate initiated by the Commission in spring 2010 indicated a broad consensus on the challenges the sector faces. The next step is to redesign the policy instruments to make the CAP more efficient, effective and simple, responsive to societal concerns and coherent with other EU policy objectives.

The challenge related to agricultural policy is two-fold. On the one hand, agriculture can potentially contribute substantially to many of the challenges faced by Europeans with right incentives and in the right setting, as described in the next section. On the other hand, its structure is diverse and economic situation fragile, as the subsequent section shows. In effect, short-term survival dominates the perception of many farmers over the long-term, broader perspective. If agricultural policy does not address the former, it will have little success in promoting the latter.

2.1. The broad challenges

The share of agriculture in EU-27 GDP amounts to 1.2 % - its steady decline being generally associated with wider economic development. Yet, its role is not well reflected in its share of GDP but rather by the extent to which it can offer solutions to meet the most important preoccupations of citizens. The foremost role of agriculture is to provide food and feed, but the issues of *how* it is done, *where*, and *by whom* are inherently linked to sustainability - in environmental terms through land management and use of natural resources, in social terms through territorial cohesion and maintaining rural communities and in economic terms through a competitive agricultural production. In addition, agriculture has a role in providing other products and uses, such as biomass for energy (as a source of green energy) and biomaterials (as a way of reducing dependency on fossil materials), thus contributing to fighting climate change and providing more sustainable energy supply.

Food security and safety

Ensuring that agricultural products are of good quality, healthy and safe and available to consumers at reasonable prices is considered by EU citizens to be the top priority for the Common Agricultural Policy. The concern regarding food security is less about the overall availability of supply in Europe, but rather about the role of the EU within a world-wide context. Particular attention is paid to ensuring the resilience of the current system— i.e. the "access, availability and acceptability" of food and diets.

Within a time span of three years the agricultural sector experienced a high price spike followed by an equally strong decline a few months later. Both were caused by a combination of factors on supply and demand side, including an increased influence of wider macroeconomic developments. While it has had a modest effect on the average European consumer (food represents 16 % of household expenses and agricultural product prices represent a decreasing share of food prices), it revealed the sensitivity of

the system to excess price volatility and other disruptions, asymmetry and tensions in the food chain.

Creating the conditions for easy access to healthy, diverse, sustainable and nutritious diet has clear public health benefits as diet is one of the major modifiable risk factor for chronic non-communicable diseases ([obesity](#), [diabetes](#), [cardiovascular](#) disease, [cancer](#)). The number of overweight children increases by 1.2 million per year and (with increase in child obesity 400.000 per year) in the EU. From a public health perspective, access to nutritious-efficient food remains insufficient for some groups of EU citizens (e.g. the most deprived), availability of local and directly marketed food stuffs is limited, and acceptability is largely influenced by mass media which is biased towards unhealthy food stuffs (soft drinks, highly processed foods). Finally, there are concerns as regards other qualities of the food, which include the ethical factors related to production and the way animals are treated.

Food safety and animal and plant health are areas where constant adaptation is necessary, with diseases which were unknown a decade ago appearing (e.g. SARS) while others, such as foot and mouth disease, bluetongue and avian flu recently presenting new challenges, coupled with the increasing volume of trade in animal products and science and technology advances. This points to the need for strengthening the principle of prevention in animal and plant production, the strengthening of surveillance and a more risk-management based approach across the food chain.

The availability of food and the capacity of Europe to meet its needs is largely taken for granted (although access to food can be problematic for the most deprived people). Expectations relate to safety, quality, health, environmental and ethical aspects, which means that there is an increased interest in production methods and that farmers are put under the spotlight. This requires the creation of strong, stable links between farmers and consumers.

Environmental concerns

With agriculture and forests covering about 77% of the EU territory (about 47% for agriculture and 30 for forests), their interaction with the environment is significant. It is estimated that about one third of agricultural land in the EU is managed by farming systems delivering High Nature Value. Natura 2000 sites protecting biodiversity cover 10% of agricultural area. Although progress has been made in integrating environmental concerns into the CAP and in introducing environmental legislation at farm level, more needs to be done to ensure the sustainable management of landscapes and sustainable use of natural resources. In particular, water quality and quantity, soil quality and land availability are still areas of major concern, together with the question of how to protect, maintain and further enhance farmland habitats and biodiversity and to enhance the role of agriculture in preserving ecologically valuable landscapes.

According to the European Environment Agency (EEA), 24% of water abstraction is used for agriculture (and up to 80% in certain areas of southern Europe) with a relatively low return flow, as often just a third of the withdrawal water is returned to a water body. The data further show that agricultural water use across Europe has increased over the

last two decades. In addition an estimated 25% of EU soil suffers from unsustainable erosion and 45% of European soils have low organic matter content.³

As regard the use of farm inputs, there has been a substantial decline from the fertiliser consumption peak of the seventies and eighties (by 2017 projections show a decrease of 28% for nitrogen compared to 1988, 67% for phosphorus and 61% for potassium in the EU-27 compared to 1979). The current use is rather steady with a general decrease of all nutrients in the EU-15, but an increase in the EU-12. The total amount of plant protection products used in the EU-25 increased steadily in the 1990s, stabilising in the late '90s and then declining continuously from 1999 until 2003 (declining in EU-15 and slightly increasing in EU-10).⁴ New approaches to agricultural management slowly gain ground: organic farming and the use of integrated crop management techniques in many pesticide-intensive farming systems. In this context, prevention of the entry of non-native plant pests and diseases is essential.

Certain farming systems and practices are particularly favourable for the environment. These include extensive livestock and mixed systems, traditional permanent crop systems or organic farming. However, also modern farming systems have an important capacity to ensure good environmental outcomes. Integrated crop management (a whole farm management approach combining the ecological care with the economic demands) are of particular importance in this respect. Integrated farming systems, following defined codes of farming practices, are estimated to cover only about 3 % of the utilised agricultural area in the EU.

Many valuable habitats and the related biodiversity developed over centuries in interaction with farming, systems. Whilst these environmental features depend on appropriate management practices, those practices have been subject to changes, driven by competitive pressures. The assessment of the conservation status of Europe's most vulnerable habitat types and species protected under the Habitats Directive shows that while nearly 65 % of all habitat assessments are unfavourable, generally habitat types associated with agriculture have a worse conservation status than other types.

Intensification and specialisation threaten the environmental values associated with traditional farming systems. In some places, extensively used areas of particular environmental interest struggle with the problem of being economically less viable. These areas are most vulnerable to land marginalisation or abandonment, which is particularly a threat to biodiversity on farmland. Whilst the estimates of manifest land abandonment vary from 0.2 % to 2% of UAA annually on average (i.e. abandonment in spite of CAP support), the estimated area under risk of abandonment accounts for a significant proportion of the total agricultural land, and it is affecting mainly extensive grasslands, mountain areas, and areas with a poor soil and water conditions.

The prospect of more specialization and intensification in some production areas carries the risk of an increase of the above-mentioned pressures on the environment. This will require appropriate baseline rules and sufficient incentives in the CAP for farmers to

³ For instance, there is clear scientific evidence that arable land in France and the UK has been steadily losing large quantities of organic carbon in recent decades.

⁴ Yet, some of the more modern substances are needed in smaller quantities but can be more toxic.

adopt sustainable practices, and to make efforts to preserve biodiversity, habitats and environmentally valuable landscapes, and ensure the provision of ecosystem services.

Environmental concerns have become increasingly present in the CAP, with incentives coming mostly from the Rural Development measures. Rural Development is by far the largest source of EU funding for incentives specifically targeting the environment in rural areas. Given that there is, on the one hand, increasing competitive pressure and a trend towards intensification in many fertile areas, while on the other hand there is a threat of land abandonment in more marginal areas, it will be necessary to ensure that the systems of incentives for farmers to assume their role in the sustainable management of natural resources and the preservation of ecosystems and environmentally valuable landscapes is effective for farmers and land managers operating in very diverse conditions.

Territorial cohesion

Agriculture is also closely linked with the development of rural areas. Of the EU-27 territory, 54% is predominantly rural, representing 19% of EU population. The results of the SCENAR2020 study suggest that most of the economic growth in rural areas now tends to be mainly driven by urban rather than rural economies, with increased urbanisation and a growing service sector, making the issue of rural-urban interaction an important factor. There are large disparities between rural areas themselves depending on their proximity to urban areas: from peri-urban areas, which are well integrated in the metropolitan systems to remote rural areas, which are suffering poor accessibility to services of general interest and population decline.

In predominantly rural areas the primary sector still represents 4.9% of value added (and more, if related food industry is considered) and 15.7% of employment. This is where the role of agriculture can be particularly important, not only directly but also indirectly - through the generation of additional economic activities. It is estimated that an increase in agricultural output produces an additional 150% increase in output among local purchasers and consumers of that output. Especially strong forward linkages exist with food processing, hotels and catering and trade, all sectors that, in turn, have further high links with the rest of the rural economy.

While agriculture is generally not the main driver of economic development in all rural areas, its disappearance in particularly fragile areas will have significant negative consequences for the regional economy.

Climate and energy

In the Climate and Energy Package of 2008, the EU committed unilaterally to reduce its overall greenhouse gas emissions by 20 % below 1990 levels by 2020, and by 30 % if other parties would commit to comparable efforts. The Europe 2020 Strategy establishes the reduction of greenhouse gases as one of the EU's five headline targets.

The 20 % reduction commitment is mainly implemented through Directive 2009/29/EC and Decision 406/2009/EC which require sectors participating in the EU Emissions Trading System (EU ETS) to jointly reduce emissions by 21 % below 2005 levels and non-trading sectors under the Effort Sharing Decision (ESD) to reduce emissions by 10

%). As agriculture is one of the non-trading sectors, policies at the national and EU level, in particular the reformed CAP, will play a key role.

Agriculture has contributed, and can continue to make a positive contribution, to the reduction of greenhouse gases as committed to by the EU⁵. Non-CO₂ emissions from the sector fell by some 20% in the period 1990-2005 to a level of around 9% of the EU total greenhouse gas emissions (excl. land use, land use change and forestry)⁶. However, baseline projections show that emissions in agriculture are predicted to largely remain at current levels in 2020 and 2030 unless further action is taken. Model results show that the sector offers additional cost-efficient mitigation potential for 2020; at a carbon price level of €30/ton (as predicted in the Commission's '20 to 30%' Communication), the EU as a whole could achieve reductions of non-CO₂ greenhouse gases in the agricultural sector by up to 11%. This is consistent with what is required by the non-trading sectors.

There is still underutilised mitigation potential in agriculture for reducing non-CO₂ emissions from manure management and fertilizers as well as for reducing CO₂ emissions, preserving carbon stocks and enhancing carbon sequestration in agricultural soils. Maintaining soil organic matter levels in carbon-rich soils (e.g. grasslands and peatlands) is seen by many scientists as an effective way for agriculture to avoid CO₂ emissions further aggravating climate change.

At the same time, future changes in climate are expected to have a significant effect on agricultural production. On the one hand, this is due to systemic changes, such as permanently drier or wetter conditions, or higher temperature averages. On the other hand, the increased likelihood and severity of extreme weather events will considerably increase the risk of crop failure.

The Renewable Energy Directive requires the EU to produce 20% of its final energy consumption from renewable sources in 2020, including a separate target for the transport sector of 10%. EU agriculture, together with forestry, provides one of the sources of renewable energies, for the heating, electricity and transports sectors. Agriculture has the potential to increase its contribution for example by increased supply of raw material (crops or by-products) for energy or by increased 'on farm' renewable energy production (production of electricity or heating from biogas, solar energy or wind energy). At the same time, the current EU legislation as well as the EU energy efficiency strategy currently under preparation requires energy efficiency improvement both in buildings and in production processes, implying that improvements are necessary also in farm buildings and in agricultural processing. Agriculture uses 2.4 % of the final energy consumption in EU.

Agriculture, as some other sectors, has achieved already a reduction in emissions, and with a decrease of 20% compared to 1990 this reduction has been more than twice the rate of the EU commitment required by the Kyoto Protocol. This is partly due to structural changes and partly to improvements in efficiency. However,

⁵ Emissions in the EU-15 fell by 12% and emissions in the EU-12 by 42% compared to 1990

⁶ The land use, land use change and forestry (LULUCF) sector is currently not part of the EU's greenhouse gas reduction commitment. The Commission is, however, assessing options and modalities for a possible inclusion of this sector in the future. The results will be reported in mid 2011 and, as appropriate, accompanied by a legislative proposal.

further reductions are needed and possible. This will require a more integrated approach and may require changes in production methods, possibly adding costs to farming. Impacts of such cost increases on the competitiveness of EU agriculture would need to be assessed to avoid negative consequences for the global GHG balance, while any loss of agricultural production capacity in the EU should be measured against the challenge of global food security. At the same time, EU agriculture will also have to adapt to the already observable impacts of climate change, which in some regions may, already in the medium term, lead to significant changes in the conditions for farming activities. At the same time the potential of EU agriculture to contribute to a greener energy supply needs to be facilitated.

Non-food uses

Agriculture can provide raw materials for the high value added bio-based products, replacing fossil-based materials with renewable biological materials and bio-processes which are more environmentally sustainable. Also, the EU forestry sector makes an important contribution in providing the feed stocks for bio-energy and forests are an important source of raw materials for forest-based industries, providing the wood, pulp, cork and fibres that supply a wide range sectors.

Although bio-plastics are at present "niche markets" (50,000 tons of bio-plastics were produced in 2005, representing 0.1% of the total market), a dynamic growth is expected. Estimates suggest possible market shares in the order of 1-2% by 2010 and 2-4% by 2020.

European agriculture, as a provider of raw materials, stands to benefit from the developing bioeconomy, which will offer high-value outlets for specialized products. While most of the policy tools are beyond the CAP, it is necessary to create the links between farmers, research and industry to facilitate cooperation. Nevertheless, an increased use of both biomass-based energy and raw materials needs to be achieved in a way that is economically efficient and is compatible with food security and environmental objectives.

Global issues

The forecast population of 9.2 billion people in 2050 with a projected increase of world's average daily calorie availability by 11% will require 70% more production. While this is less than the increase of 148% that took place between 1961 and 2007, the big challenge to reduce hunger and poverty will relate not only to assuring the availability of food, but also access to food and improving nutritional adequacy of food intake.⁷ Most of the poor and hungry in the world live in rural areas, where agriculture is the main economic activity and small-scale farming is dominant: about 85% of farmers in developing

⁷ Future global food security challenges in developing countries also include population growth, pressures on natural resources and ecosystem services, and adverse impacts of climate change on agriculture, affecting growing conditions and making adaptation measures necessary. The EU's policy framework to assist developing countries in addressing food security explores key issues such as nutrition, price volatility, social protection and safety nets, biofuels, food safety, research and innovation, large-scale land acquisition, and the "Right to Food".

countries produce on less than 2 hectares of land. Apart from investment and capacity building, relative stability of local agricultural markets is necessary to foster growth. On the other hand, the increasing role of certain developing and emerging economies has transformed the agricultural trade landscape.

The EU remains the world's leading trader (biggest importer and one of the two biggest exporters together with the US) but Brazil is a constantly growing exporter of a whole range of agricultural products. China and India are both leading producers and consumers. Given their size, changes in their domestic situation translate into significant shifts in their trade position on the world market, especially when the latter is thin. Overall, a shift towards developing countries is occurring, both for agricultural production, consumption and trade.

The EU will continue its efforts to seek the conclusion of an ambitious, balanced and comprehensive agreement in the Doha Development Round. As part of an overall package deal, the EU has indicated its readiness to accept a steep reduction in the ceiling on its trade-distorting subsidies, the elimination of its export subsidies and a significant reduction of its border protection. In parallel, the EU will actively pursue its agenda of bilateral or regional trade negotiations, which come as a complement to the multilateral ones. This means that the EU agricultural sector will be exposed to growing pressure and volatility of prices and income and, as a result, production is likely to adjust. At the same time, new trade agreements provide opportunities for EU agricultural exports. And EU role in world agriculture makes it an important actor in the global standard setting for sustainable agricultural production and consumption.

The EU has substantially reduced its trade-distorting support to agriculture, opened markets for least developed countries (LDCs) and other key partners significantly, and shown its commitment for achieving an ambitious agreement in WTO negotiations, provided that it is comprehensive and balanced, including for the agricultural sector. This represents a challenge for EU farmers, but also offers an opportunity for EU food exporters.

2.2. Can agriculture do it?

The contribution of European agriculture to the challenges signalled above will hinge on it being a thriving and competitive sector, with positive prospects and longer-term perspective of a sector that is capable of attracting human and financial capital and is less dependent on public support.

Farm income

The main economic parameters give, however, reasons to be concerned, in particular about the profitability of farming. Farm income has been increasing only by 0.6% per year between 2000 and 2009. The dynamics have been very different in EU-15, where income stagnated for the last decade before falling by 17% following the economic crisis, and EU-12 where accession led to large increase in farm income, which despite a drop of 12.5% in recent years, stayed substantially above the levels at time of accession. The impact of the economic crisis has been severe for EU agriculture, leading to a cumulative decline in agricultural income that erased in just two years the gains of the past fifteen. The sector is also plagued by instability, with more than half of EU farms experiencing a variation of farm income by over 30% in comparison with the average for the previous three years.

In effect, while the vast majority of farms are able to cover variable costs, in the 2004-2006 period only 35% of farms in EU-25 were able to cover all costs. This is especially true for small farms, but the share of profitable large farms is also just above 62%. In practice, this means that family labour is not sufficiently remunerated and that family assets do not provide adequate returns. Farm incomes are lower than that of the rest of the economy. In 2008, the entrepreneurial income per worker employed in agriculture in the EU-27 was estimated to be around 58% of the average wage in the EU. The gap is more pronounced in the EU-12 than in the EU-15. Since the year 2000, the gap has decreased in the EU-12, but actually increased in the EU-15.

Agricultural structure

The relatively low profitability of agriculture is partly a result of the fragmented and divided structure of EU agriculture. In 2007, there were 13.7 million holdings and 11.7 million annual working units⁸ in EU-27 and the most striking feature is the diversity of structures. The average farm in EU-27 has 12.6 ha (22 ha in EU-15 and 6 ha in EU-12), with an increasing number of farms above 4 ESU⁹. At the same time, 6.4 million holdings (46.6% of all farms) had an economic size of less than 1 ESU. These farms employ 2.7 million annual working units (23% of total labour force) but cover only 11 million hectares (6% of the total utilised agricultural area). Many of them in EU-12 are subsistence and semi-subsistence farming, with more than one third of EU-27 family farmers (36.4%) carrying out another gainful activity (apart from farm work). The demographic and education structure points to an issue of low level of human capital. In about a third of all farms, the managers are of 65 years and above (in further 20% they are between 55 and 64) and 80% of farm managers have no agricultural training but practical experience only. This diverse and fragmented structure is set to dominate EU agriculture in the longer perspective with the annual rate of decrease in the number of holdings of 2.2% (for EU-15 between 1995 and 2007 and EU-12 2003-2007).

The attractiveness of rural areas suffers from a significant development gap between the urban and rural areas. Many rural regions lag behind other types in terms of GDP per capita, employment rates or educational attainment. Their social capital suffers as they are more affected by aging population and outward flows. Their level of development of infrastructure and access to public amenities is low. In rural remote areas 43% of population lives more than 30 minutes of driving time by road from a hospital (against 2% in urban and 15% in rural close areas) and more than 1 hour of driving time by road from a university (against 1% in urban and 15% in rural close areas).

The diversity of structures, with a dominance of small-scale farming, will remain high in the 2020 perspective and is mostly a result of factors outside agriculture (e.g. economic and social development, legal framework for land, access to factors of production, heterogeneous agronomic conditions). As a result, the same instrument will have different impact on particular holdings and may not be sufficiently

⁸ The annual work unit corresponds to the work performed by one person who carried out an agricultural activity on a full-time basis.

⁹ European size unit, abbreviated as ESU, is a standard gross margin of EUR 1 200 that is used to express the economic size of an agricultural holding or farm.

targeted in terms of achieving policy objectives. Moreover, these holdings have a different role with regard to the environment, local economy and social cohesion.

Factors influencing market income

Agricultural commodity markets, despite a sustained demand growth linked to increasing population, are unlikely to offer higher returns. Most medium-term projections for the agricultural sector show prices at levels above historical averages, but this is partly due to expectations of higher energy and other production costs, so producers' margins are not expected to increase. Further opening of access to markets will lead to stronger competition, especially in livestock sector, but for some sectors it will open new markets. Furthermore, price volatility is expected to remain significant due to series of factors, among which: uncertainties over energy markets, increased extreme weather events due to climate change, the financialisation of commodity markets and the use of distorting measures (e.g. export restrictions) which should add to the natural instability of agricultural markets.

A part of the unfavourable perspectives for the market income of EU farmers is related to the **functioning of the whole food chain**. Analysis shows that the overall competitiveness of the chain and its economic growth have underperformed as compared to the overall EU economy since 1995 (average value-added growth has been 2% lower per year than average growth in the EU). Moreover, it is facing increased competition from international actors and recent food price volatility has pointed to a lack of resilience to shocks in agricultural prices. Markets along the food supply chain suffer from a low and asymmetric price transmission as well as a lack of price transparency and predictability. Farmers tend to lose out – in particular due to the concentration of market power upstream and downstream and an unequal bargaining power among the partners of the chain.

In view of the above, there is an increasing relevance of product differentiation in specialised and local markets and higher value-added outlets, where they can gain a competitive advantage. Yet, these opportunities have remained a niche which is not easily transformable to a mainstream approach for most of these markets. In 2008 over 860 PDO/PGI products were registered for a total value of 14.5 billion EUR (about 4% of total production). The organic sector has been growing dynamically in the past decade. However it still represented in 2007 only 2% of food expenditure in EU-15 and even less in EU-12. Consumers and stakeholders do not seem to be sufficiently well informed about the characteristics and production methods that define the quality of products, with information and promotion activities becoming an important marketing tool. Promising outlets are also linked to the development of the bioeconomy and the supply of raw materials for bioplastics, although they are still marginal.

Overall, although prices on commodity markets are set to remain above historical levels, the agricultural margins will not grow due to higher input costs and increasing price and production risks. Moreover, the relatively weak position of farmers in the food chain means that they bear a disproportionate share of the risks within the chain. Specialised and local markets offer an alternative, but are not fully developed and sometimes lack the right framework. Innovative production techniques will also be increasingly needed for environmentally-friendly farming.

Longer-term perspectives

In terms of **efficiency gains**, the Total Factor Productivity (TFP) in EU-15 has increased at an average annual rate of 1.5% between 2000 and 2006, while it grew at around 2% per year in the nineties. The productivity gains result mainly from increased labour productivity, while yields have not grown significantly. **Research and innovation** are the main factors that could reverse the declining trend of productivity growth in agriculture. The potential is large, as estimates of costs and benefits of agricultural research show rates of return on investment of around 45% - each 1 € spent gives 0.45 € gain per year in the future. It does not appear to be a problem of public spending on research. In terms of Agricultural R&D, Eurostat data show that EU public spending on agricultural research (GBAORD)¹⁰ accounted for close to 3.2 billion € in 2007 (double that of the USA and quadruples that of Japan) and showed a rising trend of 5.4 % growth per year since 2000. However, the process of knowledge dissemination and adaptation should be improved.

In the context of low profitability and diversified structure, EU agriculture has witnessed a slowdown of productivity growth which will reduce the potential of the sector to overcome current problems and develop in long-term perspective. Agricultural knowledge and innovation systems, including extension services, are fragmented and insufficiently responsive to evolving needs which hampers the implementation of research and uptake of innovation by the agriculture and the food sector.

2.3. Challenges to the current policy tools

A certain continuity is required to preserve what has already been achieved, but at the same time the reorientation towards a wider role for agriculture needs reinforcing.

The CAP is not a blank slate and the three broad types of CAP policy instruments: direct payments, market measures and rural development provide a starting point for discussions on the shape of the policy.

The decoupling of direct payments had successfully changed the focus of the policy from production to broader challenges. However, the actual support levels are still largely linked to historical type and level of production, resulting in large disproportions between farmers. The accession of EU-12 added to the imbalances. As the payments are not sufficiently targeted, they provoke strong criticisms and are difficult to justify to the general public. The main challenge is to achieve more equity between Member States and between farmers while strengthening the role of direct payments in the provision of public goods. However, more equity will not necessarily improve the targeting of the support. A particular challenge may therefore be to design targeted instruments that are considered as fair among Member States and farmers.

The market measures have been profoundly changed in previous reforms, which transformed their role from support to a safety-net function by lowering reference prices and removing tools which were inefficient. The 2009 dairy crisis has shown that market measures generally function well as a short-term relief in situations of very low prices.

¹⁰ Government Budget Appropriations or Outlays on Research and Development (GBAORD) are all the appropriations allocated to R&D in central government or federal budgets.

However, the high price volatility has prompted questions about the relevance of more risk management tools and a more global approach to the functioning of the whole food chain.

Rural development policy has evolved from measures accompanying the reform process to an independent set of regionally adapted tools that, by virtue of its planning and financing, require strategic thinking in its approach. This has to be aligned with the EU 2020 strategy to benefit from synergies between different policies and reinforce the European added value of the policy. There is also a need to strengthen the delivery mechanisms to make it more effective.

There are also two cross-cutting issues, which will have to be taken into account when considering the effectiveness of the policy. Firstly - how to respond to the diversity of EU agriculture to provide tailored support without losing the common character of the policy. Secondly - how to assure further CAP simplification, while moving towards better targeting maintaining sound financial management and controllability and enforcement.

3. OBJECTIVES

The Lisbon Treaty has confirmed the relevance of CAP objectives of increasing agricultural productivity, ensuring a fair standard of living for the agricultural community, stabilising markets, assuring the availability of supplies and ensuring that supplies reach consumers at reasonable prices. **Yet, the challenges to EU agriculture have become broader (beyond the agricultural markets) and more complex (due to inter-linkages of economic, social and environmental issues and their global dimension).** Indeed, this greater breadth and complexity is reflected in changes to the Treaty since the first appearance of the CAP objectives by integrating additional obligations such as the environmental and public health concerns, territorial cohesion and the development cooperation objectives of the Union into other policies.

Therefore the policy tools have to address both the short-term viability and long-term competitiveness of European agriculture (low profitability and diverse structure) and its potential contribution to wider societal concerns (including food safety and quality, contribution to climate and energy policies, environmental sustainability, cohesion). A possible way of translating these is through the following objectives:

Maintaining the agricultural production capacity throughout the EU

- Attenuating volatility and its effect on incomes, fostering the development and growth of agricultural markets and better functioning of the food chain in order to help farmers derive adequate market income while contributing to high public health level.
- Enhancing the competitiveness and productivity of the agricultural sectors and fostering green growth through innovation in adopting new technologies and processes, developing new products and markets and supporting the transfer of research results to agriculture and the food sector, in view of the challenges and opportunities presented by evolving consumer preferences and increased trade liberalization.

- Contributing to reduction of the gap between agricultural and non-agricultural income in an equitable manner and compensate for difficulties in areas with natural handicaps, which are valuable from environmental or social sustainability perspective

Ensuring the provision of environmental public goods such as the sustainable management of natural resources and the preservation of the countryside

- Contributing to the provision of environmental services, such as the sustainable management of natural resources, the delivery of ecosystem services and the preservation of the countryside, as well as reducing environmental damage by agriculture
- Integrating and promoting climate change mitigation in actions supported by the CAP and enhancing agriculture's resilience to the threats posed by a changing climate

Contributing to the vitality of rural areas and territorial balance throughout the EU

- by allowing for structural diversity in the farming systems, improving the conditions for small farms and developing markets for higher value-added specialised and local products
- by improving the general economic and social conditions in rural areas and promoting diversification

In order for the CAP to meet these objectives in the view of the challenges outlined above, the purpose of the reform is to rethink the existing policy instruments along the following lines:

- increase the role of instruments relating to the objective of ensuring the provision of environmental public goods and the preservation of countryside
- broaden the policy framework for agricultural markets to help farmers manage their risks better and derive adequate income from the market
- adjust current income support instrument so that it corresponds better to the needs in diverse economic, social and environmental conditions throughout the EU and complements market income
- Moreover, the reforms of policy instruments have to take into account the EU obligations as regards international trade agreements, coherence with development policy goals, impact on public health, budgetary efficiency, as well as simplification and reduction of administrative burden.

4. POLICY SCENARIOS

Various ideas about the reform of the CAP towards 2020 have been expressed in the public debate, including the debate within EU Institutions. These ideas have been grouped here under three broad policy reform scenarios, which will be analysed in the Impact Assessment and compared to two reference scenarios (status quo and no policy).

The three reform scenarios sketch alternative structures of the policy, within which possible reforms or introduction of individual instruments will be considered.

All three policy reform scenarios respond to the objectives of the reform and follow the ideas outlined in the EU Budget Review. What distinguishes them is the weight they give to particular objectives, the way of achieving them (EU-wide or local, generalised or more targeted) and their expected impacts. Between them, a complete evidence base will be provided as to the impacts of reforming the policy.

All scenarios are, to a different extent, anchored in the Europe2020 strategy contributing to:

sustainable growth by promoting resource efficiency, maintaining the food, feed and renewables production base, increasing competitiveness, providing environmental public goods, fighting climate change and biodiversity loss;

inclusive growth by unlocking local potential, diversifying rural economies, developing local markets and opening up alternative opportunities to accompany agricultural restructuring;

smart growth by supporting innovation, technology and skills, improving uptake of research, and developing high value added and quality products

In essence, the adjustment scenario continues the current policy path of gradual adaptation, while the other scenarios propose an increased effort to respond to the objectives of smart, sustainable and inclusive growth, either, by incorporating them better in the first pillar (integration scenario) or, in by concentrating efforts on strengthening the second pillar (re-focus scenario). In all scenarios, efforts would be made to make the policy more efficient and simple.

4.1. Adjustment scenario

As the challenges to sustainable agriculture in Europe are not new, the previous reforms have already allowed the adjustment of the policy to address them. This scenario assumes the continuation of this process with further gradual changes to the current policy framework. The main feature of future CAP reform under this scenario would be to lead the Single Payment Scheme (SPS) of direct payments towards a significant harmonisation in the level of payments throughout the EU (through a general flat rate payment or one adjusted by objective social and economic criteria), with further strengthening of rural development policy to target the challenges identified as priorities (resource efficiency and innovation) and streamlining of market measures (exceptional measures, public intervention and private storage).

This scenario would allow retaining a stable policy framework, while addressing the most pressing issues of payment redistribution and maintaining an economic viability of farming. A limited increase of funds to the second pillar would be available for climate change, water, biodiversity and renewable energy actions, going a certain way towards addressing the EU objectives of smart, sustainable and inclusive growth. The focus would remain on income support for farmers across the EU, given the low profitability of farming. More balanced payments across the EU would give impetus to EU-12 agriculture, where this sector is relatively more important for economic and social reasons.

Analysis will show the degree to which this would allow sufficient leverage for the EU to properly respond to environmental and social problems without undermining the long-term economic performance of the sector, with the risk of creating more pressure on income support.

4.2. Integration scenario

The approach assumed under this scenario is to project the type and scale of problems that agriculture will be faced with in the coming decade and anticipate them with a thoroughly revised policy framework, which integrates the three objectives in both first and the second pillar of the CAP, reinforcing their complementarities.

The SPS system would be divided into a basic income component (capped to avoid large payments to single beneficiaries) and additional payments targeting environmental issues applicable throughout the EU territory through generalised, non-contractual and annual environmental actions linked to agriculture (such as permanent pasture, green cover, crop rotation and ecological set-aside) with enhanced conditioning through cross-compliance. The option would be left to Member States to commit a certain part of the financial envelope to compensate specific natural constraints and address selected economic and social challenges. Rural Development would be aligned with EU priorities as provided in Europe2020 strategy and targets, with the objectives interpreted through guiding considerations of environment, climate change and innovation. It would be managed through a strengthened strategic targeting approach with an emphasis on outcomes rather than measures, in a common strategic framework for EU funds. Market measures would be reinforced as a safety-net with more focus on the whole food chain, through strengthening of producer and inter-branch organisations. A wider range of risk management instruments will be offered to farmers, helping them to cope with price and production risks (including those related to animal and plant health) through better access to insurances, mutual funds and income stabilisation instruments.

The new elements in the SPS would reinforce the support for the provision of environmental public goods in the first pillar by providing an EU-wide instrument for actions which would concern all farmers, whilst reducing negative climate change and environmental impacts. It would be supplemented by local level actions through Rural Development, with a wider possibility of alignment with Europe2020 strategy. Basic income support would provide a more equitable support for farmers. Market measures would focus on avoiding extreme price fluctuation and improving farmers' position in the food chain to help increase market revenues. The current balance between the first and the second pillar will be maintained, thus risking that the local responses will not sufficiently match future needs.

4.3. Re-focus scenario

With direct payments representing the bulk of CAP spending, the current policy has a strong focus on income support. This scenario assumes the gradual re-focus of support solely around ensuring the environmental and climate change objectives through the rural development policy strategic framework, thus fostering sustainable growth. It assumes that production capacity can be maintained without support (albeit with an accelerated and strong restructuring of the sector). The objective of contributing to the vitality of rural areas and territorial balance would be achieved by the cohesion policy.

The SPS system would be progressively phased out to allow a smoother adjustment within the timeframe of 2020, with parallel abolition of the remaining market measures. Funding for Rural Development would be increased significantly and redistributed between Member States based on objective criteria. It would be focused on climate change and environment aspects with certain temporary measures to support the phasing-out of direct payments, fostering innovative approaches and with a simplified management system.

By providing significantly increased funding for environmental and climate change issues, this scenario would encourage the creation of regional strategies for addressing these issues in order to assure the implementation of EU objectives at a local level.

However, the difficult income situation in the EU agriculture could result in lowering the effectiveness of the environmental incentives as the farming sector concentrates and intensifies production in the most competitive regions with the aim of receiving adequate market income. This scenario allows significant CAP savings for the EU budget, but, depending on the impacts, may leave open the sources of compensation for expected income losses via national policies.

4.4. Status quo

This reference scenario examines the effects of current trends as regards environmental, social and economic factors affecting EU agriculture if current policy framework was maintained. It allows the illustration of the main problems and adaptation needs and serves as a benchmark for other options.

4.5. No policy

This reference scenario examines the effects of current trends as regards environmental, social and economic factors affecting EU agriculture if no policy framework were available, except for general common market rules. As a counter-factual scenario, it provides an insight into the role of policy in other scenarios.

5. QUESTIONS

The above description of issues, objectives, options and scenarios tries to sum up various ideas that were put forward in the public debate. It represents a certain choice with regard to issues tackled, main objectives and possible policy evolutions. This consultation process calls on interested parties to express their opinion on the relevance of the described elements, the consistency of approach and possible improvements that could be made.

The public consultation also allows to acquire a broad range of information and knowledge on the expected effects that each broad policy scenario and consequent changes to the CAP instruments. The stakeholders are invited to provide factual, analytical contributions that will complement other sources of information in assessing the impacts of policy reform. In order to guide and structure the contributions, the following questions were prepared by the Inter-service Steering Group:

Policy scenarios

- (12) Are the policy scenarios outlined consistent with the objectives of the reform? Could they be improved and how?
- (13) Are there other problems apart from those set in the problem definition section of this document that should be analysed when considering the architecture of the CAP in the post 2013 period? What causes them? What are their consequences? Can you illustrate?
- (14) Does the evolution of policy instruments presented in the policy scenarios seem to you suitable for responding to the problems identified? Are there other options for the evolution of policy instruments or the creation of new ones that you would consider adequate to reach the stated objectives?

Impacts

- (15) What do you see as the most significant impacts of the reform scenarios and the related options for policy instruments? Which actors would be particularly affected if these were put in place?
- (16) To what extent will the strengthening of producer and inter-branch organizations and better access to risk management tools help improve farmers' income levels and stability?
- (17) What environmental and climate-change benefits would you expect from the environment-targeted payments in the first and the second pillar of the CAP?
- (18) What opportunities and difficulties do you see arising from a significant increase of the rural development budget and a reinforcement of strategic targeting?
- (19) What would be the most significant impacts of a "no policy" scenario on the competitiveness of the agricultural sector, agricultural income, environment and territorial balance as well as public health?

Monitoring and evaluation

- (20) What difficulties would the options analysed be likely to encounter if they were implemented, also with regard to control and compliance? What could be the potential administrative costs and burdens?
- (21) What indicators would best express the progress towards achieving the objectives of the reform?
- (22) Are there factors or elements of uncertainty that could significantly influence the impact of the scenarios assessed? Which are they? What could be their influence?

6. PRACTICAL INFORMATION:

Consultation is open until 25th January 2011. Contributions should be sent either:

- through the electronic form to be filled on the consultation webpage:

http://ec.europa.eu/agriculture/cap-post-2013/consultation/index_en.htm

– or to a functional mailbox: agri-cap-towards2020@ec.europa.eu

Please address any inquires to:

agri-cap-towards2020@ec.europa.eu

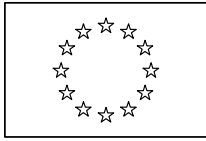
or:

The European Commission
ISSG CAP post-2013
c/o Pierre BASCOU
130, Rue de la Loi
B 1049 Brussels
Belgium

The Impact Assessment will take into account the contributions to the consultation. Relevant elements will be integrated in the Impact Assessment report and a chapter will be dedicated to the consultation process, main results and participants. The report is foreseen for the summer 2011.

For regularly updated information on progress of the Impact Assessment exercise, please consult the CAP post-2013 webpage:

http://ec.europa.eu/agriculture/cap-post-2013/index_en.htm



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 10

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Annex 10: Impact of Scenarios on the Distribution of Direct Payments and Farm Income

EXECUTIVE SUMMARY

The main objective of this note is to provide an overview about the economic impact of the scenarios envisaged for direct payments (DP) in the framework of the impact assessment for the CAP towards 2020. For this purpose, several assumptions had to be made, in particular concerning the implementation of the various instruments and measures. The analysis is based on FADN data.

Scenarios and main drivers

The scenarios analysed are the **Adjustment** scenario which includes three sub-options (EU flat rate, Min 80% and Min 90% and objective criteria), the **Integration** scenario and the **Refocus** scenario. In the EU flat rate scenario an EU-wide flat rate payment per hectare (ha) of potential eligible area (PEA) is introduced. The Min 80% scenario also foresees the implementation of flat rate payments. However, the average level is not the same within the EU. Instead the average level of DP in the Member States (MS) is brought at least to 80% of the EU average so that major disruptions are avoided. In the Min 90% and objective criteria scenario the minimum is raised to 90% of the EU average while additionally objective criteria (environmental and economic) are taken into account to determine how this increase is financed. The budget distribution among MS in the Integration scenario is based on the proposal of the Commission for the Multi-Annual Financial Framework for 2014-2020. The proposal foresees that over this period in all MS with direct payments below 90% of the EU-27 average the gap between their current level and 90% of the EU average direct payments is closed by one third. The Integration scenario also includes new measures focussing on a better targeting of DP in particular for the provision of basic public goods. In the Refocus scenario, DP are not redistributed but abolished. Instead the budget for Pillar-II measures is doubled. The results of these scenarios are compared to the situation in a status quo scenario in 2020.

The effect on farm income is mainly determined by the following factors:

- **Redistribution of DP among MS:** In all scenarios the level of DP per hectare increases in the EU-12 and, thus, decreases in the EU-15. This effect is most pronounced in the EU flat rate scenario. However, the development is not uniform since DP are neither increased in all MS of the EU-12 nor are they reduced in all MS of the EU-15. In the Min 80%, the Min 90% and objective criteria and in the Integration scenario the effects on the redistribution of DP among MS are smaller.
- **Redistribution of DP within MS due to a flat rate:** In many MS the move from the allocation of DP based on historical farm individual references to a flat rate payment per ha of eligible area (move to a "regional model") leads to a significant redistribution of DP. In all MS that apply the SPS and which have not opted for the regional implementation, the amount of DP per ha differs between farms. Hence, due to the introduction of a flat rate payment, farms with a high payment level lose DP and farms with comparatively low payment level gain. Field crop, mixed and milk farms often lose payments while payments increase in grazing livestock, wine and horticulture farms. Of course, these are only general trends as the situation differs from farm to farm. In the MS which apply the SAPS this effect is absent because flat rate payments have been implemented already in the Status quo.
- **DP budget:** In the Status quo scenario the budget envelope is defined as the whole DP envelope of EU-27 after phasing in of DP in the EU-12 less an amount equal to the sum

of modulation (as if modulation was still applied). In the other scenarios but the Refocus, the budget ceiling proposed by the Commission for the Multi-annual Financial Framework is used. In the Refocus scenario DP are abolished.

- **Increase of the budget of Pillar II:** In the Adjustment and the Refocus scenario the budget for the second pillar is increased. For the Adjustment scenario a mechanism similar to the current modulation is applied to transfer funds from Pillar I to Pillar II. In the Refocus scenario the budget of Pillar II is doubled, but, still the overall spending on agriculture is reduced drastically.
- **Implementation of the Greening:** In the Integration scenario farmers receive a flat rate payment in return for the implementation of greening measures. 30% of the budget is allocated to the greening measures. The effect on farm income is determined by two factors. First, the implementation of the greening measures increases the costs of farming either directly or in the form of loss in income. Secondly, because of a supply decrease, the greening leads to an increase of agricultural prices which tends to counterbalance the impact of the measures on cost.
- **The continuation of a certain level of coupled support:** In all scenarios except for the Refocus scenario it is assumed that farms which currently receive coupled DP continue to do so. However, in some cases the amount is reduced due to the reallocation of budget. This is the case in particular in the Integration scenario where the amount of coupled DP is limited to 7.5% of the budget. It affects in particular grazing livestock farms in Belgium and Portugal.
- **Measures specifically focussing on a more balanced distribution of support:** In the Integration scenario two measures are applied in order to make the distribution of DP more equitable: first, small farmers receive more support and second, the amount of DP a single farm can receive is adjusted by the application of a progressive capping that takes into account labour costs. The capped amounts are used to support innovation in rural areas. The capping has an effect in particular in the UK.

