

European Commission Green Public Procurement
(GPP) Training Toolkit
- Module 3: Purchasing Recommendations



Food and Catering Services

Background Product Report

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Introduction

This background product report forms part of the European Commission's **GPP Training Toolkit Module 3**, which presents recommended GPP purchasing criteria for 11 priority product and service groups.

This document complements the [Product Sheet on Food and Catering Services](#), by providing more in-depth information on why the purchasing recommendations included within the Product Sheet have been set. The Product Sheets themselves contain only the information that is strictly necessary for contracting authorities to incorporate environmental considerations in their tender procedures.

Where possible, the criteria presented in Module 3 will mirror the criteria underlying the **European Ecolabel**. Where the European Ecolabel does not cover a product/service group, other criteria sources (such as further eco-labels or national guidance) may be used.

For each product/service group two sets of criteria are presented:

- **Core criteria** - these are designed to be used by any European contracting authority. They address the most significant environmental impacts, and are designed to be used with minimum additional verification effort or cost increases
- **Comprehensive criteria** - these are intended for use by authorities who wish to purchase the best environmental products available on the market, and may require additional administrative effort or imply a slight cost increase as compared to the purchase of other products fulfilling the same function



Abbreviations

| | |
|-------|--|
| ADI | Accepted daily intake |
| BOD | Biological oxygen demand |
| COD | Chemical oxygen demand |
| EC | European Commission |
| EIPRO | Environmental Impact Of PROducts (EU study) |
| EISA | European Initiative for Sustainable Development in Agriculture |
| EMS | Environmental Management System |
| EU | European Union |
| FAO | Food and Agriculture Organization |
| FDM | Food, drink and milk industry |
| GMO | Genetically modified organism |
| GPP | Green public procurement |
| HCFC | Hydrochlorofluorocarbon |
| HFC | Hydrofluorocarbon |
| IFOAM | International Federation of Organic Agriculture Movements |
| IOBC | International Organisation for Biological Control |
| IPM | Integrated Pest Management |
| Kg | Kilogram |
| UK | United Kingdom |
| UN | United Nations |



1 Scope

The scope of this product group refers both to the direct procurement of food by public authorities and the procurement of catering services, where the procurement of food is normally included as part of the catering service.

In general, contracting authorities purchase catering services on a regular basis, for example in schools, hospitals or office canteens, or for events such as conferences, meetings or festivities.

Specifications are proposed for the following range of products: fruit and vegetables; aquaculture, marine, meat and dairy products; and drinks and beverages; as well as for the performance of the relevant catering services.

2 Key environmental impacts

According to a recent UK study on the cost of modern farming, people pay three times for their food: once when they subsidise farmers, a second time when they buy food at the checkout counter and a third time for managing pollution resulting from pollutant farm practices¹.

The impacts of industrial farming and food production are highlighted and recognised as having a massive environmental impact in the EU study EIPRO², where this area of consumption is considered responsible for 20-30% of the various environmental impacts of total consumption, and in the case of eutrophication³ for more than 50%. Within this area of consumption, meat and meat products (including meat, poultry, sausages or similar) have the greatest environmental impact⁴, followed by dairy products. Then come a variety of others, such as plant-based food products, soft drinks and alcoholic drinks, with lower levels of environmental impacts for most impact categories considered.

The impacts related to food cultivation, processing and catering services are:

¹ J. N. Pretty et al., "An Assessment of the Total External Costs of UK Agriculture," Agricultural Systems, August 2000, at State of the World 2002, Worldwatch Institute, 2002.

² Environmental Impact of PROducts (EIPRO). Analysis of the life-cycle environmental impacts related to the final consumption of the EU-25, IPTS/ESTO project, May 2006.

³ Eutrophication is the process whereby bodies of water (such as lakes, estuaries, or slow-moving streams) become over-enriched with nutrients which results in the excessive growth of plants (algae, nuisance plants weeds...). When this enhanced plant growth dies and decomposes, the dissolved oxygen in water is reduced which can lead to the death of aquatic organisms (such as fish). Nutrients can come from many anthropogenic (human) sources, such as fertilisers applied to fields; erosion of soil; deposition of nitrogen from the atmosphere; and sewage treatment plant discharges.

⁴ The estimated contribution of this product grouping to global warming is around 4-12 % of all products. The results reflect the impact of the full production chain, including the different phases of agricultural production.



2.1. Use of pesticides and fertilisers

Modern agriculture, based on monocultural practices, requires heavy pesticide and fertiliser use, since monocultures invite pests and draw a lot of nutrients out of the soil⁵.

Locally, chemical use raises levels of nitrates and pesticides (both hazardous to public health) in groundwater and reduces soil quality; chemical fertilisers can acidify the soil, a condition that leaches out key nutrients and compromises the long-term productivity of the land. Worldwide, farmers use 10 times more fertiliser today than in 1950, and spend roughly 17 times as much on pesticides. Yet the effectiveness of these applications has plummeted - a tenfold increase in fertiliser use has coincided with just a threefold increase in food production, while the share of the harvest lost to pests remains largely the same as in 1950 despite the use of much greater quantities of pesticide⁶.

Pesticides are biological, physical or chemical substances or mixtures of substances intended for preventing, destroying, repelling or mitigating pests. Though often misunderstood to refer only to insecticides, the term pesticide also applies to herbicides, fungicides, bactericide and various other substances used to control specific pests (such as insects, weeds, fungi, bacteria, mice, etc.).

