13.1 Introduction

**Evaluation Question 8**

_to what extent has the EU legislative framework for organic farming contributed to the sustainable development of the organic farming sector?_

The overarching objective of Council Regulation (EC) 834/2007 is to provide "the basis for the sustainable development of the organic farming sector" (Article 1), alongside the effective functioning of the internal market, guaranteeing fair competition, ensuring consumer confidence and protecting consumer interests. Despite this overarching objective, the concept of the sustainable development in the context of organic farming remains somewhat elusive. It is not defined in the Regulation, although the legislation does make clear the 'dual societal role' of the organic production method that "on the one hand provides for a specific market responding to a consumer demand for organic products, and on the other hand delivers public goods contributing to the protection of the environment and animal welfare, as well as to rural development" (Recital 3). It also makes reference to the contribution made by organic livestock production to sustainable agriculture (Recital 14). The main focus of the Regulation is on defining more explicitly the objectives, principles and rules applicable to organic production. It sets out very clearly that organic production should pursue the objective of establishing "a sustainable management system for agriculture that respects nature's systems and cycles and sustains and enhances the health of soil, water, plants and animals and the balance between them; contributes to a high level of biological diversity; makes responsible use of energy and the natural resources, such as water, soil, organic matter and air; [and] respects high animal welfare standards and in particular meets animals’ species-specific behavioural needs" (Article 3).

The Regulation thus makes clear that organic production covers both market goods and public goods, and that these should be produced through sustainable agricultural management. In answering Evaluation Question 8a definition of ‘sustainability’ has been chosen to suit this broad scope, covering the economic, environmental and social aspects of development as used by the
2006 EU Strategy on Sustainable Development¹, which recognises that these three aspects can reinforce each other.

Against this background, the aim of Evaluation Question 8 is to establish the extent to which the EU legislative framework has contributed to the sustainable development of the organic farming sector. This will be addressed through the following sub-questions:

- Has the EU legislative framework for organic farming contributed to the development of the organic farming sector and, if so, to what extent? Was the resulting development of the organic farming sector (if confirmed) economically, environmentally and socially sustainable?

The evaluation of the first sub-question focuses on the aim of “providing conditions under which this sector can progress in line with production and market developments” (Recital 3). The Regulation sets this aim in both policy and market contexts, pointing out first that “the legislation on organic production plays an increasingly important role in the agricultural policy framework” and second that it is “closely related to developments in agricultural markets” (Recital 2). Both aspects are considered here.

The evaluation of the second sub-question focuses on the economic, environmental and social sustainability of the resulting development, particularly in the context of rural development, provision of environmental public goods and animal welfare.

The chapter first provides an overview of the approach used, outlining the judgement criteria and the information sources. It then presents the results of the evaluation for each criterion. Finally, it presents the results from the Evaluation Question 8 and a judgment of the extent to which the EU legislative framework has contributed to the sustainable development of the organic farming sector.

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¹ The 2006 Renewed EU Sustainable Development Strategy, adopted by the European Council, refines the initial sustainability goals of the 2001 Goteborg Strategy. It defines economic prosperity under the first sustainability pillar as aiming at ‘a prosperous, innovative, knowledge-rich, competitive and eco-efficient economy which provides high living standards and full and high-quality employment throughout the EU’. ‘Environmental protection’ is defined as ‘the capacity to support life in all its diversity, respect the limits of the planet’s natural resources and ensure a high level of protection and improvement of the quality of the environment; prevention and reduction of environmental pollution and promotion of sustainable consumption and production to break the link between economic growth and environmental degradation’. Further, the Strategy defines social equity and cohesion as the way of ‘promoting a democratic, socially inclusive, cohesive, healthy society’. The recently adopted EU2020 Strategy has brought further refinement into these basic goals (European Council, 2006).
13.2 Approach

Evaluation Question 8 was answered using judgement criteria deduced from the model of the intervention logic, the background of the evaluation question and the definition of sustainable development described above. The judgement criteria include:

1. The legislative framework helps (or does not help) the development of the sector by structuring a specific market in response to consumer demand

2. The legislative framework helps (or does not help) the development of competitive organic businesses within the wider agricultural context

3. The development of the sector is (or is not) economically sustainable as a result of requirements set within the legislative framework

4. The development of the sector provides (or does not provide) a sustainable supply of environmental public goods and benefits for animal welfare as a result of requirements set within the legislative framework

5. The development of the sector contributes (or does not contribute) to sustainable socio-economic benefits for rural areas as a result of requirements set within the legislative framework

Due to the breadth of the topic, only a brief review of relevant EU-wide literature and selected national literature has been carried out. Certain elements of information gathered in 13 Member States, based on interviews with authorities and stakeholders in the sector, have been a complementary source. Where relevant, reference is made to the judgements of Evaluation Questions 2 and 5 about the production rules and consumer understanding, respectively.