Impact on farm income and farm profitability

- **General observations:**

- In the **Adjustment scenarios** farm income drops by 2% on average. This is because the transfer of funds from Pillar I to Pillar II aims mainly at meeting the challenges related to climate change, water, biodiversity, renewable energy and innovation. It is assumed that the related measures do not have an effect on farm income. Thus, compared to the Status quo, where a higher share of the budget is granted in the form of DP, farm income decreases.

The redistribution effects among MS are the strongest in the EU flat rate scenario. Here, on average, farm income increases in the EU-12 by 6% and drops in the EU-15 by 4%. On MS level the effects are much more pronounced. The income effects in the Min 80% and the Min 90% and objective criteria scenario are in most cases in the same direction as in the EU-flat rate scenario but less pronounced.

- In the **Integration scenario** farm income decreases by 3% on average. This is because in the Integration scenario a part of DP are targeted at the provision of public goods which implies in some cases an increase in farm costs or a loss of income (income effect in EU-27: -3.4%). The slight increase in the price level does not compensate the increase in costs (income effect in EU-27: +0.6%). Additionally, the total amount of DP distributed to farmers is slightly lower than in the Status quo (due to capping, the

capped amounts are used to support innovation in rural areas which, in this assessment, is not assumed to increase farm incomes).

- In the **Refocus scenario** farm income drops dramatically by 23% on average. In approximately 500 000 **additional** farms (approximately 10% of all farms represented) there is no income left to remunerate the employed family workers.
- **Impact on farms differing in the type of production:** In all the scenarios with the exception of the Refocus scenario grazing livestock (beef and sheep) farmers are the main beneficiaries. Their income increases by 5% to 7% on average due to the introduction of flat rate payments and the new payments schemes introduced in the Integration scenario. On the other hand, income of field crop and milk farms drops in all scenarios (by 5% to 6%). Regarding the impacts on farm profitability large farms are negatively affected. In the Refocus scenario large field crop, grazing livestock and mixed farms which are often viewed as the most competitive farms are particularly affected due to their high dependency on DP.
- **Effect on small farmers and the equality of the distribution of DP:** The income of small farmers rises particularly in the EU-flat rate scenario (+ 8%) and to a lesser extent also in the Min 80% scenario (+ 3%) and in the Min 90% and objective criteria scenario. The main factor explaining the differences among scenarios is the degree of DP redistribution between the EU-15 and the EU-12 because a large part of the small farms is located in the EU-12. In the Integration scenario, additionally, there is the minimum payment supporting the income of small farms. However, the FADN does include only farms above a MS specific threshold. As a result many small farmers which would benefit from this scheme are not covered by the survey. Therefore, the effect of this measure cannot be observed clearly in the results of the analysis.

In all scenarios the concentration of DP (the share of DP that the largest farms receive) is reduced. The reduction is slightly more pronounced in Adjustment scenarios than in the Integration scenario. The transfer from Pillar I to Pillar II in the Adjustment scenario (which affects large farms more than small farms) has a stronger effect on the concentration than the capping which is applied in the Integration scenario because it affects a larger number of farms than the capping.

- **Impact on farms in Less Favoured Areas (LFA):** In all the scenarios with the exception of the Refocus scenario, income of farms in LFA - in particular in mountain LFA - increases. The increase is most pronounced in the Integration scenario. The general trend is induced by the introduction of flat rate payments which leads to a re-distribution of DP to LFA. In addition, in the Integration scenario the specific support for farms in areas with specific natural constraints supports this trend.

Environmental impact

A positive impact on the environment can be expected in the Integration scenario as the implementation of greening measures favours an improvement of the agronomic practices. Although the environmental effect could not be assessed in depth due to a lack of environmental indicators in the FADN, the following figures provide a flavour of the effect. The results of the assessment of the greening imply that:

- the risk of ploughing permanent grassland is reduced on about 13 million ha,
- a green cover is applied during winter time on 21 million ha,
- farmers have to cultivate alternative crops on about 1.8 million ha of land, reducing significantly the negative effects of monoculture,
- about 3.6 million ha of arable land are set aside for ecological purpose.

Another indication for the environmental impact is the economic impact on farms which are important for the maintenance of grassland. In this respect, it is shown that due to the introduction of the flat rate payment income in grassland based farms increases in all scenarios.

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1. INTRODUCTION

In the framework of the impact assessment of the CAP towards 2020 the aim of this note is to provide an overview about the economic impact of the scenarios for DP. The analysis is based on FADN data and methods have been developed with the aim of comparisons between the scenarios and the status quo.

The note begins with the introduction of the scenarios analysed and the various assumptions made in order to be able to assess the impact. In a next step, it is illustrated which impact scenarios have on the distribution of DP as the main factor explaining the changes in farm income and viability. Afterwards, more insight on the level of additional costs arising from the provision of public goods in the Integration scenario is given. Finally, the main findings on farm income and farm viability are shown. The annexes provide additional methodological information and more detailed results.

2. SCENARIOS

In the framework of the impact assessment five scenarios are analysed: the Status quo, the Adjustment, the Integration, the Refocus and the No policy scenario¹.

However, to be able to assess the impact of policy scenarios quantitatively it is necessary to make further assumptions. Main assumptions for the implementation of the status quo scenario, the Adjustment scenario (including three sub options), the Integration scenario and the Refocus scenario are provided below. The no-policy scenario is not covered in this analysis. More details on the database used and the calculation of income and profitability indicators are given in the Chapter Method.

2.1. Assumptions made for all scenarios

Target year:

The target year of the analysis is 2020. This means that impacts of the scenarios are estimated in 2020 and then results are compared.

DP budget:

In the Status quo scenario the budget is defined as the whole DP envelope of EU-27 after phasing in of DP in the EU-12 less an amount equal to the sum of modulation (as if modulation was still applied) and excluding Posei². In the Adjustment and the Integration scenario the overall budget is based on the proposal of the Commission for the Multi-Annual Financial Framework for 2014-2020³:

The model was calibrated in order to ensure that the total amount of DP granted to farmers is in line with the respective budget ceilings. National aids are not taken into account in the analysis.

¹ A general description of these scenarios can be found in the note "Annex 3. Direct Payments"

² Programme d'Options Spécifiques à l'Eloignement et Insularité.

³ Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions A budget for Europe 2020, 29.6.2011, COM(2011) 500 final

Prices and yields and labour productivity:

Prices and yields estimates are based on results from the AGLINK-COSIMO model. Additionally, the labour input has been adjusted according to observed trends. However, as all scenarios with the exception of the Integration scenario use the same assumptions, the impact of these changes on the results of the comparative analysis are limited. In the Integration scenario the agricultural prices are different because the greening measures, ecological set aside and crop rotation have an impact on supply.

2.2. Status quo

For the Status quo scenario it is assumed that the current CAP continues to apply. The level of DP is increased in the EU-12 to 100% (i.e. full phasing-in). DP are distributed to small and large recipients as if compulsory modulation was still applied. Voluntary modulation is not applied.

2.3. Adjustment scenarios

The Adjustment scenario has three sub options: the EU flat rate, the Min 80% and the Min 90% and objective criteria scenario. In all scenarios an area based flat rate is granted to the farmers (regional model applied at the level of the MS). In addition farmers in several MS continue to receive a limited amount of coupled DP (suckler cows, sheep and goat, cotton, Article 68, Posei).

It is assumed that a mechanism similar to the current "modulation" will be maintained to transfer part of the DP to the second pillar (10% cut between €5 000 and €300 000 and an additional 4% above €300 000). Furthermore, it is assumed that the measures to be financed with the additional budget in Pillar II would not affect farmers' income because they would be aimed mainly at meeting challenges related to climate change, water, biodiversity, renewable energy and innovation.

The sub options differ with respect to the redistribution of the budget among MS and thus with respect to the level of the flat rate in the MS:

In the **EU flat rate scenario** an EU flat rate is calculated by dividing the total available budget for DP by the total potential eligible area (PEA)⁴, according to information from IACS. The budget per MS is then determined multiplying this rate by the eligible area of each MS. Afterwards the EU flat rate is adjusted in order to take into account that in some MS a part of the support will continue to be coupled. In order to ensure that the sum of coupled and decoupled DP does not exceed the available budget, both the flat rate and the coupled payments are reduced proportionally. Of course this is done only in the MS where it is assumed that coupled payments will remain at the same level as in the current policy implementation. Due to this adjustment even in the EU-flat rate scenario the area payment differs slightly between MS.

In the **Min 80% of EU average scenario** the redistribution of DP is less pronounced because the payment level is increased only in those MS where the payment level per ha is on average less than 80% of the EU-average. In the MS where the payment level per ha is above the average the budget is reduced in order to respect the total EU budget.

In the **Min 90% and objective criteria scenario** national DP envelopes for 2020 are generated by adding up the DP/ha in each MS according to their eligible area. The DP/ha is determined

⁴ In this analysis, PEA is based on IACS information from 2009.

by the current position of each MS relative to the EU average. If the DP/ha is below 90% of the EU average, it will be lifted up to this minimum amount. MS above the average, on the other hand, have to finance the difference. Their share in this transfer is defined according to a set of objective criteria.

2.4. Integration scenario

In order to assess the impact of the Integration scenario many assumptions concerning the details of the implementation had to be made. Results give only an indication how the various instruments could affect farm incomes across the European Union. This is true in particular for the effect of the greening which depends heavily on implementing rules and farmer's local situation. The measures are described below. Quantitative information on the implementation of the measures in the FADN simulation is provided in Table 2.1.

In the Integration scenario the gap between the current DP level and 90% of the EU average direct payments is closed by one third in all Member States with an average DP level below 90% of the EU-27 average. The budget is allocated to five measures. The initial allocation key is the following:

- Coupled payments: maximum 7.5%
- Aid to small farmers: maximum 5%
- Greening: 30%
- Natural constraints payment: maximum 5%
- Basic rate: remainder of the amount, at least 52.5%

Basic rate: It is assumed that the basic rate is a decoupled area payment defined at MS level and uses at least 52.5% of the available budget. However, this share is increased whenever in a MS the envelopes available for coupled payments, areas with natural constraints or small farmers were not fully used. Afterwards, this adjusted budget envelope is divided by the total amount of PEA to obtain the level of the basic rate.

Coupled payments: The maximum share of coupled payments is 7.5% of the MS budget envelope. Whenever, the amount is higher than 7.5% of the budget, the coupled DP are reduced proportionally (with the exception of cotton and Posei). As described above, unused amounts are added to the envelope of the basic payment.

Capping: The scenario foresees a limitation of the amount of DP a farm can receive. If the sum of payments originating from the basic rate, coupled DP and the natural constraints payments surpasses a certain level, the payments are capped. This is done progressively according to the following rules:

- Payments between €150 000 and €200 000 are cut by 20%
- Payments between €200 000 and €250 000 are cut by 40%
- Payments between €250 000 and €300 000 are cut by 70%
- Upper payment limit €300 000

These limits are adjusted taking into account the expenses for wages for the employees of the farm. The limits are increased by the full amount of wages paid. The amounts resulting from the capping are used for innovation in rural development policy which, in this assessment, is not assumed to increase farm incomes.

Greening: For the assessment it is assumed that the greening component comprises four additional measures: green cover, crop diversification, ecological set aside and preservation of

grassland⁵. Additionally, farms in Natura 2000 areas have to respect specific rules. The greening payment is granted as a flat rate payment per ha of PEA. The level of the payment differs between MS depending on the budget envelope available in each MS. When estimating the impact of income, it is assumed that farmers fully comply with greening and receive their full direct payment amounts; hence, the impact on income is solely driven by the (direct or indirect) effect of greening. The measures and the way the costs for their implementation have been estimated are described below in further detail:

Green cover: During winter, farms have to apply green cover on 70% of their arable land and on the area covered by permanent crops. The area of ecological set-aside is exempted from this provision. The costs of the implementation of green cover are estimated based on assumptions on the affected area and the costs per ha. As there is no information on green cover available at farm level several assumptions had to be made: first, it was assumed that a large part of the area covered by cereals is covered during the winter, as in most cases a large share of the cereals are winter crops. As in the FADN it is not differentiated between winter and summer crops it was assumed that on each farm the share is equal to the national shares of winter and summer varieties published by EUROSTAT. Furthermore, it was assumed that 30% of the area of permanent crops is already covered. The costs per ha of land to be additionally covered in order to meet the requirement are assumed to be equal to 50€

Crop diversification: Aiming to support the diversity of crop production and to avoid monoculture, the measure will provide an incentive for farms to cultivate at least 3 different crops, with no crop allowed to cover more than a 70% of the total arable land. It is assumed that the profitability of the additional crops corresponds to the average regional gross margin of field crop farms with diversified arable crops. Therefore, the costs are assumed to be equal to the difference between the farm's individual gross margin of arable land and this average regional gross margin. In the cases where the farm individual gross margin is lower than this regional average it is assumed that there are no additional costs.

Ecological set aside: 5% of the land has to be taken out of production. For simplicity, in this analysis only arable land is considered and horticultural land is exempted. Costs for the implementation of the measure arise if the amount of fallow land on the farm is lower than the area to be set-aside. For each ha to be additionally set aside it is assumed that the costs equal 2/3 of the farm individual gross margin of arable land. The idea is that farmers will set aside the less productive areas first (with the assumption that their gross margin is 2/3 of the farm average).

Preservation of grassland: Farmers have to maintain their permanent grassland. The cost of the implementation of this measure would be an opportunity cost. To estimate this cost, it was necessary to assess on each farm whether there is an opportunity to convert grassland to arable land or not and to quantify the magnitude of the opportunity cost:

- There will be little or no opportunity to convert grassland in farms with poor soil quality. For the simulation it is assumed that this is the case on farms with a low share of arable land (less than 5%) and on farms where sheep and goats represent more than 70% of grazing livestock units. Furthermore, it is assumed that rough grazing and 10% of the remaining permanent pastures cannot be converted. For the remaining permanent pasture it is assumed that the opportunity costs are 2/3 of the difference in gross

⁵ More details are available in the note for the Impact Assessment "Annex 2d. Greening - Results of partial analysis on impact on farm income using FADN".

margins between permanent grassland based dairy and beef production systems and alternative systems at regional level. Only a fraction of the difference is kept in order to take into account that the newly converted grassland would probably not have the same level of productivity as land already in fodder crops (the most productive areas have been converted into arable crops before).

- For the calculation of the difference in gross margins at regional level, it is considered that there are no opportunity costs in regions where permanent grassland is not relevant or where there is no alternative identified (no cattle production). Otherwise, in regions where grass-based and forage crops based feeding systems co-exist in specialised farms, it is assumed that the first alternative to cattle production based on grass is to intensify production adapting the feeding system by ploughing the grassland to produce forage crops. Finally, in the remaining regions, where cattle production takes place in mixed cropping-livestock farms, the farm gross margins per hectare of utilised agricultural area in mixed and specialised cropping farms are compared.

Aid to small farmers: In each MS a minimum amount of DP per farm is granted to small beneficiaries⁶. The payment replaces the other payments. The budget corresponding to the payments that would have been paid to the small farmers instead of the lump sum is used to increase the basic rate. The level of minimum payment is set to €1000. However, in the MS where the budget envelope of 5% would not be sufficient to grant a minimum payment of €1000 the minimum payment is reduced, accordingly. The assessment whether this is the case was conducted based on 2009 CATS data. CATS data was used because the small farms are not well represented in the FADN (depending on the structure of the agricultural sector of the MS a threshold for the coverage of the survey is defined). Although the CATS database does not reflect the distribution of DP in the Integration scenario⁷ it is better suited for the determination of the minimum payment because it includes data of all DP recipients. The difference between the databases becomes evident when the minimum payments determined based on CATS data are applied in the simulation program. In all MS with the exception of Bulgaria the required DP envelope in the simulation with FADN data was far below 5% of the budget⁸. This shows that the results of the simulation concerning the small farmers' scheme have to be viewed critically.

Payment in areas with specific natural constraints: A payment of €100 per ha of PEA is granted to farms which are located in LFA areas. The budget envelope of the measure is limited to 5%. Whenever, the budget is not sufficient to grant the full amount (which is the case in most MS) it is cut proportionally. In those MS, where the amount of represented LFA is very limited (e.g. in the Netherlands, there are no significant LFA areas and in Romania the data delivered does not allow a good representation of LFA) the budget left over is transferred to the envelope of the basic payment.

⁶ However, in order to be eligible to receive DP, including the aid to small farmers, it was assumed that farms must fulfil the criteria of minimum size as defined in Article 124 of Regulation 73/2009.

⁷ CATS data provide the distribution of DP in 2009. However, the phasing in of DP was taken into account in the analysis.

⁸ In the case of Bulgaria the budget envelope is not sufficient to guarantee the minimum payment determined with CATS data. Thus, the amount was reduced using the simulation with FADN data.

Table 2.1: Analysis of the Integration scenario based on FADN data: main parameters

	Integration scenario									
	Basic rate		Coupled DP	Greening payment		Min DP		Payment in areas with specific natural constraints		Share of budget spent*
	€/ha	% budget	% budget	€/ha	% budget	€/farm	% budget	€/ha	% budget	%
Belgium	231	57%	7.5%	121.0	30%	1000	0.3%	82	5%	100%
Bulgaria	154	62%	0.0%	70.1	29%	700	4.8%	100	2%	98%
Czech Republic	166	65%	0.0%	76.4	30%	1000	0.1%	37	5%	100%
Denmark	240	70%	0.1%	103.3	30%	1000	0.0%	100	0%	100%
Germany	200	65%	0.0%	92.2	30%	1000	0.1%	37	5%	100%
Estonia	102	65%	0.0%	47.0	30%	1000	0.2%	15	5%	100%
Ireland	174	65%	0.0%	80.4	30%	1000	0.0%	17	5%	100%
Greece	234	63%	0.7%	109.2	30%	362	0.1%	25	5%	98%
Spain	135	56%	7.5%	71.3	30%	730	2.0%	16	5%	100%
France	167	58%	7.2%	86.7	30%	1000	0.2%	32	5%	100%
Italy	229	61%	4.2%	113.4	30%	405	0.2%	34	5%	100%
Cyprus	228	64%	0.0%	105.5	30%	238	0.9%	31	5%	100%
Latvia	92	65%	0.0%	42.5	30%	892	0.3%	10	5%	100%
Lithuania	113	65%	0.0%	52.3	30%	472	0.0%	23	5%	100%
Luxembourg	179	65%	0.0%	82.7	30%	1000	0.2%	14	5%	100%
Hungary	167	64%	0.0%	77.2	30%	463	0.1%	32	5%	99%
Malta	438	65%	0.0%	202.1	30%	126	0.0%	34	5%	100%
Netherlands	295	70%	0.0%	126.6	30%	1000	0.4%	100	0%	100%
Austria	149	57%	7.5%	77.9	30%	1000	0.3%	20	5%	100%
Poland	144	65%	0.0%	66.5	30%	473	0.2%	19	5%	100%
Portugal	119	57%	7.5%	62.3	30%	355	0.4%	12	5%	100%
Romania	135	65%	0.0%	60.2	30%	356	1.9%	100	2%	99%
Slovenia	184	59%	6.3%	93.8	30%	505	0.2%	19	5%	100%
Slovakia	140	64%	0.0%	64.6	30%	1000	0.0%	14	5%	99%
Finland	143	61%	4.3%	70.8	30%	1000	0.0%	12	5%	100%
Sweden	152	65%	0.5%	70.5	30%	1000	0.0%	22	5%	100%
United Kingdom	148	62%	0.8%	69.3	30%	1000	0.0%	24	5%	97%

* Due to the capping in some MS less than 100% of the budget is distributed to farmers as the capped amounts are used to finance measures supporting innovation. These are not taken into account in the simulation.

Source: DG AGRI L3

2.5. Refocus scenario:

In the Refocus scenario DP are abolished. Instead the total amount of second pillar payments (observed in FADN in 2007) is doubled in each farm⁹. Compared to the Status quo in 2020 the amount is doubled. It is implicitly assumed that the implementation of new measures targeting at new challenges does not lead to a redistribution of funds (that could not be simulated). As the new second pillar would consist mainly of agri-environmental measures and measures to fight climate change it was assumed that the additional payments would be partly offset by additional costs. It is assumed that the application of the new measures would imply additional costs in the magnitude of 13% and 25% of the additional payments in the EU-12 and the EU-15, respectively¹⁰.

⁹ It has to be emphasised at this point that the FADN does not cover all Pillar-II measures. In the simulation the amount recorded at farm level in the year 2007 is used.

¹⁰ The estimate is based on the distribution of the additional budget for Rural Development in the context of the Health Check between the measures and on hypothesis of the income effect in the long term of the sub-set of relevant RD measures.

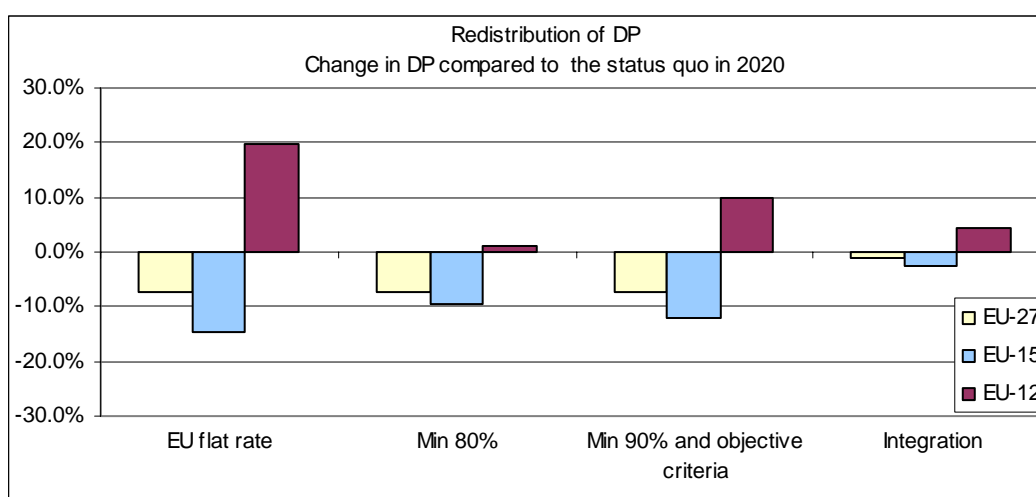
3. EFFECT ON THE DISTRIBUTION OF DP BETWEEN MS AND FARMERS

The redistribution of DP and the transfer of funds from Pillar I and to Pillar II of the CAP are the main factors explaining the impact on farm income presented in Chapter 5. Since, the question of a fair distribution of DP is of high political concern this chapter analyses the major effects of the policy scenarios on the distribution of DP.

3.1. Redistribution effects between MS

All scenarios foresee that the level of DP increases in the EU-12 and decreases in the EU-15 (Figure 3.1). In the Adjustment scenarios this effect is overlapping with the transfer of DP from Pillar I to Pillar II which lower in particular the amount of DP large farms receive. The strongest redistribution effect is observed in the EU-flat rate scenario, with an increase of 21% in the EU-12 and a decrease of 15% in the EU-15. The change is less pronounced in the Min 90% and objective criteria, in the Min 80% and the Integration scenario. In the Refocus scenario, which is not illustrated, DP are not redistributed but the instrument is abolished.

Figure 3.1: Distribution of DP between the EU-15 and the EU-12



Source: DG AGRIL3

Table 3.1 provides a more detailed picture of the effect. Here, the magnitude of the changes in the EU flat rate scenario is even more evident. There would be an increase of DP in 12 MS with the highest growth in the Baltic States. The redistribution decreases progressively, in terms of number of MS with an increase and of magnitude of the changes, in the Min 90% and objective criteria and in the Min 80% scenario. In the Integration scenario the redistribution is more balanced in the sense that there are 8 MS which benefit of the redistribution, but that, except for the Baltic States, the changes range from +8% to -8%. A result of this comparison is that winners and losers of the redistribution in the EU flat rate scenario do not belong strictly, to the EU-12 and the EU-15, respectively. For instance, in the EU-12, the level of DP drops in Cyprus, Slovenia, Malta, Czech Republic and Hungary while in the EU-15 payments increase in Portugal, United Kingdom, Finland, Sweden and Spain.

Table 3.1: Redistribution of DP between the MS

	Impact on DP Change in DP in percent compared to the Status quo in 2020				
	Status quo € per AWU	EU flat rate	Min 80%	Min 90% and objective criteria	Integration
Belgium	11 735	-43%	-12%	-24%	-7%
Bulgaria	3 667	4%	-9%	-6%	-2%
Cyprus	3 346	-31%	-9%	-21%	-6%
Czech Republic	11 074	-7%	-11%	-11%	-1%
Denmark	22 525	-32%	-13%	-22%	-5%
Germany	14 057	-23%	-13%	-16%	-4%
Greece	4 340	-30%	-7%	-18%	-6%
Spain	6 178	9%	-4%	-2%	4%
Estonia	7 887	108%	67%	88%	34%
France	14 390	-17%	-12%	-13%	-2%
Hungary	11 233	-10%	-7%	-8%	0%
Ireland	13 798	-8%	-7%	-7%	-1%
Italy	5 784	-37%	-10%	-22%	-6%
Lithuania	5 564	73%	39%	56%	21%
Luxembourg	15 957	-10%	-7%	-8%	0%
Latvia	3 765	161%	110%	135%	50%
Malta	1 858	-62%	2%	-33%	-3%
Netherlands	6 266	-45%	-12%	-22%	-8%
Austria	6 611	-3%	-6%	-6%	-1%
Poland	3 204	20%	-4%	8%	3%
Portugal	3 933	29%	3%	16%	7%
Romania	1 339	38%	11%	24%	8%
Finland	10 016	5%	-7%	-5%	0%
Sweden	18 150	4%	-9%	-6%	0%
Slovakia	10 594	16%	-7%	4%	4%
Slovenia	3 209	-19%	-6%	-11%	-4%
United Kingdom	19 078	6%	-10%	-5%	-2%

Source: DG AGRI L3

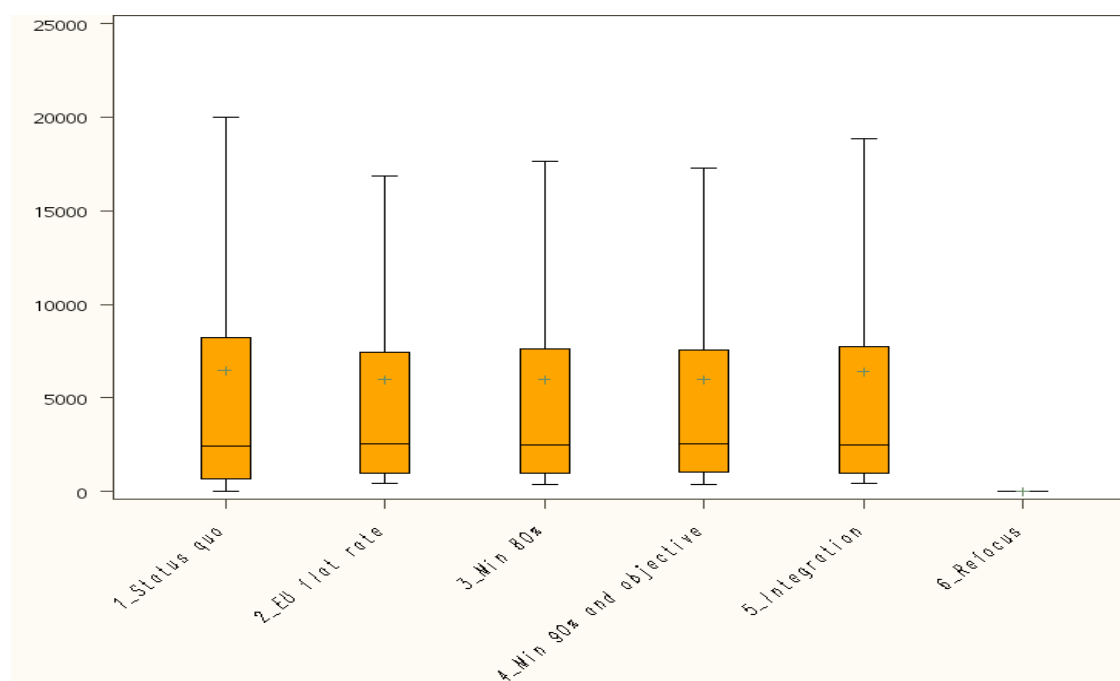
3.2. Impact on the redistribution of DP per AWU in the EU-27

Figure 3.2 illustrates the changes of the distribution of DP with the help of "box-plots"¹¹. The average amount of DP is the same in all scenarios except the Refocus scenario where farms do not receive any DP. Compared to the Status quo scenario the interquartile range (the yellow box) is reduced in all other scenarios. This indicates that the differences in distribution of DP are reduced for the majority of farms.

Compared to the Status quo the value of DP at P90 (the minimum amount of DP received by the 10% of farms with the highest amount of DP) is reduced in all scenarios. This indicates that the amount large recipients of DP receive is reduced. The value is the lowest in the EU-flat rate scenario where the redistribution from farms receiving large amount of DP to smaller recipients is the most pronounced. In the Adjustment scenarios the value of P90 is lower than in the Integration scenario. This is because the transfer of DP from Pillar I to Pillar II foreseen in the Adjustment scenario has a stronger effect on large recipients than on small recipients (the first €5000 of DP are exempted from the 10% reduction and the amounts above €300 000 are reduced by an additional 4%).

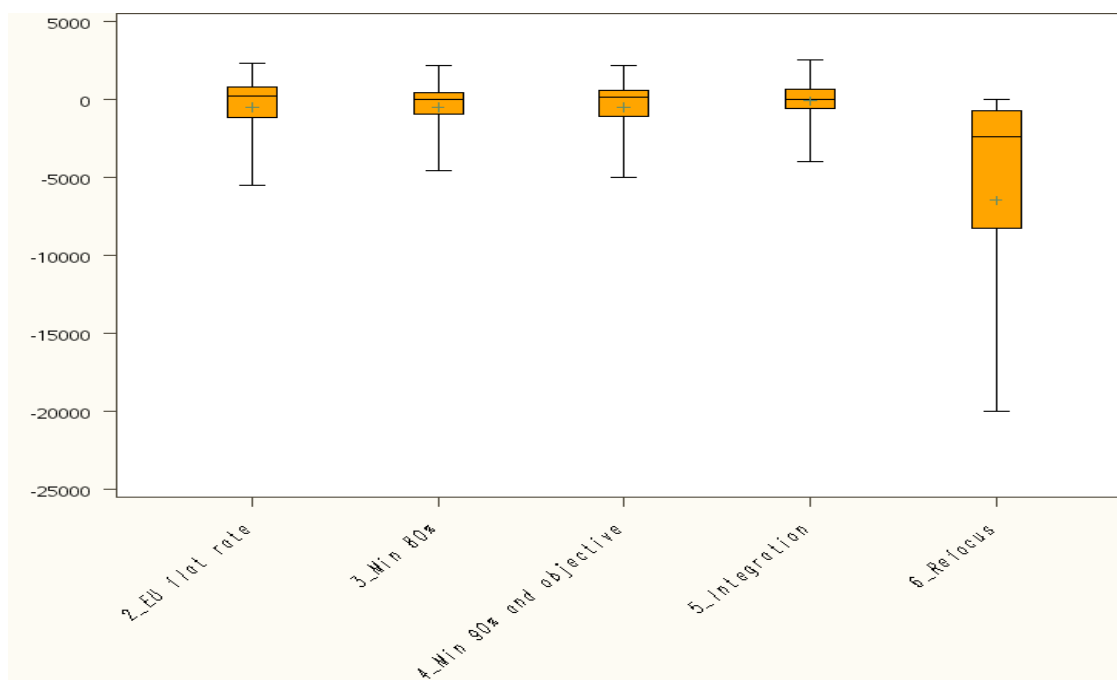
It could be expected that in the Integration scenario the P10 (the maximum amount of DP received by the 10% of farms with the lowest amount of DP) is significantly higher than in the Adjustment scenarios showing that the special support scheme for small farmers that is foreseen in the Integration scenario leads to an increase of the amount DP small farmers receive. However, the effect of the scheme is underestimated since the FADN does include only farms above a Member State specific economic threshold excluding a large number of small farms.

Figure 3.2: Distribution of DP per AWU in the EU-27 by scenario



¹¹ In the box plots the inter quartile range (range between 25% of farms and 75% of farms) is indicated by the yellow box; the limits of 10% of farms and 90% of farms corresponds to the end of lines (whiskers); the median (50% of farms) is the line crossing the yellow boxes and the mean corresponds to the '+' sign in the yellow boxes.

¹² In the MS which have introduced the SAPS and the MS which have opted for the "regional model" in the 2003 Reform of the CAP this is not the case.



Source: DG AGRI L3

3.3. Effect on the concentration of DP

Compared to the status quo, the concentration of DP is reduced in all scenarios. The reduction is most pronounced in the Adjustment scenarios. This is due to the higher redistribution of DP among Member States and the way DP are transferred to Pillar II. In the Integration scenario the concentration decreases because small farmers receive a minimum amount of DP and the amounts of DP large farms receive is progressively cut if it exceeds a maximum level. As described earlier the effect of the small farmers would be more visible in the results if the FADN data base included a higher share of small farms.

This conclusion is based on the development of the GINI index. The GINI index is a measure of the concentration, ranging from 0 to 100. In this context, 100 means that DP are completely concentrated (i.e. one farmer receives all DP) and 0 that DP are evenly distributed among farmers (agricultural working units).

Table 3.2: Concentration of DP in the EU-27; impact on the GINI coefficients¹³.

	Coefficient	Difference to Status quo
EU flat rate	74.4	-2.3
Min 80%	74.8	-1.9
Min 90% and objective criteria	74.4	-2.3
Integration	75.2	-1.5

Source: DG AGRI L3

¹³ In the FADN small farms are systematically underrepresented. Therefore, from the perspective of the analysis the most relevant information is magnitude of the change of the Gini coefficient between scenarios and not the value of the coefficient itself.

4. IMPLEMENTATION OF THE GREENING COMPONENT

The Integration scenario foresees the implementation of a greening component which would on the one hand lead to significant environmental benefits¹⁴ but could on the other hand also affect farm incomes. In this note, it is focussed on the economic impact of the area affected by the greening, but the amount of area affected provides also a flavour of the environmental effect of the greening.

In total for the EU-27, it is estimated that 25% of the PEA is concerned. These are the main effects (Table 4.1):

- the risk of ploughing permanent grassland is reduced on about 13 million ha,
- an additional 21 million ha of arable land green cover is applied during winter time,
- on about 1.8 million ha of land, farmers receive incentives to cultivate alternative crops mitigating the negative effects of monoculture,
- about 3.6 million ha of arable land are set aside for ecological purposes.

Table 4.1: Environmental effect of the greening: area affected by the greening measures

	Grassland preservation	Winter cover	Crop diversification	Ecological set aside
	Area preserved (ha)	Area where application is ensured (ha)	Area to be diversified (ha)	Additional area (ha)
EU-12	3 175 000	7 196 000	404 000	1 465 000
EU-15	9 804 000	13 525 000	1 360 000	2 171 000
EU-27	12 978 000	20 721 000	1 764 000	3 636 000

Source: DG AGRI L3

The economic effect of the implementation of the greening is determined by two factors:

- Market effect of the implementation of the greening.
- Implementation costs of the greening (either direct costs or non realised profits)

4.1. Market effect of the implementation of the greening

The implementation of the greening measures ecological set aside and crop diversification have an effect on agricultural markets. Ecological set aside forces farmers to reduce production which leads to a drop of supply and an increase of prices. Crop diversification also affects prices because farmers have to adapt their crop production pattern which also leads to a change in prices. The effect of crop diversification, however, is more limited because overall the total cultivated area is not changed. For the arable crops sectors, set aside leads, in general, to price increases, while crops diversification may induce price decreases for crops that are introduced by farmers to substitute the main crops. Higher prices for arable crops also lead to higher feed cost prices for the animal production.

¹⁴ See the note for the Impact Assessment "Annex 2d. Greening - Results of partial analysis on impact on farm income using FADN".

Not taking into account the direct cost of the greening measure, the market effect of the implementation of the greening leads to an increase of farm income by 0.6% (Table 4.2). However, the effect depends on the type of farming: income of field crop farms increases by 2.5% while income of farms producing pigs and poultry ("granivores") drops by more than 8%. The market equilibrium model used to assess the market impact (AGLINK-COSIMO) also foresees a slight increase of beef prices which more than offsets the increase of feed costs of "other grazing livestock".

Table 4.2: Isolated market effect of the greening on FNVA by type of farming

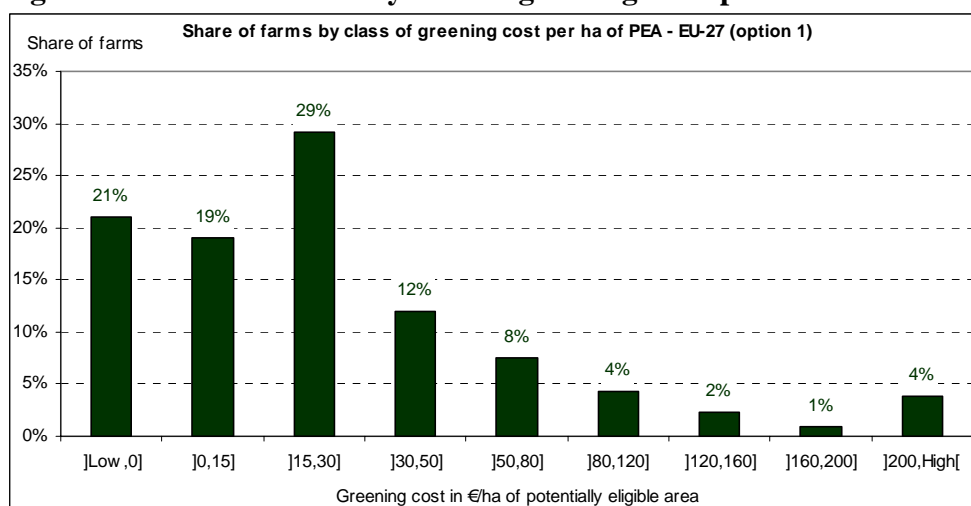
	Status quo € per farm	Effect of the greening
Fieldcrops	30 642	2.6%
Horticulture	89 711	-0.6%
Wine	51 370	0.2%
Other permanent crops	23 207	0.0%
Milk	42 276	-0.3%
Other grazing livestock	26 670	1.2%
Granivores	35 078	-8.4%
Mixed	19 171	0.6%
Total	31 028	0.6%

Source: DG AGRI L3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO

4.2. Costs of the implementation of the greening

The costs implied by the greening vary a lot depending on the specific situation of each farm, reflecting differences in land use and profitability as well as in current agronomic practices. Both the level of the implementation cost of each measure, but also the amount of land affected by the measures is of importance. Costs for the maintenance of permanent grassland and the ecological set-aside are in general the highest. For instance, among regions, the cost of maintaining permanent grassland in areas where an alternative use of land exists varies between €5 and €620/ha, with an EU average of €216/ha of grassland. With 5% of set-aside, the average cost per ha of land to be set-aside is €260/ha, but in some regions the cost per ha is more than €1 000. When the cost of greening is brought back to the total PEA, the amounts are lower. It is estimated that 29% of farms would have a cost between €15 and €30/ha of PEA, 4% would have a cost higher than €200/ha of PEA, and about 21% of farms would not face cost (Figure 4.1).

Figure 4.1: Share of farms by class of greening costs per ha of PEA



Source: DG AGRIL3 calculations based on EU FADN, the AIDS7K model and AGLINK COSIMO.

Option 1: 70% of crop diversification, 5% of ecological set-aside, 70% of green cover and preservation of permanent pasture

As given in Table 4.3 the average cost of greening would be €33/ha of PEA, with half coming from the cost of maintaining permanent grassland (average €17/ha). In general, the costs are estimated to be highest in the MS where maintaining large areas of permanent grassland is economically challenging due to pressure to substitute grassland by fodder crops (the Netherlands, Slovenia and Belgium).

Table 4.3: Implementation of the greening measures: average cost per ha by MS

	Average costs for greening measures per ha of PEA (€)				
	Green cover	Grassland preservation	Ecological set aside	Crop diversification	Total measures
Belgium	8	78	13	2	102
Bulgaria	6	0	6	5	18
Cyprus	12	0	23	16	52
Czech Republic	7	24	8	0	38
Denmark	5	3	14	1	24
Germany	4	37	6	2	49
Greece	9	0	7	6	22
Spain	11	9	3	8	30
Estonia	11	3	4	1	20
France	4	22	5	1	32
Hungary	10	2	11	3	26
Ireland	1	20	1	0	23
Italy	7	2	8	13	30
Lithuania	7	1	4	1	12
Luxembourg	6	47	3	0	57
Latvia	5	0	2	1	7
Malta*	19	0	42	90	151
Netherlands	10	98	11	2	120
Austria	6	22	5	1	34
Poland	8	20	10	1	40
Portugal	7	4	2	7	20
Romania	9	0	7	9	25
Finland	16	1	3	1	21
Sweden	6	17	4	0	28
Slovakia	7	6	6	0	19
Slovenia	5	99	8	3	114
United Kingdom	1	27	4	1	33
EU-27	6	17	6	4	33

* The costs for the implementation of crop diversification in Malta are overestimated. In Malta many farms cultivate only a single crop. In the calculation of the costs of crop diversification the gross margin of the farms which have to diversify is compared to an alternative production system. This alternative could not be identified in Malta. Instead an EU average gross margin was used which is much lower than the gross margins in Malta. Thus, the calculated drop in income is very high.