By their very nature pesticides can cause harm to humans, animals or the environment because they are designed to kill or otherwise adversely affect living organisms⁷. The World Health Organization estimates that every year 3 million people suffer from severe pesticide poisoning, matched by a greater number of unreported, mild cases that result in acute conditions such as skin irritation, nausea, diarrhoea, and breathing problems⁸. Those are however only the health problems caused by direct use and contact with pesticides. Pesticides also have ecotoxic effects when such products pollute soils and water-courses and, as a consequence, bioaccumulate and are biomagnified⁹ through the food chain causing hazardous effects on animals and consumers.

Fertilisers are compounds given to plants to promote growth; they are usually applied either via the soil, for uptake by plant roots, or by foliar feeding, for uptake through leaves. Fertilisers can be either organic (from composted vegetal matter and/or animals dropping) or inorganic (such as peat, mineral depositions or chemically produced compounds) and they contain plant nutrients in concentrated form.

⁵ State of the World 2002, Worldwatch Institute, 2002.

⁶ State of the World 2002, Worldwatch Institute, 2002.

⁷ US Environment Protection Agency (EPA): <http://www.epa.gov/pesticides/about/index.htm>.

⁸ State of the World 2002, Worldwatch Institute, 2002.

⁹ Bioaccumulation occurs when an organism absorbs a toxic substance at a rate greater than that at which the substance is excreted or degraded biologically. Biomagnification is the increase in concentration of a substance that occurs in a food chain as a consequence of: food chain energetics and low (or nonexistent) rate of excretion/degradation of the substance. Although sometimes used interchangeably with 'bioaccumulation,' an important distinction is drawn between the two. Bioaccumulation occurs within an organism, and biomagnification occurs across trophic (food chain) levels.



Although the health risk resulting from the use of fertilisers is smaller than that resulting from the use of pesticides, its extensive and abusive use is responsible for important environmental impacts such as:

- Water pollution and eutrophication by nitrate and phosphate loss through leaching which causes toxic algae blooms,
- Species diversity reduction and the long-term disruption of aquatic ecosystems,
- Acidification¹⁰ of soil and water, which helps mobilise heavy-metals that can then enter food chains,
- Reduction of natural soil productivity due to the loss of plant nutrients.

In order to reduce these impacts, the use of pesticides and fertilisers should be reduced, by increasing the share of organically produced food or food produced under integrated crop management systems.

2.2. Soil degradation, forest destruction and loss of biodiversity

Pesticides and fertilisers can cause soil degradation.

Soil degradation can also result from erosion and compaction processes. About 10 million hectares of land are lost globally per year for agricultural use, due to soil degradation processes¹¹.

Intensive land cultivation methods, overgrazing and the use of exaggerated mechanised tillage using heavy machines are major causes of land degradation in developing as well as industrialised countries¹².

Degradation has a strong economic impact on-site (on agricultural land) due to a loss of productivity; and off-site on the surrounding environment and public infrastructure by increased incidence of flooding, sediment deposition in rivers, ditches and roads, etc. Estimates indicate that erosion increases agricultural production costs by about 25% each year (€53 per hectare). Further, if on-site and off-site costs are combined, the total annual cost of erosion from agriculture can be estimated at about €85.5 per hectare. Water quality in particular is seriously impaired by conventional agriculture¹³.

¹⁰ Acidification is the build-up of excess sulphuric and nitric acids in soils, waters, and air caused by acid depositions. These depositions originate from anthropogenic (human) emissions of mainly sulphur dioxide, nitrogen oxides, and ammonia from, for example, the use of animal manure and other soil improvers in agriculture. Acid depositions have negative impacts on water, forests, and soil. They cause defoliation and weakening of trees; they can also change soil and water pH mobilising heavy metals and other harmful substances with toxic effects on soil and aquatic organisms; and also damage buildings and monuments.

¹¹ European Conservation Agriculture Federation (ECAAF). I World Congress on Conservation Agriculture: A Worldwide Challenge, Madrid, 2001.

¹² UN Food and Agriculture Organization (FAO). Press release PR01/59.
http://www.fao.org/WAICENT/OIS/PRESS_NE/PRESSENG/DEFAULT.htm

¹³ European Conservation Agriculture Federation (ECAAF). I World Congress on Conservation Agriculture: A Worldwide Challenge, Madrid, 2001.



To reduce these impacts the share of organic or integrated produced food should be increased, as they are cultivated applying soil conservation practices.

Another cause of soil degradation is deforestation. **Forest destruction** can be caused by many factors such as mining activities or the collection of fuel wood, but the main factor is to provide land for tree plantations, crops and cattle ranching. According to some studies, about 14 million of hectares of tropical forests are destroyed every year, 80-85% of which is replaced with crops and pastures¹⁴. Where agricultural practices are carried out on an intensive, monoculture basis, it causes the environmental impacts described above.

The change from forest to extensive monoculture agriculture also has an impact on the **loss of biodiversity**. When talking about biodiversity three aspects have to be taken into account: genetic variability within species, the variety of species and the variety of ecosystems. Agricultural practices affect biodiversity in its three dimensions as it substitutes complex biotopes¹⁵ of great diversity into monocultures reducing the variety of ecosystems, and thus also the diversity of species linked to them. Further, monocultures can not sustain many different species, leading to the impoverishment of the agrarian ecosystem. Finally, the increased selection of highly productive breeds or varieties within species and the introduction of genetically modified organisms (GMOs) is eroding genetic variability within species, agricultural husbandry and fish populations - resources which are essential for guaranteeing food security in the future.