In terms of the contribution of EU organic farming framework to socio-economic aspects of rural development such as rural diversity, rural employment and for development of human capital, consolidated evidence is missing. For these types of assessments evidence of incidental benefits has been collected from an array of examples in the EU Rural Review publications from 2010 to 2013 which were produced by the European Network for Rural Development (ENRD) under the Commission’s auspices. Additional information has been collected from a pool of recent FAO reports on organic agriculture that include empirical case studies for eight EU Member States.

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2 A total of 26 examples across 14 Member States have been identified which discuss benefits and potential issues relating to rural diversity, rural employment and other aspects of social sustainability, whilst highlighting the role of organic farming. To distil the appropriate criteria for analysing examples, recommendations in recent pan-European studies have been used on sustainable competitiveness (Dwyer et al., 2012), biodiversity and green growth in rural areas (Lobley et al., 2009; Mills et al., 2009; Poláková et al., 2011; ICF GHK et al., 2012). For simplicity, all examples are referenced in the text as EU Rural Review database (2010-2013). The full references to all issues of the EU Rural Review that have been reviewed to produce the database are provided in the reference list.
13.3 Results

13.3.1 Contribution of the legislation by structuring a specific market in response to consumer demand

The development of the sector depends on meeting consumer requirements now and in the future. This requires a closely defined market which distinguishes clearly between organic and other food, while meeting the varied demands of organic consumers which will differ between places and will change over time. The role of the legislative framework is to define the scope of the market whilst allowing sufficient flexibility to satisfy consumer needs, and to help consumers in identifying produce which meets those needs. Regulation (EC) 834/2007 has maintained the impetus created by the previous legislative framework in supporting a strong EU domestic and import market for thus defined organic food, principally by providing detailed rules for organic production and processing, introducing a unified and strict control mechanism, and thus unifying a previously fragmented policy area.

Pan-European statistics show that there is an unmet demand for organic food (European Commission, 2010; Chapter 7), which could to some extent be met by production within the EU. Thus the overall level of demand does not appear to be a barrier to development of the market, although there are likely to be substantial regional differences in demand growth. Organic consumption represented around 2% of total food expenditure in the EU-15 in 2007. A much lower level was reached in the EU-12, affected by lower purchasing power of consumers in general (European Commission, 2010), and where production, consumption and trade have grown much faster but from a far lower base. Growing disposable income has been an important factor for growth in the EU-15 and more recently also in the Czech Republic and Slovenia (Santacoloma, 2007a). On the other hand, there have been low or negative growth rates in Portugal, Hungary, the Netherlands, Italy and the UK, but national figures hide considerable differences in uptake between specific regions within the country (Chapter 2). It is apparent that predicting future levels of demand by consumers, and the role of the legislative framework in such development is not straightforward. Furthermore, there are multiple non-policy factors involved and regional differences which will affect organic stakeholders in different ways.

The legislative framework, by defining common standards, has played an important role in enabling the market to develop through domestic production, intra-European trade and imports. Where domestic organic production is insufficient to meet demand, organic retailers have relied on substantially increasing intra-EU trade and imports from outside the EU (European Commission, 2010). The import regime established under the EU legislation played a role in the rapid increase in imports from third countries in the EU-15, while intra-EU trade increased in EU-12 markets in particular (European Commission, 2010). However, there are many contributing factors, and diverse needs developed in individual countries in relation to the types of organic products missed by local consumers.
There are indications that local food markets are important to the sector, reflecting consumer preference for short supply chains and the role of SME suppliers and processors. Member State support measures, rather than the Regulation itself, seem to have had a key effect here by promoting enhanced information exchange, particularly between producers and consumers, aimed at stimulating innovation, growth in markets and enhanced competitiveness for the organic farm sector (Santacoloma, 2007a and 2007b; Edwardson and Santacoloma, 2013). It is of note that the regulatory basis provided by Regulation 834/2007 was an essential legal pre-condition for the implementation and administration of the funded support measures. All of this has had a knock-on effect on creating well-established organic markets in Northern Europe and Germany in particular, and on local sustainability issues in rural development (Häring et al., 2001; Darnhofer, 2005; Kratochvil, 2006; Dwyer et al., 2012). A majority of examples in the EU Rural Review database (ENRD 2010a et seq.) report that organic production has resulted in improved competitiveness of local food products (20 of the 26 examples). This is quite often due to marketing initiatives taken by individual producers, who use opportunities offered by the legislative framework, rather than being a direct effect of the Regulation per se. Such initiatives can result in a multiplier effect for rural employment through growth in processing, markets and farm diversification. On the other hand, the FAO case studies illustrate that improved competitiveness of organic farmers in the Czech Republic and Hungary was associated with packages of policy measures indirectly associated with the legislative framework which aimed to develop marketing skills, short food chains and knock-on effects on increasing local demand for quality produce (Santacoloma, 2007a; Edwardson and Santacoloma, 2013).

