

High Level Group (HLG) on the Competitiveness of the Agro-Food Industry

CIAA contribution to the discussions of the Working Group: “Environmental Policy”

Background

EU food and drink manufactures depend on a healthy natural environment for the supply of high quality agricultural raw materials. Environmental sustainability is thus a long standing priority for the sector. In addition to increasingly stringent EU environmental legislation in this field, the industry is engaged in a broad range of voluntary initiatives and partnerships that continuously improve the management of natural resources, energy, water and waste in the sector (concrete examples can be found in the CIAA Environment Communication 2007, <http://envi.ciaa.eu>). The HLG Working Group on Environmental Policy is an important and welcome opportunity to ensure that EU policies in this field are designed to turn the efficient management of resources into a competitive advantage, rather than a disadvantage, for the EU agro-food industries.

I. Climate Change and Energy

While the food and drink manufacturing sector – if viewed at an aggregate level – is characterised by relatively low energy-intensity, some sub-sectors (e.g. sugar, starch, oils, yeast) show energy-intensities comparable to that of other manufacturing sectors and sharply rising energy prices have become an important cost factor in those sectors. The food and drink industry as a whole accounts for about 1.5% of total GHG emissions in the EU-15 in 2005 (including indirect emissions). Within the food chain, agriculture accounts for about 49% of GHG emissions, followed by consumers with 18% and manufacturing with 11%.

1. EU Emissions Trading Scheme (EU ETS)

The current EU Emission Trading System (ETS) is mandatory for food and drink companies operating combustion installations above 20 MW capacity. About 900 EU ETS installations are on food and drink industry sites. While the majority of the sector's ETS installations are small emitters, there are also some larger installations in sub-sectors such as sugar and starch production, oil seed crushing, brewing, dairy, yeast, malt and potato processing.

- The food and drink industry is supportive of emissions trading as an efficient tool to reduce GHG emissions from large industrial installations. However, for small installations, ETS compliance causes significant financial and administrative burdens that are disproportionate to the low level of their actual emissions. In order to safeguard the competitiveness of small installations and to improve the cost-efficiency of the ETS, a harmonised *de minimis* rule should be introduced to exclude lowest emitters, set at 25 kt CO₂/year, from the scope of the ETS.
- The food industry is strongly supportive of introducing of a centrally determined EU ETS cap so removing the need for separate member state NAPs and to move towards full harmonisation of allocation methods across the EU. This will greatly simplify the EU ETS, and ensure a level playing field for companies operating in different EU countries.

- 100% auctioning would negatively impact the competitiveness of main exposed food industry sub-sectors, such as sugar, vegetable oils, yeast and starch as higher production costs cannot always be passed on along the supply chain due international competition and the high concentration of retailers in several Member States. Negative impacts on the competitiveness of affected sub-sectors must be taken into full consideration in the design of revised ETS allocation rules.
- Auctioning is an allocation method, not a means to tax industry. Any auctioning revenues must be used to 100% for investment in GHG reduction measures in the ETS sector in order to help ETS companies to cope with increasingly stringent caps.
- It is essential that sufficient free allowances are available for non-energy-intensive sectors in the period 2013-2020 and that full access to the auctioning process is ensured for small operators. Speculation must be avoided.
- In order to promote the increased uptake of low carbon technologies in the agro-food sector, free allowances should be allocated to CHP installations.

2. Energy efficiency

The promotion of energy efficiency is an important driver for industrial competitiveness and reduced emissions in the food and drink sector. The sustainable energy roadmap of the food and drink industry sector involves both demand side measures (i.e. energy-saving) as well as supply side measures (i.e. move towards low-carbon energy sources). EU public policies should create the right incentives to support the effective implementation of this road map.