2.3. Intensive husbandry, fishing and aquaculture

The UN Food and Agriculture Organization (FAO) estimates that **animal husbandry** is responsible for 18% of global greenhouse gas emissions and also impacts the world's water supply, accounting for more than 8% of global human water use, mainly for the irrigation of feed crops¹⁶. As mentioned before, it is also responsible for deforestation and soil degradation. About 70% of all grazing land in dry areas is considered degraded, mostly because of overgrazing, compaction and erosion attributable to livestock activity¹⁷.

These impacts have been increasing because meat production has increased more than five-fold since 1950. In little over half a century, consumption per person has more than doubled, climbing from 17 kg to 39 kg¹⁸ and it is projected that global production of meat will double again by 2050¹⁹.

¹⁴ Impactos ambientales de la agricultura moderna. Echarri Prim, Luís. Ciències de la Terra y del Medio Ambiente, Ed. Teide, 1998.

¹⁵ A biotope is an area of uniform environmental conditions providing living place for a specific assemblage of plants and animals. Biotope is almost synonymous with the term habitat but while the subject of habitat is a species or a population, the subject of biotope is a biological community.

¹⁶ FAO Spotlight / 2006: Livestock impacts on the environment.

¹⁷ Managing Livestock. Environment Interactions. Committee on Agriculture (COAG), FAO, 2007.
In some industrialised countries where farming is decreasing, grazing can have a positive impact on keeping the landscape open and improving biodiversity by maintaining agricultural and forest ecosystems.

¹⁸ Vital Signs 2002, Worldwatch Institute, 2002.

¹⁹ World Agriculture: towards 2030/2050, Interim Report, FAO, 2006.



Meat and dairy production also have impacts on animal welfare and may present, in some cases, a risk for human health. At the European level, there are a number of regulations (see section 3) that try to minimise these aspects, although many “animal protection” organisations consider these measures insufficient and health scandals continue to occur (mad cow and foot and mouth disease in the UK; dioxins present in poultry in the Netherlands; or the recent “Hackfleisch” scandal in Germany).

In addition, it is necessary to take into account the energy and water used in the process of raising livestock and producing animal-based products. According to the study “Livestock Production: Energy Inputs and the Environment”²⁰, broiler chickens are the most energy efficient and beef the least.

Table 1 (below) summarises the ratio of energy used to produce animal protein and the energy obtained from that protein as presented in this study:

| Table 1. Ratio of energy input-output for meat or animal derived products | |
|--|-------------------------------------|
| Type of meat or product produced | Ratio of energy input-output |
| Chicken | 4:1 |
| Turkey | 13:1 |
| Milk protein | 14:1 |
| Pork | 17:1 |
| Eggs | 26:1 |
| Lamb | 50:1 |
| Beef | 54:1 |

In terms of water consumption, animal agriculture is also a leading consumer of water resources as can be seen in table 2 (again taken from the above-mentioned study):

| Table 2. Litres of water consumed to generate a kilogram of food | |
|---|--------------------------------------|
| Type of food | Water consumption (litres/kg) |
| Grain-fed beef | 100,000 |
| broiler chickens | 3,500 |
| Soyabean | 2,000 |
| Rice | 1,912 |
| Wheat | 900 |
| Potatoes | 500 |

Figures may vary from study to study, but this gives an idea of how inefficient meat and the processing of animal-based products is. Therefore it may be recommended to reduce the amount of meat and derived products offered in menus and catering services²¹.

²⁰ David Pimentel - Livestock Production: Energy Inputs and the Environment, 2001.

²¹ The proportion of meat, meat products and dairy products in menus should be in accordance to national nutritional guidelines.



Another reason to reduce the amount of dairy and meat products can also be linked with the use of GMOs. Most GM crops are used in animal food and according to Regulation (EC) No 1829/2003, it is not required to label products such as meat, milk or eggs obtained from animals fed with genetically modified feed or treated with genetically modified medicinal products. For this reason, if GMO ingestion is to be reduced, due to traceability difficulties, meat products should be reduced in menus as well.

To reduce the impacts of this product group would it is advisable to preferably purchase food from organic farming. Where ecologically certified meat is still very expensive, it may be advisable to include at least some basic welfare conditions for meat and dairy products (such as animals' free access to open areas and grass fields, minimum floor area for poultry, free range eggs, etc.).

In relation to fishery and aquaculture, the state of overexploitation of some commercial fish and shellfish stocks and the difficulties in establishing resting periods for the recovery of such stocks are well known. Fishing and over-fishing, however, do not only affect the target species' stocks but also their predators, competitors and prey. These effects can be directly caused by fishing gears or by the alteration of species composition and biodiversity. Fishing machinery and practices (such as the use of dynamite and poisons) can also damage vulnerable sea habitats such as sea grass, algae beds or coral reefs²².

As global marine catches stagnate and even decline in some areas, aquaculture is quickly filling the gap. Global aquaculture production has grown nearly 400% in the past 15 years (from 1984 to 1999). It has become the fastest-growing segment of food production in the world, providing around 30% of the world's food fish²³.