### 13.3.2 Contribution of the legislation to the development of competitive organic businesses within the wider agricultural context

The judgement of Evaluation Question 2 and 7 (see Chapters 7 and 12) concludes that distortion of competition may occur if differing interpretations of the Regulation affect production costs, giving competitive advantage to operators in some countries. There is room for interpretation of EU rules, in some cases Member States have responsibility for definitions, in a range of situations including greenhouse substrates and fertilisers, the meaning of ‘region’ in the rule on the origin of feed, and of ‘factory farming’ for the use of non-organic fertiliser in organic crops, housing conditions for poultry, slow growing strains, and minimum slaughter age of broilers and the use of conventional seeds).

Chapter 11 also notes concerns about the length of the product approval process and the lack of guidance to operators about approved products in some Member States. These issues may cause problems for the development of the sector, for example if the lack of organic protein feed is an obstacle to maintaining or developing an organic livestock business, or if innovative approaches serving the development of the sector are slowed down or inhibited.
Another line of argument taken by some commentators and interviewees in the case study countries is that Regulation (EC) 834/2007 does not give sufficient room for the organic sector to develop where necessary to address new opportunities (IFOAM, 2012). Concern has been voiced by certain Member States about the flexibility needed for development in well-established markets where growth reached a plateau for a period of time. Possible stimuli could for example be given by extending the scope and use of substances, implementing stricter standards for livestock comparable to Regulation (EEC) 2092/91, or introducing higher standards to address full life cycle impacts (FAO, 2011; Halberg, 2008; IFOAM, 2012; Sengstschmid et al., 2011).

Access to suitable processing facilities is a vital link in the organic supply chain, and the requirements for the processing sector are set out in the Regulation. There is no available evidence on the positive or negative effect of the legislative framework on the relative importance of organic processing in individual Member States. In a majority of Member States, about a quarter of organic farms are engaged in processing (e.g. of cheese) but this is not so common in other parts of the European Union (European Commission, 2008). The vast majority of processors are still found in the EU-15, and between 2003 and 2011 the number of processors grew by 29% in the EU-15 compared to only 7% in the EU 12. It would be a threat to the development of the sector if organic farmers who comply with the legislative and certification requirements were to lose some of the added value of their produce because of a lack of suitable processing facilities. Barriers to establishing new processing facilities have not been systematically researched; however, the lack of data on the EU organic market clearly makes it difficult to take informed decisions about market opportunities, and is likely to be a contributing factor. There are a number of additional factors which are likely to coincide with other barriers to SMEs entering green markets, including legislative complexity, costs associated with meeting higher standards, red tape, and lack of extension services (Eurobarometer, 2012).

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3 Interviewees from Denmark argued e.g. that growth of the organic sector continues up to a certain plateau level where it becomes difficult to attract new consumers and increase number of organic producers by conversion because the legislative and economic conditions together limit further improvement in the profitability of producers.

4 Own calculation based on data for registered processors for selected Member States for which information is available: Belgium, Netherlands, Sweden, Denmark, Finland, United Kingdom, Greece, France, Spain, Germany and Italy (EU-15); and for Czech Republic, Latvia, Hungary, Poland, Slovenia and Slovakia (EU-12) from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=food_act2&lang=en.