The food and drink industry's sustainable energy roadmap

1. Demand side (energy end-use)

a) Implementation of energy efficiency measures:

- Definition and application of sector best practice on energy management
- Identification of major energy saving opportunities within the plant, e.g. via an energy audit
- Development of an energy action plan and integrate it into daily business practice
- Monitor energy efficiency savings over time, use bench-marking where sensible
- Participate in national and sector energy efficiency schemes

b) Investment in low carbon technology:

- Consideration of energy efficiency in long-term investment decisions
- Explore co-generation (CHP), tri- and poly-generation, and other technologies
- Gradual move towards HCFC and HFC-free refrigeration technology

2. Supply side (heat and power generation)

Move towards renewable and low-carbon energy sources (internal and external)

a) External sources:

- Electricity is mainly sourced from the grid. Its CO₂-intensity depends on the national energy mix
- Purchasing of low carbon power from certified suppliers may become an option

b) Internal sources:

- For heat generation, switch from oil and solid fuels to natural gas, renewables and biomass
- Explore the potential for increased on-site generation of low carbon energy, e.g.:
Bio-gas production from by-products, waste, process water, etc.
- Cogeneration (CHP)
- Use of by-products as renewable, CO₂-neutral fuels in combustion plant
- Explore potential for other renewable energy sources, e.g. solar heat, wind;

II. Sustainable Consumption and Production

The EC is tabling an Action Plan on Sustainable Consumption and Production (SCP). Aim of the Action Plan is to change consumption and production patterns through extended eco-design and eco-labelling rules linked with financial incentives and green public procurement. The following success factors are crucial for making the SCP Action Plan work for sustainability along the food chain:

1. General principles:

- SCP policies should address the three pillars of sustainability (environmental, social, economic) in an integrated manner.
- In order to be effective, SCP policies must involve the entire supply chain, including farmers, manufacturers, transport, retailers, consumers and others.
- SCP policies should promote focused R&D and eco-innovation in key sustainability areas across the food chain. Technological innovation can be expected to deliver significant further improvements in areas such as energy, climate, water and resources.
- SCP policies must foster the proliferation of existing best practice and technology across the entire sector. Particular attention has to be paid to reaching SMEs, which account for 99% of all food and drink companies in the EU (279,000).
- In order to avoid distortions of markets and information, SCP policies should promote consistency of ongoing initiatives at EU, national and company level. This relates in particular to the development of methodologies for the environmental assessment of products and communication with consumers.
- SCP must be science-based in order to gain the broad support of all stakeholders. Combined efforts by industry, public authorities, environmental agencies and the EU research community have considerable potential to further improve the knowledge-base in areas where relevant data is still incomplete or insufficiently robust.

2. SCP Roundtable:

In order to translate the above principles into concrete action, an SCP Roundtable should be set up.

- involving the key supply chain operators, i.e. farmers, industry, transport sector, retailers, consumers, waste managers, and others; depending on the issue to be addressed, different players should be involved;
- governed in partnership between the relevant EC services (DGs ENV, ENTR, SANCO, AGRI, TREN) and the above business players
- addressing the key sustainability challenges along the food chain by developing environmentally effective voluntary measures that have support within the food chain;
- drawing on scientific experts (e.g. research, academia) to establish a sound knowledge base to support the development of individual measures;
- taking into account ongoing SCP related work conducted at EU, national and company level, e.g. research, development of methodologies, standardisation, with a view to facilitate the consistency of individual company and MS action;
- addressing, in a first step, the topics of
 - methodologies to assess environmental performance of food products
 - environmental communication to consumers
 - concrete measures for continuous improvement along the supply chain

- promoting harmonisation of key principles and methodologies (to avoid distortions of information and markets) while granting individual business players the flexibility to define their own tailor-made commitments, in line with their respective corporate and national framework. Within such a process, the market itself will drive environmental sustainability forward. The process should by no means have the same effect as legislation, but should facilitate targeted and consistent voluntary action by individual food chain players.
- developing concrete working plans and time-lines in order to ensure that the forum delivers in terms of driving concrete actions forward.