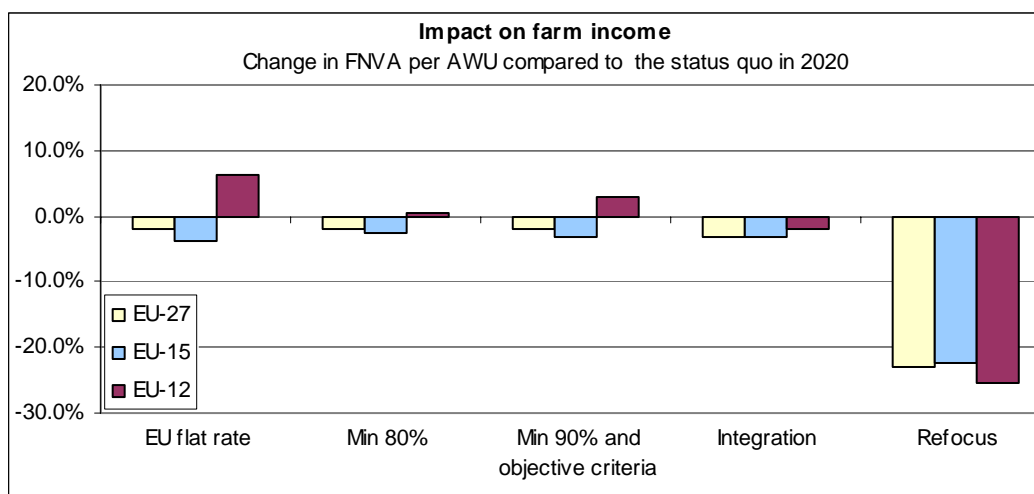
Source: DG AGRIL3

5. CONSEQUENCES FOR THE INCOME SITUATION OF FARMERS

In this Chapter the consequences of the redistribution of DP on farm income (Farm Net Value Added per Annual Work Unit – FNVA per AWU¹⁵) are analysed at different aggregation levels. The analysis is done at different territorial aggregation levels (EU-group, MS, LFA) as well as for different type and size of farms.

5.1. Impact on farms in the EU-15, the EU-12 and in the MS

Figure 5.1: Change of FNVA compared to the status quo by EU-group



Source: DG AGRI L3

The redistribution of DP in the first place, the transfer of part of DP to Pillar-II in the adjustment scenarios, but also the additional costs due to implementation of the greening measures, the additional Pillar-II measures and the market effect of the implementation of the greening have an impact on farm income. In the Adjustment scenarios average income at EU-27 level decreases by 2% due to the transfer of DP to Pillar-II while in the Integration and the Refocus scenarios average farm income drops by 3% and 23%, respectively. At EU-27 level the drop is the same for all Adjustment scenarios because DP are only redistributed among farms and the total amount of DP is almost the same. In the Integration scenario the amount of DP granted to farmers is slightly higher. However, here the implementation of the greening measures requires additional effort causing a rise in operating costs. The dramatic drop observed in the Refocus scenario is caused by the abolishment of DP. The doubling of P-II support is not sufficient to offset this effect because only a part of the budget is transferred to the P-II and due to the fact that P-II measures not always translate integrally into the support of income.

In all scenarios the effects on FNVA differ between the EU-12 and the EU-15. In the EU flat rate scenario farm income increases in the EU-12 by 6.2% because the average level of DP rises significantly in many MS of the EU-12. Correspondingly, the income in the EU-15 decreases by 3.8%.

The income effects in the Min 80% and the Min 90% and objective criteria scenarios are in the same direction as in the EU-flat rate scenario but less pronounced. Many MS are not or less affected because in the MS with a currently low DP level the payment level is increased only to

¹⁵ See Annex 7.1.2 of this note.

respectively, 80% and 90% of the EU-average which lowers also the need to cut DP in the MS with a high DP level. In the Integration scenario the income level is both in the EU-15 and in the EU-12 lower than in Min 80% and Min 90% and objective criteria scenarios due to the additional costs for the greening. The implementation of the greening measures leads to a slight increase of the agricultural prices, which on average supports farm income. However, the effect is not very pronounced and cannot compensate the increase in costs. In the Refocus scenario income drops sharply both in the EU-15 and the EU-12.

Farmers in the MS of the EU-12 where currently the level of DP is very low such as in Latvia, Estonia, Lithuania, Poland, Romania, Slovakia and Bulgaria but also farms in some EU-15 MS such as Portugal, the UK, Finland, Sweden and Spain benefit in the EU flat rate scenario.

The income effects in the Min 80%, the Min 90% and objective criteria and, in particular, the Integration scenarios are less pronounced. Income increases significantly in Estonia, Lithuania and Latvia. However, as the amount of agricultural area in these MS is relatively small, DP in other MS do not have to be significantly reduced to finance the increase of the DP level.

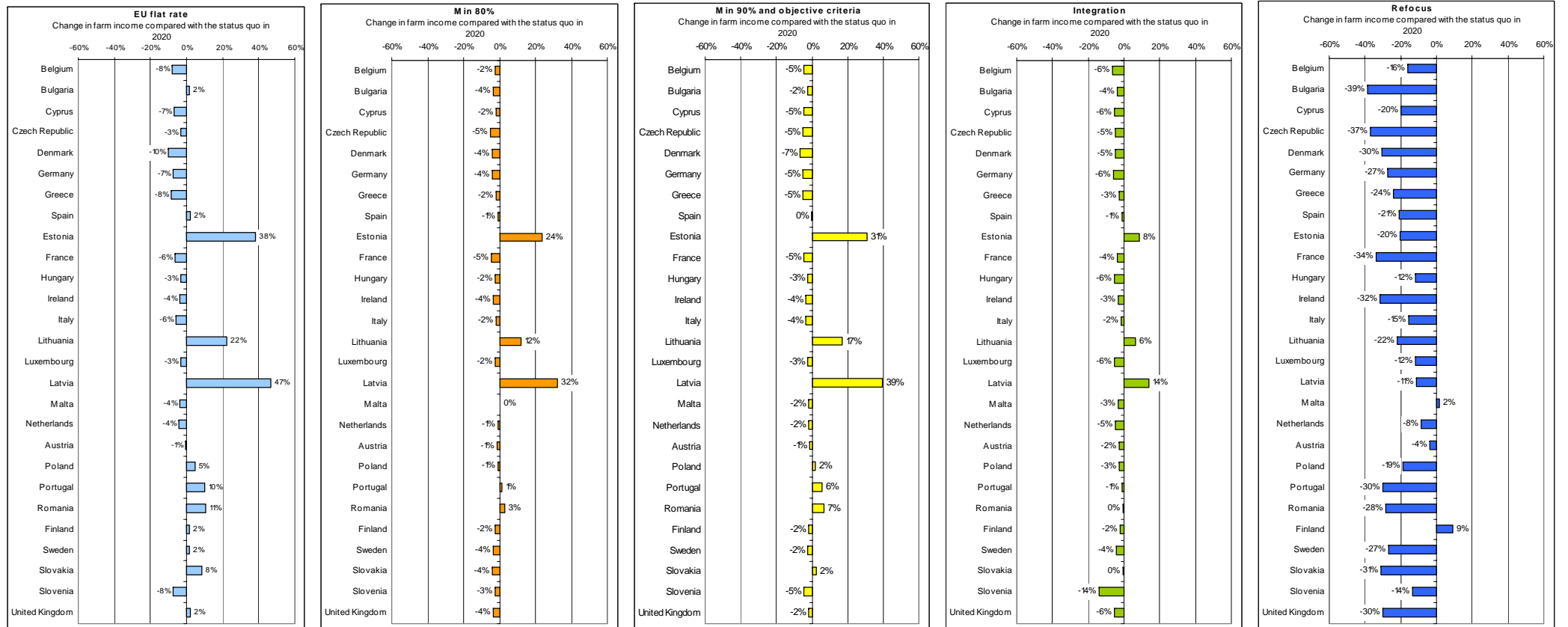
In the Refocus scenario farm income would drop in all MS except in Finland and Malta. However, the scale of the effect would differ significantly among the MS. In Finland and Malta income would increase slightly as the doubling of P-II payments would more than compensate for the loss of EU-DP. Graphs showing the impact of the scenarios on regional level can be found in the annex.

Table 5.1: Change of FNVA compared to the status quo by MS

	2020 Farm Net Value Added per AWU - comparison with the status quo					
	Status quo € per FWU	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	Refocus
Belgium	62 429	-8%	-2%	-5%	-6%	-16%
Bulgaria	9 465	2%	-4%	-2%	-4%	-39%
Cyprus	15 251	-7%	-2%	-5%	-6%	-20%
Czech Republic	23 473	-3%	-5%	-5%	-5%	-37%
Denmark	72 352	-10%	-4%	-7%	-5%	-30%
Germany	44 864	-7%	-4%	-5%	-6%	-27%
Greece	15 597	-8%	-2%	-5%	-3%	-24%
Spain	28 953	2%	-1%	0%	-1%	-21%
Estonia	22 281	38%	24%	31%	8%	-20%
France	38 819	-6%	-5%	-5%	-4%	-34%
Hungary	27 898	-3%	-2%	-3%	-6%	-12%
Ireland	27 383	-4%	-4%	-4%	-3%	-32%
Italy	35 561	-6%	-2%	-4%	-2%	-15%
Lithuania	18 162	22%	12%	17%	6%	-22%
Luxembourg	50 620	-3%	-2%	-3%	-6%	-12%
Latvia	12 912	47%	32%	39%	14%	-11%
Malta	31 180	-4%	0%	-2%	-3%	2%
Netherlands	68 346	-4%	-1%	-2%	-5%	-8%
Austria	32 445	-1%	-1%	-1%	-2%	-4%
Poland	12 893	5%	-1%	2%	-3%	-19%
Portugal	11 077	10%	1%	6%	-1%	-30%
Romania	4 757	11%	3%	7%	0%	-28%
Finland	28 483	2%	-2%	-2%	-2%	9%
Sweden	43 966	2%	-4%	-2%	-4%	-27%
Slovakia	20 060	8%	-4%	2%	0%	-31%
Slovenia	7 849	-8%	-3%	-5%	-14%	-14%
United Kingdom	50 196	2%	-4%	-2%	-6%	-30%
EU-27	23 751	-2%	-2%	-2%	-3%	-23%

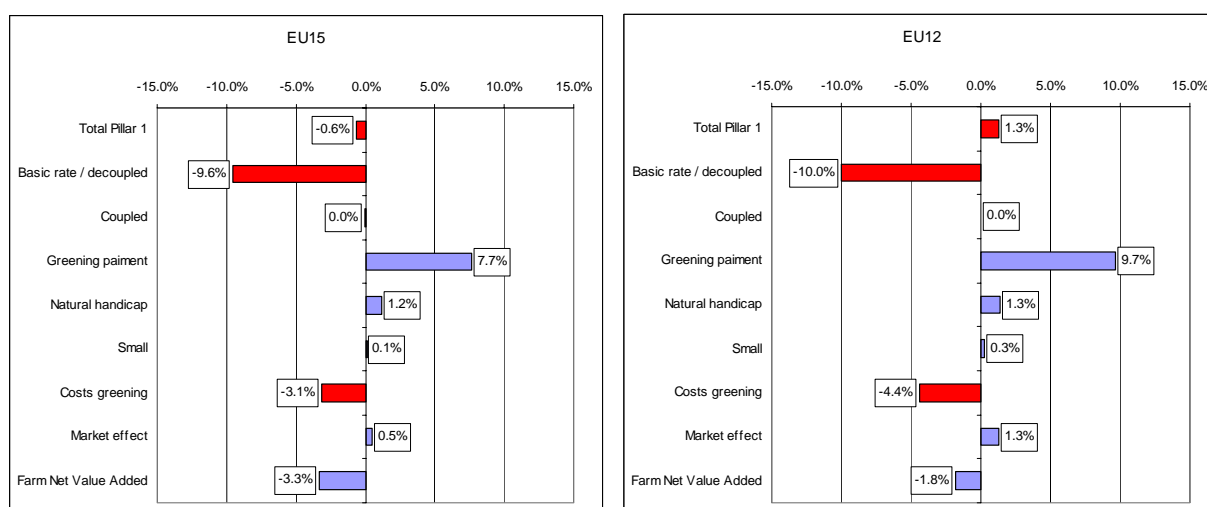
Source: DG AGRI L3

Figure 5.2: Change of FNVA compared to the status quo by MS



Source: DG AGRI L3

Figure 5.3: Components determining the effect of the Integration scenario in comparison to status quo on FNVA in the EU-15 and the EU-12



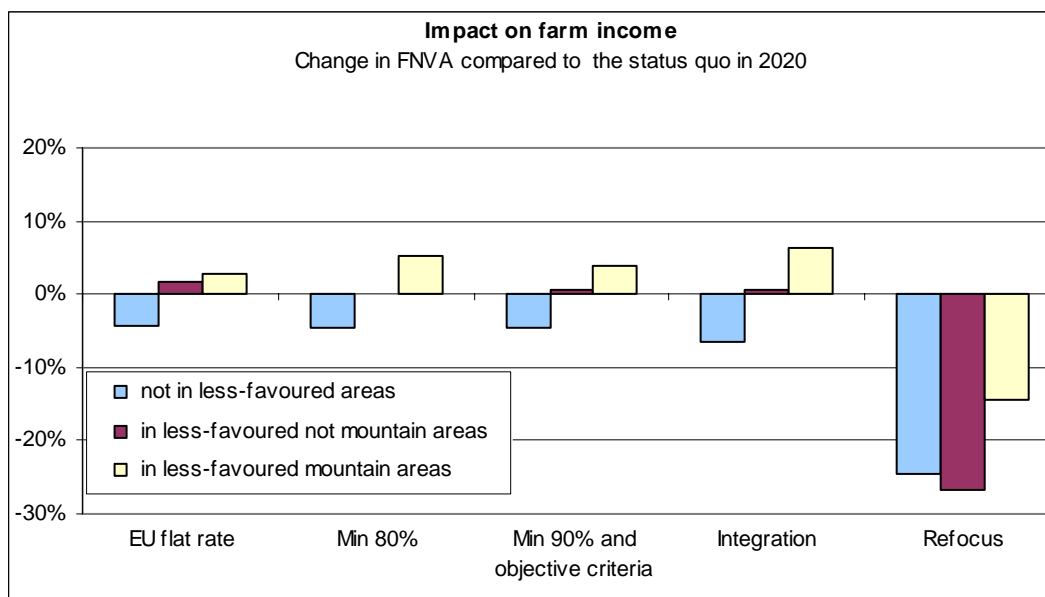
Source: DG AGRI L3

Of all scenarios analysed the Integration scenario is the most complex. This is why the effect of the individual measures on the FNVA is described with the examples of the EU-15 and the EU-12 (Figure 5.3). The figure shows the relative effect of changes in the amount of DP, new measures and additional costs on farm income. Apart from the effect of the redistribution of DP both groups experience similar impact: the reduction of the basic rate compared to the total sum of decoupled payments leads to a reduction of income which is compensated by revenue through the new measures (greening, natural handicap and small farmers). Another negative effect is due to the costs or loss of income for the greening which on average make up for 40% of the greening payments. Although the market effect of the greening slightly supports farm incomes this leads to slight decrease of income in both the EU-12 and the EU-15 compared to the status quo.

5.2. Effect on farms in LFA

In all Adjustment scenarios and particularly in the Integration scenario farm incomes increase in both mountainous and non-mountainous LFA and decrease in non LFA areas. This is not only due to the redistribution of DP between MS but mainly due to the redistribution of DP within the MS. The small difference between the Adjustment scenarios can be explained by the relative importance of LFA in the MS whose DP increase/decrease. In the EU-12 for instance there is a large amount of non-mountainous LFA but only a limited amount of mountainous LFA. Thus, in the scenario where the increase of the DP level in the EU-12 is the highest (EU-flat rate scenario) the rise in farm income in mountainous LFA is less pronounced than in the other scenarios.

Figure 5.4: Change of FNVA compared to the status quo by LFA category



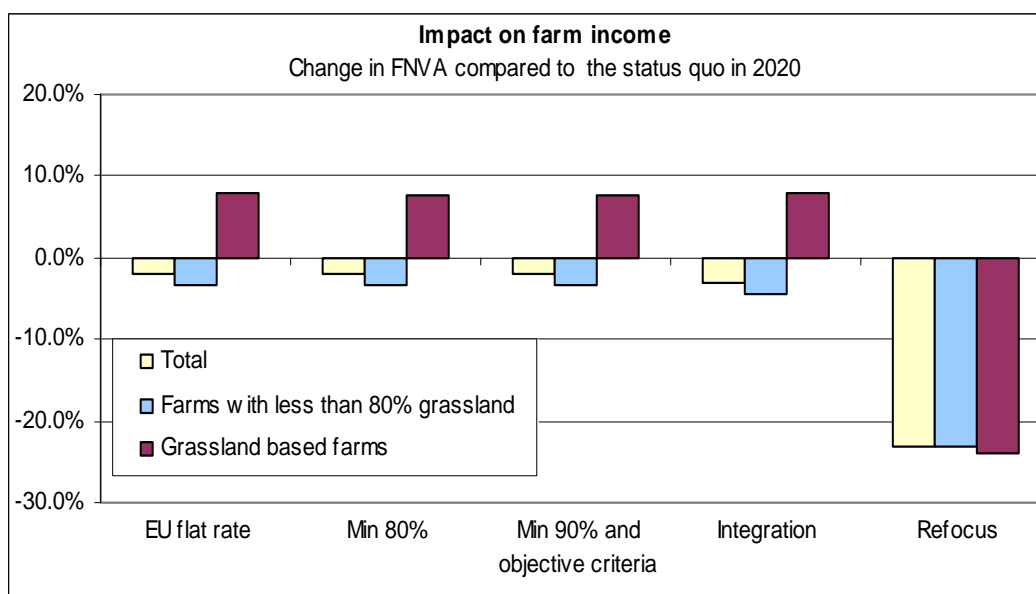
Source: DG AGRI L3

In the Refocus scenario the income drops in all classes but the decrease is less pronounced in mountainous LFA. This is due to the doubling of the budget for P-II measures and the high importance of those measures in these areas. This indicates that farms in non-mountainous LFA are highly dependent on DP.

5.3. Impact on grassland based farms

Farm income in grassland based farms¹⁶ increases with the same magnitude in all scenarios with the exception of the Refocus scenario (Figure 5.5).

Figure 5.5: Change of FNVA compared to the status quo in grassland based farms



Source: DG AGRI L3

¹⁶ Grassland-based farms are defined as farms where temporary, permanent grassland and rough grazing represent more than 80% of the utilised agricultural area.

5.4. Impact on small and larger farms

The scenarios affect small and large farms in different ways (Table 5.2)¹⁷. The picture is mixed but there is a tendency that small farms benefit particularly in the EU-flat rate scenario and to a lesser extend in Min 80% and the Min 90% and objective criteria scenario. In the Integration scenario the effect on small farms would be positive if more of these farms would be included in the FADN data base. Due to the lack of these farms in the data base the effect of the specific scheme foreseen to support the income of small farmers in the Integration scenario is largely hidden. Moreover, the positive trend in DP is off set by the additional costs for the implementation of the greening measures. The income level of the largest size class is reduced in all scenarios. One major explanation for the effects is that a lot of small farms are located in the EU-12 where DP tend to increase while the majority of the large farms is located in the EU-15. In the Refocus scenario where no DP are granted the drop in income tends to be more pronounced in large farms (with the exception of the largest size class, revealing a lower dependency on DP).

Table 5.2: Change of FNVA compared to the status quo by economic size

	2020 Farm Net Value Added per AWU - comparison with the status quo					
	Status quo € per AWU	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	Refocus
0 - <4 ESU	4 631	8%	2%	5%	-1%	-19%
4 - <8 ESU	11 380	-1%	-1%	-1%	-3%	-21%
8 - <16 ESU	15 882	2%	1%	1%	0%	-23%
16 - <40 ESU	25 134	0%	0%	0%	0%	-25%
40 - <100 ESU	40 668	-3%	-2%	-3%	-3%	-26%
>= 100 ESU	55 258	-4%	-4%	-4%	-5%	-22%
Total	23 751	-2%	-2%	-2%	-3%	-23%

Source: DG AGRI L3

5.5. Effect on the different farm types

In all the scenarios with the exception of the Refocus scenario, grazing livestock (beef and sheep) farmers are the main beneficiaries (Table 5.3). This is due to two main factors: first, the subsidy level of these farms is generally rather low in the Status quo and second in some major producing countries (e.g. France, Spain, Belgium) it is assumed that beef farms will continue to receive coupled support in addition to the area payments¹⁸. As the average level of income in this farm type is relatively low in the status quo scenario the reception of both coupled payments and the flat rate payment helps to close the gap to farm types which are currently better off. The second farm type which is benefiting are wine farms. With the introduction of flat rate payments as foreseen in all scenarios but the Refocus scenario, wine farms will start to receive DP in all MS. In the status quo scenario this is not the case as most of the wine producing countries adopted the historic model for the Single Payment Scheme. The impact on farm income is limited, however, because the acreage of wine farms is low and therefore the amount of DP is small in comparison with their output and income level. The same is true for horticulture farms.

Table 5.3: Change of FNVA compared to the status quo by farm type

¹⁷ The size of the farms is measured according to the Community typology for agricultural holdings (Decision 85/377/EEC). 1 European Size Unit (ESU) corresponds to €1 200 of potential gross value added (Standard Gross Margin).

¹⁸ In Belgium, however, the overall impact on grazing livestock farms is negative due to the reduction of coupled payments and the high intensity of production.

	2020 Farm Net Value Added per AWU - comparison with the status quo					
	Status quo € per AWU	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	Refocus
Fieldcrops	25 162	-5%	-6%	-5%	-5%	-35%
Horticulture	36 197	0%	0%	0%	0%	-1%
Wine	33 811	3%	3%	3%	3%	-3%
Other permanent crops	21 006	-2%	-1%	-1%	-1%	-10%
Milk	29 899	-5%	-4%	-4%	-7%	-20%
Other grazing livestock	20 688	6%	6%	6%	7%	-33%
Granivores	23 347	-2%	-1%	-1%	-11%	-13%
Mixed	14 909	-3%	-4%	-3%	-6%	-34%
Total	23 751	-2%	-2%	-2%	-3%	-23%

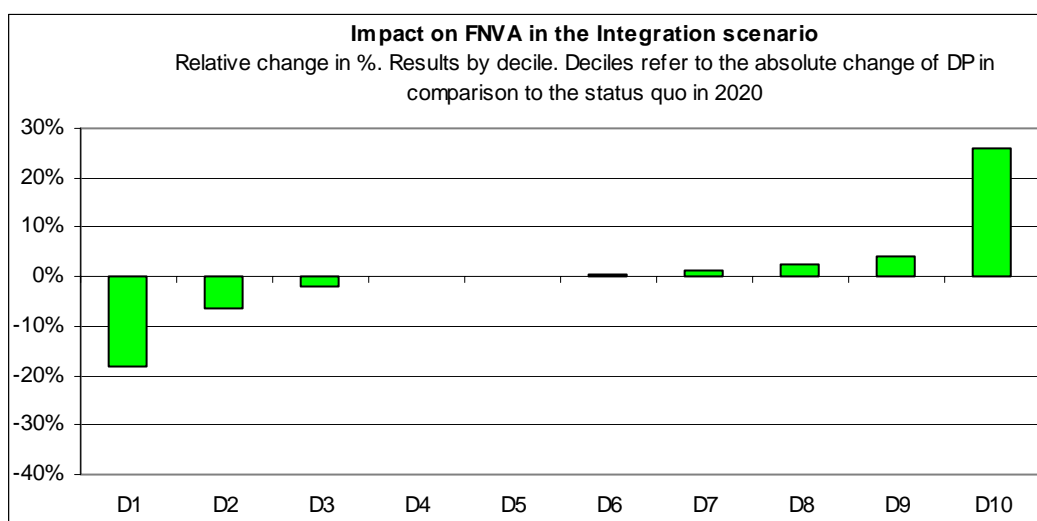
Source: DG AGRI L3

On the other hand, on average, field crop and milk farms suffer a decrease in income in all scenarios. The drop is more pronounced in the Integration and of course in the Refocus scenario. In the Integration scenario this is partly due to additional costs or loss of income arising with the implementation of the greening measures. These costs are partly compensated by the increase in market prices for crops. However, on the other hand the rise in the prices also leads to an increase of feed costs which causes a drop in the income of pig and poultry farms. In the Refocus scenario field crops, grazing livestock and mixed farms are particularly affected due to their high dependence on DP.

5.6. Identification of the most affected farms

So far the impact on average farm income was analysed. This section is focused on the identification of the most affected farms. For this purpose farms are ordered according to the change of FNVA/AWU and the average impact on farm income is calculated per decile. Figure 5.6 shows that in the Integration scenario the farm income of the 10% most favourable affected farms increases on average by 26% while the 10% most negatively affected farms lose on average 18% of their income. For the other 80% the impact on FNVA ranges from around -6% to +4%. The results of the other scenarios - although not identical - show a similar pattern. Graphs with results of the other scenarios can be found in the annex of this note. The only exception is the Refocus scenario.

Figure 5.6: Impact of the Integration scenario on FNVA by decile



Source: DG AGRI L3

But who are the most affected farms and where are they located? To answer to this question it is analysed which farm types are overrepresented in the 1st and 10th decile (Table 5.4).

Table 5.4: Identification of the farms with the most pronounced income effects by scenario and farm type. Relative frequency: Figures < 1 = under representation; Figures > 1 over representation¹⁹

	10% of farms in EU-27 with the most pronounced drop in FNVA				10% of farms in EU-27 with the most pronounced increases in FNVA			
	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	EU flat rate	Min 80%	Min 90% and objective criteria	Integration
Fieldcrops	1.6	1.6	1.6	1.5	1.1	0.9	0.9	0.9
Horticulture	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1
Wine	0.2	0.3	0.3	0.3	1.7	2.1	1.9	1.4
Other permanent crops	0.8	0.8	0.8	0.9	0.7	0.9	0.8	0.8
Milk	1.1	1.1	1.1	1.1	0.8	0.7	0.8	0.8
Other grazing livestock	1.0	1.2	1.1	1.2	2.3	2.4	2.4	2.7
Granivores	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Mixed	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5

Source: DG AGRI L3

In table 5.4 high values (>1) indicate that the farm type is overrepresented in the 1st and 10th decile. Example: if there are 1 million field crop farms in the population it would be expected that there are 100 000 field crop farms in each decile. In this context a figure of 2.6 means that there are 2.6 times as many farms in the decile as expected (i.e. 260 000 farms). If this is the case for the 1st decile the farms of this type are often among the most negatively affected farms. The opposite is the case for the 10th decile. It indicates that, globally, the most affected farms types are grazing livestock farms (positively) and field crop farms (negatively). These are the farm types which rely the most on DP. To have a better picture where these farms are located the impact on grazing livestock and field crop farms is analysed at MS level.

5.6.1. Grazing livestock farms

Grazing livestock farms are heavily affected in all scenarios (Table 5.5). However, the situation is complex as the impact depends on the specific situation of the farm and the scenario. Two main effects play a role:

- The acreage of many grazing livestock farms (e.g. beef rearing and sheep & goat farms) is often high in comparison to the amount of payments they currently receive. These farms tend to benefit from the introduction of a flat rate payment. However, the level of DP which differs in the MS between scenarios is of major importance to determine the performance of grazing livestock farms.
- In all scenarios it is assumed that coupled DP currently granted to sheep and beef producers will continue to be granted in addition to the flat rate payment. However, the level of coupled DP is reduced. This has an effect in particular in Portugal and Belgium in the Integration scenario where DP are limited to 7.5% of the budget envelope.

It has to be kept in mind that intensive beef fatteners which also fall under the category "Grazing livestock farms" do in most cases neither benefit from the introduction of a flat rate

¹⁹ The relative frequency refers to the frequency of a type of farms in the decile in comparison with the frequency of this type of farms in the whole population.

nor from coupled payments because they currently tend to receive a high amount of decoupled DP. In the integration scenario they may suffer of higher feed costs.

Table 5.5: Effect on grazing livestock farms by scenario and MS. Relative frequency: Figures < 1 = under representation; Figures > 1 over representation

Grazing livestock	10% of farms in EU-27 with the most pronounced drop in FNVA				10% of farms in EU-27 with the most pronounced increases in FNVA			
	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	EU flat rate	Min 80%	Min 90% and objective criteria	Integration
Belgium	5.5	2.2	3.3	3.5	0.4	3.1	1.5	2.9
Bulgaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyprus	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Czech Republic	0.0	0.2	0.1	0.0	0.0	0.0	0.0	4.2
Denmark	4.1	2.0	2.6	0.0	0.0	0.0	0.0	0.6
Germany	2.2	1.0	1.2	0.4	0.0	0.2	0.0	0.8
Greece	0.6	0.7	0.7	0.8	1.8	2.2	2.1	2.1
Spain	2.0	2.4	2.2	2.8	2.3	2.0	2.1	2.2
Estonia	0.0	0.0	0.0	0.0	10.0	9.4	10.0	5.0
France	0.9	0.9	0.9	0.7	5.1	6.0	6.0	7.3
Hungary	0.1	1.2	0.7	0.4	0.0	0.0	0.0	0.4
Ireland	1.8	2.0	1.9	2.1	3.4	3.5	3.6	3.6
Italy	1.6	1.2	1.4	1.4	3.0	4.5	3.9	4.5
Lithuania	0.0	0.0	0.0	0.0	6.0	3.3	4.6	1.2
Luxembourg	2.6	3.1	2.9	2.5	1.0	1.4	1.2	2.2
Latvia	0.0	0.0	0.0	0.0	8.5	8.2	8.3	4.4
Malta	1.8	1.8	1.8	1.8	0.0	3.4	2.1	2.1
Netherlands	2.1	1.8	1.9	1.8	2.2	5.3	3.4	4.4
Austria	1.2	1.5	1.4	1.6	2.7	2.7	2.7	2.7
Poland	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.1
Portugal	0.2	0.5	0.4	0.8	5.5	4.2	5.0	3.8
Romania	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
Finland	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.2
Sweden	0.8	1.5	1.2	1.2	4.4	1.6	1.8	3.8
Slovakia	0.0	0.1	0.0	0.0	5.9	0.0	0.9	0.8
Slovenia	0.2	0.2	0.2	0.2	0.3	1.7	1.7	1.7
United Kingdom	2.0	4.2	3.3	3.4	4.0	3.3	3.5	3.9

Source: DG AGRI L3

Farms with major income increase

In all scenarios many grazing livestock farms with a high increase in income are e.g. located in the Baltic countries, France, Portugal, Italy, Ireland, UK, Sweden and Austria. In some countries like Belgium, the Czech Republic, The Netherlands and Slovakia the effect depends on the scenario. Thus, in these MS the level of the flat rate is decisive. In contrast to Belgium, grazing livestock farms in Slovakia benefit the most in the EU-flat rate scenario while in the Czech Republic grazing livestock farms benefit in particular in the Integration scenario.

Farms with a major income drop

Despite the general positive trend in several MS grazing livestock farms are also overrepresented among the farms facing the most severe income drop. Often these farms are located in the same MS as the main beneficiaries but are differently affected due to their structure or their historical payment level. Mainly in Belgium, Spain, the UK and Luxembourg and to a lesser extent also in the Netherlands and Ireland, a relatively large number of grazing livestock farms suffer a drop in income in all scenarios. In Denmark this is the case in the Adjustment scenarios.

5.6.2. Field crop farms

Overall the number of field crop farms with a significant drop in income is higher than the number of field crop farms with increasing income (Table 5.4). However, income of field crop farms increases significantly in several MS (Table 5.6). Several effects are of importance:

- In the MS which currently apply SAPS the main effect is due to change of the level of the flat rate and thus the redistribution of budget between MS.
- In the MS which currently apply the SFP and which have chosen to base the level of DP on farm individual historical references the move to a flat rate is of major importance. In those MS, depending on their situation in the status quo, farms can be positively and negatively affected at the same time, depending mostly on the former reference yield of the regions.
- In the Adjustment scenario large and mid-sized field crop farms are also affected by the transfer of DP to to Pillar II.
- In the Integration scenario the effect of the greening, the capping and the minimum payment are of importance.

Table 5.6: Effect on field crop farms by scenario and MS. Relative frequency: Figures < 1 = under representation; Figures > 1 over representation

Field crop farms	10% of farms in EU-27 with the most pronounced drop in FNVA				10% of farms in EU-27 with the most pronounced increases in FNVA			
	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	EU flat rate	Min 80%	Min 90% and objective criteria	Integration
Belgium	6.1	4.0	4.8	3.7	0.3	1.2	0.7	1.6
Bulgaria	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.0
Cyprus	1.1	0.2	0.8	0.2	0.0	0.0	0.0	0.0
Czech Republic	0.9	1.1	1.1	1.0	0.0	0.0	0.0	0.4
Denmark	8.6	3.2	7.5	0.6	0.0	0.0	0.0	0.1
Germany	4.3	2.9	3.2	2.0	0.0	0.2	0.1	0.6
Greece	2.2	1.8	2.0	2.1	0.7	1.6	1.2	1.5
Spain	1.5	2.1	1.8	2.1	3.2	2.4	2.6	2.7
Estonia	0.0	0.0	0.0	0.0	8.4	7.3	8.1	3.8
France	6.2	6.3	6.1	5.9	0.3	0.5	0.5	0.7
Hungary	0.5	1.4	1.3	1.5	0.0	0.0	0.0	0.3
Ireland	6.1	6.1	6.1	6.4	1.3	1.5	1.5	1.6
Italy	2.7	1.8	2.3	2.0	0.8	1.8	1.4	1.6
Lithuania	0.0	0.0	0.0	0.1	7.0	4.6	6.0	1.7
Luxembourg	0.0	0.0	0.0	0.0	3.7	5.4	4.6	5.4
Latvia	0.0	0.0	0.0	0.0	8.2	7.1	7.9	3.7
Malta	0.3	0.3	0.3	0.3	0.1	3.0	0.6	1.8
Netherlands	3.3	1.0	1.5	0.9	0.6	4.9	3.3	4.7
Austria	3.7	4.9	4.5	5.2	0.1	0.1	0.1	0.1
Poland	0.0	0.1	0.1	0.1	0.6	0.0	0.3	0.2
Portugal	1.0	1.3	1.1	1.4	0.7	0.7	0.7	0.6
Romania	0.0	0.0	0.0	0.0	0.8	0.1	0.3	0.1
Finland	0.0	1.1	0.5	0.3	1.4	0.0	0.0	0.3
Sweden	0.9	1.9	1.6	2.1	4.8	2.9	3.8	3.8
Slovakia	0.3	0.7	0.4	0.6	5.1	0.0	1.1	0.4
Slovenia	0.7	0.8	0.8	0.9	0.0	0.0	0.0	0.0
United Kingdom	3.9	8.0	6.9	8.0	0.3	0.1	0.2	0.2

Source: DG AGRI L3

Farms with major income increase

In all scenarios a high share of field crop farms with increasing income are located in the Baltic States, Sweden, Luxembourg and Spain. In the Netherlands, Finland and Slovakia the effect depends to a large extent on the scenario. In the Netherlands farm income increases in all scenarios but the EU flat rate scenario while the Finnish and Slovak field crop farms benefit the most from the EU flat rate scenario.

Farms with a major income drop

In Belgium, France, United Kingdom, Ireland and Austria in particular but also in Germany, Spain, Greece and Italy a high share of field crop farms are among the farms with the highest losses in all scenarios. In the EU flat rate scenario the income drop is particularly pronounced in Belgium, Denmark, the Netherlands and Germany. In Denmark the transfer to Pillar II of DP plays a significant role as Income drops significantly for all Adjustment scenarios.

6. IMPACT ON FARM PROFITABILITY AND EMPLOYMENT

A large share of EU farms is not able to cover all economic costs²⁰. Already in the status quo scenario only 39% of all farms in the EU are fully profitable. Further 11% of farms cover at least 2/3rd of their opportunity costs for family labour (Table 6.1).

In all scenarios the number of profitable farms decreases. However, in the Adjustment scenarios and the Integration scenario the effect is limited. The slight decrease in the Adjustment scenarios is due to the transfer of DP to Pillar II. The reason why the lowest decrease of the number of profitable farms can be observed in the EU flat rate scenario might be that DP are redistributed from a relative low number of large farms with a high amount of DP to a higher number of small farms of which some become profitable. However, the exact drivers are difficult to assess at this level of aggregation.

In the Integration scenario the number of profitable farms also decreases slightly because in order to implement the greening measures, farms are facing additional costs. This tends to decrease farm income although the slight increase in market prices triggered by the greening supports farm incomes. In this context it has to be emphasised that new income opportunities which might arise due to the implementation of the greening due to the improvement of the attractiveness of the rural landscape could not be taken into account in the assessment. Also, the value of long term effects of greening, such as improved soil quality, increased availability of pollinators and increased resilience to face climate change could not be taken into account. As regards environmental benefits, it can be noted that a move towards a flat rate would benefit the maintenance of permanent grasslands, as well as the continuation of farming in areas with a high risk of land abandonment, which is in turn positive for biodiversity.

In the Refocus scenario the profitability of farms is severely reduced. The share of fully profitable farms drops by 8.4 percentage points and the share of farms where no income left to remunerate the family labour increases by 9.6 percentage points. This means that around

²⁰ Fully profitable = All economic costs including opportunity costs for family labour and capital (including land) are covered; 2/3 of family labour remunerated = farm is not fully profitable but all economic cost but 1/3 of the opportunity costs for family labour are covered; Some remuneration of family labour = farm is not fully profitable: after remuneration of all other costs some but less than 2/3 of the opportunity costs for family labour are covered; No remuneration of family labour = Revenue is not sufficient to cover costs even without remunerating family labour.

500 000 additional farms are not able to remunerate their family work force if they remunerate their assets at a normal rate. This means that the number of profitable farms drops by almost 21% and the number of farms which cannot remunerate family labour at all increases by 50%.

Table 6.1: Impact on farm profitability in the EU-27

	Status quo	EU flat rate	Min 80%	Min 90% and objective criteria	Integration	Refocus
Profitability categories	Situation	Difference in percentage points compared to the Status quo				
Fully profitable	39%	-0.4%	-0.7%	-0.5%	-1.2%	-8.4%
2/3rd of family labour remunerated	11%	0.4%	0.3%	0.4%	-0.4%	-1.3%
Some remuneration of family labour	31%	-0.2%	0.1%	-0.1%	0.4%	0.1%
No remuneration of family labour	19%	0.2%	0.3%	0.2%	1.2%	9.6%

Source: DG AGRI L3

With a more thorough analysis (more detailed results by economic size and farm type can be found in the annex), it is shown that in all scenarios but the Refocus scenarios the share of profitable farms increases in particular for grazing livestock (with the exception of the largest farms) and wine farms. In the Integration scenario, additionally, horticulture farms are positively affected while mixed farms benefit the most in the EU flat rate scenario. On the other hand in all scenarios the share of profitable field crop farms drops. Here, in particular large farms are negatively affected.

7. ANNEX

7.1. Method

The analysis is based on data of the **Farm Accountancy Data Network (FADN)**. The FADN is a European system of sample surveys that take place each year and collect structural and accountancy data relating to the farms; their aim is to monitor the income and business activities of agricultural holdings and to evaluate the impacts of the Common Agricultural Policy (CAP).

The scope of the FADN survey covers only those farms exceeding a minimum economic size (threshold) so as to cover the most relevant part of the agricultural activity of each EU Member State (MS), i.e. at least 90% of the total Standard Gross Margin²¹ (SGM) covered in the Farm Structure Survey (FSS, EUROSTAT). For 2007, the sample consists of approximately 81 000 holdings in the EU-27, which represent 5.4 million farms (39%) out of a total of some 14 million farms included in the FSS.

The applicable rules are aimed at providing representative data along three dimensions: region, economic size and type of farming. FADN is the only harmonised source of micro-economic data, which means that the accounting principles are the same in all EU MS.

The most recent FADN data available for this report are for the 2007 accounting year; this is because of the time needed to collect the data from farms in all the EU MS.

7.1.1. Policy simulation

The simulation is conducted with the model AIDS7K, which has been developed in DG AGRI L3. The current model version is based on the structure of farms observed in 2007. The model is able to simulate the impact of the change of DP schemes on farm income and DP for the 81 000 sample farms included in FADN. The impact on the sector level e.g. EU-27 is measured by aggregating the individual data using the FADN weighting scheme. The model is static. This means that the structure of farms and the allocation of land do not change in different scenarios. Outmost regions are not covered in this analysis because it is difficult to separate the POSEI payments from the rest of the EU DP received by the farmers in these regions.

For the purpose of the impact assessment the model has been extended to simulate the policy options covered by the impact assessment (with the exception of the no policy scenario) and to assess their impact on farm income and farm profitability. The implementation of policy scenarios is described in Chapter 2.

For the calculation of farm income both changes in output and intermediate consumption and DP are taken into account at individual farm level. The coefficients for agricultural outputs and

²¹ The Standard Gross Margin (SGM) is the difference between the standardised monetary value of gross production and the standardised monetary value of certain special costs. This difference is calculated for the various crop and animal characteristics (per hectare or per animal), at the level of the survey district for each Member State and given in €. By multiplying the areas or the number of animals by the corresponding SGM and then adding the products together, the total SGM of the holding is obtained. By adding the total SGM of all holdings of a Member State, the total Member State SGM is obtained. The concept of SGM is used for the determination of the economic size and the type of farming in FADN and in the Farm Structure Survey (FSS) organised by EUROSTAT.

inputs are mainly derived from medium term projections of DG AGRI obtained from AGLINK COSIMO, assuming the removal of sugar beet quotas. For certain agricultural outputs not covered by AGLINK (vegetable, flowers, olive and wine), the coefficients were set based on the analysis of long historical price series²².

For the purpose of the analysis it was necessary to calibrate the model in several ways in order to ensure comparability of the results between the policy scenarios.

First, the weighting coefficients in the FADN were adjusted in order to adjust the eligible area in the FADN to the one reported by IACS. This was necessary because the DP levels in the scenarios were calculated based on the information on eligible area in IACS and, thus, differences in the representation of the area would have led to distorted results. Second, the aggregated amount of DP in the status quo scenario was adjusted proportionally in order to be in line with the forecasted budget in the year 2020 on which the calculation of the DP level in the scenarios is based.