5 For example when organic milk is sold on conventional markets, or organic farm output is transported for processing from the EU-12 countries to the EU-15 and thus some value-added for the local economy is lost (European Commission, 2010). The lack of processing observed on mountain farms and is one of the main threats to improving their viability by added value products across the majority of EU Member States (Santini et al., 2013).
Contribution of the legislation to the economic sustainability of the sector

The economically sustainable development of the sector requires not just a relatively stable market that meets consumer requirements, but also actors along the whole supply chain able to maintain profitable organic businesses within the wider food sector that is dominated by conventional agricultural production and processing. The analysis therefore focuses on the links between the requirements of the Regulation and the drivers of the decisions made by farmers and other organic businesses to join and remain in the sector.

During the lifetime of Regulation (EC) 834/2007, farm conversion across the EU-27 has continued, albeit at a slower rate than that seen in EU-15 from 2000 to 2005. Since 2011 overall development has largely stabilised across the EU, with 5.4% all EU farmland certified as organic, concentrated mainly in Spain, Italy, Poland, France, Germany, Austria and Greece (Chapter 2). The main effect of the Regulation on this development is the stable policy framework which makes it possible for farms and businesses to estimate the impact of organic production and processing requirements on their profitability, compared to conventional production. For the sector to grow, a sufficient number of farmers must be convinced that conversion to organic takes place in a stable investment environment and can be an economically viable option. In addition, a high proportion of those farmers must be able to maintain their organic business for the longer term. The organic legislative framework appears to have created some opportunities in less intensive conventional farming systems, such as mixed livestock crop farms, extensive livestock systems or dryland crop systems\(^6\), although exact data for the rates of these conversions are missing, causalities are uneasy to extricate and the effects vary across EU regions.

It is of note that stability of environment for certain type conversions, such as to organic horticulture, is affected by the fact that they require fairly advanced technologies and may involve heavy investment in skills and management know-how (glasshouses, use of approved substances for crop protection\(^7\)). Some of these methods are governed by the production rules in Regulation (EC) 834/2007, with certain issues debated in the sector and differing interpretations, as discussed in previous sections. Unless these ambiguities in the interpretation of the framework are resolved, it can be expected that a potential expansion of organic horticulture

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\(^6\) Of note, in low intensity systems, the loss in productivity compared to conventional agriculture will be lower or will not take place at all. There is also potential to improve organic product competitiveness and farm income (Dwyer et al., 2012), and targeting regional or local markets may reduce comparative economic disadvantage in globalised food markets (European Parliament, 2010).

\(^7\) The basic production rules require the use of crop rotations and biological control as a key practice to prevent pest and pathogen risk. However use of certain organic protection substances is approved in accordance with Regulation (EC) 834/2007. These are authorised by the Commission. Novel substances that may be developed to enhance protection and improve yields will have to be authorised as well.
will have a knock-on effect at an EU level on the increasing amount of guidance needed for the interpretation of the rules and the increasing number of applications for approval of substances.

A key role of Regulation (EC) 834/2007 has been in **setting the regulatory basis for other policy tools** that were indispensable in creating favourable economic conditions for the organic sector. Supply-side policy tools facilitated by the detailed regulatory basis in the Regulation include e.g. the funded measures for organic management and promotion, financial support to facilitate access to markets and set up new producer groups, the development of quality products, extension services, and training (European Commission, 2010; Sanders et al., 2011). The demand side of the market benefitted from funds for promotion, information, market research and the use of a unified publicly operated organic logo, which are tools that also could not be used without the EU-wide definition of organic food in the Regulation (Daugbjerg and Sønderskov, 2012; Sanders et al., 2011). Available studies do not quantify the extent to which a clear regulatory basis enabled the rapidity of developing such supporting environment. However, research including FAO concurs on the fact that the combination of varied policy tools and funding has been one of the key factors that made the EU organic sector increasingly competitive and viable (Nemes, 2009; Sanders et al, 2011).

The positive effect of these policy measures, partly enabled by the organic legislation framework, cannot always overcome **other agricultural drivers**, such as commodity markets, re-structuring and technology change. These continue to pose a range of barriers to organic conversion or start-up organic processing. In addition, the recent development of specialised and intensified organic production systems may also be a barrier for some potential organic farmers, due to poor access to knowledge and technology, or because they see this as a dilution of organic principles, and therefore a societal and environmental disincentive.

The **administrative burden** on organic operators in relation to certification and record keeping requirements, and the additional red tape with the applications for approval of non-organic inputs and substances, has been cited by case study interviewees as a deterrent, concurring with

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8. This outcome coincides with the recommendation by the OECD on the irreplaceable role of mix of policy instruments in achieving improved environmental management, compared to the use of any single instrument alone (OECD, 2007).