3. Eco-design:

The quality of food products critically depends on the quality of the ingredients that are grown in the natural environment. Their composition in recipes is driven by factors such as taste, health, food safety, nutritional and cultural diversity in compliance with extensive EU food legislation. Mandatory eco-design requirements, as currently applied to energy using products, should therefore not be applied as priority route to improve the sustainability of food products. The key to sustainable food production lies in the continuous application of best available practices along the food chain, from farming to end-of-life. This also includes food preparation by the consumer, which can be an important factor in ensuring the sustainability of the life-cycle of a product. For packaging, Essential Requirements exist under Directive 94/62/EC on Packaging and Packaging Waste, laying down marketing requirements with regard to packaging volume and weight minimisation, re-usability and recoverability, and prevention of hazardous substances emissions in landfill or incineration.

4. Environmental information to consumers:

Voluntary consumer information on all relevant product characteristics, including their environmental performance, should be promoted on the condition that it is

- scientifically reliable,
- based on uniform methodologies across the EU in line with international standards,
- relevant for the consumer and not misleading or confusing (e.g. proliferation of labels),
- covers the most significant environmental impacts along the supply chain,
- contributes effectively to environmental improvement,
- avoids disproportionate financial or administrative burden, especially on SMEs,
- safeguards innovation and the functioning of the internal market.

There is currently no uniformly applied methodology to communicate environmental information at the food product level specifically, which is due to the complexity of the food chain and its environmental impacts and the high diversity of food products. A structured dialogue among all food chain partners and policy makers should be established in the framework of the SCP Roundtable to assess the practical implications of various routes to environmental consumer information in the food sector and to define effective and consistent strategies forward. Labels are not the only tool to inform consumers. Information can also be provided on shelves, websites, in CSR reports, leaflets, etc. All suitable means of communication should be considered.

Carbon footprint:

While greenhouse gas emissions constitute an important environmental impact of production and consumption, the carbon footprint alone does not serve as a valid indicator to assess the overall environmental performance of food and drink products. Other environmental indicators (water, bio-diversity, soil, etc) also play an important role and must be considered in the overall assessment in order to provide environmentally meaningful results.

III. Integrated Pollution Prevention and Control (IPPC)

The agro-food industry fully supports the fundamental principles of the existing IPPC Directive as an efficient tool to reduce industrial emissions, by applying Best Available Techniques, while taking into account economic considerations, environmental objectives and local conditions in a balanced manner. The current IPPC Directive has yet to reveal its full potential and effectiveness as it came into force only in October 2007, and has been only partially implemented by Member States since then.

The following priority points have direct or indirect impacts on the competitiveness of agro-food operators and should be considered in the ongoing review process:

- The "integrated approach" should remain one of the key principles of the IPPC Directive (considering the emissions from an installation into the different environmental media (air, water and land)).
- Flexibility in the implementation of the BREFs : taking into account the technical characteristics of the installations, their geographical location and the local environmental conditions. Rigid implementation of the BREF would disregard the specificities of individual installations and thereby not only trigger sub-optimal environmental outcomes, but also hamper the competitiveness of the operators.
- Participation of the stakeholders in the BREFs making process: The Seville process is a very successful example of stakeholder consultation with a view to achieve better regulation outcomes. Without the technical expertise of industry and its experience in operating BAT, the BREF-making exercise would be seriously undermined. The result of the exchange of information must remain a consensus reached by all stakeholders involved, and the final endorsement of the BREF must remain a collective exercise. We therefore urge the European Parliament and the Council to maintain the valuable BREF-making process as it is now.
- Legal clarity on the definition/thresholds for the food industry (Annex 1). Clear legal provision significantly reduce "red tape", in particular in SMEs, and thereby contribute to more cost-efficient implementation of the IPPC Directive.

IV. Generic factors for improving sustainability:

1. Spreading best practice

In many cases, short and mid-term objectives for environmental improvement along the food chain can be achieved via the broad dissemination of already existing best practice and technology. Already today, numerous food and drink companies today deliver impressive results in reducing energy use, emissions, water consumption and waste generation. The key lies in spreading these practices more widely across the entire food sector and across the whole chain. It is crucial that national and local authorities target their support programmes and incentives to help companies to overcome barriers in terms of financial and human resources. Consideration should also be given to optimising tax benefits, for example through an enhanced capital allowance scheme. Such a scheme has been introduced in Ireland this year to boost investment in energy efficient equipment – see