Furthermore, the following assumptions with the respect to the development of the costs for external and own production factors were made:

Land rents:

- Land rents were adjusted for inflation based on a GDP deflator used in AGLINK.
- The change of the DP was also taken into account as it is most likely to have an effect on the level of land rents. Based on the results of Scenar 2020 it was assumed that a change of the level of DP by one Euro per ha leads to a change of the land rents by 20 cents.

Formula: rent per ha in 2007 x inflation until 2020 + 0.2 x change of DP per ha.

Opportunity costs for own land:

- Opportunity costs are estimated based on the rental value for land (on the farm, in the region or in farms of the same type). The adjustment of the reference land rents in the scenarios is done as described above.

Wages and opportunity costs for family labour:

- Wages and opportunity costs for family labour increase at the same speed as inflation. As an indicator for inflation the GDP deflator applied in AGLINK is used. The adjustment coefficients are defined at EU-12 and EU-15 level.
- It is also assumed that the labour force decreases annually by 1.4 % in the EU-15 and 3.0% in the EU-12.

Interest:

- The level of interest paid is adjusted by the change of the long term interest rate as forecasted by Global Insight. The adjustment coefficients differ among MS.
- The development of the **opportunity costs for other own capital** is based on changes of the real interest rate. The real interest rate is calculated subtracting on the Global Insight HCPI inflation rate from the Global Insight long term interest rate. The estimate differs among MS.

²² More details for the Integration scenario can be found in the note "Annex 2d. Partial analysis of greening measures"

7.1.2. Indicators used

FNVA

The farm net value added per annual working unit (FNVA/AWU) is used as the main income indicator because it is the most suitable to assess the differences between MS. FNVA is used to remunerate the fixed factors of production (work, land and capital), whether they be external or family factors. As a result, holdings can be compared regardless of the family/non-family nature of the factors of production employed.

FNVA = output + Pillar I and Pillar II-type payments (excluding on investments) + national subsidies + VAT balance - intermediate consumption - farm taxes – depreciation.

The value is given per AWU in order to take into account the differences in the scale of farms and to obtain a better measure of the productivity of the agricultural workforce.

Remuneration available for family labour

In the agricultural sector the bulk of the work force does not receive a salary but has to be remunerated from the farms' income. The amounts available to remunerate family labour are estimated by deducting from the FNVA the costs for external production factors and the estimates of the opportunity costs for own capital (including land). Only farms with unpaid labour (which in most cases means family members) were included. Results are provided by family labour unit (FWU).

Remuneration of family labour= FNVA + Balance of subsidies and taxes - Wages paid - Paid rent - Interest paid - Estimate of the opportunity costs for own capital (including land)

Economic profit

Economic profit: the economic profit corresponds to the amount remaining after remuneration of all production factors. Thus, as in the case of the FNVA, holdings can be compared irrespective of the family/non-family nature of the factors of production employed. However, a part of the costs is not taken from the FADN farm accounts but is estimated. The size of the estimates depends to a large extent on the methodological assumptions made when they are calculated.

Economic profit = FNVA + subsidies on investment-taxes on investment-wages-rent-costs of own labour- costs of own capital- costs of own land.

A negative value for economic profit does not necessarily mean that a farm is forced to cease production. If the farmer accepts that his/her own production factors are remunerated less than their opportunity costs the farm can continue to produce even if the economic profit is negative over a long period. Of course, in the short term this is only possible if other costs such as intermediate consumption and external factors can be paid and the farmer has sufficient income to live on.

7.2. Result tables for EU groups

EU-27	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	66 678	66 678	0%	66 678	0%	66 678	0%	67 311	1%	66 678	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	8 426	7 812	-7.3%	7 804	-7%	7 806	-7%	8 340	-1.0%	0	-100%
Basic rate / decoupled - €/farm	8 118	7 519	-7%	7 517	-7%	7 519	-7%	5 121	-37%	0	-100%
Coupled payments - €/farm	308	292	-5%	287	-7%	287	-7%	303	-1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 491	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	381	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	44	-	0	-
Total Pillar 1 and 2 payments - €/farm	10 079	9 466	-6%	9 458	-6%	9 460	-6%	9 994	-1%	3 308	-67%
Amounts transfered to Pillar II or capped - €/farm	0	576	-	577	-	576	-	41	-	0	-
COSTS											
Total operating costs, depreciation and taxes	45 729	45 729	0%	45 729	0%	45 729	0%	47 215	3%	46 099	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 041	-	0	-
Total external factors, own capital and investment aids	15 249	15 151	-1%	15 146	-1%	15 147	-1%	15 248	0%	13 693	-10%
External factor costs - €/farm	10 220	10 137	-1%	10 147	-1%	10 146	-1%	10 213	0%	9 370	-8%
Own capital - €/farm	5 024	5 008	0%	4 993	-1%	4 997	-1%	5 030	0%	4 318	-14%
INCOME											
Farm Net Value Added - €/farm	31 028	30 414	-2%	30 407	-2%	30 408	-2%	30 089	-3%	23 886	-23%
Farm Net Value Added per AWU - €/AWU	23 751	23 281	-2%	23 275	-2%	23 277	-2%	23 033	-3%	18 284	-23%
Remuneration for family labour - €/farm	15 779	15 263	-3%	15 261	-3%	15 261	-3%	14 841	-6%	10 193	-35%
Remuneration for family labour - €/FWU	15 624	15 078	-3%	15 131	-3%	15 105	-3%	14 728	-6%	10 582	-32%
Share of Pillar 1 payments in FNVA	27%	26%	-5%	26%	-5%	26%	-5%	28%	2%	0%	-100%

Source: DG AGRI L3

EU15	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	93 890	93 890	0%	93 890	0%	93 890	0%	94 745	1%	93 890	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	11 507	9 843	-14.5%	10 398	-10%	10 138	-12%	11 230	-2%	0	-100%
Basic rate / decoupled - €/farm	10 979	9 342	-15%	9 904	-10%	9 645	-12%	6 786	-38%	0	-100%
Coupled payments - €/farm	528	502	-5%	493	-7%	493	-7%	521	-1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	3 350	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	525	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	48	-	0	-
Total Pillar 1 and 2 payments - €/farm	13 736	12 072	-12%	12 626	-8%	12 366	-10%	13 459	-2%	4 457	-68%
Amounts transferred to Pillar II or capped - €/farm	0	755	-	802	-	780	-	55	-	0	-
COSTS											
Total operating costs, depreciation and taxes	63 878	63 878	0%	63 878	0%	63 878	0%	65 897	3%	64 435	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 366	-	0	-
Total external factors, own capital and investment aids	22 304	22 018	-1%	22 119	-1%	22 071	-1%	22 278	0%	20 202	-9%
External factor costs - €/farm	15 071	14 881	-1%	14 948	-1%	14 923	-1%	15 046	0%	13 913	-8%
Own capital - €/farm	7 189	7 093	-1%	7 127	-1%	7 104	-1%	7 188	0%	6 245	-13%
INCOME											
Farm Net Value Added - €/farm	43 747	42 084	-4%	42 638	-3%	42 378	-3%	42 306	-3%	33 912	-22%
Farm Net Value Added per AWU - €/AWU	34 232	32 930	-4%	33 364	-3%	33 160	-3%	33 104	-3%	26 535	-22%
Remuneration for family labour - €/farm	21 444	20 066	-6%	20 519	-4%	20 307	-5%	20 028	-7%	13 709	-36%
Remuneration for family labour - €/FWU	22 032	20 692	-6%	21 120	-4%	20 914	-5%	20 642	-6%	14 429	-35%
Share of Pillar 1 payments in FNVA	26%	23%	-11%	24%	-7%	24%	-9%	27%	1%	0%	-100%

Source: DG AGRI L3

EU12	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	29 202	29 202	0%	29 202	0%	29 202	0%	29 528	1%	29 202	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	4 182	5 014	19.9%	4 233	1%	4 594	10%	4 361	4%	0	-100%
Basic rate / decoupled - €/farm	4 178	5 010	20%	4 229	1%	4 591	10%	2 828	-32%	0	-100%
Coupled payments - €/farm	4	4	0%	4	-7%	4	-7%	4	1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 307	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	182	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	39	-	0	-
Total Pillar 1 and 2 payments - €/farm	5 044	5 876	16%	5 095	1%	5 457	8%	5 223	4%	1 725	-66%
Amounts transferred to Pillar II or capped - €/farm	0	329	-	267	-	294	-	22	-	0	-
COSTS											
Total operating costs, depreciation and taxes	20 736	20 736	0%	20 736	0%	20 736	0%	21 487	4%	20 848	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	595	-	0	-
Total external factors, own capital and investment aids	5 533	5 693	3%	5 542	0%	5 612	1%	5 566	1%	4 728	-15%
External factor costs - €/farm	3 539	3 605	2%	3 536	0%	3 566	1%	3 556	0%	3 114	-12%
Own capital - €/farm	2 043	2 137	5%	2 055	1%	2 095	3%	2 059	1%	1 663	-19%
INCOME											
Farm Net Value Added - €/farm	13 511	14 342	6%	13 562	0%	13 923	3%	13 265	-2%	10 079	-25%
Farm Net Value Added per AWU - €/AWU	10 041	10 659	6%	10 079	0%	10 348	3%	9 858	-2%	7 491	-25%
Remuneration for family labour - €/farm	7 978	8 649	8%	8 020	1%	8 312	4%	7 698	-4%	5 351	-33%
Remuneration for family labour - €/FWU	7 116	7 626	7%	7 180	1%	7 394	4%	6 878	-3%	5 474	-23%
Share of Pillar 1 payments in FNVA	31%	35%	13%	31%	1%	33%	7%	33%	6%	0%	-100%

Source: DG AGRI L3

7.3. Result tables for Member States

Belgium	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	229 114	229 114	0%	229 114	0%	229 114	0%	230 706	1%	229 114	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	18 894	10 843	-43%	16 629	-12%	14 358	-24%	17 533	-7%	0	-100%
Basic rate / decoupled - €/farm	15 565	8 295	-47%	13 868	-11%	11 657	-25%	10 032	-36%	0	-100%
Coupled payments - €/farm	3 329	2 548	-23%	2 761	-17%	2 701	-19%	1 315	-61%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	5 251	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	876	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	60	-	0	-
Total Pillar 1 and 2 payments - €/farm	22 816	14 765	-35%	20 550	-10%	18 279	-20%	21 455	-6%	7 843	-66%
Amounts transferred to Pillar II or capped - €/farm	0	744	-	1 360	-	1 114	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	151 426	151 426	0%	151 426	0%	151 426	0%	158 056	4%	152 406	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	4 444	-	0	-
Total external factors, own capital and investment aids	36 167	34 644	-4%	35 737	-1%	35 308	-2%	35 901	-1%	32 605	-10%
External factor costs - €/farm	28 541	27 339	-4%	28 196	-1%	27 860	-2%	28 322	-1%	25 733	-10%
Own capital - €/farm	6 042	5 721	-5%	5 957	-1%	5 864	-3%	5 995	-1%	5 289	-12%
INCOME											
Farm Net Value Added - €/farm	100 504	92 453	-8%	98 239	-2%	95 967	-5%	94 105	-6%	84 551	-16%
Farm Net Value Added per AWU - €/AWU	62 429	57 428	-8%	61 022	-2%	59 611	-5%	58 454	-6%	52 519	-16%
Remuneration for family labour - €/farm	64 337	57 809	-10%	62 502	-3%	60 660	-6%	58 205	-10%	51 946	-19%
Remuneration for family labour - €/FWU	50 174	45 083	-10%	48 743	-3%	47 306	-6%	45 392	-10%	40 511	-19%
Share of Pillar 1 payments in FNVA	19%	12%	-38%	17%	-10%	15%	-20%	19%	-1%	0%	-100%

Source: DG AGRI L3

Bulgaria	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	24 118	24 118	0%	24 118	0%	24 118	0%	24 267	1%	24 118	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	5 904	6 158	4%	5 348	-9%	5 553	-6%	5 798	-2%	0	-100%
Basic rate / decoupled - €/farm	5 904	6 158	4%	5 348	-9%	5 553	-6%	3 692	-37%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	1 729	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	95	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	282	-	0	-
Total Pillar 1 and 2 payments - €/farm	5 919	6 172	4%	5 362	-9%	5 568	-6%	5 813	-2%	29	-100%
Amounts transferred to Pillar II or capped - €/farm	0	590	-	496	-	520	-	111	-	0	-
COSTS											
Total operating costs, depreciation and taxes	14 795	14 795	0%	14 795	0%	14 795	0%	15 375	4%	14 796	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	458	-	0	-
Total external factors, own capital and investment aids	5 560	5 611	1%	5 450	-2%	5 491	-1%	5 539	0%	4 410	-21%
External factor costs - €/farm	5 083	5 127	1%	4 984	-2%	5 020	-1%	5 049	-1%	4 060	-20%
Own capital - €/farm	569	575	1%	557	-2%	561	-1%	581	2%	441	-22%
INCOME											
Farm Net Value Added - €/farm	15 242	15 496	2%	14 686	-4%	14 891	-2%	14 706	-4%	9 351	-39%
Farm Net Value Added per AWU - €/AWU	9 465	9 623	2%	9 120	-4%	9 248	-2%	9 133	-4%	5 807	-39%
Remuneration for family labour - €/farm	9 681	9 885	2%	9 235	-5%	9 400	-3%	9 166	-5%	4 941	-49%
Remuneration for family labour - €/FWU	6 726	6 825	1%	6 506	-3%	6 587	-2%	6 413	-5%	4 390	-35%
Share of Pillar 1 payments in FNVA	39%	40%	3%	36%	-6%	37%	-4%	39%	2%	0%	-100%

Source: DG AGRI L3

Czech Republic	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	355 036	355 036	0%	355 036	0%	355 036	0%	360 047	1%	355 036	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	60 904	56 720	-7%	54 236	-11%	54 237	-11%	60 330	-1%	0	-100%
Basic rate / decoupled - €/farm	60 904	56 720	-7%	54 236	-11%	54 237	-11%	39 178	-36%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	18 098	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	3 014	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	39	-	0	-
Total Pillar 1 and 2 payments - €/farm	75 984	71 800	-6%	69 316	-9%	69 316	-9%	75 409	-1%	30 159	-60%
Amounts transferred to Pillar II or capped - €/farm	0	6 453	-	6 113	-	6 113	-	20	-	0	-
COSTS											
Total operating costs, depreciation and taxes	301 990	301 990	0%	301 990	0%	301 990	0%	312 744	4%	303 951	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	9 116	-	0	-
Total external factors, own capital and investment aids	95 946	95 115	-1%	94 621	-1%	94 621	-1%	95 833	0%	84 027	-12%
External factor costs - €/farm	83 849	83 089	-1%	82 654	-1%	82 654	-1%	83 731	0%	73 336	-13%
Own capital - €/farm	14 377	14 305	-1%	14 246	-1%	14 246	-1%	14 381	0%	12 971	-10%
INCOME											
Farm Net Value Added - €/farm	129 029	124 845	-3%	122 361	-5%	122 362	-5%	122 713	-5%	81 244	-37%
Farm Net Value Added per AWU - €/AWU	23 473	22 711	-3%	22 260	-5%	22 260	-5%	22 324	-5%	14 780	-37%
Remuneration for family labour - €/farm	33 083	29 730	-10%	27 741	-16%	27 741	-16%	26 879	-19%	-2 784	-108%
Remuneration for family labour - €/FWU	26 318	25 470	-3%	24 810	-6%	24 810	-6%	25 070	-5%	15 681	-40%
Share of Pillar 1 payments in FNVA	47%	45%	-4%	44%	-6%	44%	-6%	49%	4%	0%	-100%

Source: DG AGRI L3

Denmark	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	318 583	318 583	0%	318 583	0%	318 583	0%	321 845	1%	318 583	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	29 283	19 820	-32%	25 568	-13%	22 862	-22%	27 753	-5%	0	-100%
Basic rate / decoupled - €/farm	29 269	19 806	-32%	25 554	-13%	22 848	-22%	19 314	-34%	0	-100%
Coupled payments - €/farm	14	14	1%	14	0%	14	1%	15	8%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	8 326	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	96	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	2	-	0	-
Total Pillar 1 and 2 payments - €/farm	30 247	20 785	-31%	26 532	-12%	23 827	-21%	28 717	-5%	1 929	-94%
Amounts transferred to Pillar II or capped - €/farm	0	1 691	-	2 321	-	2 022	-	2	-	0	-
COSTS											
Total operating costs, depreciation and taxes	254 731	254 731	0%	254 731	0%	254 731	0%	260 854	2%	254 972	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 913	-	0	-
Total external factors, own capital and investment aids	123 141	121 924	-1%	122 660	0%	122 312	-1%	122 943	0%	119 434	-3%
External factor costs - €/farm	108 703	108 169	0%	108 493	0%	108 340	0%	108 628	0%	107 056	-2%
Own capital - €/farm	14 560	13 876	-5%	14 288	-2%	14 093	-3%	14 435	-1%	12 499	-14%
INCOME											
Farm Net Value Added - €/farm	94 099	84 636	-10%	90 384	-4%	87 679	-7%	89 708	-5%	65 539	-30%
Farm Net Value Added per AWU - €/AWU	72 352	65 076	-10%	69 495	-4%	67 415	-7%	68 975	-5%	50 393	-30%
Remuneration for family labour - €/farm	-29 043	-37 288	28%	-32 277	11%	-34 634	19%	-33 236	14%	-53 895	86%
Remuneration for family labour - €/FWU	-41 293	-53 016	28%	-45 892	11%	-49 243	19%	-47 255	14%	-76 628	86%
Share of Pillar 1 payments in FNVA	31%	23%	-25%	28%	-9%	26%	-16%	31%	-1%	0%	-100%

Source: DG AGRI L3

Germany	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	240 157	240 157	0%	240 157	0%	240 157	0%	242 141	1%	240 157	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	26 848	20 613	-23%	23 370	-13%	22 606	-16%	25 889	-4%	0	-100%
Basic rate / decoupled - €/farm	26 848	20 613	-23%	23 370	-13%	22 606	-16%	16 814	-37%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	7 764	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 295	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	17	-	0	-
Total Pillar 1 and 2 payments - €/farm	31 484	25 248	-20%	28 006	-11%	27 241	-13%	30 525	-3%	9 271	-71%
Amounts transferred to Pillar II or capped - €/farm	0	1 858	-	2 188	-	2 096	-	2	-	0	-
COSTS											
Total operating costs, depreciation and taxes	185 776	185 776	0%	185 776	0%	185 776	0%	191 864	3%	186 935	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	4 160	-	0	-
Total external factors, own capital and investment aids	60 641	59 417	-2%	59 956	-1%	59 807	-1%	60 450	0%	55 437	-9%
External factor costs - €/farm	42 197	41 348	-2%	41 736	-1%	41 628	-1%	42 109	0%	38 500	-9%
Own capital - €/farm	16 222	15 846	-2%	15 999	-1%	15 956	-2%	16 119	-1%	14 715	-9%
INCOME											
Farm Net Value Added - €/farm	85 866	79 630	-7%	82 387	-4%	81 623	-5%	80 802	-6%	62 494	-27%
Farm Net Value Added per AWU - €/AWU	44 864	41 606	-7%	43 046	-4%	42 647	-5%	42 218	-6%	32 652	-27%
Remuneration for family labour - €/farm	25 224	20 213	-20%	22 431	-11%	21 816	-14%	20 352	-19%	7 056	-72%
Remuneration for family labour - €/FWU	21 346	18 017	-16%	19 424	-9%	19 034	-11%	18 026	-16%	9 854	-54%
Share of Pillar 1 payments in FNVA	31%	26%	-17%	28%	-9%	28%	-11%	32%	2%	0%	-100%

Source: DG AGRI L3

Estonia	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	94 696	94 696	0%	94 696	0%	94 696	0%	96 228	2%	94 696	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	14 433	30 018	108%	24 127	67%	27 074	88%	19 327	34%	0	-100%
Basic rate / decoupled - €/farm	14 433	30 018	108%	24 127	67%	27 074	88%	12 523	-13%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	5 792	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	966	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	47	-	0	-
Total Pillar 1 and 2 payments - €/farm	21 423	37 008	73%	31 117	45%	34 064	59%	26 317	23%	13 980	-35%
Amounts transferred to Pillar II or capped - €/farm	0	2 911	-	2 217	-	2 563	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	75 248	75 248	0%	75 248	0%	75 248	0%	78 254	4%	76 157	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	2 409	-	0	-
Total external factors, own capital and investment aids	17 460	20 577	18%	19 398	11%	19 988	14%	18 439	6%	14 762	-15%
External factor costs - €/farm	13 751	15 640	14%	14 926	9%	15 283	11%	14 353	4%	12 190	-11%
Own capital - €/farm	5 028	6 256	24%	5 792	15%	6 024	20%	5 405	7%	3 891	-23%
INCOME											
Farm Net Value Added - €/farm	40 871	56 457	38%	50 565	24%	53 512	31%	44 291	8%	32 519	-20%
Farm Net Value Added per AWU - €/AWU	22 281	30 777	38%	27 565	24%	29 172	31%	24 145	8%	17 728	-20%
Remuneration for family labour - €/farm	23 411	35 880	53%	31 166	33%	33 524	43%	25 852	10%	17 757	-24%
Remuneration for family labour - €/FWU	17 435	26 648	53%	23 160	33%	24 905	43%	19 364	11%	13 757	-21%
Share of Pillar 1 payments in FNVA	35%	53%	51%	48%	35%	51%	43%	44%	24%	0%	-100%

Source: DG AGRI L3

Ireland	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	47 543	47 543	0%	47 543	0%	47 543	0%	48 301	2%	47 543	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	12 970	11 976	-8%	12 041	-7%	12 011	-7%	12 832	-1%	0	-100%
Basic rate / decoupled - €/farm	12 970	11 976	-8%	12 041	-7%	12 011	-7%	8 340	-36%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	3 849	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	642	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	2	-	0	-
Total Pillar 1 and 2 payments - €/farm	19 341	18 347	-5%	18 412	-5%	18 383	-5%	19 204	-1%	12 743	-34%
Amounts transferred to Pillar II or capped - €/farm	0	804	-	811	-	808	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	41 082	41 082	0%	41 082	0%	41 082	0%	42 528	4%	42 675	4%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 104	-	0	-
Total external factors, own capital and investment aids	18 692	18 509	-1%	18 522	-1%	18 516	-1%	18 678	0%	16 155	-14%
External factor costs - €/farm	5 307	5 262	-1%	5 264	-1%	5 263	-1%	5 292	0%	4 882	-8%
Own capital - €/farm	13 171	13 033	-1%	13 044	-1%	13 039	-1%	13 172	0%	11 059	-16%
INCOME											
Farm Net Value Added - €/farm	25 802	24 807	-4%	24 873	-4%	24 843	-4%	24 976	-3%	17 610	-32%
Farm Net Value Added per AWU - €/AWU	27 383	26 327	-4%	26 397	-4%	26 365	-4%	26 506	-3%	18 689	-32%
Remuneration for family labour - €/farm	7 110	6 298	-11%	6 351	-11%	6 327	-11%	6 298	-11%	1 455	-80%
Remuneration for family labour - €/FWU	8 045	7 126	-11%	7 186	-11%	7 159	-11%	7 127	-11%	1 647	-80%
Share of Pillar 1 payments in FNVA	50%	48%	-4%	48%	-4%	48%	-4%	51%	2%	0%	-100%

Source: DG AGRI L3

Greece	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	21 368	21 368	0%	21 368	0%	21 368	0%	21 536	1%	21 368	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	4 210	2 928	-30%	3 896	-7%	3 441	-18%	3 962	-6%	0	-100%
Basic rate / decoupled - €/farm	3 882	2 593	-33%	3 564	-8%	3 108	-20%	2 320	-40%	0	-100%
Coupled payments - €/farm	328	334	2%	332	1%	333	2%	348	6%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 111	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	179	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	4	-	0	-
Total Pillar 1 and 2 payments - €/farm	4 916	3 633	-26%	4 602	-6%	4 147	-16%	4 668	-5%	1 411	-71%
Amounts transferred to Pillar II or capped - €/farm	0	113	-	176	-	145	-	68	-	0	-
COSTS											
Total operating costs, depreciation and taxes	11 105	11 105	0%	11 105	0%	11 105	0%	11 426	3%	11 282	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	225	-	0	-
Total external factors, own capital and investment aids	4 704	4 439	-6%	4 610	-2%	4 530	-4%	4 625	-2%	3 923	-17%
External factor costs - €/farm	2 159	2 085	-3%	2 150	0%	2 120	-2%	2 160	0%	1 884	-13%
Own capital - €/farm	2 604	2 413	-7%	2 519	-3%	2 469	-5%	2 524	-3%	2 098	-19%
INCOME											
Farm Net Value Added - €/farm	15 178	13 896	-8%	14 864	-2%	14 409	-5%	14 778	-3%	11 497	-24%
Farm Net Value Added per AWU - €/AWU	15 597	14 279	-8%	15 275	-2%	14 807	-5%	15 187	-3%	11 815	-24%
Remuneration for family labour - €/farm	10 475	9 457	-10%	10 254	-2%	9 880	-6%	10 154	-3%	7 574	-28%
Remuneration for family labour - €/FWU	12 173	10 990	-10%	11 917	-2%	11 482	-6%	11 800	-3%	8 802	-28%
Share of Pillar 1 payments in FNVA	28%	21%	-24%	26%	-6%	24%	-14%	27%	-3%	0%	-100%

Source: DG AGRI L3

Spain	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	46 395	46 395	0%	46 395	0%	46 395	0%	47 005	1%	46 395	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	6 858	7 489	9%	6 570	-4%	6 743	-2%	7 098	4%	0	-100%
Basic rate / decoupled - €/farm	6 245	6 885	10%	5 994	-4%	6 168	-1%	3 902	-38%	0	-100%
Coupled payments - €/farm	613	605	-1%	576	-6%	575	-6%	634	4%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 075	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	345	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	142	-	0	-
Total Pillar 1 and 2 payments - €/farm	7 034	7 666	9%	6 746	-4%	6 919	-2%	7 275	3%	352	-95%
Amounts transferred to Pillar II or capped - €/farm	0	520	-	434	-	450	-	28	-	0	-
COSTS											
Total operating costs, depreciation and taxes	21 377	21 377	0%	21 377	0%	21 377	0%	22 578	6%	21 421	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	894	-	0	-
Total external factors, own capital and investment aids	9 693	9 879	2%	9 703	0%	9 736	0%	9 804	1%	8 501	-12%
External factor costs - €/farm	4 953	5 003	1%	4 946	0%	4 957	0%	4 984	1%	4 580	-8%
Own capital - €/farm	4 664	4 800	3%	4 681	0%	4 704	1%	4 744	2%	3 845	-18%
INCOME											
Farm Net Value Added - €/farm	32 051	32 683	2%	31 763	-1%	31 936	0%	31 701	-1%	25 325	-21%
Farm Net Value Added per AWU - €/AWU	28 953	29 524	2%	28 693	-1%	28 850	0%	28 637	-1%	22 878	-21%
Remuneration for family labour - €/farm	22 358	22 803	2%	22 059	-1%	22 199	-1%	21 896	-2%	16 824	-25%
Remuneration for family labour - €/FWU	24 738	25 232	2%	24 419	-1%	24 572	-1%	24 227	-2%	18 692	-24%
Share of Pillar 1 payments in FNVA	21%	23%	7%	21%	-3%	21%	-1%	22%	5%	0%	-100%

Source: DG AGRI L3

France	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	160 702	160 702	0%	160 702	0%	160 702	0%	162 187	1%	160 702	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	22 879	19 001	-17%	20 067	-12%	19 960	-13%	22 317	-2%	0	-100%
Basic rate / decoupled - €/farm	21 393	17 622	-18%	18 690	-13%	18 582	-13%	12 851	-40%	0	-100%
Coupled payments - €/farm	1 487	1 379	-7%	1 378	-7%	1 379	-7%	1 616	9%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	6 687	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 115	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	47	-	0	-
Total Pillar 1 and 2 payments - €/farm	25 515	21 637	-15%	22 703	-11%	22 596	-11%	24 953	-2%	5 272	-79%
Amounts transferred to Pillar II or capped - €/farm	0	1 609	-	1 725	-	1 714	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	124 373	124 373	0%	124 373	0%	124 373	0%	127 647	3%	125 032	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	2 458	-	0	-
Total external factors, own capital and investment aids	32 107	31 364	-2%	31 572	-2%	31 551	-2%	32 015	0%	27 709	-14%
External factor costs - €/farm	28 120	27 387	-3%	27 566	-2%	27 548	-2%	27 937	-1%	24 275	-14%
Own capital - €/farm	5 126	5 115	0%	5 145	0%	5 142	0%	5 217	2%	4 573	-11%
INCOME											
Farm Net Value Added - €/farm	61 845	57 967	-6%	59 033	-5%	58 926	-5%	59 493	-4%	40 943	-34%
Farm Net Value Added per AWU - €/AWU	38 819	36 385	-6%	37 054	-5%	36 987	-5%	37 343	-4%	25 699	-34%
Remuneration for family labour - €/farm	29 738	26 603	-11%	27 460	-8%	27 374	-8%	27 478	-8%	13 234	-55%
Remuneration for family labour - €/FWU	25 345	22 676	-11%	23 406	-8%	23 332	-8%	23 426	-8%	11 298	-55%
Share of Pillar 1 payments in FNVA	37%	33%	-11%	34%	-8%	34%	-8%	38%	1%	0%	-100%

Source: DG AGRI L3

Italy	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	65 794	65 794	0%	65 794	0%	65 794	0%	66 474	1%	65 794	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	6 767	4 266	-37%	6 080	-10%	5 254	-22%	6 331	-6%	0	-100%
Basic rate / decoupled - €/farm	6 513	4 012	-38%	5 838	-10%	5 012	-23%	3 835	-41%	0	-100%
Coupled payments - €/farm	253	254	0%	242	-4%	241	-5%	268	6%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 896	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	316	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	16	-	0	-
Total Pillar 1 and 2 payments - €/farm	7 242	4 742	-35%	6 556	-9%	5 729	-21%	6 806	-6%	951	-87%
Amounts transferred to Pillar II or capped - €/farm	0	217	-	366	-	296	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	31 357	31 357	0%	31 357	0%	31 357	0%	32 258	3%	31 476	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	508	-	0	-
Total external factors, own capital and investment aids	14 320	13 875	-3%	14 228	-1%	14 067	-2%	14 277	0%	13 078	-9%
External factor costs - €/farm	7 590	7 418	-2%	7 550	-1%	7 489	-1%	7 572	0%	7 140	-6%
Own capital - €/farm	6 869	6 596	-4%	6 817	-1%	6 716	-2%	6 844	0%	6 078	-12%
INCOME											
Farm Net Value Added - €/farm	41 678	39 177	-6%	40 992	-2%	40 165	-4%	41 022	-2%	35 268	-15%
Farm Net Value Added per AWU - €/AWU	35 561	33 427	-6%	34 975	-2%	34 270	-4%	35 001	-2%	30 092	-15%
Remuneration for family labour - €/farm	27 359	25 303	-8%	26 764	-2%	26 099	-5%	26 744	-2%	22 190	-19%
Remuneration for family labour - €/FWU	31 107	28 796	-7%	30 433	-2%	29 688	-5%	30 411	-2%	25 310	-19%
Share of Pillar 1 payments in FNVA	16%	11%	-33%	15%	-9%	13%	-19%	15%	-5%	0%	-100%

Source: DG AGRI L3

Cyprus	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	34 180	34 180	0%	34 180	0%	34 180	0%	34 365	1%	34 180	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	2 677	1 849	-31%	2 445	-9%	2 114	-21%	2 527	-6%	0	-100%
Basic rate / decoupled - €/farm	2 677	1 849	-31%	2 445	-9%	2 114	-21%	1 626	-39%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	753	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	126	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	22	-	0	-
Total Pillar 1 and 2 payments - €/farm	3 023	2 195	-27%	2 791	-8%	2 460	-19%	2 873	-5%	692	-77%
Amounts transferred to Pillar II or capped - €/farm	0	67	-	103	-	82	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	25 062	25 062	0%	25 062	0%	25 062	0%	25 766	3%	25 107	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	374	-	0	-
Total external factors, own capital and investment aids	6 532	6 369	-3%	6 487	-1%	6 421	-2%	6 503	0%	6 006	-8%
External factor costs - €/farm	4 209	4 104	-2%	4 180	-1%	4 138	-2%	4 194	0%	3 874	-8%
Own capital - €/farm	2 357	2 298	-3%	2 341	-1%	2 317	-2%	2 343	-1%	2 167	-8%
INCOME											
Farm Net Value Added - €/farm	12 141	11 313	-7%	11 909	-2%	11 578	-5%	11 472	-6%	9 765	-20%
Farm Net Value Added per AWU - €/AWU	15 251	14 212	-7%	14 960	-2%	14 544	-5%	14 411	-6%	12 267	-20%
Remuneration for family labour - €/farm	5 608	4 945	-12%	5 423	-3%	5 157	-8%	4 969	-11%	3 759	-33%
Remuneration for family labour - €/FWU	10 107	8 974	-11%	9 790	-3%	9 336	-8%	9 029	-11%	6 944	-31%
Share of Pillar 1 payments in FNVA	22%	16%	-26%	21%	-7%	18%	-17%	22%	0%	0%	-100%

Source: DG AGRI L3

Latvia	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	47 463	47 463	0%	47 463	0%	47 463	0%	48 037	1%	47 463	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	5 797	15 123	161%	12 173	110%	13 650	135%	8 684	50%	0	-100%
Basic rate / decoupled - €/farm	5 797	15 123	161%	12 173	110%	13 650	135%	5 623	-3%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	2 599	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	434	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	28	-	0	-
Total Pillar 1 and 2 payments - €/farm	9 933	19 259	94%	16 308	64%	17 786	79%	12 820	29%	8 272	-17%
Amounts transferred to Pillar II or capped - €/farm	0	1 214	-	897	-	1 054	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	37 503	37 503	0%	37 503	0%	37 503	0%	38 238	2%	38 040	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	427	-	0	-
Total external factors, own capital and investment aids	5 838	7 703	32%	7 113	22%	7 409	27%	6 416	10%	4 737	-19%
External factor costs - €/farm	5 333	6 162	16%	5 898	11%	6 030	13%	5 600	5%	4 874	-9%
Own capital - €/farm	2 628	3 664	39%	3 338	27%	3 502	33%	2 939	12%	1 986	-24%
INCOME											
Farm Net Value Added - €/farm	19 893	29 219	47%	26 268	32%	27 746	39%	22 619	14%	17 694	-11%
Farm Net Value Added per AWU - €/AWU	12 912	18 966	47%	17 051	32%	18 010	39%	14 682	14%	11 485	-11%
Remuneration for family labour - €/farm	14 054	21 515	53%	19 155	36%	20 337	45%	16 203	15%	12 956	-8%
Remuneration for family labour - €/FWU	12 972	19 116	47%	17 172	32%	18 146	40%	14 769	14%	12 204	-6%
Share of Pillar 1 payments in FNVA	29%	52%	78%	46%	59%	49%	69%	38%	32%	0%	-100%

Source: DG AGRI L3

Lithuania	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	40 492	40 492	0%	40 492	0%	40 492	0%	41 271	2%	40 492	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	7 400	12 770	73%	10 280	39%	11 526	56%	8 968	21%	0	-100%
Basic rate / decoupled - €/farm	7 400	12 770	73%	10 280	39%	11 526	56%	5 827	-21%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	2 691	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	449	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	2	-	0	-
Total Pillar 1 and 2 payments - €/farm	9 890	15 259	54%	12 769	29%	14 016	42%	11 457	16%	4 979	-50%
Amounts transferred to Pillar II or capped - €/farm	0	951	-	697	-	822	-	3	-	0	-
COSTS											
Total operating costs, depreciation and taxes	26 263	26 263	0%	26 263	0%	26 263	0%	27 116	3%	26 586	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	638	-	0	-
Total external factors, own capital and investment aids	4 862	5 934	22%	5 437	12%	5 685	17%	5 175	6%	3 424	-30%
External factor costs - €/farm	4 152	4 786	15%	4 489	8%	4 638	12%	4 343	5%	3 303	-20%
Own capital - €/farm	2 331	2 768	19%	2 568	10%	2 669	14%	2 453	5%	1 742	-25%
INCOME											
Farm Net Value Added - €/farm	24 119	29 488	22%	26 998	12%	28 245	17%	25 613	6%	18 884	-22%
Farm Net Value Added per AWU - €/AWU	18 162	22 205	22%	20 330	12%	21 268	17%	19 287	6%	14 220	-22%
Remuneration for family labour - €/farm	19 256	23 554	22%	21 561	12%	22 559	17%	20 438	6%	15 460	-20%
Remuneration for family labour - €/FWU	17 636	21 493	22%	19 721	12%	20 608	17%	18 736	6%	14 430	-18%
Share of Pillar 1 payments in FNVA	31%	43%	41%	38%	24%	41%	33%	35%	14%	0%	-100%

Source: DG AGRI L3

Luxembourg	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	171 924	171 924	0%	171 924	0%	171 924	0%	173 576	1%	171 924	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	22 021	19 722	-10%	20 443	-7%	20 165	-8%	22 118	0%	0	-100%
Basic rate / decoupled - €/farm	22 021	19 722	-10%	20 443	-7%	20 165	-8%	14 348	-35%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	6 627	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 105	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	38	-	0	-
Total Pillar 1 and 2 payments - €/farm	40 301	38 002	-6%	38 723	-4%	38 445	-5%	40 398	0%	36 561	-9%
Amounts transferred to Pillar II or capped - €/farm	0	1 680	-	1 759	-	1 728	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	142 296	142 296	0%	142 296	0%	142 296	0%	147 894	4%	146 866	3%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	4 558	-	0	-
Total external factors, own capital and investment aids	36 901	36 439	-1%	36 580	-1%	36 525	-1%	36 906	0%	32 612	-12%
External factor costs - €/farm	26 715	26 482	-1%	26 555	-1%	26 527	-1%	26 730	0%	24 488	-8%
Own capital - €/farm	16 037	15 808	-1%	15 876	-1%	15 850	-1%	16 027	0%	13 974	-13%
INCOME											
Farm Net Value Added - €/farm	69 930	67 631	-3%	68 352	-2%	68 074	-3%	66 082	-6%	61 619	-12%
Farm Net Value Added per AWU - €/AWU	50 620	48 956	-3%	49 478	-2%	49 277	-3%	47 835	-6%	44 605	-12%
Remuneration for family labour - €/farm	33 029	31 192	-6%	31 772	-4%	31 548	-4%	29 176	-12%	29 007	-12%
Remuneration for family labour - €/FWU	28 179	26 612	-6%	27 107	-4%	26 916	-4%	24 892	-12%	24 748	-12%
Share of Pillar 1 payments in FNVA	31%	29%	-7%	30%	-5%	30%	-6%	33%	6%	0%	-100%

Source: DG AGRI L3

Hungary	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	85 511	85 511	0%	85 511	0%	85 511	0%	86 442	1%	85 511	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	14 041	13 209	-6%	12 750	-9%	12 750	-9%	13 769	-2%	0	-100%
Basic rate / decoupled - €/farm	14 041	13 209	-6%	12 750	-9%	12 750	-9%	8 904	-37%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	4 170	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	681	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	15	-	0	-
Total Pillar 1 and 2 payments - €/farm	16 439	15 606	-5%	15 147	-8%	15 148	-8%	16 166	-2%	4 795	-71%
Amounts transferred to Pillar II or capped - €/farm	0	1 214	-	1 162	-	1 162	-	116	-	0	-
COSTS											
Total operating costs, depreciation and taxes	67 085	67 085	0%	67 085	0%	67 085	0%	68 915	3%	67 397	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 415	-	0	-
Total external factors, own capital and investment aids	19 355	19 189	-1%	19 098	-1%	19 098	-1%	19 301	0%	16 601	-14%
External factor costs - €/farm	15 987	15 877	-1%	15 816	-1%	15 816	-1%	15 969	0%	14 173	-11%
Own capital - €/farm	3 976	3 920	-1%	3 890	-2%	3 890	-2%	3 940	-1%	3 036	-24%
INCOME											
Farm Net Value Added - €/farm	34 865	34 032	-2%	33 574	-4%	33 574	-4%	33 694	-3%	22 909	-34%
Farm Net Value Added per AWU - €/AWU	27 898	27 232	-2%	26 865	-4%	26 865	-4%	26 962	-3%	18 332	-34%
Remuneration for family labour - €/farm	15 509	14 843	-4%	14 476	-7%	14 476	-7%	14 393	-7%	6 308	-59%
Remuneration for family labour - €/FWU	28 744	27 917	-3%	27 463	-4%	27 463	-4%	26 992	-6%	16 841	-41%
Share of Pillar 1 payments in FNVA	40%	39%	-4%	38%	-6%	38%	-6%	41%	1%	0%	-100%