9. Support payments to organic farming account for only 4-6% of gross farm income, however, they represent a very significant proportion of farm family income, varying from 13% in Austria to 28% in Germany, 47% in the UK and 72% in Denmark (Nieberg et al., 2007). Besides funding and supporting policy measures, other main factors for the competitiveness of EU organic sectors include comparatively high prices compared to conventional produce, and lower production costs from reduced inputs (Nemes, 2009).

10. Other barriers pertain to the specificities of organic agriculture unrelated to the formal regulatory framework, such as slow development of organic supply chains for certain organic sub-sectors, long production cycles and crop rotations that require a longer time to take environmental and economically favourable effect, higher technical risks (pest management, climatic conditions) and more difficult management planning than in conventional agriculture.
the generic finding on the EU-wide obstacles to SMEs entering the green markets.\textsuperscript{11} Stolze et al. (2012) found that the total costs of organic certification represent up to 0.4% of the raw income of a farm and up to 1% of the organic turnover of processors (against the background of an estimated average net margin for processors of around 3%). Together with another weakness in the organic legislation framework, lack of access to group certification for smaller farms, these are potentially important issues that are likely to have diminished opportunities for organic conversion in certain EU regions. Where the loss of uneconomic mixed family farms and semi-subistence farms to either intensification or land abandonment is a major trend, it has been attributed partly to prevailing agricultural drivers and partly to a failure of EU and Member State agricultural and rural development policies (Keenleyside et al., 2011; Dwyer et al., 2012; Keenleyside et al., forthcoming). Unavailability of group certification for these farms in the organic legislation framework thus means not only reduced opportunities for the development of the sector but also a reduced chance to help safeguard some of the social and environmental benefits currently provided by these farms, particularly in areas of High Nature Value farming (Keenleyside et al., 2011; Dwyer et al., 2012; Keenleyside et al., forthcoming).

The \textbf{reversion of organic units} to conventional farming is another potential brake on the development of the sector. While the sector is regarded as quite stable in eight Member States where less than 5% farmers leave the sector annually, in several Member States the rates of farmers quitting were as high as 9-13% between 2005 and 2007 (European Commission, 2010).\textsuperscript{12} This indicates a considerable degree of vulnerability within the sector. It is of note that the decision to revert is usually a result of several factors of which the Regulation is just one. Scientific studies revealed that for most farmers economic reasons were the most important followed by difficulties with certification, control and organic production techniques (Kuhnert et al., 2013; Sahm et al., 2013). Reasons which relate directly to provisions in the Regulation are, for example, the obligation to feed beef cattle with 100% organic feed, the need to keep a wide range of records, or the prohibition of tethering of livestock.

Although there is no suggestion that the Regulation as a whole is a barrier to economic sustainability several groups of stakeholders indirectly emphasise the issue of \textbf{scarce supply} of organic inputs and ingredients as an important cause of an array of challenges to the development of the sector. The smooth functioning of the rules that govern the use of inputs and substances is therefore an essential pre-condition for the predictable and reliable development

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\textsuperscript{11} Stolze et al (2012) provide the most complete quantitative evidence available to date on comparative certification costs. It is of note that the empirical information comes from six member states with relatively very large farms compared to EU average (CH, CZ, DE, DK, IT and the UK). In none of these countries are the HNV farming systems or the organic sector characterised by small family and semi-subistence farms partly outside current CAP support, and none of them have only an embryonic organic sector. Therefore certain discretion is needed in interpreting the evidence in relation to examples in other Member States in the EU-12 with prevailing small farm ownership.

\textsuperscript{12} Bulgaria has seen much higher rates of loss up to 35% of farmers leaving the organic sector annually between 2005 and 2007 for reasons including both the cessation of farming activity and reversion to conventional agriculture.
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of the organic sector. Particular issues in the production rules and the exceptional rules that are difficult for producers to comply with, as discussed in previous sections, create an obstacle to conversion and play a role in reversion to conventional farming. Organic producers interviewed underline that they need reliable rules, certitude about the way these are interpreted and a timely approval processes to have the confidence to make a long-term business investment.