Rapid growth in aquaculture has raised a number of concerns, however. Disease outbreaks within farms and within wild fish stocks have taken a stiff toll. Another concern is aquaculture's growing appetite for wild fish. Carnivorous fish such as salmon and shrimp are typically fed high-protein pellets made from a combination of fishmeal and plant-based proteins. Small pelagic species, such as anchovy, herring, and menhaden, are used to produce fishmeal instead of being directly eaten by consumers. Today, increasing numbers of farmers are replacing an entirely plant-based diet for omnivorous and herbivorous fish with feed pellets, to induce faster growth and weight gain²⁴.

Other environmental impacts associated with **fish processing operations** are the high consumption of water, consumption of energy and the discharge of wastewater with a high organic concentration²⁵.

2.4. Energy and water consumption and waste generation in manufactured food production

Energy consumption relates to food production, preparation and delivery. During production, energy is consumed directly for the use of machinery and indirectly to produce pesticides,

²² Environmental impacts of fishing. Fisheries and Aquaculture Department, Food and Agriculture Organization of the United Nations (FAO).

²³ Vital Signs 2002, Worldwatch Institute, 2002.

²⁴ Vital Signs 2002, Worldwatch Institute, 2002.

²⁵ Food, drink and milk industries. Integrated Pollution Prevention and Control. Reference Document on Best Available Techniques, European Commission, August 2006.



fertilisers and other products that are used. After production, energy is used to transport food, mainly by road, to storage warehouses, manufacturing industries, selling points, secondary manufacturing places (such as catering companies) and finally to end consumers.

The manufacturing processes also consume energy. Processes involving heating, cooling, drying, evaporation, sterilisation, pasteurisation and blanching consume energy, especially electricity. Of all forms of processing, deep freezing uses the most electricity. During this process, energy is consumed at a rate of 80 to 280 kWh/t for frozen vegetables²⁶.

Therefore the more processed a product, the more energy consumed for its production.

But energy is not the only resource used in the food industry. Water consumption and pollution are two of the most significant environmental issues associated with food, drink and milk industry (FDM) installations according to the document on Best Available Techniques for the sector (BREF)²⁷ developed by the European IPPC Bureau within the framework of the IPPC Directive (96/61/EC).

Most of the water, which is not used as an ingredient, ultimately appears in the wastewater stream. Untreated FDM wastewater is high in both COD (chemical oxygen demand) and BOD (biological oxygen demand). Levels can be 10 – 100 times higher than in domestic wastewater. The suspended solids concentration varies from negligible to as high as 120,000 mg/l. Untreated wastewater from some sectors, e.g. meat, fish, dairy and vegetable oil production, contains high concentrations of fat, oils and greases. High levels of phosphorus can also occur, particularly where large quantities of phosphoric acid are used in the process, e.g. for vegetable oil de-gumming, or in cleaning²⁸.

2.5. Additives used in processed food

A big proportion of the food purchased by the public sector is made up of processed products in which additives might be used.

Food additives are substances added to foods to perform a range of specific functions including: keeping food wholesome until it is eaten; making the food look or taste better; ensuring that the food is convenient to store or use; keeping the price of the food competitive; making the food healthier (higher in vitamins or lower in fat); or aiding in processing and manufacturing (for example yeast).

Additives may be natural or artificial and are normally grouped by their function. The main groups of food additives are: antioxidants, colours, flavour enhancers, sweeteners, emulsifiers and stabilisers, and preservatives.

All additives in the European Union are thoroughly assessed for safety before they are permitted for use, and they are only permitted to be used in a limited range of products. Additives accepted as safe for use within the European Union show an “E” and are given a number (for example E-300). Even when an additive has been approved, regular testing is

²⁶ Food, drink and milk industries. Integrated Pollution Prevention and Control. Reference Document on Best Available Techniques, European Commission, August 2006.

²⁷ Idem.

²⁸ Idem.



required to maintain its status as ‘approved’. Food labels give information about most additives present so that consumers can make informed choices.

In 2001, a study²⁹ was conducted to check if normal ingestion of processed food containing additives could surpass the accepted daily intake (ADI) values fixed for some additives. According to the results of the study, it could be concluded that, so far, those limits were not surpassed. Therefore, in the light of this study and considering the fact that additives are strictly regulated in the EU as well as the fact that it seems difficult to eliminate all additives, no criteria will be defined in their respect.

2.6. Waste generation

Waste generated during production, in the handling of products, in the preparation for sale and after purchase, and waste arising in the preparation and serving of meals, should also be considered. In these two last steps the excessive packaging and the use of single-use cutlery, crockery, glassware and tablecloths have the biggest impacts.

Additionally, there is the waste generated after consumption. Where the waste is not selectively collected it may end up in landfills or incinerators.³⁰ In this context, the focus should be on reducing the amount of packaging and promoting that secondary packaging and transport packaging are totally or partly made from recycled materials³¹.

2.7. Impacts resulting from the performance of the catering service

Where the contracting authority manages its catering services in-house, it is easier to control how the food is prepared and how waste is managed. Where catering services are contracted out, this control is more difficult and it is therefore necessary to establish criteria to guarantee that the services are carried out in accordance with best environmental practices.

The main elements that can have impacts on the environment are:

²⁹ Report from the European Commission on Dietary Food Additive Intake in the European Union. COM (2001) 542 final.

³⁰ The most significant environmental impacts of landfills are water pollution through leakage, odour emissions and emission of GHG (such as carbon dioxide and methane). Incinerators may also pollute water ecosystems, the soil and the air (mainly with the emission of nitrogen oxides (NO_x), sulphur dioxide (SO₂), hydrogen chloride (HCl), heavy metals, particles, dioxins and furans).