Source: DG AGRI L3

Malta	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	74 215	74 215	0%	74 215	0%	74 215	0%	74 366	0%	74 215	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	2 341	896	-62%	2 383	2%	1 574	-33%	2 266	-3%	0	-100%
Basic rate / decoupled - €/farm	2 341	896	-62%	2 383	2%	1 574	-33%	1 473	-37%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	680	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	113	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	5 855	4 410	-25%	5 897	1%	5 088	-13%	5 780	-1%	7 028	20%
Amounts transferred to Pillar II or capped - €/farm	0	1	-	23	-	6	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	40 735	40 735	0%	40 735	0%	40 735	0%	42 107	3%	41 192	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	508	-	0	-
Total external factors, own capital and investment aids	10 321	10 219	-1%	10 488	2%	10 340	0%	10 466	1%	10 068	-2%
External factor costs - €/farm	4 555	4 498	-1%	4 712	3%	4 595	1%	4 695	3%	4 382	-4%
Own capital - €/farm	5 778	5 732	-1%	5 788	0%	5 758	0%	5 784	0%	5 698	-1%
INCOME											
Farm Net Value Added - €/farm	39 335	37 890	-4%	39 376	0%	38 568	-2%	38 039	-3%	40 051	2%
Farm Net Value Added per AWU - €/AWU	31 180	30 034	-4%	31 213	0%	30 572	-2%	30 153	-3%	31 747	2%
Remuneration for family labour - €/farm	29 014	27 671	-5%	28 888	0%	28 227	-3%	27 573	-5%	29 982	3%
Remuneration for family labour - €/FWU	25 112	23 934	-5%	25 074	0%	24 455	-3%	23 946	-5%	26 080	4%
Share of Pillar 1 payments in FNVA	6%	2%	-60%	6%	2%	4%	-31%	6%	0%	0%	-100%

Source: DG AGRI L3

Netherlands	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	457 830	457 830	0%	457 830	0%	457 830	0%	458 389	0%	457 830	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	14 474	7 946	-45%	12 795	-12%	11 237	-22%	13 348	-8%	0	-100%
Basic rate / decoupled - €/farm	14 474	7 946	-45%	12 795	-12%	11 237	-22%	9 307	-36%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	3 994	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	47	-	0	-
Total Pillar 1 and 2 payments - €/farm	16 070	9 542	-41%	14 391	-10%	12 833	-20%	14 944	-7%	3 192	-80%
Amounts transferred to Pillar II or capped - €/farm	0	476	-	981	-	815	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	316 171	316 171	0%	316 171	0%	316 171	0%	323 475	2%	316 570	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	3 805	-	0	-
Total external factors, own capital and investment aids	107 237	106 485	-1%	107 198	0%	106 967	0%	107 280	0%	105 342	-2%
External factor costs - €/farm	87 603	87 199	0%	87 590	0%	87 464	0%	87 636	0%	86 565	-1%
Own capital - €/farm	18 446	18 097	-2%	18 419	0%	18 314	-1%	18 454	0%	17 588	-5%
INCOME											
Farm Net Value Added - €/farm	157 728	151 200	-4%	156 049	-1%	154 491	-2%	149 857	-5%	144 451	-8%
Farm Net Value Added per AWU - €/AWU	68 346	65 517	-4%	67 618	-1%	66 943	-2%	64 935	-5%	62 592	-8%
Remuneration for family labour - €/farm	50 491	44 714	-11%	48 851	-3%	47 523	-6%	42 577	-16%	39 108	-23%
Remuneration for family labour - €/FWU	41 966	37 177	-11%	40 594	-3%	39 498	-6%	35 410	-16%	32 490	-23%
Share of Pillar 1 payments in FNVA	9%	5%	-43%	8%	-11%	7%	-21%	9%	-3%	0%	-100%

Source: DG AGRI L3

Austria	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	81 677	81 677	0%	81 677	0%	81 677	0%	82 237	1%	81 677	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	8 793	8 493	-3%	8 281	-6%	8 280	-6%	8 713	-1%	0	-100%
Basic rate / decoupled - €/farm	8 156	7 903	-3%	7 690	-6%	7 691	-6%	4 989	-39%	0	-100%
Coupled payments - €/farm	637	590	-7%	590	-7%	590	-7%	653	3%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 607	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	435	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	28	-	0	-
Total Pillar 1 and 2 payments - €/farm	18 450	18 150	-2%	17 937	-3%	17 937	-3%	18 369	0%	19 313	5%
Amounts transferred to Pillar II or capped - €/farm	0	453	-	432	-	432	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	56 990	56 990	0%	56 990	0%	56 990	0%	58 538	3%	59 404	4%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 125	-	0	-
Total external factors, own capital and investment aids	23 019	22 961	0%	22 919	0%	22 919	0%	23 004	0%	21 296	-7%
External factor costs - €/farm	6 746	6 670	-1%	6 658	-1%	6 657	-1%	6 682	-1%	6 169	-9%
Own capital - €/farm	14 123	14 140	0%	14 111	0%	14 111	0%	14 172	0%	12 977	-8%
INCOME											
Farm Net Value Added - €/farm	43 136	42 836	-1%	42 624	-1%	42 623	-1%	42 068	-2%	41 586	-4%
Farm Net Value Added per AWU - €/AWU	32 445	32 219	-1%	32 059	-1%	32 059	-1%	31 642	-2%	31 278	-4%
Remuneration for family labour - €/farm	20 117	19 876	-1%	19 705	-2%	19 705	-2%	19 065	-5%	20 290	1%
Remuneration for family labour - €/FWU	16 308	16 112	-1%	15 974	-2%	15 974	-2%	15 455	-5%	16 448	1%
Share of Pillar 1 payments in FNVA	20%	20%	-3%	19%	-5%	19%	-5%	21%	2%	0%	-100%

Source: DG AGRI L3

Poland	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	32 231	32 231	0%	32 231	0%	32 231	0%	32 588	1%	32 231	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	3 716	4 447	20%	3 572	-4%	4 013	8%	3 830	3%	0	-100%
Basic rate / decoupled - €/farm	3 716	4 447	20%	3 572	-4%	4 013	8%	2 485	-33%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	1 148	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	191	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	6	-	0	-
Total Pillar 1 and 2 payments - €/farm	4 733	5 464	15%	4 588	-3%	5 029	6%	4 847	2%	2 033	-57%
Amounts transferred to Pillar II or capped - €/farm	0	162	-	110	-	135	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	21 960	21 960	0%	21 960	0%	21 960	0%	22 841	4%	22 093	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	687	-	0	-
Total external factors, own capital and investment aids	4 918	5 064	3%	4 889	-1%	4 978	1%	4 941	0%	4 183	-15%
External factor costs - €/farm	1 766	1 804	2%	1 757	0%	1 781	1%	1 776	1%	1 572	-11%
Own capital - €/farm	2 899	3 006	4%	2 878	-1%	2 943	2%	2 912	0%	2 357	-19%
INCOME											
Farm Net Value Added - €/farm	15 003	15 734	5%	14 859	-1%	15 300	2%	14 595	-3%	12 172	-19%
Farm Net Value Added per AWU - €/AWU	12 893	13 521	5%	12 769	-1%	13 148	2%	12 542	-3%	10 460	-19%
Remuneration for family labour - €/farm	10 085	10 670	6%	9 970	-1%	10 323	2%	9 654	-4%	7 989	-21%
Remuneration for family labour - €/FWU	9 993	10 537	5%	9 892	-1%	10 217	2%	9 546	-4%	8 121	-19%
Share of Pillar 1 payments in FNVA	25%	28%	14%	24%	-3%	26%	6%	26%	6%	0%	-100%

Source: DG AGRI L3

Portugal	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	27 667	27 667	0%	27 667	0%	27 667	0%	27 890	1%	27 667	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	5 506	7 078	29%	5 680	3%	6 379	16%	5 891	7%	0	-100%
Basic rate / decoupled - €/farm	4 606	6 288	37%	4 914	7%	5 600	22%	3 369	-27%	0	-100%
Coupled payments - €/farm	900	790	-12%	766	-15%	779	-13%	442	-51%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 764	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	294	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	21	-	0	-
Total Pillar 1 and 2 payments - €/farm	6 675	8 247	24%	6 849	3%	7 549	13%	7 060	6%	2 340	-65%
Amounts transferred to Pillar II or capped - €/farm	0	496	-	374	-	435	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	18 878	18 878	0%	18 878	0%	18 878	0%	19 678	4%	19 171	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	569	-	0	-
Total external factors, own capital and investment aids	5 257	5 514	5%	5 324	1%	5 418	3%	5 353	2%	4 654	-11%
External factor costs - €/farm	2 981	3 047	2%	2 970	0%	3 007	1%	2 982	0%	2 731	-8%
Own capital - €/farm	2 526	2 716	8%	2 603	3%	2 660	5%	2 620	4%	2 172	-14%
INCOME											
Farm Net Value Added - €/farm	15 465	17 037	10%	15 639	1%	16 338	6%	15 273	-1%	10 837	-30%
Farm Net Value Added per AWU - €/AWU	11 077	12 203	10%	11 202	1%	11 703	6%	10 940	-1%	7 762	-30%
Remuneration for family labour - €/farm	10 208	11 523	13%	10 315	1%	10 921	7%	9 920	-3%	6 183	-39%
Remuneration for family labour - €/FWU	8 812	9 947	13%	8 904	1%	9 427	7%	8 563	-3%	5 337	-39%
Share of Pillar 1 payments in FNVA	36%	42%	17%	36%	2%	39%	10%	39%	8%	0%	-100%

Source: DG AGRI L3

Romania	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	13 097	13 097	0%	13 097	0%	13 097	0%	13 223	1%	13 097	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	1 862	2 569	38%	2 061	11%	2 315	24%	2 017	8%	0	-100%
Basic rate / decoupled - €/farm	1 862	2 569	38%	2 061	11%	2 315	24%	1 328	-29%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	602	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	48	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	39	-	0	-
Total Pillar 1 and 2 payments - €/farm	1 862	2 569	38%	2 061	11%	2 315	24%	2 017	8%	0	-100%
Amounts transferred to Pillar II or capped - €/farm	0	139	-	105	-	122	-	18	-	0	-
COSTS											
Total operating costs, depreciation and taxes	8 368	8 368	0%	8 368	0%	8 368	0%	8 674	4%	8 368	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	252	-	0	-
Total external factors, own capital and investment aids	2 549	2 675	5%	2 584	1%	2 629	3%	2 574	1%	2 216	-13%
External factor costs - €/farm	1 775	1 832	3%	1 791	1%	1 811	2%	1 791	1%	1 625	-8%
Own capital - €/farm	803	872	9%	822	2%	847	6%	812	1%	620	-23%
INCOME											
Farm Net Value Added - €/farm	6 591	7 298	11%	6 790	3%	7 044	7%	6 566	0%	4 729	-28%
Farm Net Value Added per AWU - €/AWU	4 757	5 267	11%	4 901	3%	5 084	7%	4 739	0%	3 413	-28%
Remuneration for family labour - €/farm	4 042	4 623	14%	4 206	4%	4 415	9%	3 992	-1%	2 513	-38%
Remuneration for family labour - €/FWU	3 131	3 431	10%	3 215	3%	3 323	6%	3 058	-2%	2 343	-25%
Share of Pillar 1 payments in FNVA	28%	35%	25%	30%	7%	33%	16%	31%	9%	0%	-100%

Source: DG AGRI L3

Slovenia	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	27 861	27 861	0%	27 861	0%	27 861	0%	28 250	1%	27 861	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	3 755	3 053	-19%	3 512	-6%	3 339	-11%	3 612	-4%	0	-100%
Basic rate / decoupled - €/farm	3 531	2 830	-20%	3 303	-6%	3 130	-11%	2 118	-40%	0	-100%
Coupled payments - €/farm	224	223	0%	209	-7%	209	-7%	226	1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 082	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	180	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	6	-	0	-
Total Pillar 1 and 2 payments - €/farm	6 635	5 934	-11%	6 393	-4%	6 220	-6%	6 493	-2%	5 762	-13%
Amounts transferred to Pillar II or capped - €/farm	0	44	-	63	-	55	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	25 342	25 342	0%	25 342	0%	25 342	0%	26 879	6%	25 716	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 321	-	0	-
Total external factors, own capital and investment aids	7 298	7 157	-2%	7 248	-1%	7 214	-1%	7 268	0%	6 573	-10%
External factor costs - €/farm	1 131	1 065	-6%	1 093	-3%	1 083	-4%	1 103	-2%	903	-20%
Own capital - €/farm	6 402	6 327	-1%	6 390	0%	6 366	-1%	6 401	0%	5 906	-8%
INCOME											
Farm Net Value Added - €/farm	9 155	8 453	-8%	8 912	-3%	8 739	-5%	7 863	-14%	7 906	-14%
Farm Net Value Added per AWU - €/AWU	7 849	7 248	-8%	7 642	-3%	7 493	-5%	6 742	-14%	6 779	-14%
Remuneration for family labour - €/farm	1 857	1 296	-30%	1 664	-10%	1 525	-18%	595	-68%	1 333	-28%
Remuneration for family labour - €/FWU	1 665	1 162	-30%	1 492	-10%	1 367	-18%	534	-68%	1 195	-28%
Share of Pillar 1 payments in FNVA	41%	36%	-12%	39%	-4%	38%	-7%	46%	12%	0%	-100%

Source: DG AGRI L3

Slovakia	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	611 683	611 683	0%	611 683	0%	611 683	0%	620 474	1%	611 683	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	119 601	138 287	16%	111 105	-7%	124 716	4%	124 326	4%	0	-100%
Basic rate / decoupled - €/farm	119 601	138 287	16%	111 105	-7%	124 716	4%	80 562	-33%	0	-100%
Coupled payments - €/farm	0	0	-	0	-	0	-	0	-	0	-
Greening - €/farm	0	0	-	0	-	0	-	37 586	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	6 177	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	1	-	0	-
Total Pillar 1 and 2 payments - €/farm	175 845	194 531	11%	167 349	-5%	180 960	3%	180 570	3%	112 488	-36%
Amounts transferred to Pillar II or capped - €/farm	0	16 862	-	13 013	-	14 918	-	963	-	0	-
COSTS											
Total operating costs, depreciation and taxes	560 997	560 997	0%	560 997	0%	560 997	0%	575 260	3%	568 308	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	11 141	-	0	-
Total external factors, own capital and investment aids	180 938	184 668	2%	179 241	-1%	181 958	1%	181 880	1%	158 209	-13%
External factor costs - €/farm	158 526	162 159	2%	156 924	-1%	159 546	1%	159 488	1%	136 671	-14%
Own capital - €/farm	30 901	30 998	0%	30 806	0%	30 901	0%	30 881	0%	30 027	-3%
INCOME											
Farm Net Value Added - €/farm	226 531	245 217	8%	218 035	-4%	231 646	2%	225 783	0%	155 863	-31%
Farm Net Value Added per AWU - €/AWU	20 060	21 714	8%	19 307	-4%	20 513	2%	19 993	0%	13 802	-31%
Remuneration for family labour - €/farm	45 592	60 549	33%	38 794	-15%	49 688	9%	43 903	-4%	-2 347	-105%
Remuneration for family labour - €/FWU	46 328	50 349	9%	44 424	-4%	47 387	2%	45 677	-1%	29 427	-36%
Share of Pillar 1 payments in FNVA	53%	56%	7%	51%	-3%	54%	2%	55%	4%	0%	-100%

Source: DG AGRI L3

Finland	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	88 461	88 461	0%	88 461	0%	88 461	0%	89 603	1%	88 461	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	12 220	12 849	5%	11 363	-7%	11 622	-5%	12 187	0%	0	-100%
Basic rate / decoupled - €/farm	11 732	12 396	6%	10 894	-7%	11 153	-5%	7 392	-37%	0	-100%
Coupled payments - €/farm	487	453	-7%	469	-4%	469	-4%	526	8%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	3 656	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	609	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	3	-	0	-
Total Pillar 1 and 2 payments - €/farm	32 606	33 235	2%	31 749	-3%	32 008	-2%	32 573	0%	40 772	25%
Amounts transferred to Pillar II or capped - €/farm	0	906	-	745	-	773	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	86 394	86 394	0%	86 394	0%	86 394	0%	88 200	2%	91 490	6%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 070	-	0	-
Total external factors, own capital and investment aids	24 031	24 151	0%	23 865	-1%	23 915	0%	24 024	0%	21 707	-10%
External factor costs - €/farm	14 386	14 431	0%	14 328	0%	14 346	0%	14 389	0%	13 548	-6%
Own capital - €/farm	10 383	10 458	1%	10 274	-1%	10 306	-1%	10 371	0%	8 896	-14%
INCOME											
Farm Net Value Added - €/farm	34 673	35 302	2%	33 816	-2%	34 075	-2%	33 976	-2%	37 743	9%
Farm Net Value Added per AWU - €/AWU	28 483	29 000	2%	27 779	-2%	27 992	-2%	27 910	-2%	31 005	9%
Remuneration for family labour - €/farm	10 642	11 151	5%	9 951	-6%	10 160	-5%	9 953	-6%	16 036	51%
Remuneration for family labour - €/FWU	10 528	11 030	5%	9 845	-6%	10 052	-5%	9 842	-7%	15 864	51%
Share of Pillar 1 payments in FNVA	35%	36%	3%	34%	-5%	34%	-3%	36%	2%	0%	-100%

Source: DG AGRI L3

Sweden	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	175 011	175 011	0%	175 011	0%	175 011	0%	177 223	1%	175 011	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	22 688	23 663	4%	20 713	-9%	21 344	-6%	22 679	0%	0	-100%
Basic rate / decoupled - €/farm	22 590	23 566	4%	20 615	-9%	21 247	-6%	14 635	-35%	0	-100%
Coupled payments - €/farm	97	97	0%	98	0%	97	0%	106	9%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	6 804	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 134	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	0	-	0	-
Total Pillar 1 and 2 payments - €/farm	33 183	34 159	3%	31 208	-6%	31 840	-4%	33 174	0%	20 991	-37%
Amounts transferred to Pillar II or capped - €/farm	0	2 089	-	1 763	-	1 833	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	153 107	153 107	0%	153 107	0%	153 107	0%	157 541	3%	155 731	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	2 656	-	0	-
Total external factors, own capital and investment aids	42 840	43 044	0%	42 509	-1%	42 623	-1%	42 866	0%	38 981	-9%
External factor costs - €/farm	33 613	33 717	0%	33 405	-1%	33 472	0%	33 633	0%	31 395	-7%
Own capital - €/farm	9 227	9 327	1%	9 103	-1%	9 151	-1%	9 233	0%	7 586	-18%
INCOME											
Farm Net Value Added - €/farm	55 087	56 063	2%	53 112	-4%	53 744	-2%	52 856	-4%	40 271	-27%
Farm Net Value Added per AWU - €/AWU	43 966	44 745	2%	42 390	-4%	42 894	-2%	42 185	-4%	32 141	-27%
Remuneration for family labour - €/farm	12 247	13 019	6%	10 603	-13%	11 121	-9%	9 990	-18%	1 290	-89%
Remuneration for family labour - €/FWU	12 781	13 586	6%	11 078	-13%	11 615	-9%	10 451	-18%	1 411	-89%
Share of Pillar 1 payments in FNVA	41%	42%	2%	39%	-5%	40%	-4%	43%	4%	0%	-100%

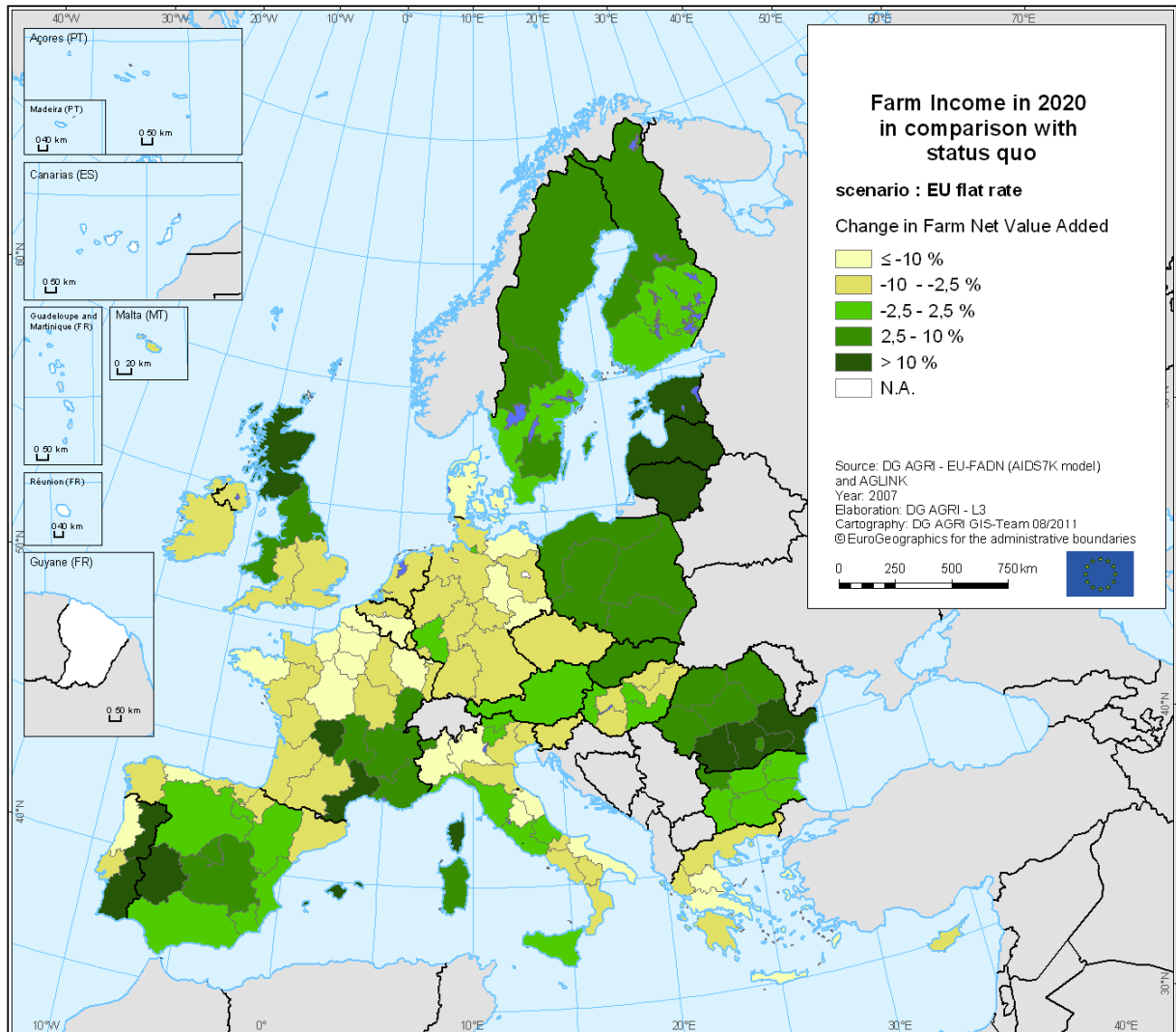
Source: DG AGRI L3

United Kingdom	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	257 345	257 345	0%	257 345	0%	257 345	0%	259 985	1%	257 345	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	37 584	39 799	6%	33 932	-10%	35 878	-5%	36 807	-2%	0	-100%
Basic rate / decoupled - €/farm	37 298	39 515	6%	33 649	-10%	35 594	-5%	23 371	-37%	0	-100%
Coupled payments - €/farm	286	283	-1%	284	-1%	284	-1%	310	9%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	11 372	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 740	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	13	-	0	-
Total Pillar 1 and 2 payments - €/farm	47 880	50 096	5%	44 229	-8%	46 174	-4%	47 103	-2%	20 594	-57%
Amounts transferred to Pillar II or capped - €/farm	0	3 997	-	3 313	-	3 539	-	1 107	-	0	-
COSTS											
Total operating costs, depreciation and taxes	206 354	206 354	0%	206 354	0%	206 354	0%	213 715	4%	208 929	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	5 393	-	0	-
Total external factors, own capital and investment aids	74 962	75 405	1%	74 293	-1%	74 661	0%	74 832	0%	67 977	-9%
External factor costs - €/farm	51 690	52 079	1%	51 580	0%	51 745	0%	51 773	0%	48 735	-6%
Own capital - €/farm	24 302	24 356	0%	23 741	-2%	23 945	-1%	24 088	-1%	20 270	-17%
INCOME											
Farm Net Value Added - €/farm	98 871	101 086	2%	95 220	-4%	97 165	-2%	93 373	-6%	69 010	-30%
Farm Net Value Added per AWU - €/AWU	50 196	51 320	2%	48 342	-4%	49 329	-2%	47 405	-6%	35 036	-30%
Remuneration for family labour - €/farm	23 908	25 680	7%	20 927	-12%	22 503	-6%	18 541	-22%	1 033	-96%
Remuneration for family labour - €/FWU	22 013	23 655	7%	19 279	-12%	20 731	-6%	17 082	-22%	967	-96%
Share of Pillar 1 payments in FNVA	38%	39%	4%	36%	-6%	37%	-3%	39%	4%	0%	-100%

Source: DG AGRI L3

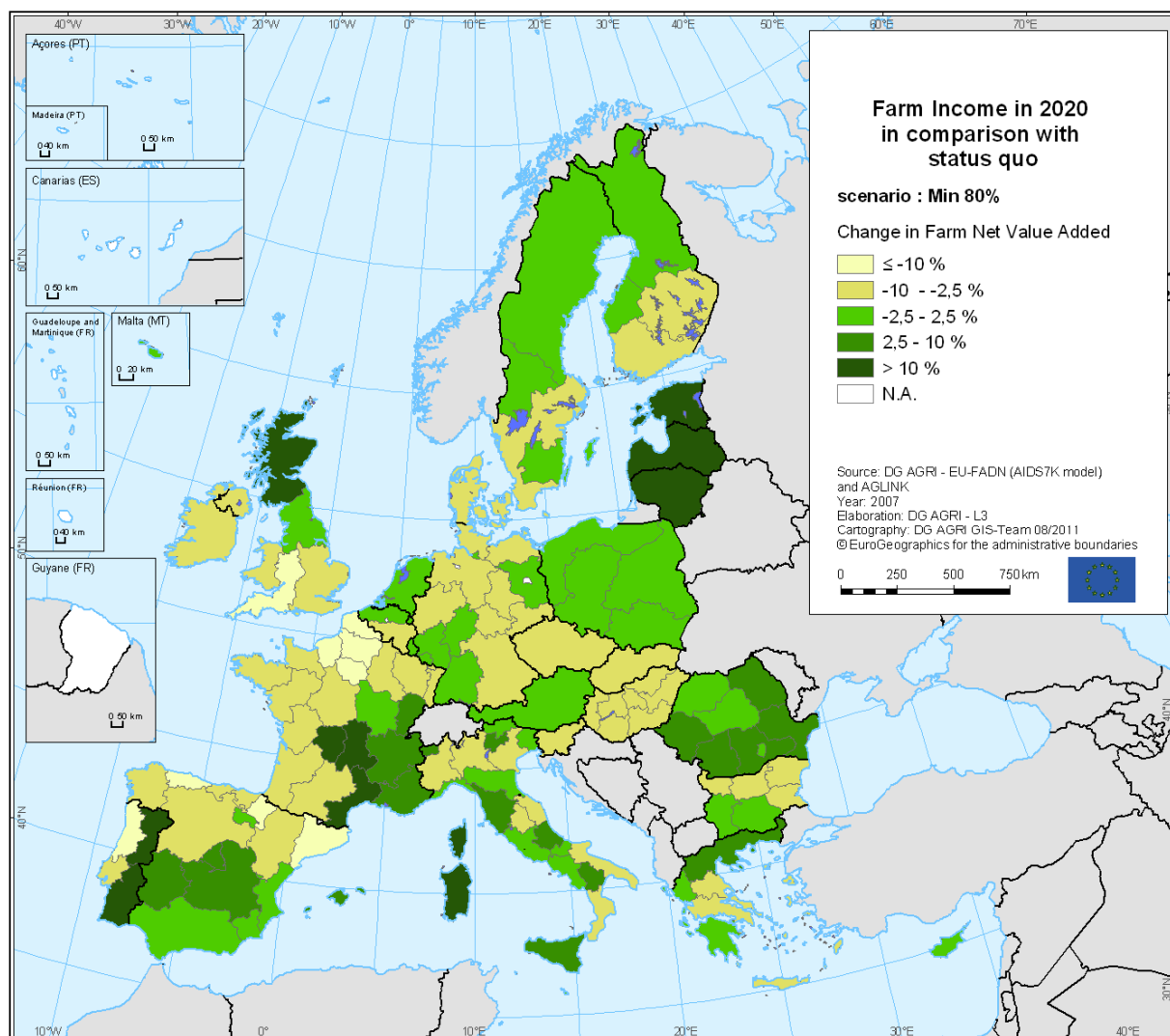
7.4. Maps impact for regions

Map A.1: Impact of the EU flat rate scenario on FNVA in the FADN regions in comparison with the Status quo scenario.



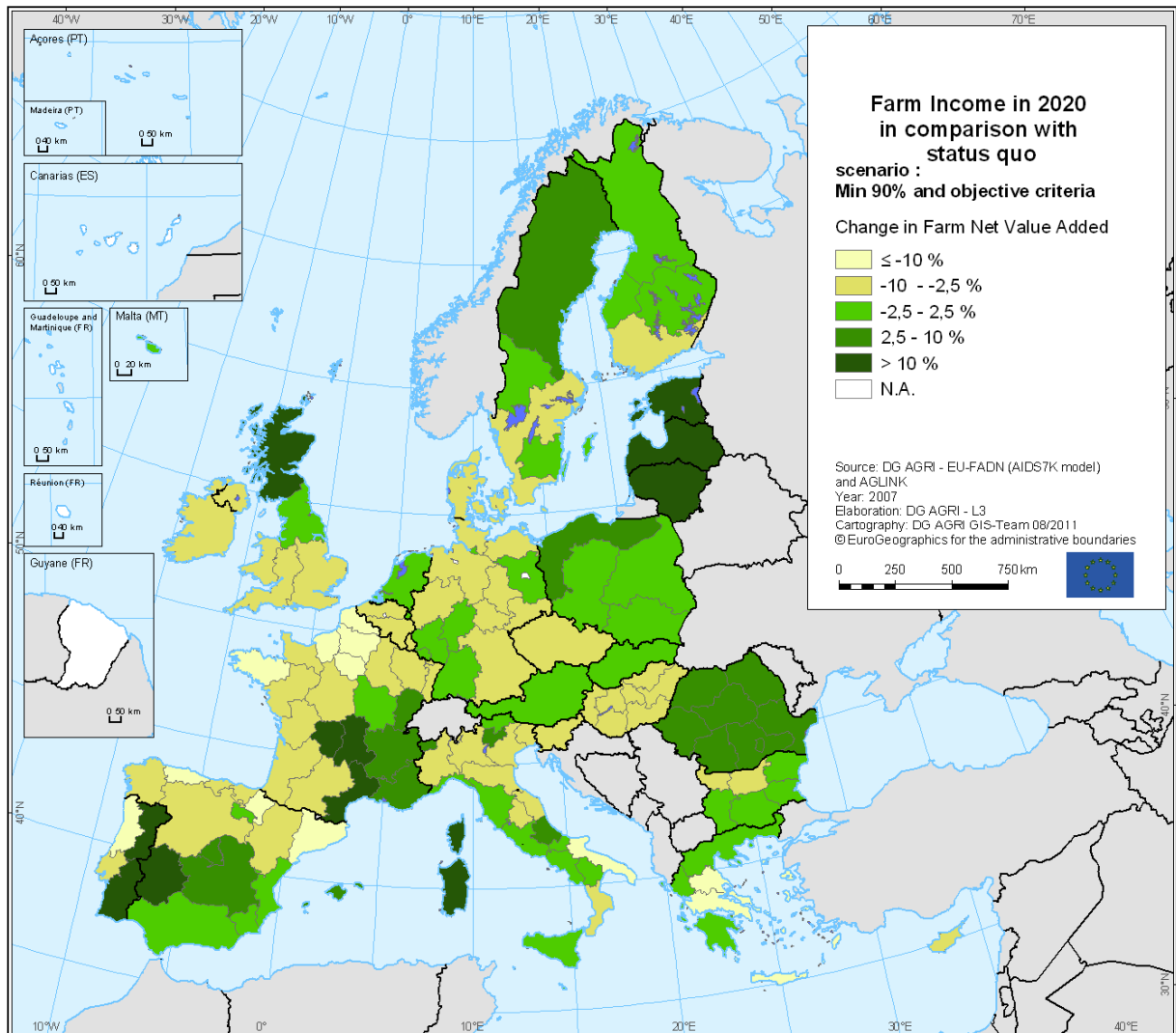
Source: DG AGRI L3

Map A.2: Impact of the Min 80% scenario on FNVA in the FADN regions in comparison with the Status quo scenario.



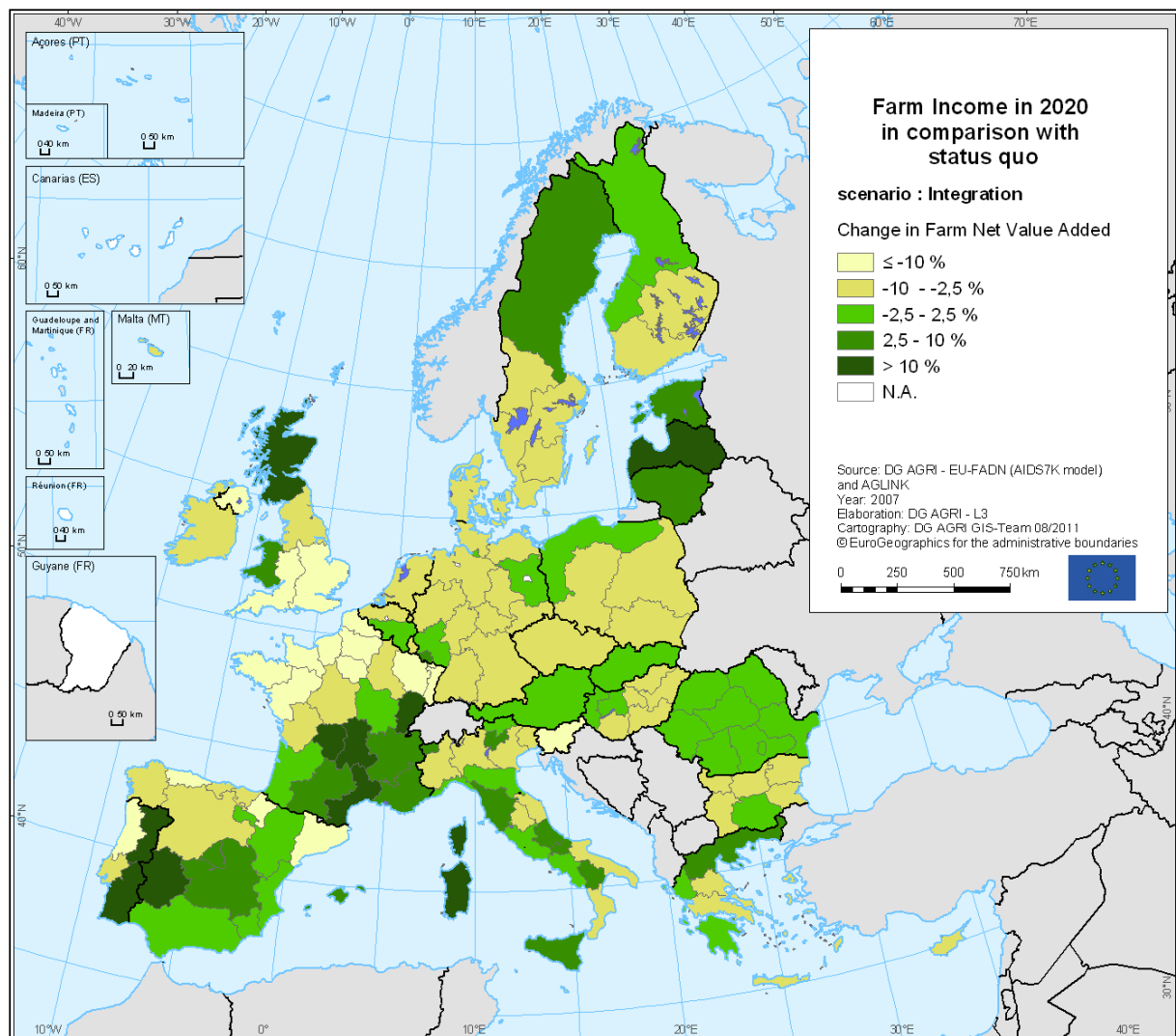
Source: DG AGRI L3

Map A.3: Impact of the 90% and objective criteria scenario on FNVA in the FADN regions in comparison with the Status quo scenario.



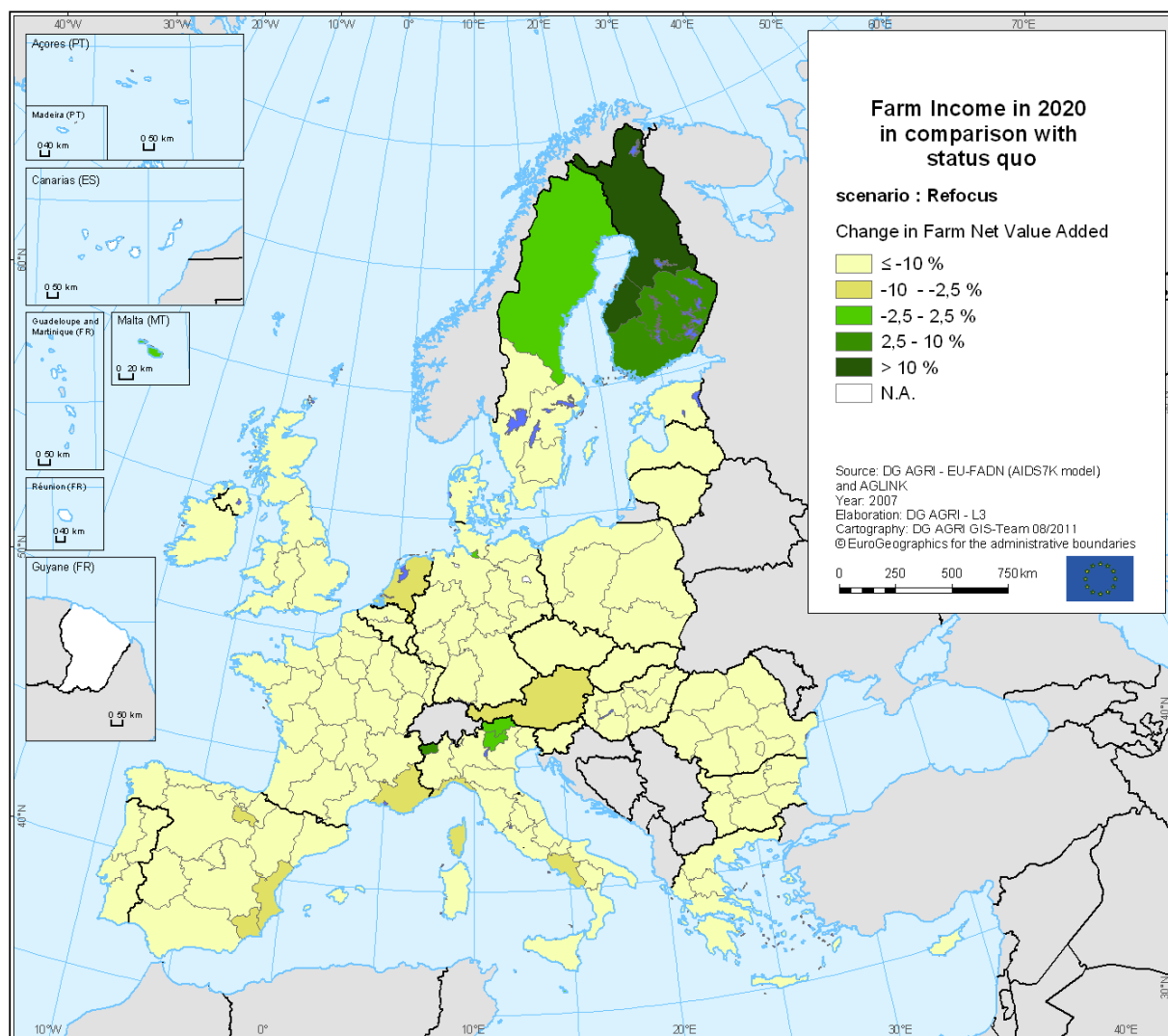
Source: DG AGRI L3

Map A.4: Impact of the Integration scenario on FNVA in the FADN regions in comparison with the Status quo scenario.



Source: DG AGRI L3

Map A.5: Impact of the Refocus scenario on FNVA in the FADN regions in comparison with the Status quo scenario.