<http://www.sei.ie/index.asp?locID=1579&docID=1597>

2. R&D and innovation

Innovation plays a crucial role in achieving long-term sustainability targets. Technological development can be expected to deliver significant further improvements in areas such as energy use, greenhouse gases and resource efficiency. This will require further focus on R&D and investment and increased cooperation among all stakeholders. R&D efforts along the food chains should be coordinated and prioritised, according to their improvement potential, and the results made available across all sectors. The industry is committed to work closely with authorities and researchers to align R&D with business needs and to implement the results of beneficial R&D. Particular attention must be paid to improving the commercial competitiveness of emerging technologies.

3. Small and medium-sized enterprises (SMEs)

SMEs are the backbone of the EU food and drink industry, a sector which is extremely fragmented. SMEs represent 99% of all food and drink companies and contribute with 48% to the total turnover of the sector. Policies need to be better designed to meet SMEs' requirements, also in the area of environmental policy. SMEs have a permanent lack of resources (time, people and money) to get information that is relevant to them, to find funding or specific training and thus increase their resource-efficiency and competitiveness.

R&D and eco-innovation:

SMEs also have considerably less resources to invest in R&D or to participate in joint research projects. Knowledge and technology transfers from large research centres to food and drink SMEs should be facilitated.

- Funding programmes should support SMEs in overcoming existing barriers to applying best management practices and innovative technology, for example in promoting energy and resource efficiency, providing investment facilities, pushing for low carbon innovation and promoting eco-innovation;
- There is a need for systematically designed financial support along the whole innovation process: from the development of the concept to its commercialisation and market introduction;
- National technology platforms should be used more to communicate about financial instruments, financing programmes and procedures.
- Of course, as for all business partners, the rapid return of investment is of particular importance to SMEs.

V. Additional issues listed in the Working Group agenda (15 July)

1. Sustainable Transport:

- Transport impact areas are overwhelmingly road congestion, damage to infrastructure and road accidents. There are also impacts on greenhouse gas emissions, air and noise pollution though to a lesser extent.
- Following the general trend, the food and drink industry has experienced an increase in transport operations over the past decades. This is driven by structural changes affecting global supply chains, including a shift towards fewer, more efficient production plants and distribution centres, as well as “just-in-time” delivery.
- Food transport sustainability critically depends on an integrated approach, based on environmental life-cycle thinking and the consideration of all social and economic implications of transport.
- While increased food transport obviously has an environmental impact, food miles per se do not serve as a valid indicator of sustainability, neither in environmental nor in broader sustainability terms.
- Food and drink manufacturers pursue a range of initiatives to optimise transport efficiency and sustainability, such as inter-modality, lowering impacts of individual modes, investing in new technologies and cooperating with key supply chain partners.
- Greater cooperation across the supply chain, bringing together food manufacturers, logistics providers, retailers and consumers, has the potential to achieve important further improvements in transport sustainability.
- Industry welcomes recent initiatives to improve infrastructures for alternative modes of transport at national level and calls for more pan-European work to look at the existing barriers to achieving greater modal shift and how these might be overcome.

2. Packaging

- As a major user of packaging, the food and drink industry fully recognises its responsibility to reduce the environmental impact of packaging along the life-cycle.
- At the same time, packaging is essential to ensure food safety and product quality. By avoiding food waste, packaging also protects the environment.

Sociological trends and changes in life-styles are driving significant changes in the demand for packaged goods. The key challenge lies in the reduction of packaging material where possible, without compromising on food quality and safety, and in ensuring sound recycling and recovery of packaging waste.

- Packaging recycling and recovery is very successful in the EU. In 2002, all recycling and recovery targets under EU legislation have been met and several member states had already achieved their targets for 2008. Between 1997 and 2004 the amount of packaging waste sent for disposal in the EU-15 fell by more than 20%. Significant savings in GHG have been achieved due to this, amounting to around 25 million tonnes of CO₂ equivalent. Resource savings total around 10 million tonnes of oil equivalent (source: European Commission, 2006).