Sources: http://ec.europa.eu/environment/waste/landfill_index.htm and <http://ec.europa.eu/environment/air/stationary.htm#2>.

³¹ According to article 3 of Directive 94/62/EC of 20 December 1994 on packaging and packaging waste, ‘Packaging’ consists only of:

- (a) sales packaging or primary packaging, i. e. packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase;
- (b) grouped packaging or secondary packaging, i. e. packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale; it can be removed from the product without affecting its characteristics;
- (c) transport packaging or tertiary packaging, i. e. packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packagings in order to prevent physical handling and transport damage. Transport packaging does not include road, rail, ship and air containers;



- The amount of packaging and (particularly for event catering) single-use cutlery and tableware. Measures to reduce this waste should be a priority.
- The management of food and packaging waste. In order to minimise impacts the contractor should guarantee selective waste collection (in accordance with the municipal system) and separate waste collection of used oils and fats (which will have to be collected/managed through an authorised waste collector).
- The equipment and machinery used to perform the catering service (fridges, ovens, dish-washing machines, etc.). Whenever possible they should be energy and water efficient. They should also not contain harmful substances such as HFCs and HCFCs.
- The cleaning products used, which should be environmentally friendly (see [Product Sheet on Cleaning Products and Services](#)).
- The vehicles used to carry out the catering service. The vehicles should be energy-efficient and produce low emissions of exhaust gases. Unnecessary delivery should be avoided and tools like route planning and eco-driving should be in use (see [Product Sheet on Transport](#)).

2.8. Reducing the key impacts

The table below summarises the main environmental impacts related to food and catering services as described above, and indicates the focus of measures to address these impacts.

| Table 3. Key environmental impacts – Food and catering services | | |
|---|-------------------|---|
| Impact | | GPP Approach |
| <ul style="list-style-type: none"> • Eutrophication, acidification and toxic impacts on human health and the environment (plants and animals) due to the bioaccumulation and biomagnification of pesticides and fertilisers present in water, air, soil and food • Soil erosion, forest destruction and loss of biodiversity caused by agriculture, intense animal production and intense fishing and aquaculture practices • Animal cruelty due to a lack of respect for animal welfare • High energy consumption in food production and processing • High water consumption and pollution in manufactured food production • Packaging waste • Negative impact on the occupational health of farmers due to the handling and use of certain pesticides and fertilisers • High consumption of cleaning agents which might have a negative impact on the occupational health of kitchen personnel and on environment through waste water | <p>→</p> <p>→</p> | <ul style="list-style-type: none"> • Procurement of organic food and livestock products • Procurement of food produced under “integrated production systems” • Procurement of sustainably-produced or caught aquaculture and marine products • Procurement of livestock products with high welfare standards • Procurement in bulk or in packaging that has a high recycled content • Use of reusable cutlery, crockery, glassware and tablecloths • Use of environmentally friendly paper products • Selective waste collection and staff training • Minimisation of the use of hazardous chemicals in food processing and the use of environmentally friendly cleaning and dishwashing products • Procurement of water and energy |



| | | |
|--|---|--|
| <ul style="list-style-type: none">• High water and energy consumption from kitchen appliances• Transport impacts in the carrying out of catering services | → | <p>efficient kitchen appliances</p> <ul style="list-style-type: none">• Improvement of transport routes and energy efficiency and emissions of vehicles used in the catering service |
|--|---|--|



3 Relevant European environmental policy and legislation

There are many European regulations and directives related to food production and trading. Some focus on animal welfare, some on feeding substances, others on fishing practices, several aim at controlling food quality to avoid the presence of substance residues or other toxic elements and finally there are regulations aimed at correct food labelling and identification.

In the light of setting environmental criteria for food, there are two regulations which are particularly relevant: the regulations which establish the organic production practices and methods for agriculture and livestock.

The main EU Regulation on **organic production of agricultural products** (Council Regulation (EEC) No 2092/91) creates the framework for the production, labelling and inspection of organic farm products and foodstuffs. It will be replaced from 1 January 2009 when the new Council Regulation (EC) No 834/2007 will apply. Due to the rapid growth in organic production in recent years the existing regulations have become insufficient in some respects.

To complete the framework of organic production, EU Regulation 1804/1999 establishes the rules for the production, labelling and inspection for organic livestock products. It includes the statement that the use of GMOs is not compatible with organic production methods.

There are a number of specific pieces of legislation concerning **genetically modified organisms (GMOs)**:

- Directive 90/219/EC on the contained use of genetically modified micro-organisms (mainly relating to e.g. laboratory research).
- Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms (relevant to products containing or consisting of GMOs placed on the market, and also for their introduction into the environment for experimental purposes).
- Regulation (EC) 1829/2003 on genetically modified food and feed (relevant for food or feed (and their processed products) containing, consisting of, or produced from GMOs placed on the market)
- Regulation (EC) No 1946/2003 on transboundary movements of genetically modified organisms (relevant for the exports or unintentional transboundary movement of GMOs).
- Regulation (EC) 1829/2003 and Regulation (EC) 1830/2003 (amending Directive 2001/18/EC) concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms.

Regarding animal welfare, in 1998, Council Directive 98/58/EC on the protection of animals kept for farming purposes has established general rules for the protection of animals of all species kept for the production of food, wool, skin or fur or for other farming purposes, including fish, reptiles or amphibians. These rules are based on the European Convention for the Protection of Animals kept for Farming Purposes.