Source: DG AGRI L3

7.5. Result tables according to the Less Favoured Areas status

not in less-favoured areas	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	70 140	70 140	0%	70 140	0%	70 140	0%	70 811	1%	70 140	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	8 340	6 923	-17%	6 890	-17%	6 917	-17%	7 057	-15%	0	-100%
Basic rate / decoupled - €/farm	8 155	6 747	-17%	6 714	-18%	6 743	-17%	4 608	-43%	0	-100%
Coupled payments - €/farm	184	177	-4%	175	-5%	175	-5%	182	-1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 211	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	0	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	56	-	0	-
Total Pillar 1 and 2 payments - €/farm	9 032	7 615	-16%	7 582	-16%	7 609	-16%	7 749	-14%	1 384	-85%
Amounts transferred to Pillar II or capped - €/farm	0	514	-	516	-	516	-	12	-	0	-
COSTS											
Total operating costs, depreciation and taxes	47 258	47 258	0%	47 258	0%	47 258	0%	48 745	3%	47 411	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 045	-	0	-
Total external factors, own capital and investment aids	16 090	15 831	-2%	15 822	-2%	15 829	-2%	15 853	-1%	14 529	-10%
External factor costs - €/farm	11 614	11 428	-2%	11 436	-2%	11 437	-2%	11 464	-1%	10 678	-8%
Own capital - €/farm	4 466	4 392	-2%	4 376	-2%	4 382	-2%	4 379	-2%	3 841	-14%
INCOME											
Farm Net Value Added - €/farm	31 914	30 497	-4%	30 463	-5%	30 491	-4%	29 816	-7%	24 113	-24%
Farm Net Value Added per AWU - €/AWU	23 053	22 030	-4%	22 006	-5%	22 026	-4%	21 538	-7%	17 419	-24%
Remuneration for family labour - €/farm	15 823	14 666	-7%	14 641	-7%	14 662	-7%	13 962	-12%	9 584	-39%
Remuneration for family labour - €/FWU	15 255	14 062	-8%	14 113	-7%	14 100	-8%	13 479	-12%	9 825	-36%
Share of Pillar 1 payments in FNVA	26%	23%	-13%	23%	-13%	23%	-13%	24%	-9%	0%	-100%

Source: DG AGRI L3

in less-favoured not mountain areas	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	56 174	56 174	0%	56 174	0%	56 174	0%	56 850	1%	56 174	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	9 411	9 853	5%	9 400	0%	9 570	2%	10 487	11%	0	-100%
Basic rate / decoupled - €/farm	8 979	9 446	5%	9 000	0%	9 170	2%	6 101	-32%	0	-100%
Coupled payments - €/farm	432	407	-6%	400	-7%	400	-7%	418	-3%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	3 002	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	932	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	34	-	0	-
Total Pillar 1 and 2 payments - €/farm	12 100	12 543	4%	12 089	0%	12 259	1%	13 177	9%	5 378	-56%
Amounts transferred to Pillar II or capped - €/farm	0	747	-	705	-	720	-	90	-	0	-
COSTS											
Total operating costs, depreciation and taxes	41 030	41 030	0%	41 030	0%	41 030	0%	42 583	4%	41 616	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 149	-	0	-
Total external factors, own capital and investment aids	12 727	12 837	1%	12 751	0%	12 783	0%	12 961	2%	10 983	-14%
External factor costs - €/farm	7 306	7 333	0%	7 318	0%	7 326	0%	7 442	2%	6 436	-12%
Own capital - €/farm	5 426	5 510	2%	5 439	0%	5 463	1%	5 524	2%	4 553	-16%
INCOME											
Farm Net Value Added - €/farm	27 245	27 688	2%	27 235	0%	27 405	1%	27 444	1%	19 937	-27%
Farm Net Value Added per AWU - €/AWU	22 972	23 345	2%	22 963	0%	23 106	1%	23 139	1%	16 810	-27%
Remuneration for family labour - €/farm	14 518	14 851	2%	14 483	0%	14 621	1%	14 483	0%	8 954	-38%
Remuneration for family labour - €/FWU	15 126	15 475	2%	15 117	0%	15 246	1%	15 116	0%	9 837	-35%
Share of Pillar 1 payments in FNVA	35%	36%	3%	35%	0%	35%	1%	38%	11%	0%	-100%

Source: DG AGRI L3

in less-favoured mountain areas	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	44 871	44 871	0%	44 871	0%	44 871	0%	45 270	1%	44 871	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	6 147	6 830	11%	7 507	22%	7 165	17%	8 278	35%	0	-100%
Basic rate / decoupled - €/farm	5 605	6 314	13%	7 005	25%	6 662	19%	4 660	-17%	0	-100%
Coupled payments - €/farm	542	517	-5%	502	-7%	502	-7%	550	2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 352	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	695	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	21	-	0	-
Total Pillar 1 and 2 payments - €/farm	9 299	9 983	7%	10 659	15%	10 317	11%	11 430	23%	6 305	-32%
Amounts transferred to Pillar II or capped - €/farm	0	451	-	507	-	477	-	52	-	0	-
COSTS											
Total operating costs, depreciation and taxes	28 426	28 426	0%	28 426	0%	28 426	0%	29 300	3%	29 168	3%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	576	-	0	-
Total external factors, own capital and investment aids	10 130	10 257	1%	10 382	2%	10 319	2%	10 534	4%	9 026	-11%
External factor costs - €/farm	4 959	5 070	2%	5 112	3%	5 092	3%	5 199	5%	4 509	-9%
Own capital - €/farm	5 256	5 273	0%	5 356	2%	5 313	1%	5 421	3%	4 603	-12%
INCOME											
Farm Net Value Added - €/farm	25 744	26 428	3%	27 104	5%	26 762	4%	27 400	6%	22 008	-15%
Farm Net Value Added per AWU - €/AWU	21 748	22 325	3%	22 897	5%	22 608	4%	23 146	6%	18 592	-15%
Remuneration for family labour - €/farm	15 615	16 171	4%	16 723	7%	16 444	5%	16 866	8%	12 982	-17%
Remuneration for family labour - €/FWU	15 565	16 094	3%	16 686	7%	16 389	5%	16 814	8%	12 987	-17%
Share of Pillar 1 payments in FNVA	24%	26%	8%	28%	16%	27%	12%	30%	27%	0%	-100%

Source: DG AGRI L3

7.6. Result tables according to the Economic Size

(1) 0 - <4 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	9 569	9 569	0%	9 569	0%	9 569	0%	9 669	1%	9 569	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	1 263	1 646	30%	1 381	9%	1 509	20%	1 359	8%	0	-100%
Basic rate / decoupled - €/farm	1 249	1 633	31%	1 368	10%	1 497	20%	845	-32%	0	-100%
Coupled payments - €/farm	14	13	-4%	13	-8%	13	-8%	12	-17%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	389	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	50	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	62	-	0	-
Total Pillar 1 and 2 payments - €/farm	1 614	1 998	24%	1 732	7%	1 861	15%	1 710	6%	703	-56%
Amounts transfered to Pillar II or capped - €/farm	0	14	-	10	-	12	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	6 164	6 164	0%	6 164	0%	6 164	0%	6 428	4%	6 219	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	219	-	0	-
Total external factors, own capital and investment aids	1 718	1 797	5%	1 744	2%	1 770	3%	1 740	1%	1 475	-14%
External factor costs - €/farm	681	695	2%	685	1%	690	1%	684	0%	634	-7%
Own capital - €/farm	1 007	1 072	6%	1 029	2%	1 050	4%	1 026	2%	811	-20%
INCOME											
Farm Net Value Added - €/farm	5 019	5 402	8%	5 137	2%	5 265	5%	4 951	-1%	4 052	-19%
Farm Net Value Added per AWU - €/AWU	4 631	4 985	8%	4 740	2%	4 859	5%	4 569	-1%	3 739	-19%
Remuneration for family labour - €/farm	3 301	3 606	9%	3 393	3%	3 496	6%	3 211	-3%	2 578	-22%
Remuneration for family labour - €/FWU	3 505	3 809	9%	3 597	3%	3 700	6%	3 419	-2%	2 785	-21%
Share of Pillar 1 payments in FNVA	25%	30%	21%	27%	7%	29%	14%	27%	9%	0%	-100%

Source: DG AGRI L3

(2) 4 - <8 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	17 223	17 223	0%	17 223	0%	17 223	0%	17 403	1%	17 223	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	2 700	2 578	-4%	2 565	-5%	2 558	-5%	2 602	-4%	0	-100%
Basic rate / decoupled - €/farm	2 586	2 466	-5%	2 457	-5%	2 449	-5%	1 561	-40%	0	-100%
Coupled payments - €/farm	114	113	-1%	108	-5%	108	-5%	110	-4%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	753	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	128	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	50	-	0	-
Total Pillar 1 and 2 payments - €/farm	3 212	3 091	-4%	3 078	-4%	3 070	-4%	3 114	-3%	1 024	-68%
Amounts transferred to Pillar II or capped - €/farm	0	47	-	42	-	43	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	9 690	9 690	0%	9 690	0%	9 690	0%	10 079	4%	9 785	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	318	-	0	-
Total external factors, own capital and investment aids	3 477	3 467	0%	3 465	0%	3 463	0%	3 472	0%	2 976	-14%
External factor costs - €/farm	1 192	1 195	0%	1 195	0%	1 194	0%	1 195	0%	1 093	-8%
Own capital - €/farm	2 270	2 258	-1%	2 256	-1%	2 255	-1%	2 262	0%	1 869	-18%
INCOME											
Farm Net Value Added - €/farm	10 746	10 624	-1%	10 612	-1%	10 604	-1%	10 439	-3%	8 462	-21%
Farm Net Value Added per AWU - €/AWU	11 380	11 251	-1%	11 237	-1%	11 229	-1%	11 055	-3%	8 961	-21%
Remuneration for family labour - €/farm	7 270	7 158	-2%	7 147	-2%	7 141	-2%	6 968	-4%	5 486	-25%
Remuneration for family labour - €/FWU	8 550	8 412	-2%	8 404	-2%	8 395	-2%	8 195	-4%	6 459	-24%
Share of Pillar 1 payments in FNVA	25%	24%	-3%	24%	-4%	24%	-4%	25%	-1%	0%	-100%

Source: DG AGRI L3

(3) 8 - <16 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	30 518	30 518	0%	30 518	0%	30 518	0%	30 891	1%	30 518	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	4 980	5 258	6%	5 197	4%	5 192	4%	5 364	8%	0	-100%
Basic rate / decoupled - €/farm	4 722	5 006	6%	4 954	5%	4 948	5%	3 229	-32%	0	-100%
Coupled payments - €/farm	258	252	-2%	243	-6%	243	-6%	254	-1%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 574	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	270	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	37	-	0	-
Total Pillar 1 and 2 payments - €/farm	6 347	6 625	4%	6 564	3%	6 559	3%	6 731	6%	2 734	-57%
Amounts transferred to Pillar II or capped - €/farm	0	234	-	224	-	224	-	47	-	0	-
COSTS											
Total operating costs, depreciation and taxes	19 659	19 659	0%	19 659	0%	19 659	0%	20 381	4%	19 961	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	566	-	0	-
Total external factors, own capital and investment aids	6 681	6 726	1%	6 705	0%	6 708	0%	6 739	1%	5 764	-14%
External factor costs - €/farm	2 611	2 639	1%	2 629	1%	2 632	1%	2 640	1%	2 348	-10%
Own capital - €/farm	4 049	4 066	0%	4 054	0%	4 055	0%	4 077	1%	3 394	-16%
INCOME											
Farm Net Value Added - €/farm	17 207	17 484	2%	17 423	1%	17 418	1%	17 242	0%	13 291	-23%
Farm Net Value Added per AWU - €/AWU	15 882	16 138	2%	16 082	1%	16 077	1%	15 914	0%	12 268	-23%
Remuneration for family labour - €/farm	10 526	10 758	2%	10 718	2%	10 710	2%	10 503	0%	7 527	-28%
Remuneration for family labour - €/FWU	11 398	11 608	2%	11 595	2%	11 571	2%	11 358	0%	8 262	-28%
Share of Pillar 1 payments in FNVA	29%	30%	4%	30%	3%	30%	3%	31%	7%	0%	-100%

Source: DG AGRI L3

(4) 16 - <40 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	62 484	62 484	0%	62 484	0%	62 484	0%	63 198	1%	62 484	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	10 034	10 136	1%	10 147	1%	10 107	1%	10 948	9%	0	-100%
Basic rate / decoupled - €/farm	9 437	9 569	1%	9 589	2%	9 549	1%	6 496	-31%	0	-100%
Coupled payments - €/farm	596	567	-5%	558	-6%	558	-6%	609	2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	3 191	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	622	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	30	-	0	-
Total Pillar 1 and 2 payments - €/farm	12 948	13 050	1%	13 061	1%	13 021	1%	13 862	7%	5 828	-55%
Amounts transferred to Pillar II or capped - €/farm	0	686	-	678	-	677	-	34	-	0	-
COSTS											
Total operating costs, depreciation and taxes	43 958	43 958	0%	43 958	0%	43 958	0%	45 434	3%	44 652	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 109	-	0	-
Total external factors, own capital and investment aids	14 221	14 267	0%	14 269	0%	14 261	0%	14 424	1%	12 382	-13%
External factor costs - €/farm	6 969	7 017	1%	7 031	1%	7 025	1%	7 108	2%	6 184	-11%
Own capital - €/farm	7 222	7 220	0%	7 208	0%	7 206	0%	7 286	1%	6 168	-15%
INCOME											
Farm Net Value Added - €/farm	31 473	31 576	0%	31 587	0%	31 547	0%	31 626	0%	23 660	-25%
Farm Net Value Added per AWU - €/AWU	25 134	25 216	0%	25 225	0%	25 193	0%	25 256	0%	18 894	-25%
Remuneration for family labour - €/farm	17 253	17 309	0%	17 318	0%	17 286	0%	17 202	0%	11 278	-35%
Remuneration for family labour - €/FWU	16 731	16 749	0%	16 790	0%	16 744	0%	16 684	0%	11 054	-34%
Share of Pillar 1 payments in FNVA	32%	32%	1%	32%	1%	32%	0%	35%	9%	0%	-100%

Source: DG AGRI L3

(5) 40 - <100 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	150 299	150 299	0%	150 299	0%	150 299	0%	151 845	1%	150 299	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	20 587	18 635	-9%	18 895	-8%	18 791	-9%	20 537	0%	0	-100%
Basic rate / decoupled - €/farm	19 687	17 792	-10%	18 061	-8%	17 957	-9%	12 441	-37%	0	-100%
Coupled payments - €/farm	900	843	-6%	834	-7%	834	-7%	884	-2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	6 150	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 041	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	21	-	0	-
Total Pillar 1 and 2 payments - €/farm	24 815	22 863	-8%	23 123	-7%	23 019	-7%	24 765	0%	8 456	-66%
Amounts transferred to Pillar II or capped - €/farm	0	1 586	-	1 607	-	1 598	-	130	-	0	-
COSTS											
Total operating costs, depreciation and taxes	107 233	107 233	0%	107 233	0%	107 233	0%	110 726	3%	108 247	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	2 434	-	0	-
Total external factors, own capital and investment aids	32 761	32 416	-1%	32 469	-1%	32 447	-1%	32 787	0%	28 932	-12%
External factor costs - €/farm	21 120	20 898	-1%	20 949	-1%	20 938	-1%	21 150	0%	18 806	-11%
Own capital - €/farm	11 658	11 534	-1%	11 537	-1%	11 526	-1%	11 653	0%	10 142	-13%
INCOME											
Farm Net Value Added - €/farm	67 881	65 928	-3%	66 188	-2%	66 084	-3%	65 883	-3%	50 507	-26%
Farm Net Value Added per AWU - €/AWU	40 668	39 498	-3%	39 654	-2%	39 592	-3%	39 472	-3%	30 259	-26%
Remuneration for family labour - €/farm	35 119	33 512	-5%	33 719	-4%	33 636	-4%	33 096	-6%	21 575	-39%
Remuneration for family labour - €/FWU	29 016	27 558	-5%	27 826	-4%	27 715	-4%	27 302	-6%	18 026	-38%
Share of Pillar 1 payments in FNVA	30%	28%	-7%	29%	-6%	28%	-6%	31%	3%	0%	-100%

Source: DG AGRI L3

(6) >= 100 ESU	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	531 365	531 365	0%	531 365	0%	531 365	0%	535 524	1%	531 365	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	52 986	42 991	-19%	44 047	-17%	43 702	-18%	47 839	-10%	0	-100%
Basic rate / decoupled - €/farm	52 046	42 113	-19%	43 173	-17%	42 831	-18%	30 564	-41%	0	-100%
Coupled payments - €/farm	939	878	-7%	874	-7%	871	-7%	895	-5%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	14 741	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 611	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	27	-	0	-
Total Pillar 1 and 2 payments - €/farm	58 866	48 872	-17%	49 928	-15%	49 583	-16%	53 719	-9%	11 762	-80%
Amounts transferred to Pillar II or capped - €/farm	0	4 506	-	4 591	-	4 565	-	277	-	0	-
COSTS											
Total operating costs, depreciation and taxes	367 569	367 569	0%	367 569	0%	367 569	0%	378 511	3%	368 853	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	6 961	-	0	-
Total external factors, own capital and investment aids	129 814	128 052	-1%	128 216	-1%	128 164	-1%	128 932	-1%	120 095	-7%
External factor costs - €/farm	107 615	106 267	-1%	106 391	-1%	106 367	-1%	106 944	-1%	100 325	-7%
Own capital - €/farm	22 439	22 025	-2%	22 064	-2%	22 036	-2%	22 227	-1%	20 010	-11%
INCOME											
Farm Net Value Added - €/farm	222 662	212 668	-4%	213 723	-4%	213 379	-4%	210 732	-5%	174 273	-22%
Farm Net Value Added per AWU - €/AWU	55 258	52 777	-4%	53 039	-4%	52 954	-4%	52 297	-5%	43 249	-22%
Remuneration for family labour - €/farm	92 848	84 616	-9%	85 508	-8%	85 215	-8%	81 801	-12%	54 178	-42%
Remuneration for family labour - €/FWU	63 990	58 082	-9%	59 115	-8%	58 720	-8%	56 659	-11%	42 316	-34%
Share of Pillar 1 payments in FNVA	24%	20%	-15%	21%	-13%	20%	-14%	23%	-5%	0%	-100%

Source: DG AGRI L3

7.7. Result tables according to the Type of Farming

(1) Fieldcrops	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	57 563	57 563	0%	57 563	0%	57 563	0%	58 511	2%	57 563	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	11 865	10 273	-13%	10 162	-14%	10 196	-14%	10 722	-10%	0	-100%
Basic rate / decoupled - €/farm	11 616	10 025	-14%	9 918	-15%	9 951	-14%	6 816	-41%	0	-100%
Coupled payments - €/farm	249	248	0%	244	-2%	244	-2%	260	4%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	3 295	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	332	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	20	-	0	-
Total Pillar 1 and 2 payments - €/farm	13 241	11 648	-12%	11 538	-13%	11 571	-13%	12 098	-9%	2 751	-79%
Amounts transferred to Pillar II or capped - €/farm	0	816	-	803	-	806	-	30	-	0	-
COSTS											
Total operating costs, depreciation and taxes	40 161	40 161	0%	40 161	0%	40 161	0%	41 569	4%	40 462	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 242	-	0	-
Total external factors, own capital and investment aids	15 918	15 624	-2%	15 604	-2%	15 609	-2%	15 711	-1%	13 689	-14%
External factor costs - €/farm	10 801	10 594	-2%	10 592	-2%	10 595	-2%	10 666	-1%	9 472	-12%
Own capital - €/farm	5 153	5 067	-2%	5 049	-2%	5 051	-2%	5 081	-1%	4 254	-17%
INCOME											
Farm Net Value Added - €/farm	30 642	29 050	-5%	28 940	-6%	28 973	-5%	29 040	-5%	19 851	-35%
Farm Net Value Added per AWU - €/AWU	25 162	23 854	-5%	23 763	-6%	23 791	-5%	23 845	-5%	16 301	-35%
Remuneration for family labour - €/farm	14 725	13 426	-9%	13 336	-9%	13 363	-9%	13 329	-9%	6 162	-58%
Remuneration for family labour - €/FWU	15 789	14 200	-10%	14 255	-10%	14 215	-10%	14 234	-10%	7 441	-53%
Share of Pillar 1 payments in FNVA	39%	35%	-9%	35%	-9%	35%	-9%	37%	-5%	0%	-100%

Source: DG AGRI L3

(2) Horticulture	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	186 202	186 202	0%	186 202	0%	186 202	0%	186 278	0%	186 202	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	1 177	1 293	10%	1 361	16%	1 329	13%	1 509	28%	0	-100%
Basic rate / decoupled - €/farm	1 107	1 222	10%	1 290	17%	1 258	14%	789	-29%	0	-100%
Coupled payments - €/farm	70	71	1%	71	1%	71	1%	77	10%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	378	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	31	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	234	-	0	-
Total Pillar 1 and 2 payments - €/farm	1 416	1 532	8%	1 600	13%	1 568	11%	1 748	23%	477	-66%
Amounts transferred to Pillar II or capped - €/farm	0	52	-	56	-	54	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	97 907	97 907	0%	97 907	0%	97 907	0%	98 676	1%	97 958	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	153	-	0	-
Total external factors, own capital and investment aids	38 719	38 739	0%	38 749	0%	38 744	0%	38 776	0%	38 494	-1%
External factor costs - €/farm	33 701	33 718	0%	33 728	0%	33 724	0%	33 734	0%	33 628	0%
Own capital - €/farm	4 965	4 966	0%	4 967	0%	4 966	0%	4 988	0%	4 812	-3%
INCOME											
Farm Net Value Added - €/farm	89 711	89 827	0%	89 895	0%	89 863	0%	89 350	0%	88 722	-1%
Farm Net Value Added per AWU - €/AWU	36 197	36 244	0%	36 271	0%	36 258	0%	36 051	0%	35 797	-1%
Remuneration for family labour - €/farm	50 992	51 089	0%	51 146	0%	51 119	0%	50 574	-1%	50 228	-1%
Remuneration for family labour - €/FWU	45 604	45 694	0%	45 747	0%	45 723	0%	45 232	-1%	44 964	-1%
Share of Pillar 1 payments in FNVA	1%	1%	10%	2%	15%	1%	13%	2%	29%	0%	-100%

Source: DG AGRI L3

(3) Wine	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	89 602	89 602	0%	89 602	0%	89 602	0%	89 675	0%	89 602	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	2 181	3 619	66%	3 850	77%	3 730	71%	3 991	83%	0	-100%
Basic rate / decoupled - €/farm	2 134	3 573	67%	3 805	78%	3 686	73%	2 460	15%	0	-100%
Coupled payments - €/farm	47	46	-2%	44	-6%	44	-6%	48	2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 247	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	158	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	77	-	0	-
Total Pillar 1 and 2 payments - €/farm	2 765	4 204	52%	4 434	60%	4 315	56%	4 575	65%	1 170	-58%
Amounts transferred to Pillar II or capped - €/farm	0	133	-	149	-	141	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	40 997	40 997	0%	40 997	0%	40 997	0%	41 203	1%	41 132	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	254	-	0	-
Total external factors, own capital and investment aids	23 932	24 210	1%	24 259	1%	24 234	1%	24 286	1%	23 518	-2%
External factor costs - €/farm	16 949	17 065	1%	17 083	1%	17 077	1%	17 093	1%	16 824	-1%
Own capital - €/farm	7 270	7 433	2%	7 464	3%	7 445	2%	7 481	3%	6 982	-4%
INCOME											
Farm Net Value Added - €/farm	51 370	52 809	3%	53 039	3%	52 920	3%	53 047	3%	49 640	-3%
Farm Net Value Added per AWU - €/AWU	33 811	34 758	3%	34 910	3%	34 832	3%	34 915	3%	32 673	-3%
Remuneration for family labour - €/farm	27 438	28 598	4%	28 780	5%	28 686	5%	28 761	5%	26 122	-5%
Remuneration for family labour - €/FWU	30 023	31 269	4%	31 483	5%	31 374	4%	31 451	5%	28 649	-5%
Share of Pillar 1 payments in FNVA	4%	7%	61%	7%	71%	7%	66%	8%	77%	0%	-100%

Source: DG AGRI L3

(4) Other permanent crops	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	34 943	34 943	0%	34 943	0%	34 943	0%	34 979	0%	34 943	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	2 530	2 177	-14%	2 345	-7%	2 238	-12%	2 417	-4%	0	-100%
Basic rate / decoupled - €/farm	2 481	2 128	-14%	2 298	-7%	2 191	-12%	1 452	-41%	0	-100%
Coupled payments - €/farm	49	48	-1%	47	-4%	47	-3%	48	-2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	724	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	104	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	89	-	0	-
Total Pillar 1 and 2 payments - €/farm	2 807	2 454	-13%	2 622	-7%	2 515	-10%	2 694	-4%	554	-80%
Amounts transferred to Pillar II or capped - €/farm	0	63	-	65	-	62	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	14 543	14 543	0%	14 543	0%	14 543	0%	14 726	1%	14 605	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	154	-	0	-
Total external factors, own capital and investment aids	8 849	8 785	-1%	8 819	0%	8 797	-1%	8 833	0%	8 370	-5%
External factor costs - €/farm	5 480	5 477	0%	5 482	0%	5 479	0%	5 485	0%	5 406	-1%
Own capital - €/farm	3 317	3 257	-2%	3 285	-1%	3 267	-2%	3 297	-1%	2 912	-12%
INCOME											
Farm Net Value Added - €/farm	23 207	22 854	-2%	23 022	-1%	22 915	-1%	22 948	-1%	20 892	-10%
Farm Net Value Added per AWU - €/AWU	21 006	20 687	-2%	20 839	-1%	20 742	-1%	20 772	-1%	18 911	-10%
Remuneration for family labour - €/farm	14 358	14 069	-2%	14 203	-1%	14 118	-2%	14 115	-2%	12 522	-13%
Remuneration for family labour - €/FWU	17 318	16 963	-2%	17 127	-1%	17 024	-2%	17 020	-2%	15 108	-13%
Share of Pillar 1 payments in FNVA	11%	10%	-13%	10%	-7%	10%	-10%	11%	-3%	0%	-100%

Source: DG AGRI L3

(5) Milk	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	101 964	101 964	0%	101 964	0%	101 964	0%	102 742	1%	101 964	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	10 824	8 887	-18%	9 138	-16%	9 096	-16%	9 882	-9%	0	-100%
Basic rate / decoupled - €/farm	10 713	8 782	-18%	9 035	-16%	8 994	-16%	6 220	-42%	0	-100%
Coupled payments - €/farm	111	105	-6%	103	-7%	103	-8%	108	-3%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 961	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	560	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	34	-	0	-
Total Pillar 1 and 2 payments - €/farm	14 070	12 133	-14%	12 384	-12%	12 342	-12%	13 128	-7%	6 492	-54%
Amounts transferred to Pillar II or capped - €/farm	0	614	-	653	-	642	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	73 758	73 758	0%	73 758	0%	73 758	0%	76 759	4%	74 518	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	2 117	-	0	-
Total external factors, own capital and investment aids	20 148	19 841	-2%	19 870	-1%	19 869	-1%	20 010	-1%	18 189	-10%
External factor costs - €/farm	12 654	12 454	-2%	12 498	-1%	12 489	-1%	12 593	0%	11 542	-9%
Own capital - €/farm	7 244	7 136	-1%	7 121	-2%	7 130	-2%	7 166	-1%	6 397	-12%
INCOME											
Farm Net Value Added - €/farm	42 276	40 339	-5%	40 591	-4%	40 549	-4%	39 110	-7%	33 939	-20%
Farm Net Value Added per AWU - €/AWU	29 899	28 529	-5%	28 707	-4%	28 677	-4%	27 660	-7%	24 002	-20%
Remuneration for family labour - €/farm	22 128	20 498	-7%	20 721	-6%	20 679	-7%	19 100	-14%	15 749	-29%
Remuneration for family labour - €/FWU	17 756	16 398	-8%	16 607	-6%	16 558	-7%	15 341	-14%	12 777	-28%
Share of Pillar 1 payments in FNVA	26%	22%	-14%	23%	-12%	22%	-12%	25%	-1%	0%	-100%

Source: DG AGRI L3

(6) Other grazing livestock	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	53 067	53 067	0%	53 067	0%	53 067	0%	53 934	2%	53 067	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	12 094	13 617	13%	13 599	12%	13 566	12%	14 858	23%	0	-100%
Basic rate / decoupled - €/farm	10 769	12 384	15%	12 387	15%	12 355	15%	8 363	-22%	0	-100%
Coupled payments - €/farm	1 324	1 233	-7%	1 212	-8%	1 211	-9%	1 276	-4%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	4 188	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	1 001	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	30	-	0	-
Total Pillar 1 and 2 payments - €/farm	16 272	17 796	9%	17 777	9%	17 744	9%	19 036	17%	8 357	-49%
Amounts transferred to Pillar II or capped - €/farm	0	1 128	-	1 126	-	1 121	-	258	-	0	-
COSTS											
Total operating costs, depreciation and taxes	42 669	42 669	0%	42 669	0%	42 669	0%	44 450	4%	43 657	2%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 247	-	0	-
Total external factors, own capital and investment aids	12 467	12 796	3%	12 784	3%	12 782	3%	13 029	5%	10 338	-17%
External factor costs - €/farm	6 410	6 587	3%	6 599	3%	6 595	3%	6 739	5%	5 339	-17%
Own capital - €/farm	6 180	6 332	2%	6 307	2%	6 310	2%	6 413	4%	5 122	-17%
INCOME											
Farm Net Value Added - €/farm	26 670	28 194	6%	28 176	6%	28 143	6%	28 520	7%	17 767	-33%
Farm Net Value Added per AWU - €/AWU	20 688	21 870	6%	21 856	6%	21 830	6%	22 123	7%	13 782	-33%
Remuneration for family labour - €/farm	14 204	15 398	8%	15 392	8%	15 361	8%	15 491	9%	7 429	-48%
Remuneration for family labour - €/FWU	12 633	13 699	8%	13 714	9%	13 677	8%	13 803	9%	6 738	-47%
Share of Pillar 1 payments in FNVA	45%	48%	7%	48%	6%	48%	6%	52%	15%	0%	-100%

Source: DG AGRI L3

(7) Granivores	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	184 342	184 342	0%	184 342	0%	184 342	0%	184 985	0%	184 342	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	5 155	4 625	-10%	4 634	-10%	4 649	-10%	4 927	-4%	0	-100%
Basic rate / decoupled - €/farm	5 084	4 556	-10%	4 567	-10%	4 583	-10%	3 143	-38%	0	-100%
Coupled payments - €/farm	71	69	-4%	66	-7%	66	-7%	70	-2%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	1 492	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	175	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	47	-	0	-
Total Pillar 1 and 2 payments - €/farm	6 011	5 481	-9%	5 490	-9%	5 506	-8%	5 783	-4%	1 713	-72%
Amounts transferred to Pillar II or capped - €/farm	0	255	-	268	-	263	-	0	-	0	-
COSTS											
Total operating costs, depreciation and taxes	155 276	155 276	0%	155 276	0%	155 276	0%	159 451	3%	155 451	0%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	596	-	0	-
Total external factors, own capital and investment aids	25 262	25 172	0%	25 163	0%	25 171	0%	25 216	0%	24 323	-4%
External factor costs - €/farm	18 418	18 346	0%	18 363	0%	18 358	0%	18 394	0%	17 964	-2%
Own capital - €/farm	6 573	6 555	0%	6 529	-1%	6 542	0%	6 551	0%	6 088	-7%
INCOME											
Farm Net Value Added - €/farm	35 078	34 548	-2%	34 557	-1%	34 572	-1%	31 316	-11%	30 604	-13%
Farm Net Value Added per AWU - €/AWU	23 347	22 994	-2%	23 000	-1%	23 011	-1%	20 843	-11%	20 370	-13%
Remuneration for family labour - €/farm	9 816	9 375	-4%	9 393	-4%	9 401	-4%	6 100	-38%	6 281	-36%
Remuneration for family labour - €/FWU	12 251	11 828	-3%	11 844	-3%	11 852	-3%	8 757	-29%	8 853	-28%
Share of Pillar 1 payments in FNVA	15%	13%	-9%	13%	-9%	13%	-8%	16%	7%	0%	-100%

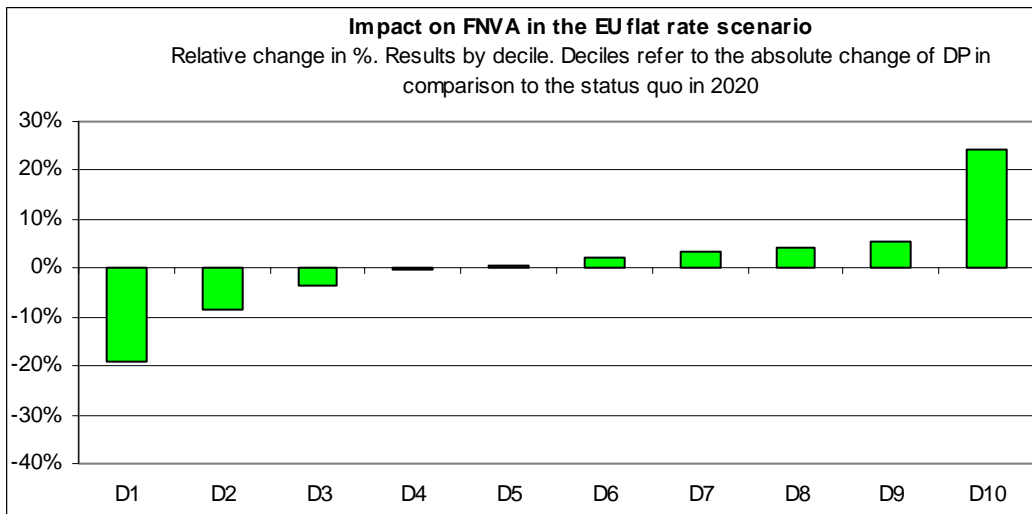
Source: DG AGRI L3

(8) Mixed	Adjustment										
	Status quo	EU flat rate		Min 80%		Min 90% and objective criteria		Integration		Refocus	
	2020	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo	2020	/status quo
MARKET											
Output - €/farm	52 658	52 658	0%	52 658	0%	52 658	0%	53 315	1%	52 658	0%
DIRECT PAYMENTS (DP) AND SUBSIDIES											
Total Pillar 1 payments - €/farm	7 740	7 255	-6%	7 047	-9%	7 170	-7%	7 581	-2%	0	-100%
Basic rate / decoupled - €/farm	7 494	7 025	-6%	6 822	-9%	6 945	-7%	4 705	-37%	0	-100%
Coupled payments - €/farm	246	230	-7%	225	-8%	225	-8%	238	-4%	0	-100%
Greening - €/farm	0	0	-	0	-	0	-	2 262	-	0	-
Natural handicap - €/farm	0	0	-	0	-	0	-	358	-	0	-
Small beneficiaries - €/farm	0	0	-	0	-	0	-	18	-	0	-
Total Pillar 1 and 2 payments - €/farm	9 186	8 701	-5%	8 494	-8%	8 616	-6%	9 027	-2%	2 892	-69%
Amounts transferred to Pillar II or capped - €/farm	0	525	-	525	-	526	-	7	-	0	-
COSTS											
Total operating costs, depreciation and taxes	42 674	42 674	0%	42 674	0%	42 674	0%	44 383	4%	42 958	1%
Estimated costs for greening - €/farm	0	0	-	0	-	0	-	1 169	-	0	-
Total external factors, own capital and investment aids	11 061	10 985	-1%	10 941	-1%	10 967	-1%	11 044	0%	9 614	-13%
External factor costs - €/farm	7 476	7 363	-2%	7 373	-1%	7 373	-1%	7 445	0%	6 629	-11%
Own capital - €/farm	3 598	3 635	1%	3 582	0%	3 607	0%	3 611	0%	2 999	-17%
INCOME											
Farm Net Value Added - €/farm	19 171	18 686	-3%	18 478	-4%	18 601	-3%	17 960	-6%	12 593	-34%
Farm Net Value Added per AWU - €/AWU	14 909	14 532	-3%	14 370	-4%	14 466	-3%	13 967	-6%	9 794	-34%
Remuneration for family labour - €/farm	8 109	7 700	-5%	7 537	-7%	7 634	-6%	6 916	-15%	2 978	-63%
Remuneration for family labour - €/FWU	7 281	6 944	-5%	6 818	-6%	6 893	-5%	6 304	-13%	3 319	-54%

Source: DG AGRI L3

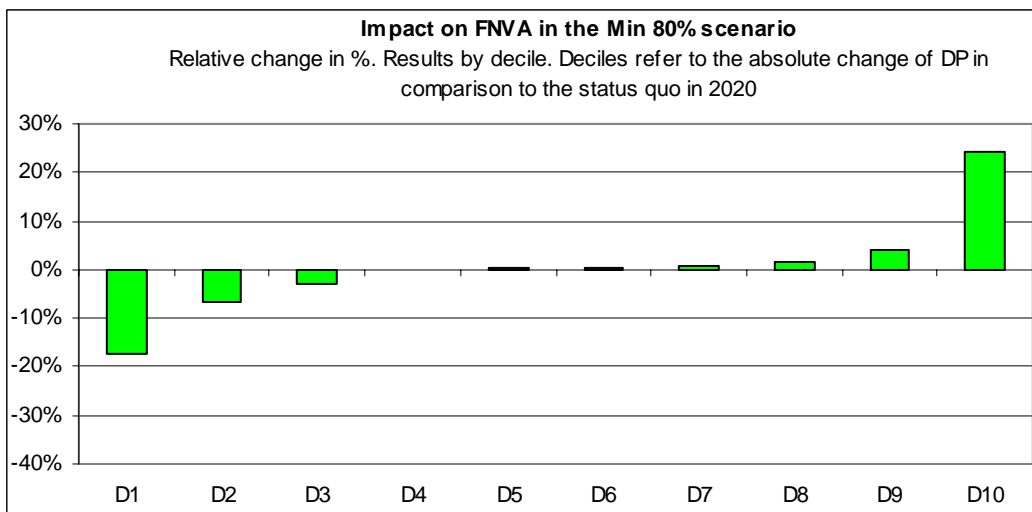
7.8. Graphs impact on farm income by deciles of changes of income, by scenario

Figure A.1: Impact of the EU flat rate scenario on FNVA by decile



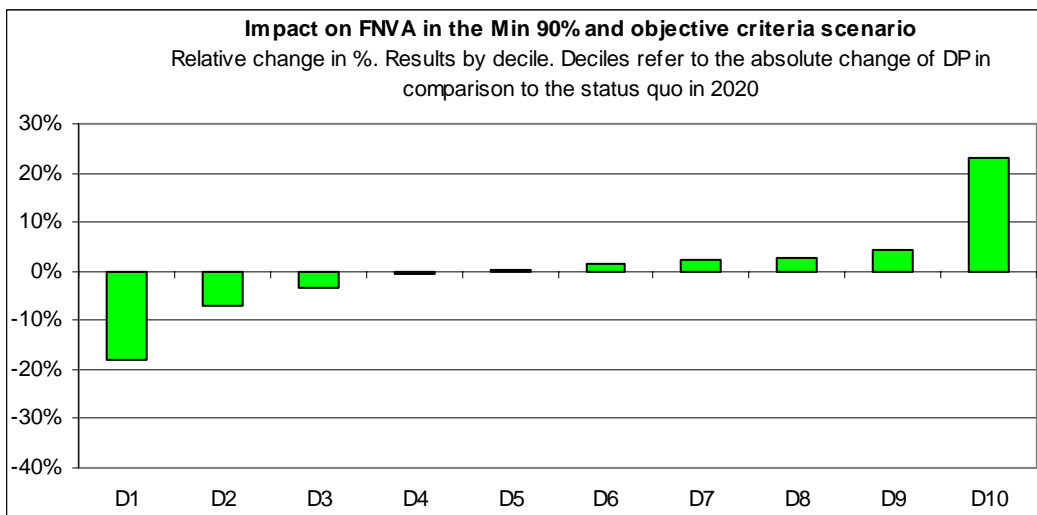
Source: DG AGRI L3

Figure A.2: Impact of the Min 80% scenario on FNVA by decile



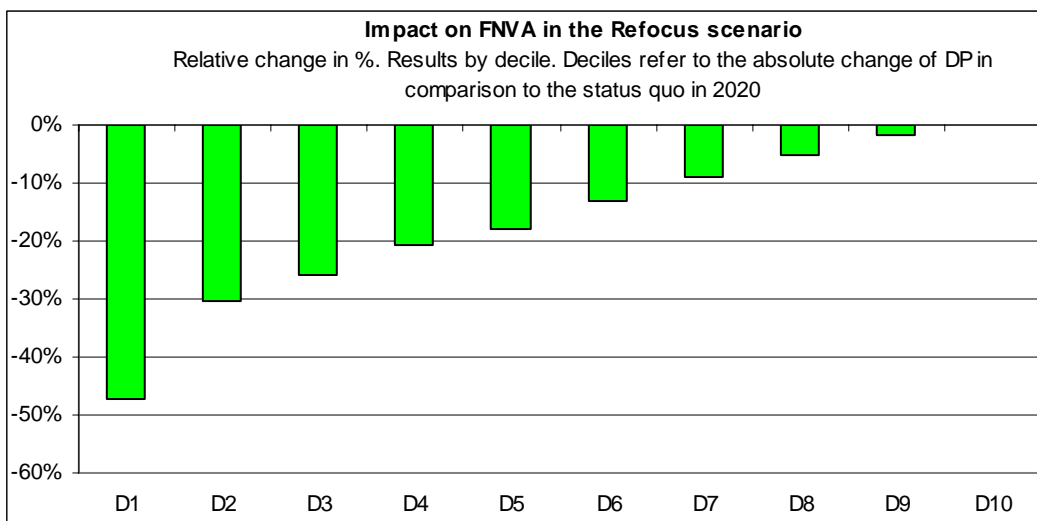
Source: DG AGRI L3

Figure A.3: Impact of the Min 90% and objective criteria scenario on FNVA by decile



Source: DG AGRI L3

Figure A.4: Impact of the Refocus scenario on FNVA by decile



Source: DG AGRI L3

7.9. Tables impact on farm profitability

Table A.1: Share of profitable farms by economic size class and Type of Farm in the status quo scenario

	Share of profitable farms by size class						Total
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	
Fieldcrops	39%	37%	41%	47%	56%	68%	43%
Horticulture	45%	59%	60%	64%	70%	79%	62%
Wine	10%	13%	34%	48%	59%	70%	37%
Other permanent crops	20%	29%	41%	52%	65%	74%	37%
Milk	44%	53%	56%	45%	49%	62%	49%
Other grazing livestock	35%	28%	36%	37%	45%	63%	37%
Granivores	23%	18%	24%	31%	40%	43%	30%
Mixed	19%	26%	44%	46%	41%	53%	29%
Total	31%	31%	42%	46%	52%	63%	39%

Source: DG AGRI L3

Table A.2: Impact on farm profitability in the EU flat rate scenario

	Change in the share of profitable farms by size class						Total
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	
Fieldcrops	0.4%	-2.5%	-3.0%	-3.7%	-6.1%	-7.1%	-2.3%
Horticulture	0.0%	0.1%	0.6%	0.6%	0.4%	0.0%	0.3%
Wine	0.0%	0.3%	0.7%	1.7%	2.1%	1.7%	1.1%
Other permanent crops	-0.2%	-2.9%	-0.3%	-0.2%	1.6%	1.7%	-1.3%
Milk	1.0%	4.9%	3.5%	-0.4%	-4.4%	-5.8%	-0.5%
Other grazing livestock	3.9%	2.6%	1.9%	1.8%	0.1%	-7.8%	2.0%
Granivores	1.7%	0.0%	2.3%	2.2%	-1.1%	0.4%	1.0%
Mixed	2.1%	2.1%	2.5%	-0.2%	-3.9%	-7.1%	1.1%
Total	1.4%	-0.9%	0.0%	-0.6%	-2.8%	-4.3%	-0.4%