- Successful collection and recovery schemes for packaging waste have been set up in many EU countries with significant financial support of the food and drink industry. For instance, in 2006 the Belgium recovery system FostPlus achieved a packaging waste recycling rate of 83%. Comparable systems should be set up consistently across the EU, including new Member States.
- Despite these positive environmental achievements, the European Commission's 2006 report confirms that more work is needed to accomplish the Directive's internal market objectives for the free movement of packaging and packaged goods, and to avoid distortions of competition.
- Member States should not be allowed to introduce discriminatory national packaging measures, such as eco-taxes, product fees or mandatory deposits, if they are not justified on recognized environmental grounds. In particular, there is no need to systematically promote re-usable packaging. The Commission observes in its report that "most studies found reusable packaging to be better in situations with generally low transport distances and high return rates" while packaging recoverable by other means is "better in situations with generally high transport distances and low return rates". In addition, no hierarchy exists between reuse and recycling under Directive 94/62/EC.

3. Sustainable Refrigeration:

- Food companies are highly reliant on a wide range of refrigeration systems and technologies for the safe conservation of food products along the production and sales chain (processing, cold storage, air-conditioning, distribution and point of sale). A variety of different refrigerants are being used the food and drink sector in compliance with EU and national legislation.
- Both HCFCs and HFCs are extensively regulated in EU legislation due to their contribution to the depletion of the ozone layer and to global warming if they are accidentally released into the atmosphere. The use of HFCs in refrigeration is strictly controlled under the recently adopted F-gas Regulation 842/2006, setting out an advanced containment regime. CIAA is supportive of this Regulation.
- The use of virgin HCFCs will be banned by 2010, that of recycled HCFCs by 2015 (Regulation 2037/2000). CIAA is supportive of maintaining the phase-out deadline 2015 for recycled HCFCs, which is very challenging for industry. The replacement process is technically highly complex and costly must be managed gradually over a period of several years in order to guarantee undisrupted business operations and to spread investment. As a result, several food and drink companies across the EU have started to implement their HCFC phase-out plans already many years ago in reliance on the 2015 phase-out date. Moreover, the market for recycled HCFCs will further accelerate the phase-out process between 2010 and 2015 as there will almost certainly be a shortage of recycled HCFCs in this period. As 2010 approaches, manufacturers scale down production and this pushes prices up and limits availability.
- The long-term objective of the food & drink industry is to move to alternative/natural refrigerants (e.g. ammonia and/or CO₂ based equipment), which is the best environmental solution and which is gradually happening already today where viable alternatives exist. However, there are currently still considerable technical, safety, energy-efficiency and economic barriers in several refrigeration areas. EU policies can help facilitate the transition towards alternative refrigerants by providing incentives for further technical R&D in those areas.

4. Energy efficiency: BESS and similar projects

BESS is an EC co-funded project, which aims to help SMEs in the food and drink sector to implement best practice energy management. CIAA accompanied BESS over a period of two years through its participation in the BESS Project Advisory Group and also helped in the dissemination of the project deliverables (see www.bess-project.info). CIAA is very supportive of the objective of the BESS project to help SMEs reduce their energy consumption and thereby to improve their competitiveness. CIAA believes that the potential of similar EU funded projects can best be maximised by involving industry as early as possible in the process, i.e. already at the project design stage. This greatly helps fine-tuning the project's focus with industry's actual needs and in making effective use of all available communication channels, including those provided by trade federations.

Success factors for the implementation of energy-efficiency tools:

SMEs often face a series of barriers, which can be grouped as follows:

- Management barriers (e.g. integration of energy and carbon issues at top level)
- Barriers to implementing and sharing best practices
- Lack of human resources and insufficient information on energy management
- Investment barriers (e.g. availability of investment funds, long pay back periods)

The following success factors are key for realizing the full potential of similar projects.

Linking the project to national programmes

In many EU countries, national support programmes for energy efficiency already exist (see e.g. UK Carbon Trust, the Austrian Klima:Aktiv Programme, and many others). BESS and similar new tools should be used to support and complement existing initiatives.