Community legislation concerning the welfare conditions of farm animals lays down minimum standards. National governments may adopt more stringent rules provided they are compatible with the provisions of the Treaty.

Specific rules apply to: laying hens (Directive 88/166/EEC), calves (Directive 91/629/EEC) and pigs (Directive 91/630/EEC). In addition the Commission has recently adopted a proposal for new EU-rules on the welfare of broiler chickens (Directive 2007/43/EC).

As mentioned before, there is a great variety of EU regulations related to food production, import/export and selling. A broader presentation of these can be found at:

- http://ec.europa.eu/food/index_en.htm
- http://ec.europa.eu/agriculture/index_en.htm
- http://ec.europa.eu/fisheries/index_en.htm

On packaging, the main piece of legislation is Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.



4 Ecolabels and other criteria sources

4.1. Organic labels

EU Regulation 2092/91 controls both organic food production and its labelling system until the new Regulation 834/2007 is applied. Any food sold in Europe using the term “organic” must meet certain minimum standards.

In general terms, the organic production criteria set by EU Regulation (2092/91) include:

- Specific principles and means to maintain soil fertility and to control pests or other diseases
- Limited use of fertilisers, soil conditioners, pesticides, feed materials, additives, cleaning and disinfection products
- Use of seeds or vegetative propagating material preferably produced by organic production methods
- Exclusion of the use of genetically modified organisms, except in veterinary medicines, although it allows a certain contamination from technically unavoidable GMOs
- Conversion of fields depends on their vegetation: For fields with crops produced in one growing season the conversion time is two years, for fields with perennials (such as fruit trees and shrubs) the conversion time is three years before harvest, for meadows the conversion time is usually one year.
- Livestock origin, feeding, disease prevention, reproduction, transport, free range and housing conditions.

As far as the labelling system is concerned, the Regulation establishes that each EU Member State has certification responsibilities. Some countries have delegated this responsibility to private inspection bodies or inspection authorities. However, they must all be authorised and must comply with EU Regulation (2092/91).

Moreover, on March 2000 the European Commission introduced a common EU logo, which also certifies compliance with EU Regulation (2092/91).



Meanwhile the European Commission is about to introduce a new common EU organic logo. From 2009 it will be obligatory for pre-packed EU products to carry the EU organic logo. The previous logo introduced in the year 2000 may still be used until stocks of packaging are exhausted.

The new logo as shown here has the advantage that there is the option to use national and private logos alongside it.





All these organic labels certify that:

- At least 95% of the product's ingredients of agricultural origin have been organically produced, according to the EU Regulation (2092/91);
- The product complies at a minimum with the EU organic regulation;
- The product bears the name of the last operator, either the producer, the preparer or vendor and the name or code of the inspection body that has inspected the last operator.

In addition to the EU organic regulation, some Member States have national and private administrations with their own labelling system. Many of these national or private organic standards existed before the EU organic legislation. In some of the countries these are widespread such as Demeter or Naturland in Germany, Soil Association in the UK, AB or Ecocert in France, KRAV in Sweden, Skal in the Netherlands or Bioagricert in Italy.

There are currently no EU organic provisions for restaurants and catering, neither in the old nor in the new organic regulation. Until there are harmonised EU provisions, national and private standards may regulate the preparation of organic food in restaurants and by caterers.

Since there were 78 public and private organic certification authorities in Europe in 2002³², it would be impossible to include and compare their criteria in these documents. The European Commission supported a research project (Organic Revision) with the aim of providing recommendations for the development of a new EU regulation for organic agriculture. One of its specific objectives was to compare the organic standards from national and private organisations in Europe with the EU regulation. The project web page presents an exhaustive database outlining the differences between some of the existing standards and every point of the current regulation (www.organic-revision.org).

At an international level, in 1999 the Codex Alimentarius Commission set international standards for organic farming. Prepared by the joint FAO/WHO Food Standards Programme and the Commission's Committee on Food Labelling, the "Guidelines for the Production, Processing, Labelling and Marketing of Organic Food" clearly define the nature of organic food production and prevent claims that could mislead consumers about the quality of the product or the way it is produced. The final objective is to provide the consumer with a choice while giving assurances that organic agriculture standards have been met.

IFOAM (International Federation of Organic Agriculture Movements), a private organisation formed by 750 members in 108 countries, also establishes its own organic standards (currently under revision) and accredits organic certifiers.

4.2. Integrated Production

Alongside the “organic” approach, another series of schemes for addressing the environmental impacts of agriculture which at the same time aim at improvements in productivity, are widespread within Europe – a variety of terms and systems exist: “Integrated Farming Systems”, “Integrated Production”, or “Integrated Crop Managed Systems”. From here forward these will be referred to as Integrated Production Schemes or systems.

³² The organic standard, GroLink AB, Issue 9, January 2002.



There is no common European definition for such production systems since they are mainly based on regional and national schemes. The concept was developed at the end of the 1980s, by the International Organisation for Biological Control (IOBC) based on the international Integrated Pest Management (IPM) system. In 1993 IOBC redefined and published the framework for integrated production and in 2001 the members of the EISA (European Initiative for Sustainable Development in Agriculture) developed a common definition for integrated farming.

Despite the differences between the schemes, the objective of Integrated Production is to use all available strategies such as pest management, soil fertilisers, modern technologies, etc. in an efficient way in order to achieve better productivity. These good practices lead to a reduction of nitrogen and pesticide use that enables not only environmental improvement but cost savings as well.