Source: DG AGRI L3

Table A.3: Impact on farm profitability in the Min 80% scenario

	Change in the share of profitable farms by size class						Total
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	
Fieldcrops	-0.3%	-1.9%	-2.4%	-3.0%	-4.9%	-6.3%	-2.1%
Horticulture	0.0%	0.1%	0.4%	0.6%	0.4%	0.1%	0.3%
Wine	0.0%	2.1%	0.1%	1.5%	3.3%	2.1%	1.6%
Other permanent crops	0.7%	-1.9%	-0.6%	-0.3%	1.2%	2.2%	-0.8%
Milk	0.2%	1.7%	1.4%	-0.3%	-3.3%	-4.5%	-0.8%
Other grazing livestock	1.1%	1.7%	1.2%	2.4%	1.6%	-4.2%	1.5%
Granivores	0.0%	0.0%	0.2%	0.0%	-1.3%	0.6%	-0.1%
Mixed	0.4%	-0.4%	0.3%	-1.2%	-3.2%	-5.4%	-0.4%
Total	0.2%	-0.9%	-0.5%	-0.5%	-1.9%	-3.3%	-0.7%

Source: DG AGRI L3

Table A.4: Impact on farm profitability in the Min 90% and objective criteria scenario

	Change in the share of profitable farms by size class						
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	Total
Fieldcrops	0.2%	-2.5%	-2.8%	-3.5%	-5.3%	-6.5%	-2.2%
Horticulture	0.0%	0.1%	0.4%	0.5%	0.3%	0.1%	0.3%
Wine	0.0%	1.6%	0.2%	1.2%	3.0%	2.1%	1.4%
Other permanent crops	-0.2%	-2.3%	-0.7%	0.2%	1.3%	2.1%	-1.0%
Milk	0.4%	3.3%	1.7%	-0.1%	-3.5%	-4.9%	-0.7%
Other grazing livestock	2.0%	1.4%	2.0%	2.0%	1.0%	-5.2%	1.6%
Granivores	1.7%	0.0%	1.5%	0.9%	-1.3%	0.5%	0.7%
Mixed	1.6%	0.7%	1.7%	-0.6%	-3.4%	-5.7%	0.6%
Total	0.8%	-1.1%	-0.3%	-0.5%	-2.2%	-3.6%	-0.5%

Source: DG AGRI L3

Table A.5: Impact on farm profitability in Integration scenario

	Change in the share of profitable farms by size class						
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	Total
Fieldcrops	-0.7%	-2.8%	-3.0%	-2.1%	-4.2%	-5.8%	-2.2%
Horticulture	3.1%	-0.2%	1.1%	0.7%	-0.2%	-0.2%	0.9%
Wine	0.8%	2.0%	0.0%	1.6%	2.7%	2.0%	1.6%
Other permanent crops	-0.2%	-1.0%	-0.3%	-0.5%	1.0%	2.3%	-0.5%
Milk	-0.1%	-2.2%	-2.0%	-1.4%	-5.5%	-9.4%	-2.7%
Other grazing livestock	0.0%	-0.1%	0.7%	4.4%	3.7%	-5.9%	1.4%
Granivores	-1.7%	-0.6%	-1.7%	-2.7%	-3.1%	-2.9%	-2.2%
Mixed	-0.5%	-1.7%	-2.6%	-1.9%	-4.7%	-8.1%	-1.7%
Total	-0.4%	-1.4%	-1.4%	-0.2%	-2.3%	-4.9%	-1.2%

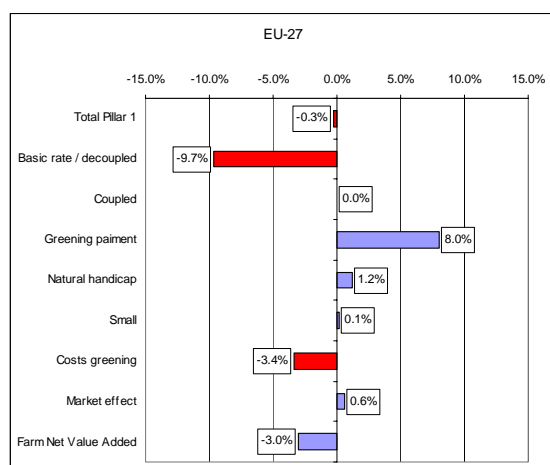
Source: DG AGRI L3

Table A.6: Impact on farm profitability in the Refocus scenario

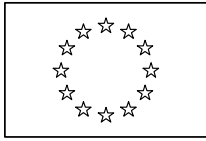
	Change in the share of profitable farms by size class						
	0 - <4 ESU	4 - <8 ESU	8 - <16 ESU	16 - <40 ESU	40 - <100 ESU	>= 100 ESU	Total
Fieldcrops	-7.6%	-10.3%	-14.1%	-16.6%	-20.8%	-25.9%	-12.6%
Horticulture	0.0%	-1.7%	-1.0%	-0.8%	-0.9%	-0.5%	-0.8%
Wine	0.4%	-0.1%	-7.1%	-2.5%	-2.1%	-2.7%	-2.4%
Other permanent crops	-1.9%	-4.9%	-4.4%	-7.9%	-6.3%	-6.0%	-4.9%
Milk	-9.2%	-9.2%	-8.1%	-3.8%	-11.7%	-17.5%	-9.3%
Other grazing livestock	-9.3%	-4.6%	-8.4%	-9.2%	-13.6%	-24.5%	-9.3%
Granivores	-1.7%	-2.7%	-6.0%	-7.3%	-5.2%	-3.9%	-4.1%
Mixed	-2.9%	-7.4%	-12.5%	-11.2%	-14.2%	-21.5%	-7.0%
Total	-5.6%	-6.7%	-9.3%	-9.6%	-12.8%	-16.3%	-8.4%

Source: DG AGRI L3

Figure A.5: Components determining the effect of the Integration scenario in comparison to status quo on FNVA in the EU-27



Source: DG AGRI L3



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IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 11

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**Annex 11: Methodology; Overview of Evaluations; JRC
Research; Studies and Research Projects Relating to the
CAP**

ANNEX 11A

METHODOLOGY FOR THE MARKET AND INCOME EFFECTS OF THE CAP REFORM

1. ANALYTICAL TOOLS USED

Analysis of the potential impacts from the different policy options about the future CAP has been carried out on the basis of quantitative analysis which was then complemented with quantitative and qualitative information from the literature and public consultations (mostly on the social and environmental impacts).

The core of quantitative analysis on the economic situation of EU agriculture until 2020 and the impacts of policy scenarios have been conducted using DG AGRI tools with the support of JRC IPTS. An economic model was used (a modified version of AGLINK-COSIMO model) to prepare the projections of agricultural markets and the Farm Accountancy Data Network (FADN) information was used to examine their implications for the cost and revenue structure and the income of individual farms¹². These results were then complemented with quantitative and qualitative information from the literature and public consultations to analyse the social and environmental impacts of the policy scenarios.

2. BASELINE PROJECTIONS

The first element of analysis was the preparation of a baseline projection between 2010 and 2020 with regard to the evolution of agricultural markets. It allows taking into account the role of the macroeconomic trends (GDP growth, population, energy prices) in the evolution of agricultural production and prices to see the general conditions under which the farmers will be operating.

The projections were established under a set of status quo assumptions on agricultural and trade policies with macroeconomic projections (world market environment is largely based on the 2010 OECD-FAO agricultural outlook) as well as considerations for climate and animal disease related issues. The projections were based on market statistics and other information available at the end of September 2010 and validated in expert discussions. An external review of the baseline and uncertainty scenarios was conducted in a seminar on 5-6 October 2010 in Brussels, gathering high-level policy makers, modelling and market experts from the EU, the United States and international organisations such as the Organisation for Economic Co-operation and Development, the United Nation's Food and Agriculture Organisation and the World Bank.³

¹ AGLINK-COSIMO is a dynamic partial equilibrium model used to generate medium-term OECD-FAO agricultural outlook

² The FADN is a European system of sample surveys that take place each year and collect structural and accountancy data relating to the farms; their aim is to monitor the income and business activities of agricultural holdings and to evaluate the impacts of the Common Agricultural Policy. The most recent FADN data available for this report are for the 2007 accounting year, because of the time needed to collect the data from all the EU MS. <http://ec.europa.eu/agriculture/rica>

³ Proceedings are available at: <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=4199>.

The results consist of market balances for main agricultural products⁴ (production, area, yields, import, export, consumption, stocks), domestic and world prices as well as agricultural income for every year between 2010 and 2020 for EU as a whole, as well as EU-15 and EU-12. Additional results at MS level for certain specific sectors (i.e. sugar) were calculated using the European Simulation Model (ESIM) model⁵.

Based on this data, the next step was to simulate the profitability and incomes of individual farms with the use of data of the Farm Accountancy Data Network. The projected prices, yields and input costs coefficients for 2020 were imposed on the current economic situation of the farms to reflect the situation under which they would find themselves in 2020 with regard to the costs and revenue structure, production structure and income.

While this static approach assumes unchanged farm structures, trends in labour productivity were introduced in order to reflect the restructuring process in the sector. This simulation allowed calculating the income of farms based on the Farm Net Value Added (FNVA) per Annual Work Unit (AWU), an indicator which represents the amount available to remunerate the factors of production labour, land and capital.⁶ The information was available at farm level. Further aggregation of the FADN data according to economic size, expressed in ESU,⁷ and wider geographical units (Member States, regions, less favoured (LFA) areas) allowed analysis to reflect impacts at different levels.⁸

3. SCENARIO SIMULATION

The baseline results were then used to simulate the effects of changing the level of direct payments as a result of the redistribution of payment and the introduction of different components and mechanisms of the direct payment (for small farmers, natural constraint areas, coupled component as well as capping) on farm income and profitability.⁹ The analysis was made at farm level and aggregates are created on the basis of the individual data using the FADN weighting scheme. The model was static, which means that the structural trends and the allocation of land do not change across the scenarios.

For the purpose of the impact assessment the model has been extended to simulate the policy options covered by the impact assessment with the exception of the no policy scenario and to assess their impact on farm income and farm profitability. For the calculation of farm income both changes in output and intermediate consumption and DP are taken into account. The results allow to compare the income of farms (calculated as Farm Net Value Added/Annual

⁴ Arable crops, meat, milk and dairy products, biofuels

⁵ ESIM is a comparative static partial equilibrium net-trade multi-country model of agricultural sector.

⁶ $FNVA/AWU = (\text{output} - \text{intermediate consumption} + \text{subsidies} - \text{taxes} - \text{depreciation}) / \text{Annual Work Units}$.

⁷ ESU - European size unit represents a standard gross margin of EUR 1 200 that is used to express the economic size of an agricultural holding or farm. For each activity on a farm, the standard gross margin (SGM) and a regional coefficient are estimated. The sum of all such margins derived from activities on a particular farm is its economic size, which is then expressed in European size units (by dividing the total SGM in euro by 1200, thus converting it to ESU).

⁸ The main results of sector-specific and microeconomic analyses are available in Annex 1: The situation and prospects for EU agriculture and rural areas.

⁹ The simulation was conducted with the model AIDS7K developed by DG AGRI L3, based on the structure of farms observed in 2007 to simulate the impact of the change of DP schemes on farm income and DP for the 81 000 sample farms included in FADN.

Working Unit), aggregated by type of farming, economic size (in ESU) and geographical units (Member States, regions) in different scenarios.

Additional analysis with FADN data was conducted to assess the economic costs of introducing the environmental measures as part of the Greening of the CAP – i.e. crop diversification, ecological set-aside, green cover or permanent pasture. The effect of changed crop pattern due to the diversification measure were then introduced in the macroeconomic model, together with set aside rules, to see what effect it would have on the production and prices of agricultural commodities. The new values were taken into account in calculating farm income together with the estimated cost of introducing the various greening measures.

At the same time, the results of agricultural market projections were used as an input for modelling the impact on developing countries and the same model was used to estimate the potential effects of DDA agreement.¹⁰

4. SENSITIVITY ANALYSIS

In order to address the uncertainties regarding the future macroeconomic developments a quantitative assessment of alternative assumptions on supply and demand drivers, the macroeconomic environment and crude oil price developments was made to see how they may affect the outlook for EU agricultural markets. The alternative assumptions examined included higher crop yield growth, faster technological prospects, higher variable costs, higher GDP growth in emerging economies, faster or slower economic growth and higher or lower crude oil price and a biofuel scenario (higher oil price with lower transport fuel demand).

In FADN analysis, three different assumptions on gains in labour productivity was made in order to simulate the restructuring process: fixed labour productivity, gains in labour productivity reflecting recent trends (1.5% for EU15 and 3% for EU12) and gains in labour productivity reflecting long term gains (3% for EU27). Also alternative possibilities were examined with regard to the direct payment scheme: thresholds for the greening component and redistribution as well as conditions of natural constraints scheme, small farmer scheme and capping.

¹⁰ For results and detailed description of the methodology see Annex 11: Analysis of the income effects of CAP reform scenarios and Annex 2d: Partial analysis of greening measures

ANNEX 11B

COMMON AGRICULTURAL POLICY: RESULTS OF MID-TERM AND EX-POST EVALUATIONS OF EXISTING INSTRUMENTS

Evaluations of the different elements of agricultural policy are conducted continuously and their results are incorporated in the ongoing reform process (a full list of evaluations completed during the period 2007 – 2010 is provided in the annex, together with the executive summaries of the evaluation reports). The evaluation projects examine in particular the impacts of CAP measures on markets, farm income, production structures, competitiveness, the environment and rural development.

1. Main results

Evaluations of existing instruments show that they are generally effective, efficient and pertinent to their objectives, but there is a need for better targeting.

A series of evaluations carried out during the period 2007 – 2010 have analysed the effects of the 2003 CAP reform on a wide number of agricultural sectors (starch, rice, protein crops, durum wheat, olive oil, hops, dried fodder, cotton and beef). The results of these sectoral evaluations indicate that while decoupled aid is needed to support farm income, the switch to decoupling and the adjustments in market measures limit distorting effects, provide higher transfer efficiency and ensure coherence with the overall objectives of the CAP. As a result, production decisions of farmers are more determined by market signals and not by the payment of the aid, contributing thus to enhancing competitiveness and the smooth functioning of the internal market. The evaluation reports also recommend to strengthen research and innovation in the agricultural sector to help consolidate market orientation and improve the quality of products, value-added and productivity.

The evaluation of the **markets effects of partial decoupling** has shown that retaining coupled support for suckler cow and sheep and goat premia in certain regions provides environmental and social benefits; however, for many other sectors it has been of limited effectiveness in maintaining production, and secondary to other market and policy developments.

The results of the ongoing evaluation of the dairy CMO are not yet available, but experience from the implementation of the safety-net in the 2008-2009 dairy crisis demonstrated the need to streamline these tools, and subsequent reflections of the High Level Expert Group on Milk pointed to the need to work on improving the functioning of the food chain.

The evaluation of the **income effects of direct support** has examined the efficiency and effectiveness of direct payments in a broad range of agricultural sectors and farm types across the EU. The results of this horizontal evaluation show that direct payments contribute to enhancing the income of farmers and play a particularly important role in generating income for grazing livestock specialist farms, those specialised in field crops, mixed farms and dairy farms. At global level, the efficiency of direct payments in terms of reaching farms that are in need of income support is quite high - the analysis indicates that in 2007, 82% of the expenditure was going to farms which, even with direct payments, did not reach the reference income (regional GDP/employee). However, the system generates very uneven levels of efficiency (direct payments are granted to a certain share of farmers whose income is above the benchmark), especially in certain sectors (i.e. in the field crops sector) and in certain

regions, while other farmers remain below the benchmark¹¹. The evaluation indicates that direct payments make also an important contribution to farm income stabilisation, in particular for small farmers and farmers in LFAs, and in the field crops and mixed farms sectors. In terms of payment modalities, direct payments have a higher positive effect on income equity in regions that apply the hybrid and the regional SPS models than in those applying the historical model.

The synthesis of evaluations of the **environmental effects of CAP measures** provides a comprehensive review of the evaluations in this field carried out between 2007 and 2010 concerning CAP measures for arable crops, cotton, beef and veal, pig, poultry and eggs production, milk quotas and the cross-compliance mechanism. The results of the analysis underline the advantages in terms of environmental performance of decoupled income support which does not directly influence farmer's behaviour, and indicate that decoupled support combined with the cross-compliance mechanism contributes to the integration of environmental concerns in agriculture.

Complementing the evaluations of environmental effects of CAP measures, DG AGRI commissioned the study¹² "The provision of public goods through agriculture in the EU". The purpose of the study was to examine the concept of public goods as it applies to agriculture in Europe and to assess how far there is a case for policy measures to encourage the provision of public goods through agriculture. The results of the study highlight that the environmental public goods associated with agriculture (biodiversity, soil and water quality, landscape preservation, climate change mitigation, etc.) are highly valued by society, and that there is a need to strengthen the provision of public goods through the CAP, giving more emphasis to the integration of environmental objectives to ensure an appropriate balance between the economic, social and environmental dimensions of sustainable agriculture.

The evaluation of the **Farm Advisory System (FAS)** analysed the implementation of the FAS in the Member States during the period 2005-2009. The results indicate that the FAS approach has contributed to awareness-raising, a better understanding of cross-compliance requirements, a reduced risk of penalties, and improved farming practices among beneficiary farmers. As to the future, the evaluation recommends that the Member States explore ways of taking greater advantage of the opportunities offered by the FAS concerning the integration of the advice on cross-compliance with advice on economic-related issues and coverage of broader needs and domains (e.g. climate change, market orientation, productivity). Similarly, the report recommends to further promote synergies between the FAS and other complementary instruments such as extension services, and to facilitate access to the FAS by small farmers.

The current **rural development policy** framework for 2007-2013 has undergone an ex-ante and a mid-term evaluation, which show the positive impact of the strategic approach.¹³ Member States made considerable efforts to develop strategies on the basis of an analysis of

¹¹ The evaluation looks solely at the income objective and does not take into account the contribution of direct payments to other objectives

¹² External study carried out by a consortium led by the Institute for European Environmental Policy (IEEP) in 2009.

¹³ See the evaluation *Synthesis of ex-ante evaluations of rural development programmes 2007–2013 (2008)*; the study *Defining EU Priorities: A Review of Rural Development Instruments (2008)*; and the final report of the Thematic Working Group 1 of the ENRD *Targeting rural territorial specificities and needs in rural development programmes 2007-2013*.

strengths, weaknesses, opportunities and threats (SWOT) so as to best tailor their intervention to policy objectives. However, policy objectives were rarely translated into quantified target levels. The evaluation also indicates that more efforts could have been made by the programme authorities to better fine-tune the general objectives of the rural development policy to the specific contexts of the different programme areas.

While Member States have generally been successful in setting demarcation lines and ensuring coordination between rural development and other policies, synergies have not always been fully exploited to allow the different policies to work together towards common objectives.

Investment measures in rural development programmes generally helped to increase the overall performance of farms in various ways, but reports have suggested some instances of deadweight effects on large productive farms undertaking "traditional" investments.

Agri-environmental measures overall have unquestionably delivered strong environmental benefits and achieved in general their objectives of preserving and enhancing the environment. However, in limited cases the commitments proposed were only marginally above the baseline of legal obligations, or highly demanding commitments were not matched by an appropriate payment rate (discouraging take-up). Similarly, linking more complex agri-environment measures to support for relevant training for farmers was at times found to be difficult. The evaluations identified as conditions for the effectiveness of agri-environmental measures aspects such as the clear definition of priorities at the programme level, information and training for farmers, and the reaching of a "critical mass" of land being subject to a certain measure. Finally, a number of evaluation reports have concluded that moving to a more results-oriented approach, based on setting environmental targets (e.g. a minimum number of indicator species, minimum population size) would be more effective in achieving environmental objectives than the current prescription/activity based approach. It would make the link to objectives more explicit, increase efficiency through paying for results, and would give farmers flexibility to adjust management to seasonal fluctuations and other factors. Some rural development programmes already contain agri-environmental measures operating on this principle.

Among the measures targeting economic diversification and the quality of life in rural areas, support for the creation and development of micro-enterprises – as an example – is seen as highly relevant to the economic fabric of rural areas, and has been actively targeted; its limitation to micro-enterprises has been, however, questioned.

The mid-term evaluation of the EU Forest Action Plan confirms the pertinence of the Action Plan in strengthening the socio-economic and environmental performance of the forest sector in the EU and its role in the development of rural areas. The report also underlines the need to keep a balanced approach to forestry taking into account the economic, social and environmental dimensions of sustainable forest management.

Leader has been successful in promoting the diversification of rural economies and in encouraging sustainable agriculture (although the impact on agricultural productivity has been less pronounced). It has brought local actors together and allowed for the development of local governance capacities. In terms of impacts, Leader has made a positive contribution to employment creation and maintenance, increased income generation (through the creation of new enterprises and activities as well as improved marketing and promotion of existing activities), and the creation of new facilities and services for local people. The capacity of Leader to enhance social capital is one of its key features and should be brought more to the fore in the future in both, the establishment of objectives and the evaluation of the approaches, since these impacts are currently not sufficiently demonstrated or valued.

2. Evaluations carried out during the period 2007 – 2010

Interventions in agricultural markets + direct aids

Year	Title
2010	Evaluation of the income effects of direct support (to be completed in May 2011)
	Evaluation of the markets effects of partial decoupling http://ec.europa.eu/agriculture/eval/reports/decoupling/exec_sum_en.pdf
	Evaluation of direct support applied to the beef and veal sector http://ec.europa.eu/agriculture/eval/reports/directaidbeef/exec_sum_en.pdf
	Evaluation of measures applied under the CAP to the starch sector (to be published in May 2011)
	Synthesis of evaluations on environmental effects of CAP measures http://ec.europa.eu/agriculture/eval/reports/environment-summary/fulltext_fr.pdf
	Evaluation of the environmental impacts of pig/poultry production http://ec.europa.eu/agriculture/eval/reports/pig-poultry-eggs/exec_sum_en.pdf
2009	Evaluation of measures applied under the Common Agricultural Policy to the raw tobacco sector http://ec.europa.eu/agriculture/eval/reports/captabac/ex_sum_en.pdf
	Evaluation of measures applied under the Common Agricultural Policy to the rice sector http://ec.europa.eu/agriculture/eval/reports/rice/exec_sum_en.pdf
	Evaluation of measures applied under the Common Agricultural Policy to the olive sector http://ec.europa.eu/agriculture/eval/reports/oilseeds/exec_sum_en.pdf
	Evaluation of measures applied under the Common Agricultural Policy to the hops sector http://ec.europa.eu/agriculture/eval/reports/hops/exec_sum_en.pdf
	Evaluation of measures applied under the Common Agricultural Policy to the protein crops sector http://ec.europa.eu/agriculture/eval/reports/protein_crops/exec_sum_en.pdf
	Evaluation of measures applied under the Common Agricultural Policy to durum wheat sector http://ec.europa.eu/agriculture/eval/reports/wheat/exec_sum_en.pdf
	Evaluation of the implementation of the Farm Advisory System http://ec.europa.eu/agriculture/eval/reports/fas/exec_sum_eval_en.pdf
	Evaluation of actions for Outermost Regions (POSEI) and Aegean Islands applied under the Common Agricultural Policy http://ec.europa.eu/agriculture/eval/reports/posei/exec_sum_en.pdf
2008	Evaluation of measures regarding producer organisations in the fruit and vegetable sector http://ec.europa.eu/agriculture/eval/reports/producer/ex_sum_en.pdf
	Evaluation of the Set Aside measure 2000 to 2006 http://ec.europa.eu/agriculture/eval/reports/setaside/exsum_en.pdf
	Evaluation of the environmental impacts of milk quotas http://ec.europa.eu/agriculture/eval/reports/milk_quot_ei/exsum_en.pdf

Year	Title
	Evaluation of the system of entry prices and export refunds in the fruit and vegetables sector http://ec.europa.eu/agriculture/eval/reports/fruitveg/exsum_en.pdf
	Evaluation de l'activation des paiements directs sur les cultures de fruits et légumes dans le modèle régional http://ec.europa.eu/agriculture/eval/reports/directpay/exsum_fr.pdf
2007	Evaluation of market measures in the beef and veal sector http://ec.europa.eu/agriculture/eval/reports/beef/summary_en.pdf
	Evaluation of Environmental impacts of the CAP measures related to the Beef and Milk Sector http://ec.europa.eu/agriculture/eval/reports/beefmilk/ex_sum_en.pdf
	Evaluation study of the Common Market measures for dried fodder http://ec.europa.eu/agriculture/eval/reports/fourrage/rapport.pdf
	Evaluation of the extensification payment http://ec.europa.eu/agriculture/eval/reports/paiement/fulltext.pdf
	Évaluation de l'impact sur l'environnement des OCM et des mesures de soutien direct de la PAC relatives au cultures arables http://ec.europa.eu/agriculture/eval/reports/ocm/sum_en.pdf
	Evaluation of the application of cross compliance as foreseen under regulation 1782/2003 http://ec.europa.eu/agriculture/analysis/external/cross_compliance/full_text_en.pdf
	Evaluation of the environmental impacts of CAP measures related to cotton http://ec.europa.eu/agriculture/eval/reports/coton/ex_sum_en.pdf
	Evaluation of withdrawals and crisis management in fruit and vegetable sector http://ec.europa.eu/agriculture/eval/reports/withdrawals/sum_en.pdf

Rural development + pre-accession measures

Year	Title
2010	Ex-post evaluation of Leader+ (to be published in May 2011)
	Synthesis of Sapard ex-post evaluations (to be published in May 2011)
2009	Mid-term evaluation of the EU Forest Action Plan http://ec.europa.eu/agriculture/eval/reports/euforest/exec_sum_en.pdf
2008	Synthesis of ex-ante evaluations of rural development programmes 2007–2013 http://ec.europa.eu/agriculture/eval/reports/rurdev/ex_sum_en.pdf
2007	Evaluation on the impact of Nordic aid schemes in northern Finland and Sweden http://ec.europa.eu/agriculture/eval/reports/nordic/sum_en.pdf

ANNEX 11c

COMMON AGRICULTURAL POLICY: SELECTED RELEVANT STUDIES AND RESEARCH PROJECTS CARRIED OUT BY THE JRC (JOINT RESEARCH CENTRE)

The present annex includes a short description of different research projects and studies recently carried out by the JRC (Joint Research Centre), applying various partial equilibrium and general equilibrium modelling tools as well as other quantitative techniques. Full references of each study are detailed in the last section.

1. CAPRI –FARM BASED STUDIES

a. EU-wide Distributional Effects of EU Direct Payments Harmonization

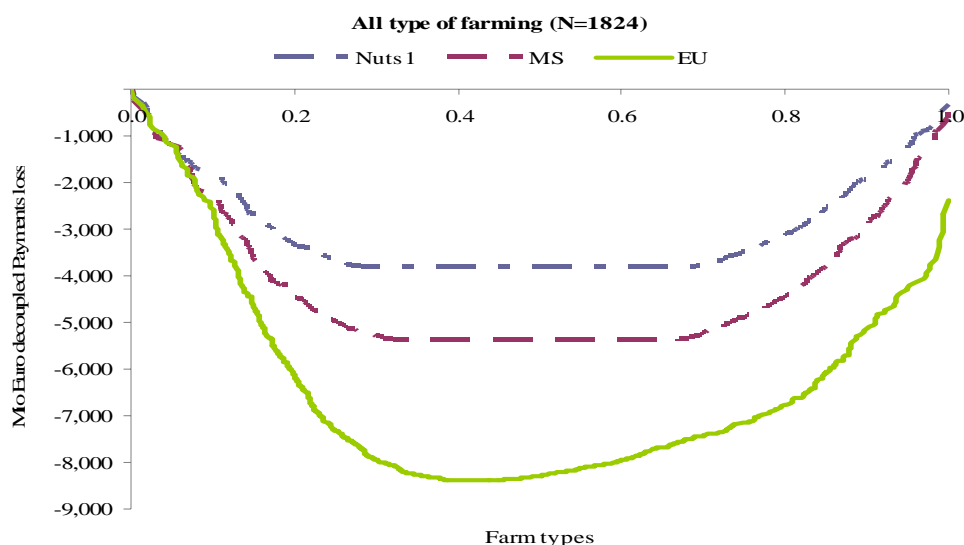
This IPTS study examines distributional effects of scenarios depicting different levels of harmonisation of CAP decoupled payments between farms and regions in the EU. The study considers three flat-rate scenarios. The first assumes a flat-rate payment at Nuts1 level, the second a flat-rate at MS and the third a flat-rate at EU level. The study applies the CAPRI-FARM model, which is an extension of the CAPRI modelling tool. The advantage of the CAPRI-FARM is that it provides policy impacts at farm type level compared to the standard regional focus of the CAPRI. The CAPRI-FARM disaggregates the standard Nuts2 regional resolution (270 Nuts2) of the supply models in CAPRI further to farm type models (1823 farm types), capturing farm heterogeneity in terms of farm specialization and farm size across EU.

The simulation results show relatively minor allocative market responses and thus small price effects for all three scenarios. More important are income effects driven by redistribution of payments. According to model results, the value of re-distributed payments varies strongly between the three flat-rate systems. The value of payments reallocated between farms in the EU increases from 9% (3.7 billion €) of the total CAP budget in the Nuts1 flat-rate scenario to 19% (8.2 billion €) in the EU flat-rate scenario. Particularly negatively affected are large- and medium-sized farms and dairies, mixed crops and livestock, general field and mixed cropping, olives, cereals and oilseeds and permanent crops. Small farms tend to be less affected. However, sheep, goats and grazing, the residual farm category and mixed livestock farms realise higher premiums and incomes.

Figure 1 shows that in the Nuts1 scenario, almost 30% of all farm types lose payments, approximately 30% are not affected (mainly those from new MS and Germany) and the remaining 30% gain payments. For the other two scenarios (MS and EU flat rate), more farms are affected by the redistribution of decoupled payments (the horizontal part of the curve is smaller). In particular, the EU flat-rate scenario reveals that almost 40% of the farm types lose payments, whereas 60% gain payments.

The Nuts1 and MS flat rates have minor payment redistributional effects between MS. On the contrary, the EU flat-rate scenario has a considerable impact on the redistribution of payments, particularly between the old and new MS. In relative terms, the Netherlands (-48%), Belgium (-45%) and Greece (-44%) experience the highest relative losses, whereas the highest gains are observed in new MS with large land endowments: Latvia (149%), Romania (92%), Estonia (82%), Bulgaria (55%) and Lithuania (54%). However, Portugal (43%) and Spain (35%) also gain considerable additional payments through a EU-wide flat-rate scheme because of low initial support levels.

Figure 1: Cumulative income change relative to the baseline over all farm types (normalised to 100%) for Nuts1, MS and EU flat rates



b. Farm level impacts of trade liberalization

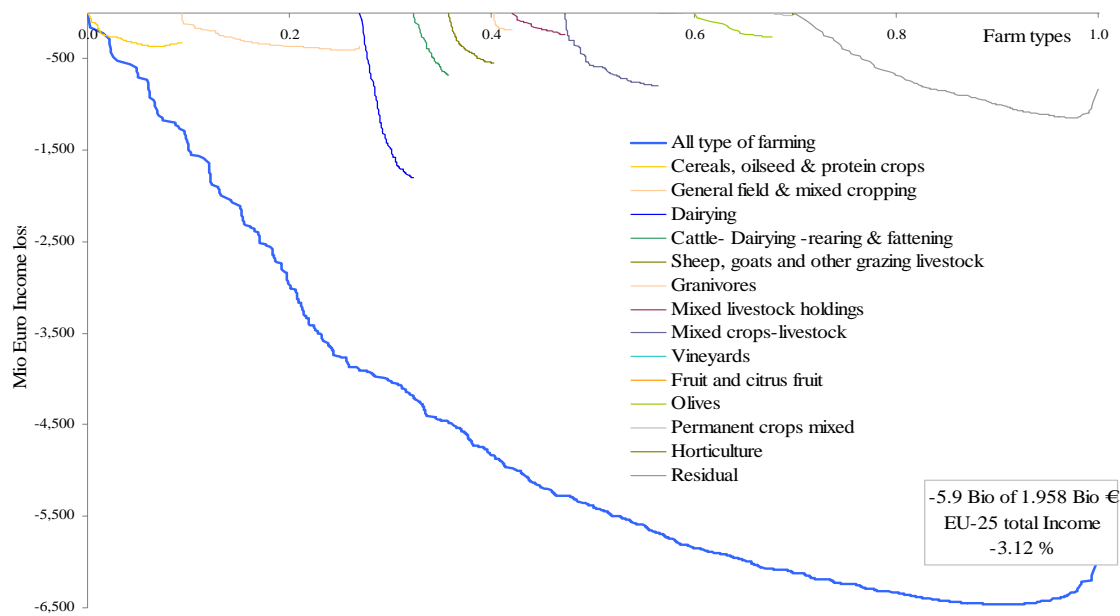
The same study also examines the impact of the trade liberalization scenario on farming sector in EU. The study simulates the impact of the proposal made by the chair of the WTO's agriculture negotiations, Ambassador Crawford Falconer. The scenario assumes a general *tariff reduction* based on a tiered formula (i.e. tariffs that are high are cut more aggressively than tariffs that are low), a reduction of TRQs in quota tariffs and the possibility to exclude certain products, called *sensitive products*, at the cost of the *extension of TRQs* for imports.

The simulation results show that tariff reduction increases consumer welfare in the EU by 8.5 billion € whereas agricultural income decreases by 6.8 billion € (-3%), mainly driven by losses realised in the animal sector that account for 5.5 billion €

Reduced trade protection increases imports and results in lower producer prices in the EU. The price reductions translate into relatively small changes in agricultural production but have a significant impact on farm income available to pay for the primary factors such as land and labour.

Generally, farm types specialised in livestock production lose more than other farm types. The absolute and relative income change for different farm types compared to the baseline vary between -2.6 billion € and 0.033 billion € and between -8% and 0.1%, respectively. Absolute income losses are the largest for the *dairy* farm type, at -1.8 billion €, followed by *mixed crops livestock* at -0.8 billion € and *cattle, dairying -rearing and fattening* at -0.7 billion €. Medium-sized farms are most affected, at -2.6 billion € when considering farm size. In percentage terms, the farm type *cattle dairying, rearing and fattening* loses the most income, at -8%, followed by *dairy farming* at -6%. Farm types that are positively or little affected include those specialised in *fruit and citrus fruit* (2%), *vineyards* (0.1% income change relative to the baseline), and *horticulture* (-0.9%). Overall, of all farm types modelled in the CAPRI-FARM (1823), 95% lose income, whereas 5% realise income growth (Figure 2).

Figure 2: Cumulative income change relative to the baseline over all farm types (bottom line) normalised to 100% and by single farm type (upper small curves)



2. THE VALUE OF EU AGRICULTURAL LANDSCAPE

The IPTS study estimates the value of EU agricultural landscape. Landscape is one of the key public good produced by agriculture. Farmers by being involved in the production of market commodities confer benefits on society by maintaining and creating rural landscapes.

In the last few decades there has been a great deal of research in scientific literature attempting to value (to place a price on) agricultural landscape. Because landscape is a non-traded good its value cannot be observed and thus it is not available from traditional statistical sources. The literature therefore most often applies *stated preference* (SP) approach by using survey based method to uncover societies' *willingness to pay* (WTP) for landscape. The vast majority of studies evaluating agricultural landscape in EU and non-EU regions find that society positively values agricultural landscape.

The IPTS study applies a meta-approach which combines results of the available evidence on the WTP for agricultural landscape from scientific literature with the aim to estimate the benefit transfer (BT) function. The BT methodology is based on the idea of using existing valuation studies, that value landscape at specific region, and it transfers valuation information from these regions to build the benefit estimate for landscape in other regions. The estimated transfer function is then used to calculate the value of landscape for different land types and for the whole EU. The final database contains 33 studies providing 96 WTP estimates and covering studies from 11 European and 3 non-European countries for the period 1982 to 2008.

The estimated per hectare value of EU agricultural landscape varies between 89 €/ha and 169 €/ha with an average value of 142 €/ha in 2009. Grassland and permanent crops report higher mean values (189 €/ha) than the arable land (113 €/ha). Further, the calculations indicate that the total value of EU landscape in 2009 is estimated to be in the range of €16.1 – 30.8 billion per year, with an average of €25.8 billion, representing around 7.5 percent of the total value of EU agricultural production and roughly half of the CAP expenditures (Table 1).

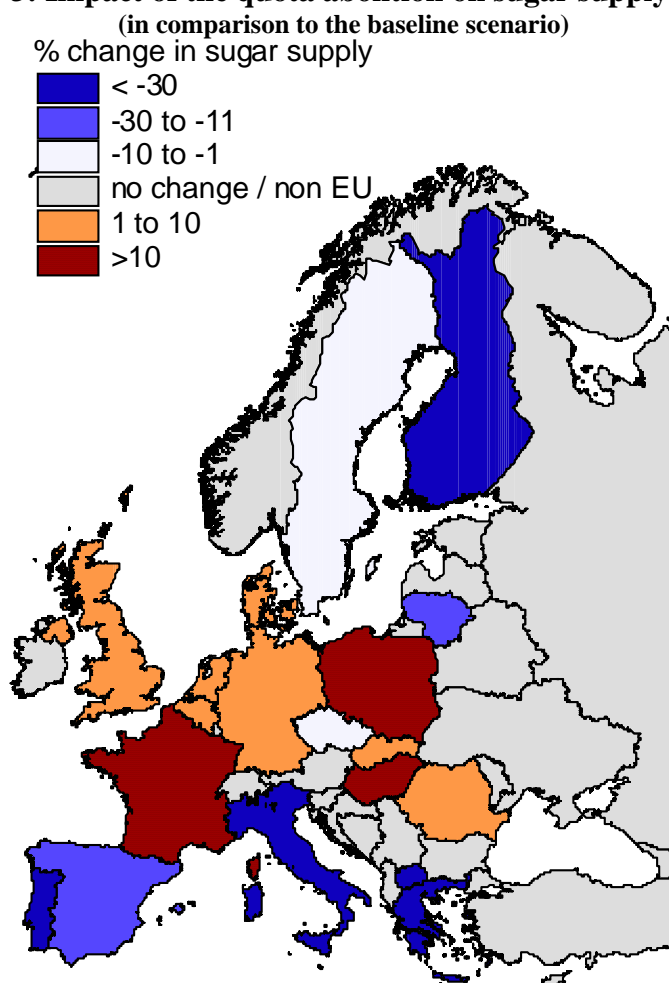
Table 1: The value of EU agricultural landscape in 2009

	Unit	Mean value	Min value	Max value
All land	€/ha/year	142	89	169
Grassland and permanent crops	€/ha/year	189	131	224
Arable land	€/ha/year	113	62	135
Total landscape value	million €/year	25,823	16,128	30,795

3. IMPACT ASSESSMENT OF THE SUGAR REFORM

The IPTS note "Impact assessment of the sugar reform" aims to assess the impact of the sugar quota abolition by Member State in the framework of the reform of the CAP after 2013. For this analysis the model ESIM¹⁴ has been used.

Figure 3: Impact of the quota abolition on sugar supply in 2020



If the sugar quota is abolished in 2015/2016 the **production in the EU27** in 2020 is expected to be higher by 7% than if the quota is maintained. However the developments in production are very different in the Member States (MS). The production increases in the MS with the lowest costs of production, which were particularly limited by the quota, namely in France,

¹⁴ ESIM (European Simulation Model) is a comparative static partial equilibrium model. It is a net-trade multi-country model of the agricultural sector. It covers supply and demand for agricultural products, with a detailed specification of cross commodity relationships, and some first-stage processing activities. The 27 EU MS are individually modelled in ESIM.

Germany, Poland and the UK. In certain competitive MS the margin of progress with quota abolition is limited because these MS are expected to produce a lot of sugar out-of-quota if quotas are not abolished; this is the case for the Netherlands, Denmark, Sweden and Belgium.

In Greece the production stops, and the production decrease is very large in Italy and Finland where the production costs are high. In Spain, the production drop is also significant.

4. RURAL EC MOD – AN EX-ANTE SPATIAL POLICY IMPACT ANALYSIS OF THE RURAL DEVELOPMENT REGULATIONS IN EUROPEAN RURAL AREAS

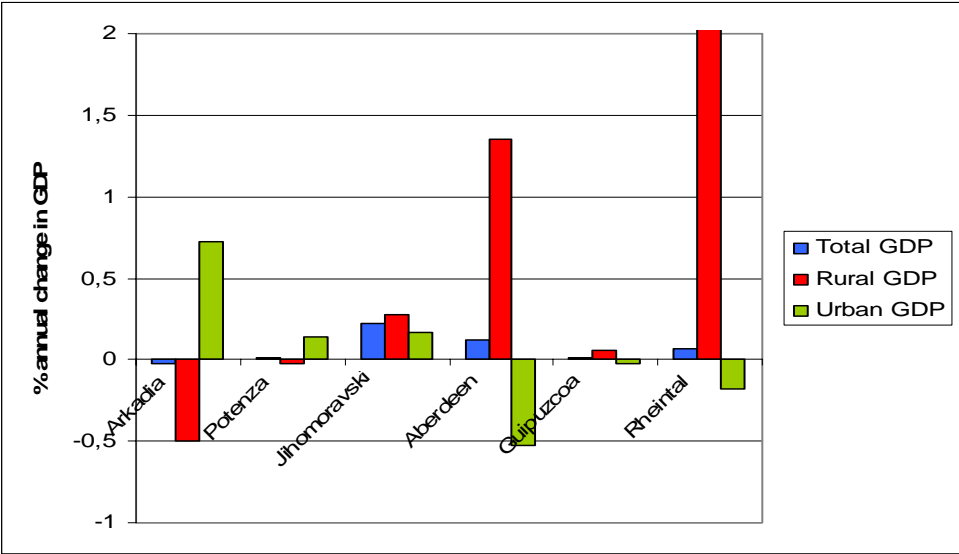
This research project aims to improve understanding of the regional economy impacts of CAP policy instruments, and, in particular, the impacts associated with switch away from an agriculture-centred focus, to an approach aimed at the balanced and sustainable development of EU rural areas. RURAL-ECMOD is particularly concerned with the estimation of rural / urban and sectoral effects of agricultural policy options and cause-effects patterns between different types of regional economies (diversification, rural / urban balance, etc.) and different types of CAP tools including Rural Development policy measures, in particular their sector-specific direct impacts.