13.3.4 Contribution of the legislation to a sustainable supply of environmental public goods and benefits for animal welfare

The analysis in Chapters 7 and 12 concludes that organic production has beneficial environmental impacts, generally good animal welfare impacts and contributes fairly well to wider EU objectives. It is also noted that the environmental role of the Regulation could be strengthened by additional guidance on biodiversity conservation and habitat management, and on the sustainable use of energy and water. However, the environmental sustainability of development of the sector relies partly on the way in which Member States, private schemes, and individual farmers have implemented the rules and interpreted the organic concept, rather than being wholly attributable to the legislation. This section provides an analysis of some key-issues of how development of the sector affects the supply of environmental public goods particularly for climate change and biodiversity, and examines the extent to which the legislation can secure a sustainable supply of these.

At a first glance, it is obvious to assume that the supply of environmental public goods has increased as a result of the increase of organic land area in the EU and that the Regulation has contributed to this by providing a regulatory framework and defining production rules for organic farming. There is however an ongoing discussion in scientific literature to what extent average lower yields from organic systems and potentially higher land use requirements may reduce the aggregated supply of environmental public goods, which in turn could also be related to the production rules (e.g. on the use of pesticides or nutrient management).

According to a recent meta-review by Seufert et al. (2012), the performance of organic systems varies substantially across different farming systems and environmental and climatic situations, while only generic differences in yields between organic and conventional agriculture have been studied. However, there is sound evidence that soils in organic systems have better water holding

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13 A meta-review by Tuomisto et al. (2012) concludes, corresponding to the evidence discussed in Chapter 7, that organic farming practices generally have positive impacts on the environment per unit of area, for example higher soil organic matter content and lower nutrient losses (nitrogen leaching, nitrous oxide emissions and ammonia emissions); however, they generally have higher land use requirements per product unit. The finding is based on a meta-review including 71 studies that address EU agriculture only, comparing organic and conventional farming and providing quantitative results on at least one of the range of environmental impacts.
capacity and infiltration rates; therefore organic agriculture appears to have higher yields than conventional systems under conditions of drought and excessive rainfall (Seufert et al., 2012).

Data for organic farming is generally insufficient to estimate yield trends (Offermann, 2003, quoted in Nieberg, 2007). To be able to examine the relationship between the organic farming legislation and the overall productivity trends, not only accurate data but also better understanding of counterfactual scenarios would be needed. It is of note that the majority of studies under the meta-review by Seufert et al. compare organic systems to commercial high-input conventional systems with above average yields. This comparison therefore has limitations for illustrating the potential impact of organic conversion, particularly on medium or lower-intensity farms, since the counterfactual scenario involves the depletion of natural resources for the production of mineral fertilisers (Malingreau, 2012), as well as affecting water, soil and biodiversity (Poláková et al., 2013, 2011; Underwood et al, 2013). Furthermore, FAO (2011), Seufert et al. (2012) and Tuomisto et al. (2012), all point to the potential to increase productivity in organic systems through improved nutrient management, research and innovation. As indicated, there are also climate adaptation opportunities associated with the maintenance of yields in organic systems in extreme climatic conditions.

The turnover of organic producers leaving the sector may affect the environmental sustainability of development of the sector, because organic management requires time to take effect on soils, water and biodiversity. Thus environmental benefits may not be realised on the ground if organic management is quickly abandoned. Carbon sequestration in soil is a particular example of a benefit that is reversible and can be easily lost by changes in soil management after reversion to conventional methods. Another potential concern is the lack of environmental safeguards when EU agricultural land which is currently abandoned or subject to minimum cultivation is brought into crop production, whether organic or conventional (Hart et al., 2013) or when semi-natural pastures are agriculturally improved, for example for organic livestock system. It is important to emphasise that no evidence of such environmental damage exists relating to organic conversion so far and that such practices would contradict the objectives of organic production as defined in Article 3(a)(ii) of the Regulation (contribution to a high level of biodiversity). However, there are no specific requirements in the Regulation that would prohibit such practices.

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14 The first ploughing and re-seeding of semi-natural grasslands, with loss of highly valuable habitat and release of soil carbon, is not banned by CAP rules on permanent pasture (Beaufoy, 2011; Díaz-Chavez et al., 2013; Poláková et al., 2011; Tucker and Poláková et al., 2013). It could possibly take place as part of conversion to organic farming if farm profitability is at stake, without being accounted for in official statistics.
13.3.5 Contribution of the legislation to sustainable social benefits for rural areas

Consolidated evidence of the contribution of the EU organic farming framework to socio-economic aspects of rural development is missing, and where studies highlight actual benefits to rural development provided by the organic farming sector, they most often assume that the EU organic farming legislation indirectly created a facilitative policy environment (Häring, 2001; Pommer, 2001; Pugliese, 2001; IfLS, 2004a and 2004b; Darnhofer, 2005; IFOAM 2006; Münchhausen et al., 2006; Schäfer, 2007). The assessments here have therefore used evidence of incidental benefits identified in examples produced by the Commission’s European Network for Rural Development (ENRD)\(^\text{15}\), recent FAO reports that include empirical case studies on organic agriculture in eight EU Member States and a brief review of key EU-wide sources on food supply chains, small farms and SMEs.