Communication with SMEs at the national level:

Particular attention has to be paid to identifying the most effective communication tools to reach SMEs, which often have no specialised staff for energy management issues. Industry sector federations, energy agencies, energy suppliers and consultants can play a positive role in reaching SMEs at the local level.

Support schemes for energy efficiency measures:

Financial support schemes and the provision of energy-related expertise can provide important incentives for implementing energy efficiency measures, in particular in SMEs with often limited financial and human resources. Different actions may be supported e.g. the conduct of energy audits, consultancy, or training courses.

Investment support for SMEs:

Long pay back periods for energy investments in a sector used to short investment cycles, investment uncertainty and the lack of available capital funds can constitute important investment barriers for SMEs. Investment support can be a crucial instrument to help SMEs to overcome existing economic barriers. Consideration should also be given to optimising tax benefits through, for example, an enhanced capital allowance scheme.

Sensible use of benchmarking:

Finally, benchmarking – if used in a sensible manner – can provide a stimulus for SMEs to implement efficiency measures and to monitor achieved energy savings. At the same time, benchmarking results should be interpreted with caution as the food & drink sector is a highly heterogeneous sector with large differences in production profiles, process technologies and local conditions. Existing correction factors – while useful and important – will not guarantee full comparability of different sites. Caution is particularly required when using benchmarking results (of whatever source) to draw conclusions for national or EU policy making.

5. By-products, bio- waste, waste water:

- Raw materials used in the food and drink industry are of agricultural origin. There is both an imperative and immense potential to use them in a highly efficient manner.
- Food and drink manufacturers are increasingly acting as bio-refineries, in which agricultural crops are separated into a long series of products, including not only food but also by-products used in feed, fertilisers, cosmetics, bio-fuels and others. The food and drink industry fully supports new Article 4 of the revised Waste Framework Directive and is willing to contribute positively to the development of implementation measures where necessary.
- While waste prevention is the over-riding priority of the food and drink industry, a minimum of waste is inevitable, and efficient waste management along the lines of re-use, recycling and recovery is imperative. The food and drink industry calls for a flexible interpretation of the waste hierarchy in order to achieve the best overall environmental, social and economic outcome.
- A specificity of the food sector is the objective to divert any remaining bio-degradable waste fractions (which cannot be directly used as a by-product) away from landfill (where they generate methane gas) into recovery and recycling.
- Bio-degradable waste from the sector can be processed either by aerobic digestion (composting) or by anaerobic digestion (bio-gas/methane production). The energy embedded in bio-degradable residues can also be recovered in a combustion process (e.g. coffee chaff, brewer's grain). Food processing residues (both by-products and waste) therefore hold a welcome potential to contribute to the EU objective to achieve its 20% renewable energy target by 2020. In particular by-product use for energy purposes thereby stands in competition with their use for alternative purposes, e.g. feed.
- Waste water is the most common waste in the food and drink industry. This is because food processing involves a number of unit operations in which water is an essential requirement, such as washing, boiling, evaporation, extraction, filtration and cleaning. Sound waste water treatment in the sector consists of three main elements: First, to reduce the amount of waste water through water-efficient processing methods. Second, to improve the quality of waste water through state-of the-art water treatment. Third, to optimize the re-use, recycling and recovery of waste water whenever this is possible without compromising stringent EU hygiene requirements.
- The organic components contained in the process water can be valorised to produce energy (anaerobic digestion), compost (aerobic digestion) and soil improvers, while at the same time significantly improving the quality of discharged water. Several companies operate a full three-step treatment: Anaerobic pre-treatment (biogas-production), followed by composting and tertiary treatment i.e. removal of nitrogen and phosphor. This results not only in improved energy efficiency, but also in a decrease in the discharge of oxygen depleting substances.
- New waste (water) treatment technologies hold a great environmental potential, but also require significant amounts of financial investment. Investment support schemes should be put in place in order to help spreading new technologies across the sector. For instance, enhanced capital allowance schemes can be considered to support investment in biodegradable waste recycling infrastructure such as anaerobic digesters.

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