It adopts a dynamic Computable General Equilibrium (CGE) modelling approach to the ex-ante assessment of various policy scenarios in six, specially selected on the base of previous work (project TERA SIAP) concerning typology of rural areas, EU NUTS3 regions. The model is recursive and implemented on a total duration equal to 2 financial periods (until 2020).

Scenarios tested refer to three groups: scenarios contemplating changes in the distribution of pillar 2 funds within axes; aggregate scenarios (change of distribution between pillar 1 and pillar 2); scenarios concerning intra axis 3 distribution of funds.

The project shows that, at local level, regional economic structures influences the direction and magnitude of policy effects. The diversity of results across study areas reinforces the menu-driven nature of the RDP where member states are able to tailor the policy to specific regional needs. It seems in addition that direction of effects are in general opposite in rural areas and urban areas (Figure 4).

Figure 4: Impact of Diversification Rural development policy on total / rural / urban GDP



Rural Development policy with emphasis on diversification measures seems to benefit more to already diversified rural economies. Reciprocally, Rural Development policy with emphasis on agriculture and food industries benefits more to agri-oriented rural economies. However, in the longer term, diversification policy seems to be beneficial in all areas, even those agri-oriented, due to increased rural interdependence and structural changes.

5. INVESTMENT BEHAVIOUR IN CONVENTIONAL AND EMERGING FARMING SYSTEMS UNDER DIFFERENT POLICY SCENARIOS

The study about farm investment behaviour under the CAP reform process aims to investigate farmers' investment behaviour, and evaluate the impact of different CAP scenarios on selected farming systems (Viaggi et al., Forthcoming). It followed up a previous study on investment behaviour carried out in 2006 (Gallerani et al., 2008). The methodology was divided into two components: a) the administration and analysis of a survey of 256 farm-households; and b) the simulation of selected scenarios through dynamic farm-household models. Eight scenarios were developed: 1.1 (-30+RSP) Reference/baseline, based on the reference scenario in the Scenar 2020 II study; 1.2 (GR+LSP) based on the liberalisation scenario in the Scenar 2020 II study; 2.1 (-30+LP) and 2.2 (GR+LP) analogous to the previous two respectively, but with a flat price decrease by 20% compared to 2009; 3.1 (-100+CP) characterised by a total abolishment of CAP payments after 2013 and 2009 prices; 3.2 (-15+LP) characterised by a reduction of CAP payments by 15% after 2013 and 2009 prices; 4.1 (HC+LP) characterised by Health Check CAP and a flat price decrease by 20% compared to 2009; 4.2 (HC+CP) that reproduces 2009 payment and prices conditions.

The results of the study can be summarised in four main outcomes. With respect to the effects of the CAP decoupling process, the 2009 results mostly confirm those of the 2006 Investment study. In both cases, for about half of the farms decoupling did not result in any change. Among those farms showing some reaction, one of the more prominent effects is the increase in on-farm investment.

Additionally, depending on the system and farm typology, decreases in on-farm, and increases in off-farm investment have also been observed when comparing 2009 results with those from 2006.

The price trends in 2007/2008 and the ongoing economic and financial crisis have partially reshaped access to credit, perceptions of objectives, constraints and expectations. In particular, farms have witnessed a major reduction in access to credit, particularly the share of farms using short term credit, which dropped from more than 40% in 2006 to about 7% in 2009. As far as objectives are concerned, farm-households seem to have increased their overall focus on agricultural activities by increasing the importance of objectives such as debt-asset ratios, and decreasing the importance of objectives such as leisure. In 2009, the share of farmers expecting an increase in production costs, and a decrease in CAP payments, increased. The willingness to invest is still high, although the number of farmers stating an intention to invest in land, buildings or machinery has decreased by about 20% compared to 2006.

The change in economic conditions between 2006 and 2009 has increased the role of the CAP in guaranteeing a minimum level of income through farming, while the importance of CAP payments in covering current expenditures has become more evident.

The results of the modelling exercise confirm that farm and farm-household income and investment choices depend more on the price level than on the level of payment received. However, some farming systems, particularly those in eastern EU and livestock systems,

show a very high dependency on payments. However, the variability of impact across farm types is very high.

A summary of the effects of the different scenarios on sustainability measured through different indicators is provided in Table 1, using a qualitative scale (+,0, -).

Table 2 - Scenario effect on sustainability

Scenarios	1.2 (GR+LSP)	2.1 (-30+LP)	2.2 (GR+LP)	3.1 (-100+CP)	3.2 (-15+LP)	4.1 (HC+LP)	4.2 (HC+CP)
Farm income	0	-	-	0	-	-	+
Household income	0	-	-	0	-	-	0
On-farm labour	0	0	-	0	0	0	0
Nitrogen use	0	+	+	0	0	0	0
Water use	+	+	+	+	+	+	0

In addition the variability of results highlights the relevance of farm/household -specific components and path-dependent issues (e.g. asset age) in affecting reactions to markets and policy, particularly concerning investment choices.

6. IMPLEMENTATION OF THE CAP POLICY OPTIONS WITH THE LAND USE MODELLING PLATFORM

The Land Use Modelling Platform (LUMP) has been developed by IES to support the exploration of future policies and the impact assessments of specific proposals. The land use model EUClueScanner (EUCS100), developed in collaboration with DG Environment, is the core component of the platform which links specialized models and data within a coherent workflow. The definition of global and economic scenarios entails the interface with external models related to different categories of drivers (demography, agriculture, regional economy, climate change, etc.). A set of other factors are also defined (e.g. accessibility maps, soil characteristics, topography, biophysical properties, etc.).

In the context of the simulation for the CAP Reform Impact Assessment, the agro-economic model CAPRI is used to drive the land cover classes associated with agriculture. We use observed CLC data for 1990, 2000 and 2006 as well as the prediction for 2020 from CAPRI-FARM (with the assumption of national-flat rates) in order to establish a trend in land claims for the agricultural sector. Biophysical crop suitability maps are provided by the JRC/AGRI4CAST Action. For residential areas we use population projections from Eurostat (EUROPOP 2008).

The Status Quo (representing the current socio-economic and environmental trends with current policy provision maintained) is considered as the reference scenario and the impacts of the Integration Policy Option are compared to it. Specific greening options (or measures) are defined for the Integration Policy Option. Following discussion with DG AGRI, the land use modelling focuses on the environmental part of the CAP reform and particularly on greening component of direct payment. The three following options are assessed:

Option 1: crop diversification with 3 crops and main crop is maximum 70% of the area, ecological focus area 5% of the area, soil cover in winter time 70% of area, maintenance of permanent pasture (PP), separate payment for Natura 2000 areas;

Option 2: crop diversification with 3 crops and main crop is maximum 50%, ecological focus area 10% of the area, soil cover in winter time 70% of area, maintenance of permanent pastures, separate payment for Natura 2000 areas;

Option 3: crop diversification with 3 crops and main crop is maximum 70% of the area, ecological focus area 5% of the area, no soil cover, PP, no specific payment for Natura 2000 areas.

For the purposes of delivering product within the deadline set for the Impact Assessment, **Option 2 is implemented**. The other options will follow at a later stage.

Indicators for environmental assessment of CAP reform

The main output of EUCS100 model is a series of projected land use/cover maps for the coming years up to 2020 for the two policy alternatives. The EUCS outputs are then used to compute a set of various indicators in the frame of LUMP by linkage with thematic models.

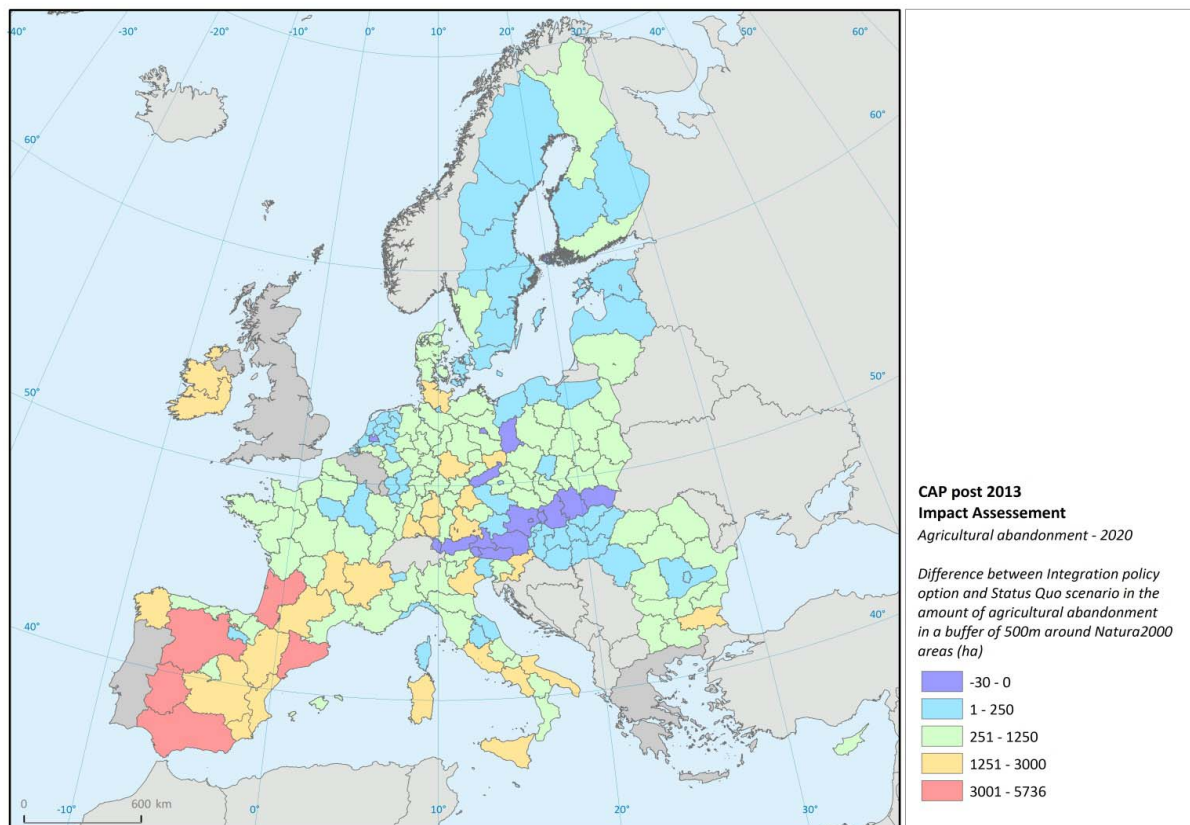
The following of indicators are computed (provisional list):

- Land use change, Cropping patterns, Land cover change, Connectivity level of green infra-structure, Landscape Patterns, Soil quality (Soil organic carbon stocks), Riparian protection, Level of agricultural abandonment, Pressure on NATURA 2000.

Indicators related water quantity and water quality will be ready at a later stage since requires the running of other models.

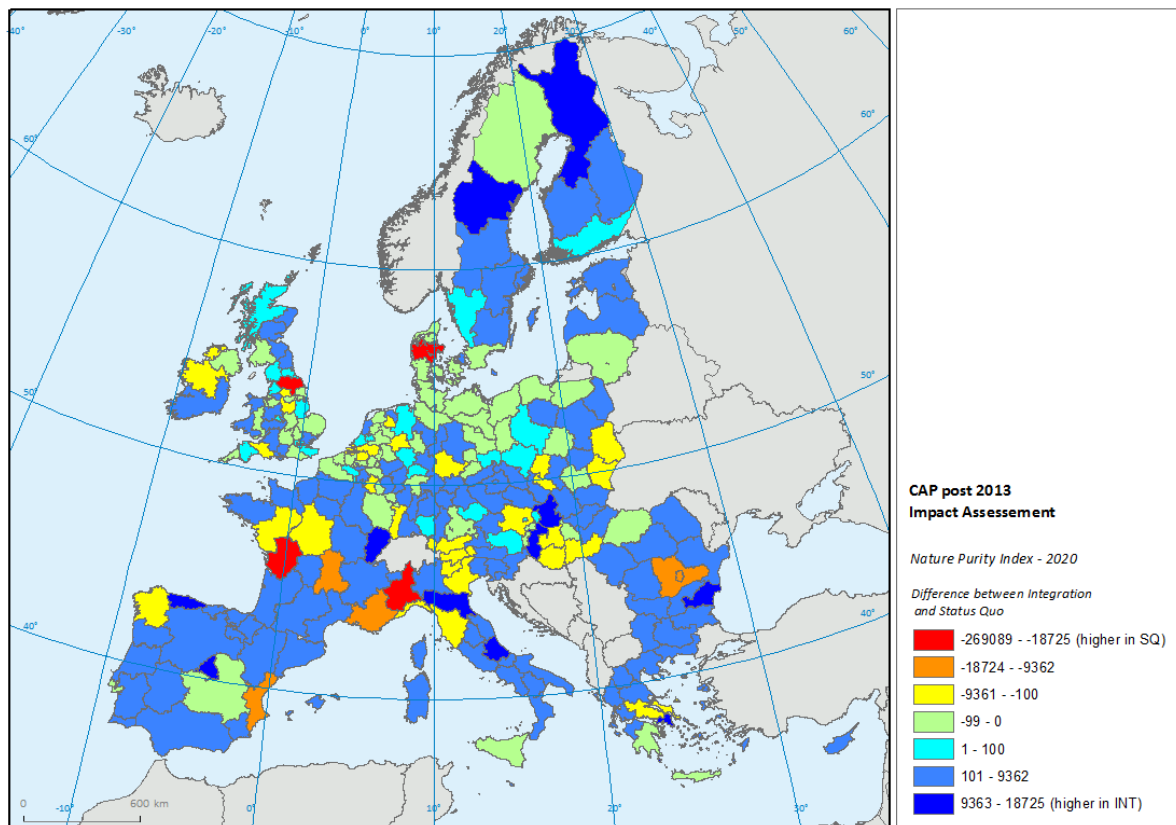
Two examples of indicators are presented in figures 5 and 6.

Figure 5: Level of agricultural abandonment around Natura 2000 Sites



The map presents the amount of arable land and permanent crops that are abandoned in year 2020 in a 500-meter wide strip around Natura 2000 sites resulting from the difference between the Integration and the Status Quo policy options. A positive value indicates a decreased pressure on Natura 2000 sites in the Integration scenario. Values for UK, PT, BE, GR and LU are being finalised at date of writing and not included in the map.

Figure 6: Nature Purity Index



Mapping pure natural areas is of interest in order to understand the differences in overall pure natural areas per NUTS 2 region, as shown in this figure, between the two scenario forecasts for 2020, and can lead to an understanding of if and where regions benefit from the greening measures proposed in the Integration scenario. As shown in this figure, more NUTS 2 regions benefit from the Integration scenario in terms of gaining in pure natural areas, than do lose due to the proposed measures.

7. IMPACTS OF THE EU BIOFUEL TARGET ON AGRICULTURAL MARKETS AND LAND USE

The EU's Renewable Energy Directive sets an overall binding target of 20% for the share of EU energy needs to be sourced from renewables by 2020, with at least 10% of each Member State's transport fuel coming from renewable sources (including biofuels).

The consequent growth in biofuel production is also likely to trigger indirect land use changes worldwide. The IPTS report presents an agro-economic impact analysis of the impacts of EU biofuel policies on agricultural production, trade and land use within and outside the EU, up to the year 2020, based on the market outlook from 2009 (full report available <http://ftp.jrc.es/EURdoc/JRC58484.pdf>).

The three agro-economic models used in this exercise, AGLINK-COSIMO, ESIM and CAPRI are robust, scientifically acknowledged tools for simulating agricultural policy changes. They are able to identify policy impacts on supply and demand, trade flows, domestic and world markets. In addition, they can give a consistent global picture of indirect land use change impacts triggered by price signals transmitted via market interactions.

The impacts identified include higher EU production of ethanol and biodiesel, and of the crops used to produce them, as well as more imports of both biofuels. AGLINK-COSIMO estimates an extra 5.2 million hectares used for cereals, oilseeds and sugar crops globally. One

quarter of this extra land use is in the EU. However, the global figure does not include any land use implications of the higher vegetable oil production in Indonesia and Malaysia.

Inevitably, the results depend on various underlying assumptions such as future trends in fossil fuel prices, population and world GDP. For instance, global land use change estimates due to biofuel policies turned out to be quite sensitive to yield growth assumptions.

Currently, an update of the assessment based on the latest available market outlook for the EU is being prepared.

8. PARTICIPATION TO (ON-GOING) FP7 RESEARCH WORK

a. CAPRI RD

JRC-IPTS and JRC-IES are both involved in the FP7 project "Common Agricultural Policy Regionalised Impact – The Rural Development Dimension (CAPRI RD)"¹⁵. Deliverable 6.2 of the project is a modelling exercise for the impact assessment of a possible 'greening' scenario of the Common Agricultural Policy. The policy scenario defines a combination of a regional flat-rate system for direct payments with a 15% corridor around the EU27 average payment rate. The study is led by University of Bonn with DG Agri playing a key role in scenario design. The Institutions vTI, LEI and IPTS are also directly involved.

In the modelling exercise the newly developed farm-type layer of the CAPRI modelling system will be applied taking into account the farm heterogeneity across EU. The results will include a detailed description of possible CAP redistribution effects across EU regions and farm types. Also the effects on land use, product balances, prices and some relevant environmental indicators will be examined.

b. CAP-IRE

The objective of CAP-IRE is to develop concepts and tools to support future CAP design, based on understanding of the long-term socio-economic mechanisms of change in rural areas.

The reaction of farm households to CAP reforms is analysed under the lens of six thematic, and one cross-thematic, viewpoints: 1) farm structural adjustment, investment and innovation; 2) chain interactions between agriculture and related economic sectors; 3) environmental sustainability; 4) social sustainability; 5) interactions between rural communities and the rest of the world; 6) farm and rural governance issues; 7) the interplay between the previous aspects. The project used a mixed method approach, including a major survey of 2363 farm households across 11 case study areas (CSA) in 9 EU countries.

http://www.cap-ire.eu/Documents%20Respository/Policy_brief_final_24%20jan%202011.pdf

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ANNEX 11D

LIST OF RELEVANT DG AGRI COMMISSIONED STUDIES AND DG RTD RESEARCH PROJECTS

5. EXTERNAL STUDIES

5.1. Studies completed in 2007

- Effects of Globalisation on the Economic Viability of EU Forestry
- Adapting Agriculture to Climate Change
- Measurement of CAP-related Administrative Burden for Farmers
- Indicators of High Nature Value for Evaluation
- Agriculture within the Overall Economy
- IT Availability in Rural Areas

5.2. Studies completed in 2008

- Economic, Social and Environmental Impact of Modulation
- Defining EU Priorities: A Review of Rural Development Instruments
- Development and Marketing of Non-market Forest Products and Services
- Economic Analysis of the Effects of the Expiry of the EU Milk Quota System
- Economic Impact of the of the Abolition of Milk Quota Regime – Regional Analysis of Milk Production in the EU
- Study on the Functioning of Land Markets

5.3. Studies completed in 2009

- Agricultural Insurance Schemes II
- Scenario 2020 Follow-up Study: scenario study on agriculture and the rural world
- Study on the Provision of Public Goods through EU Agriculture
- Value of Agricultural Production under Protected Designations of Origin and Protected Geographical Indications
- Assessment of Criteria for the Identification of Less Favoured Areas

5.4. Studies completed in 2010

- Livestock Sector's Contribution to EU Greenhouse Gas Emissions

- Marketing Standards in the Fruit and Vegetable Sector
- Study on Employment, Growth and Innovation in Rural Areas
- Designation of Less Favoured Areas

5.5. Studies launched in 2010 to be completed in 2011

- Impacts of Renewable Energy on European Farmers
- Addressing Biodiversity and Habitat Preservation through Measures Applied under the Common Agricultural Policy
- Use and Efficiency of Support Measures for Organic Farming
- Study on Administrative Burden Reduction
- Study on Efficient Measures for Adaptation to Climate Change

6. RTD PROJECTS

6.1. List of projects recently concluded / ending (FP6 programme)

Acronym	CAP Policy Domain	Title
SENSOR*	CAP – impact assessment	Sustainability Impact Assessment: Tools for Environmental, Social and Economic Effects of Land Use in EU Regions
SEAMLESS*	CAP – impact assessment	Science for Integrated Assessment of Agricultural Systems in Europe
TRADEAG	CAP - trade	Agricultural Trade Agreements
CEEC AGRI POLICY	CAP – new MS	Agro-economic policy analysis of the accession and the candidate states and the countries of Western Balkan
AGEMOD 2020	CAP – new MS	Agricultural Member State Modelling for the EU and E. European Countries
EUROCROP	CAP - production	Agricultural Research for Improving Arable Crop Competitiveness
IDEMA	SPS - income	The impact of decoupling and modulation in the enlarged Union: a sectoral and farm level assessment
GENEDEC	SPS – decoupling	A quantitative & qualitative assessment of impacts of decoupling on agricultural production, markets and land use in EU
CROSS-COMPLIANCE	SPS – cross compliance	Facilitating the CAP reform: compliance and competitiveness of EU agriculture
Income Stabilisation	SPS - income	Design & economic impact of risk management tools for EU agriculture

FOODCOMM	CAP – food chain	Key factors influencing economic relationships and communication in European food chains
CARERA	RD - employment	The Impact of CAP Reform on the Employment Levels in Rural Areas
LUMOCAP	RD – land use	Dynamic land use modelling for CAP impact assessment on the rural landscape
MEACAP	RD - environment	Impact of Environmental Agreements of the CAP
TOP-MARD	RD - multifunctionality	Towards a Policy Model of Multifunctional Agriculture and RD
CCAT	SPS- cross compliance	Cross Compliance Assessment Tool
ENDURE	RD - environment	EU Network for the Durable Exploitation of Crop Protection Strategies

* RTD-ENV Programme projects

6.2. List of ongoing projects (FP7 programme)

Acronym	CAP Policy Domain	Title
AgriPolicy	CAP – new MS	Enlargement Network for Agripolicy Analysis
AgFoodTRAdE	CAP - trade	New Issues in Agricultural, Food and Bioenergy Trade
CATSEI	CAP - trade	Chinese Agricultural Transition: Trade, Social and Environmental Impacts
TAPSIM	CAP - trade	Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets
NTM-IMPACT	CAP - trade	Assessment of the Impacts of Non-Tariff Measures-NTB on the Competitiveness of the EU And Selected Trade Partners
CAP-IRE*	CAP – impact assessment	Assessing the multiple Impacts of the Common Agricultural Policies (CAP) on Rural Economies
FACEPA	CAP – costs of production, FADN	Farm Accountancy Cost Estimation and Policy Analysis of European Agriculture
FutureFarm	SPS – cross compliance	Integration of Farm Management Information Systems to support real-time management decisions and compliance of management standards
RUFUS*	RD - impacts	Rural Future Networks
RuDI	RD - impacts	Assessing the Impact of Rural Development Policies
RuralJobs	RD - employment	New Sources of Employment to Promote the Wealth-Generating Capacity of Rural Communities

CAPRI-RD	RD – regional impact	Common Agricultural Policy Regionalised Impact - The Rural Development Dimension
DERREG*	RD - regions	Developing Europe's Rural Regions in the Era of Globalization: an Interpretative Model for Better Anticipating and Responding to Challenges for Regional Development in an Evolving International Context

* RTD-SSH Programme Projects

6.3. List of projects just started / about to start (FP7 programme)

Acronym	CAP Policy Domain	Title
Factor Markets	SPS – land, inputs	Comparative analysis of factor markets for agriculture across the Member States
SPARD	RD - territoriality	Spatial Analysis of Rural Development (SPARD): Providing a tool for better policy targeting
TRANSFOP	CAP – food chain	Transparency in food pricing (price transmission...)
SOLINSA	CAP – extension, innovation	Agricultural knowledge systems in transition: towards more effective and efficient support of learning and innovation networks for sustainable agriculture (LINSA)
PURE	RD - environment	Pesticide use and risk reduction in European farming systems with Integrated pest management
FarmPath	RD – public goods	Assessment of transition pathways to sustainable agriculture and social and technological innovation needs
AnimalChange	RD – climate change	Integration of mitigation and adaptation options for sustainable Livestock production under climate change



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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT

Common Agricultural Policy towards 2020

ANNEX 12

{COM(2011) 625 final}
{COM(2011) 626 final}
{COM(2011) 627 final}
{COM(2011) 628 final}
{COM(2011) 629 final}
{SEC(2011) 1154 final}

Annex 12 - The Common Agricultural Policy and Development

Contribution from the Directorate General for Development and Cooperation – EuropeAid

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1. Background – Policy Coherence for Development (PCD)

The reform process of the Common Agricultural Policy (CAP) has to take account of the European Union's (EU) development cooperation policy objectives, as set out in Articles 3 and 21 of the Treaty on the European Union (TEU) and Article 208 of the Treaty on the Functioning of the European Union (TFEU), which specifically refers to Policy Coherence for Development (PCD).¹ The PCD commitment is embedded in the European Consensus on Development which was adopted in December 2005 and sets out common objectives and principles for development cooperation.²

This commitment is based on the recognition that in pursuing its domestic policy objectives, the EU should avoid negative spillovers which could adversely affect the EU's development objectives. In addition, PCD uses the potential for positive synergies.³ The pursuit of coherence of non-development policies with development objectives aims to systematically take into account and wherever possible, the external impacts of the Union's policies on developing countries and groups within these countries.⁴ Ultimately, evidence of such impacts should influence policymaking and policy reform in order to privilege the adoption of policy options with a lower risk of negative impacts.

The EU has agreed to apply PCD in twelve policy areas that could accelerate progress towards the achievement of the Millennium Development Goals (MDGs) – without substituting EU development cooperation policy. PCD has a particular importance in the case of agriculture, given the first MDG target of eradicating extreme poverty and hunger and the role of the sector in achieving food security. The EU aims to support the MDGs and development by harnessing the growth potential of small farmers and small agricultural enterprises in developing countries.⁵

According to the International Fund for Agricultural Development (IFAD), at least 70% of the world's poorest people live in rural areas where agriculture (including crops, livestock, fisheries and forestry) forms the main economic activity and hence plays a vital role for livelihoods.⁶ More than 80% of rural households farm with a predominance of small-scale farming: approximately 85% of farmers in developing countries produce on less than two hectares of land. The 2008 World Development Report "Agriculture for Development" underlines the relevance of agricultural growth for poverty reduction.⁷ Evidence has shown that investments in smallholder agriculture yield the best results in terms of poverty reduction and growth.

In a context where the agricultural policies of industrialised countries can have an impact on the trade and development opportunities of developing countries, and therefore on the income of small farmers and the resilience of rural communities, the coherence of the EU's agricultural and development policies is crucial.

¹ OJ 2008 /C 115/01

² OJ 2006/C 46/01

³ COM(2009) 458 final

⁴ Throughout this text the term "developing country" is used to denote countries with a relatively lower level of material well being (approximated through GDP per capita) and does not express a judgment about the stage reached by a particular country or area in the development process. The European Commission is aware of the heterogeneity of the group of so-called developing countries.

⁵ COM(2010) 127

⁶ Rural Poverty Report; IFAD (2011)

⁷ The World Bank estimates that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture. World Development Report, World Bank, (2008)

The CAP is one of the priorities in the Commission's PCD Work Programme 2010-2013.⁸ The Communication on the future of the CAP adopted on 18 November 2010 reflects the EU PCD commitment by signalling that whilst the future CAP should maintain and improve its production capacity, it should seek to do so whilst taking into account development cooperation objectives and not undermining developing countries' efforts in achieving the MDGs.⁹

2. How does the CAP influence agriculture in other countries?

The OECD's 2005 report "Agriculture and Development. The Case for Policy Coherence"¹⁰ identifies four possible policy interventions in industrialised countries, which could influence agricultural development in developing countries: (1) domestic agricultural policies, e.g. the CAP; (2) agricultural trade policy; (3) regulatory policies affecting agricultural trade, and (4) development cooperation policies.

In view of the EU's role as a major exporter and importer, the CAP could arguably play a role not only in domestic but also in international agricultural markets, thus potentially affecting production and consumption levels in third countries.¹¹ Since the MacSharry reforms of 1992, the CAP has undergone considerable changes that have gradually altered the policy's impact on farmers' production decisions, steering EU agriculture towards greater market orientation. The criticisms formulated at times of greater market intervention regarding alleged detrimental effects on agriculture in developing countries, a sector where these countries could theoretically enjoy a comparative advantage, are thus no longer adequate.¹² In addition, the form and the extent in which the CAP would affect developing countries is not clearly established. Matthews (2011) identifies two main channels through which impacts could be transmitted: (a) changes on world market prices, and b) impact on the variability (volatility) of world market prices.

Changes on world market prices would influence the terms of trade of developing countries, but impacts would differ according to the trade profile of the country, i.a. the country's trade balance, whether it is a net exporter or importer of the product in question, relative trade with the EU, the country's level of development and trade regime, or the country's possible preferential status.¹³ Greater market orientation will ensure that impacts are generally minimised and in any case not exacerbated. However, these impacts should be assessed on a case by case basis, as the economic, social, cultural and demographic heterogeneity among and within developing countries, as well as the multitude of factors that affect food security policies and situations in the short-, medium- and long-term, make generalisations difficult. The assumption of direct price transmission mechanisms calls for a methodological approach that combines aggregate/national with household level data.

⁸ SEC(2010) 421 final

⁹ COM(2010) 672 final

¹⁰ OECD, Agriculture and Development. The case for Policy Coherence, 2005.

http://www.oecd.org/document/23/0,3746,en_2649_33797_35664919_1_1_1_1,00.html

¹¹ OECD-FAO Agricultural Outlook 2007-2016

¹² UN Special Rapporteur on the right to food, *The Common Agricultural Policy towards 2020: The role of the European Union in supporting the realization of the right to food*. Comments and Recommendations by the United Nations Special Rapporteur on the right to food - Mr. Olivier De Schutter, 17 June 2011; Bureau, Matthews, *EU Agricultural Policy: What Developing Countries Need to Know*, IIS Discussion Paper; and Bureau, Matthews, *The Consequences of Agricultural Trade Liberalization for Developing Countries: Distinguishing between Genuine Benefits and False Hopes*, IIS Discussion Paper No. 73, 2005.

<http://www.cepii.fr/anglaisgraph/workpap/pdf/2005/wp05-13.pdf> (and related bibliographic references)

¹³ OECD, Agriculture and Development. The case for Policy Coherence, 2005.

In practice, price transmission mechanisms are difficult to establish. This is particularly the case in countries where markets are more fragmented, possibly resulting in different degrees of price transmissions. National trade policies and domestic marketing systems will play a major role in this respect. Impacts on households will depend on whether they are net producers or net consumers of specific commodities.¹⁴ Moreover, the incidence of the impacts will have to be measured in different timescales, taking into consideration the capacity of different actors to respond and adapt to price variations. The analysis of price transmission mechanisms¹⁵ is thus necessary in order to understand the magnitude of effects (incidence) of potential impacts of agricultural policy changes on developing countries at different levels (e.g. country level, household level) and on different groups (e.g. regional, urban, rural).¹⁶

Transmission mechanisms and hence possible impacts would in turn be brought about through three possible measures:

- **Domestic support**
- **Export subsidies**
- **EU market access restrictions**

Finally, even in the absence of directly measurable or identifiable price effects, countries' governments may take decisions that affect their populations following EU policy changes or expected changes in world markets – these could be defined as political economy impacts.

2.1 Domestic support

Domestic support, which falls under Pillar I of the CAP, includes price support and direct subsidies paid to farmers. Coupled direct payments (i.e. tied to production levels) would be the most trade-distorting as they encourage surplus production potentially driving down world prices.

As a consequence of CAP reforms over the last 20 years, price support has declined substantially and direct payments take mostly the form of decoupled payments (more than 90%), i.e. away from supporting production levels and towards greater market orientation. While domestic agricultural support in a major trading bloc like the EU could affect international prices, the impact of these specific measures is not straightforward. As mentioned above, impacts will vary depending on the commodity, from country to country and from group to group (e.g. consumer vs. producer; urban vs. rural).

2.2 Export subsidies

Export subsidies (or refunds) seek to encourage agricultural exports through financial support. In theory, they could result in bringing down prices for EU agricultural products and stimulating additional exports, putting downward pressure on world market prices and therefore distorting competition and limiting regional trade. These measures are thus disciplined under WTO rules and are to be reduced over time.

¹⁴ OECD, Agriculture and Development. The case for Policy Coherence, 2005.

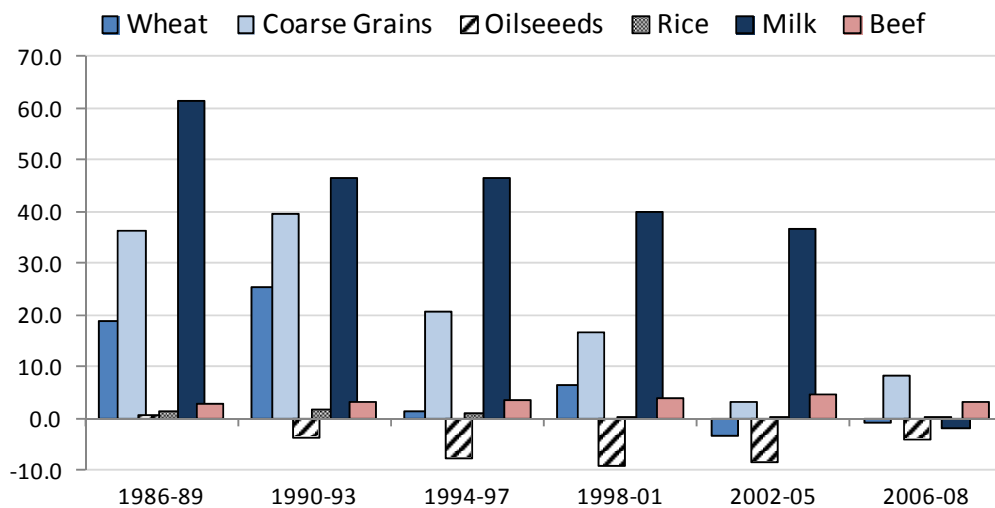
¹⁵ I.e. the extent to which domestic agricultural commodity markets in developing countries respond to changes in international prices.

¹⁶ Analyses have turned out inconclusive given the limited data available and the difficulty of linking partial economic modelling tools that provide the impact of CAP changes on global commodity markets, to household level impact assessment.

Export refunds have been subject to criticism from farmers' organisations and other civil society groups, who have reported on the resulting unfair competition as local farmers have to compete with products that may receive financial support for production and/or export. Implications for agricultural production and consumption in developing countries will differ once again depending on the product concerned, the country's trade position and the household's consumption and production patterns. On the one hand, EU subsidised products may negatively impact on local farmers by making their production less profitable. On the other hand and in the short-term, it may be favourable to consumers who benefit from access to lower-priced imports.

The use of export refunds by the EU has been declining strongly over time: In 2010, the expenditure for export refunds for agricultural products from the EU was 166 million EUR, while in 2000 the refunds were 5.6 billion EUR. This level is well below 1% of CAP expenditure.

Figure 1: Estimates of CAP impacts on EU exports, 1986-2008 (million tonnes)



Source: OECD PEM model¹⁷

2.3 EU market access restrictions

Market access restrictions include measures that have an impact on imports be it due to the different level of compliance (non-tariff barriers) or to the level of tariff to be paid (import tariffs).

Non-tariff measures (NTMs) encompass all measures affecting trade other than tariffs. Among those the most frequently discussed are sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT). SPS measures aim to provide a certain level of food safety for consumers, as well as to protect human, animal and plant health. TBT refers to labelling and marketing standards, as well as norms for sizes, quality classes and other physical attributes of products. In those two categories there is a distinction between requirements which need to be

¹⁷ Evaluation of Agricultural Policy Reforms in the European Union, OECD, TAD/CA/APM/WP(2010)26/FINAL

fulfilled to gain market access and conformity assessment which verifies that respective requirements are actually met.

NTMs bring transparency into trade regimes by spelling out minimum requirements goods have to fulfil in order to be marketed on specific markets. The SPS Agreement and the TBT Agreement of the World Trade Organisation (WTO) aim to guarantee that standards are not misused as disguised protectionist measures. While maintaining the sovereign right and obligation of countries to set their own regulations and standards, countries are encouraged to base their import requirements on internationally agreed benchmarks as set by the three standards setting organisations (Codex Alimentarius, OIE, and IPPC).

The EU is the largest importer of agricultural products from developing countries (importing more than the next five importers combined) and has several trade-friendly regimes in place to facilitate market access such as the duty free access granted through Free Trade Agreements (FTAs), including the negotiated Economic Partnership Agreements (EPAs) with African, Caribbean and Pacific (ACP) countries and the Everything But Arms Initiative (EBA), under the Generalised System of Preferences (GSP). In addition numerous trade-related assistance activities are put in place.

3. Addressing the CAP Reform from a Development Perspective

Food security is one of the major global challenges of the future in view of increasing global demand combined with supply uncertainties. The increase in demand is primarily linked to demographic and income growth, but also to other factors that lead to competition over natural resources and land use, e.g. agro-fuels. The uncertainties in supply are linked to i.a. economic (e.g. fluctuating price of oil), climatic (e.g. extreme events, desertification), and animal and plant health issues (e.g. threats of pests and diseases).

The EU should lead efforts towards a sustainable agricultural sector participating in the efforts to assure global food security. On the one hand, EU development cooperation policy aims to harness the potential growth of small farmers and small agricultural enterprises in developing countries. On the other hand, it is essential that the EU agriculture and food industries contribute to global food security by remaining important suppliers of high quality and safe agricultural and food products in a growing world market.

The rationale behind the EU's CAP reform after 2013 is explained in the Communication "The CAP towards 2020"¹⁸, namely: (i) viable food production; (ii) sustainable management of natural resources and climate action; and (iii) balanced territorial development. While the CAP's objectives are first and foremost internal to the EU, the EU's commitment to PCD puts the principle of no harm high on the EU's domestic policymaking agenda.

Over the past decade, the EU's efforts to support agriculture in developing countries have been established through a number of policies and initiatives within its development policy (e.g. 2002: Rural Development Policy, 2004: Action Plan on Commodities, 2007: Advancing African Agriculture, 2008: Food Facility). In 2010, the European Union reaffirmed its strong commitment to support interventions in order to improve food security in developing countries. The

¹⁸ C(2010) 672 final

Communication 'An EU policy framework to assist developing countries in addressing food security challenges' sets out how the EU should target food security-related development assistance, building on the principle that most food security challenges require country-specific responses.

This policy framework, endorsed by the Council in May 2010, sets out the EU food security agenda for the coming years. The framework provides directions for assistance to developing countries in addressing the four pillars of food security: (i) increasing availability of food, (ii) improving access to food, (iii) improving quality of food and ensuring adequate intake, and (iv) crisis prevention and management. This comprehensive approach is centred around four priority areas: (i) smallholder resilience and rural livelihoods; (ii) effective governance at all levels; (iii) regional agriculture and food security policies; and (iv) assistance mechanisms for vulnerable population groups.

The EU supports countries' efforts as they develop domestic policies pursuing the MDGs in general and food security in particular. To maximise the impact on hunger, the EU will prioritise support to agriculture and food security in countries most off-track with respect to achieving MDG 1. The CAP's objective is not to alleviate poverty worldwide. However, the CAP can contribute to global food security and its possible effects are taken into consideration throughout the policymaking and implementation processes.

The EU's commitment was reiterated in the framework of the G20 Agriculture Ministers meeting of 22 and 23 June 2011.¹⁹

4. Conclusions

World population could reach 9 billion by 2050 based on United Nations' estimates. Consequently, demand for food is likely to grow by at least 70%. While this is below demand growth over the previous half-century (which reached 140%) it will require continued growth in agricultural production, including in countries where populations grows fastest. In many of these countries, limited access to natural resources, exacerbated by climate change and conflicting interests will result in increasing challenges and demands for their efficient and sustainable use. The Commission supports sustainable agricultural production in developing countries through providing aid that prioritises approaches that are ecologically efficient, and promotes the formulation and implementation of partner countries' national agriculture policies.

The CAP's successive reforms since 1992 have steered its orientation towards more coherent and efficient policies and away from trade-distorting principles and instruments that may place strains on developing countries' agricultural development and growth. The proposals for the future CAP, alongside the EU's multilateral trade negotiations, are in the spirit of continued market orientation. The overall objective of promoting sustainable agriculture in a global environment remains and impacts on agriculture in developing countries will be further reduced.

¹⁹ Ministerial Declaration "Action Plan on Food Price Volatility and Agriculture", G20 Agriculture Ministers' meeting of 22 and 23 June 2011

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6. *Abbreviations*

ACP	African, Caribbean and Pacific countries
CAP	Common Agricultural Policy
EBA	Everything But Arms Initiative
EPA	Economic Partnership Agreement
EU	European Union
FTA	Free Trade Agreement
GSP	Generalised System of Preferences
IFAD	International Fund for Agricultural Development
MDGs	Millennium Development Goals
MTF	Multiannual Financial Framework
NTB	Non-tariff barrier
PCD	Policy Coherence for Development
SPS	Sanitary and phyto-sanitary measures
TEU	Treaty on the European Union
TFEU	Treaty on the Functioning of the European Union
WTO	World Trade Organisation