Integrated Production is a system, which includes production regulations intended for mainly primary producers of vegetables, fruit, berries, potatoes and pot plants. The aim is to achieve high product safety and minimise the growing process's environmental impact in accordance with the following principles:

- Guarantee environmental improvements – e.g. limits for cadmium in fertilisers and protection zones alongside watercourses.
- Minimise the use of chemical pesticides – e.g. through healthy plant stock, forecasting systems for damaging attacks and, above all, choosing biological pesticides and generally adapting pest control according to need.
- Reduce use and leaching of fertilisers – e.g. through documenting and analysing existing nutrient content of the soil and re-using drainage water when growing in greenhouses.
- Strive for high levels of food safety – e.g. through requiring products to be washed with drinking-quality water, rules on hygiene and cleaning and requirements for documented risk assessments.
- Monitoring and certification by third parties defined in each country

In environmental terms the typical requirements for Integrated Production are not as strict as those for organic farming. However, in many parts of Europe the quantity of certified products on the market is significant, and price differences with conventional products are much lower than for organic products. As such Integrated Production can be a useful “stepping stone” towards encouraging more environmentally sound agricultural practices where public authorities are put off by the price (and availability) of organic products.

4.3. Sustainable fishery and aquaculture labels

The new EU Regulation that will be applied in 2009 includes criteria for aquaculture. Until rules are established for this product group, pending on its inclusion, national rules or, in the absence thereof, private standards accepted or recognised by the Member States shall apply.

At the European level, there are several labels that specify production methods and certification for environmentally friendly fish products either from marine fishing or aquaculture. These are:

1. International Federation of Organic Agriculture Movement (international) - <http://www.ifoam.org>



2. Eurep-Gap standard (international) - <http://www.eurep.org/Languages/English/about.html>
3. Naturland (Germany) - <http://www.naturland.de>
4. Soil Association (UK) - <http://www.soilassociation.org>
5. Debio (Norway) - <http://www.debio.no>
6. KRAV (Sweden) - <http://www.krav.se>
7. ERNTE (Austria) - <http://www.bio-austria.at>
8. BioSuisse (Switzerland) - <http://www.bio-suisse.ch>
9. Milieukeur (Netherlands) - <http://www.milieukeur.nl>
10. Marine Stewardship Council- MSC (UK) - <http://www.msc.org>

Some countries, such as France and Denmark, have national aquaculture standards.

The number of products certified, though small, is growing and varies considerably from country to country.

4.4. Ecolabel for restaurants and canteens

Since December 2006 the Nordic Swan ecolabel has covered restaurants.³³ The term restaurant includes all businesses that serve ready-prepared food that is to be consumed on the premises. This includes restaurants, institutional kitchens, canteens, street kitchens, and cafés, as well as canteens in schools, hospitals and similar. Catering operations and take-away restaurants can also be Swan labelled. There are already a few restaurants in Sweden and Finland that carry the label, including a municipality lunch restaurant and catering service.

A Swan-labelled restaurant has taken measures to ensure all aspects of the restaurant are environmentally friendly. It fulfils strict requirements on which raw materials are purchased and used. Swan-labelled restaurants fulfil requirements regarding energy consumption, waste management and the use of chemical products. Swan-labelled restaurants also use a proportion of organic foodstuffs and have an environmental management system. This means that a restaurant has rules and procedures for which products may be purchased, has established goals to constantly improve environmental performance, and makes sure members of staff are involved in the environmental measures.

4.5. Other GPP Guidance

4.5.1 Swedish EKU-tool

The EKU instrument is the Swedish Tool for Ecologically Sustainable Procurement. It is aimed at purchasing organisations, both public and private. In relation to food and catering services the tool establishes basic criteria for food products produced both organically and conventionally. Even though GMOs are not banned, points are awarded if GMO-free food is purchased.

³³ Swan labelling of Restaurants
<http://www.svanen.nu/Default.aspx?tabName=CriteriaDetailEng&menuItemID=7056&pgr=91>.



EKU Criteria are differentiated per product and service: cereal, coffee, fish and shellfish, potatoes, vegetables (fresh/frozen) and fruit (incl. bananas), milk and milk-based products, food of animal origin, food packaging made of cellulose fibre, plastic, metal/aluminium and glass, food distribution and catering services.

Generally it is recommended that food should either derive from organic production, or be produced according to Integrated Production principles and good animal husbandry. Other important criteria relate to compulsory EU or Nordic legislation on the content of pesticides and other substance residues (like insecticides, pesticides, medicaments, hormones or diseases) in products and on labelling.

The catering service criteria focus on:

- Compliance with the goals of organic product purchase by the contracting authority
- Appropriate labelling of products that contain, comprise of or have been made from genetically modified organisms
- The use of seasonal fruit and vegetables
- The consideration of nutritional composition and other health aspects when planning menus following the Swedish nutritional recommendations
- Compliance with the EKU, European Ecolabel, Nordic Swan or Good Environmental Choice criteria for cleaning products, if cleaning services are included in the contract
- Management of waste in accordance with the procedures specified by the contracting authority.
- Documented environmental procedures within one year of entering into a contract.
- For transport, a minimum EURO standard average for the vehicle fleet; use of environmentally friendly fuels; reduction of fuel consumption of the vehicles used for the contract through training on economical driving; monitoring of fuel consumption; equipment of vehicles with energy-saving systems or some other solution such as a refrigeration curtain or similar and the procurement of environmentally friendly tyres.