The development of added value organic products often has knock-on effects on revitalising short food supply chains in rural areas, for example through direct sales by individual farmers (e.g. farm shops); collective direct sales (e.g. farm shops or sale points for many farms; cooperative shops); and co-operation (e.g. between urban and rural partners via organic box schemes); specialist organic shops selling more directly to consumers than via supermarkets; localised partnerships around organic retail; and formally organised groups who offer organic catering services (EU Rural Review database, 2010-2013). Several examples also illustrate certain benefits of the emerging organic sector for improved competitiveness of smallholdings. This can be attributed to the opportunity for selling their organic produce to a cooperative and thus strengthening the local food chain (Belgium, Greece, Spain, and Italy) (EU Rural Review database, 2010-2013). FAO case studies underline that emerging organic farms in the Czech Republic and Hungary rely largely on such short supply chains (Santacoloma, 2007a). Furthermore, diversification on organic farms can provide additional sources of income, for example through developing on-farm processing facilities for organic produce or through linkages with local eco-tourism.

The examples in the ENRD database and the FAO case studies make little reference to the development of human skills on organic farms, but this may reflect the lack of extension and training services to develop these skills rather than a lack of effect. Santacoloma (2007a) does note that organic production in the Czech Republic and Hungary is developing new skills among farmers, particularly in terms of record keeping and marketing. Nemes (2009) points out that organic farmers often need more time and greater managerial efforts to acquire the necessary knowledge of organic practices, prices and marketing opportunities. The same study observes

\(^{15}\) All examples are referenced in the text as EU Rural Review database (2010-2013). The full references to all issues of the EU Rural Review that have been reviewed to produce the database are provided in the reference list.
that in the EU there generally tends to be much better access to extension services and cutting-edge academic research for conventional farmers than organic ones. It is notable that in EU-12 the provision of technical assistance, advisory services and marketing support to organic farmers (particularly for conversion from conventional to organic) has often relied on not-for-profit organisations, as demonstrated in FAO case studies (Santacaloma, 2007a, 2007b).

It is important to note that no direct correlation has been found in evidence collected between the organic legislative framework and the effects on social sustainability. On the basis of the reviewed literature, it is however clear that the development of the organic sector could potentially bring socio-economic benefits, particularly to disadvantaged rural areas, but achieving this will require improved provision and careful targeting of policy support measures.

13.4 Judgement and conclusions

Based on the results presented in the section above, it is concluded that the EU legislative framework for organic farming has contributed to the development of the organic farming sector, taking the following into account:

- Regulation (EC) 834/2007 has maintained the impetus created by the previous legislative framework to support a strong EU domestic and import market for organic food, principally through defining detailed rules for organic production and processing; unifying a previously fragmented policy area, and introducing a unified and strict control mechanism. Of note are many other factors beyond the EU legislative framework that influence the development of the organic sector commodity markets, EU support policy for conventional and organic farming, national policies, and consumer demand for organic products).

It is further judged that the EU legislative framework has contributed to the economic and environmental sustainability of this development, and that there are opportunities to increase this and social sustainability of future development, because:

- In general the Regulation provides a clear basis for the development of new organic businesses. However varying proportions of organic farmers leave the sector each year, and the development of processing facilities lags behind the needs of certain organic sub-sectors in some EU regions, in particular in mountain areas. This indicates a degree of economic vulnerability for some organic operators.

- Since the Regulation came into force the EU organic sector has continued to grow. Nevertheless, barriers to organic conversion continue to exist and therefore the provision of the regulatory basis by the organic legislative framework is an essential pre-condition for a mix of measures to create a supportive policy environment for the actors in the sector (advice, training, information, land based organic payments, promotion, research).

- Neither the legislative framework nor the implementation of supporting policies appear to have been wholly effective in developing organic production for small and semi-subsistence
low-intensity farms as well as small-scale processors who could benefit economically from organic conversion. Development of these parts of the sector has the potential to deliver associated socio-economic and environmental benefits in some parts of the EU.

- The Regulation has contributed to the environmental sustainability of the sector but this relies partly on the way in which Member States, private schemes, and individual farmers have implemented the rules, not just on the legislation itself. Some environmental benefits of organic farming, particularly for arable land, take effect over a considerable period of time, and thus growth in the sector will be most sustainable where there is stability of conversion rather than rapid turnover.

- Development of the organic sector has potential to bring socio-economic benefits and hence deliver public goods. Realising this potential requires clearer targeting of supportive EU policies, particularly those in RDPs, or considering group certification for small EU producers.

**Detailed consideration**

The overarching objective of the Regulation is to provide the basis for the sustainable development of the organic farming sector. This evaluation question has addressed the achievements towards this objective in two stages. Firstly the assessment addresses the extent to which the EU legislative framework for organic farming has contributed to the development of the organic farming sector, focusing on the aim of providing conditions under which this sector can progress in line with production and market developments. Secondly, it addresses the extent to which the resulting development is economically, environmentally and socially sustainable and the contribution of the legislation to this.

The judgement is based on a brief review of relevant EU-wide literature and selected national literature, and information gathered from interviews with authorities and stakeholders in the 13 case study countries, plus selected socio-economic examples from the database maintained by the Commission’s European Network for Rural Development.

**Contribution to the development of the organic farming sector**

Regulation (EC) 834/2007 has maintained the impetus created by the previous legislative framework in supporting a strong EU domestic and import market for organic food, principally through defining detailed rules for organic production and processing. The Regulation unified a previously fragmented policy area and introduced a unified and strict control mechanism, which is an important improvement for the fair competition and smooth functioning of the market. The market underpins the supply chain and hence plays a key role in achieving growth of the sector.

The contribution to market development may be somewhat weakened because some production rules allow a broader interpretation and thus may have adverse effects on fair competition between actors in different parts of the EU (for example the definition of ‘region’ for feed and ‘factory farming’ for manure).
Economic sustainability of the development of the organic farming sector

The economic sustainability of organic development depends on the ability of many thousands of individual producers to create and maintain economically viable organic businesses on the basis of the rules. In general the Regulation provides a clear basis for development of new organic businesses and also a justification and basis for key supporting polices, particularly those funded under Member States’ RDPs. There is however significant variation between Member States in the proportion of organic farmers leaving the sector each year, for reasons that are rarely studied in depth. Supporting policies clearly have a beneficial role but may not be always sufficient to overcome external pressures. Strengthening the rules may have an impact on the one hand, by enforcing the interest of consumers as well as the transparency and consistency of the organic concept; on the other hand, by increasing the requirements put on organic farms.

Some of the barriers to organic conversion could be reduced by filling gaps in the mix of EU and national measures that are needed to create a supportive policy environment, including the provision of technical advice, extension services and training; accessibility to attractive CAP agri-environment and other RDP support; and improved institutional capacity to design and deliver appropriate policy packages with supporting measures.

Environmental sustainability of the development of the organic farming sector

There is sound scientific evidence that the Regulation has established a framework which guides farmers to the practices beneficial for the environment. Still, the environmental sustainability of development of the sector relies partly on the way in which Member States, private schemes, and individual farmers have implemented the rules and interpreted the organic concept, rather than being wholly attributable to the legislation. The environmental opportunities for the future, where the organic production rules could play a role, include: the potential to close the productivity gap between organic and conventional systems through improved nutrient management, research and innovation; and the opportunities for increased organic conversion of low-intensity farming systems, with associated potential for adding value to farm products and for securing the continuation of existing beneficial management of key semi-natural habitats and species, especially on High Nature Value farmland. While these opportunities merit attention, there needs to be more effort made to examine them together with appropriate counterfactual scenarios for organic yields in a range of farming situations, based on accurate data from the sector.

Social sustainability of the development of the organic farming sector

It is difficult to reach a clear judgement on the social sustainability of development of the sector, but on the basis of the limited evidence available it is clear that the development of the organic sector has the potential to bring socio-economic benefits. However, additional effort will be needed to achieve economically sustainable sector development in disadvantaged rural areas with small farms and a need to develop organic SMEs. For example, this may require considering group certification for small farmers under the legislative framework while ensuring access to the
CAP support for low intensity farming systems and provision of targeted packages of support in Member States’ RDPs. These could provide careful targeted ‘soft’ measures for advice, training and facilitation, as well as RDP support for cooperatives and new investment in farm buildings and equipment, processing and marketing.