4.5.2 Austria

According to the national guidelines, public authorities in Austria are recommended to purchase, whenever possible, organic food either directly or through a catering service.

Catering services must guarantee that only reusable tableware (including crockery, dishes, tablecloth and napkins) is used. Containers to deliver meals must also be reusable.

Cold vending machines have to deliver returnable bottles and warm vending machines have to be programmed so that users can decide whether to use their own reusable cup or a single-use cup.

Furthermore, public kitchens:

- Must offer food from biological agriculture
- Must also offer a vegetarian option
- Must not use deep-frozen single-portions



- Must not use single-portion packing
- Must not use single-use disposable tableware
- Must have energy-saving kitchen devices
- Must ensure selective waste collection - in particular used oils and fat must be collected separately and entrusted to an authorised waste collector

4.5.3 Belgium

In Belgium, there are two main sources of criteria for food or catering services, the website *Guide des achats Durables*³⁴ and in the Flemish region, the tool “Milekoopwijzer”. The first one defines criteria for certain products such as milk, coffee, sugar, water, etc. They focus on: the promotion of organic products and the reduction of the amount of packaging (promoting mono-material packaging, returnable containers and avoiding single-unit packages). The second one provides information to regional and local administrations with regards to beverages and beverage machines, meals, refreshments and receptions. The recommendations include the procurement of organic and seasonal food, measures to reduce energy consumption and packaging waste, and requiring information on the content of GMOs in the food purchased.

4.5.4 France

The French government has extensive documentation on how to organise the procurement of food and catering services in general. In relation to environmental aspects, the guidelines relate to the selection of food, water and energy consumption and waste management. These cover³⁵:

- the procurement of food produced in a more environmentally friendly way
- the procurement of energy and water efficient equipment
- the definition of logistical arrangements to reduce transport requirements
- the reduction of water and energy during the maintenance and cleaning of the facilities and equipment
- the selective collection of waste
- the procurement of products with recycled and/or biodegradable packaging
- the selection of packaging for dishes aimed at minimising the use of slow biodegradable materials
- the selection of food with the minimum packaging possible, especially avoiding single-units

³⁴ <http://www.guidedesachatsdurables.be/fr/productfiles/home.asp>.

³⁵ Guide des contrats publics de restauration collective (n° J4-05 du 31 mars 2005) :
http://www10.finances.gouv.fr/fonds_documentaire/daj/guide/gpem/5540/5540.htm.



4.5.5 Germany

Guidance provided on the German website for Green Public Procurement³⁶ focuses on food, kitchen equipment and canteen services.

For food, the procurement of organically sourced food is recommended, as well as, amongst others, the avoidance of GMOs and the use of pesticides.

In another publication³⁷, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environment Agency, add 2 further goals: the promotion of seasonal food and short transportation routes.

For canteen management, it is recommended to:

- Purchase beverages in returnable bottles
- Use reusable cutlery and table-ware
- Avoid single-unit packaging, promote procurement in big containers and in reusable boxes
- Buy paper products such as napkins or kitchen paper which consist of 100% recycled paper and hot paper filters consisting of unbleached cellulose
- Ensure selective collection of organic kitchen wastes; fats/ oils and the rest of the waste fractions
- Buy energy-saving refrigerators, ovens and dishwashers
- Use environmentally friendly cleaning products

4.5.6 Italy

In 2002 the Emilia-Romagna region approved regional law LR 29/02, which states that at least 70% of food products for nurseries, crèches and schools must be from organic sources, integrated production and/or traditional products giving priority to organic and GMO-free products. As an example, Ferrara, an Emilia-Romagna city, began including organic food in school canteens in 1994 as a pilot project. Today 90% of all the meals served in the city's nurseries, kindergartens and compulsory schools (amounting to a total expenditure of €1,440,000 per year) are organic.

In 2004 there were 608 "Mense bio" (educational establishments serving organic meals): 119 in Emilia-Romagna, 105 in Lombardia, 77 in Toscana, 69 in Veneto, 65 in Friuli V. G.; amounting to a total of 920,000 daily meals.

³⁶ See: <http://www.beschaffung-info.de>.

³⁷ Guidelines for the Environmentally Sound Organisation of Events during Germany's EU Council Presidency and G8 Presidency in 2007. Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Federal Environmental Agency (UBA), Germany, 2006.



4.5.7 The Netherlands

In the Netherlands the central government has committed to totally greening their procurement by 2010. Regional and local governments have also set targets (varying from 50 -100%). SenterNovem has developed GPP criteria for a number of product groups.

For catering services the minimum requirements are:

- 40% (in terms of budget spent) of products used must be organic (EU-label)
- If used at all (e.g. for reasons of food legislation) packaging should be made from recyclable materials or materials with a low environmental impact (e.g. paper).

Foundation Milieukeur (responsible for the Dutch national environmental label “Milieukeur”) has developed criteria for agriculture for almost all crops, arable products, trees, decorative plants and animal husbandry products.

4.5.8 United Kingdom

The UK Government Public Sector Food Procurement Initiative³⁸ helps to deliver the principle aims of the Government's Strategy for Sustainable Farming and Food in England.

The Public Sector Food Procurement Initiative's five priority objectives are to: 1) Raise production and process standards, 2) Increase tenders from small and local producers, 3) Increase the consumption of healthy and nutritious food, 4) Reduce the adverse environmental impacts of production and supply and 5) Increase the capacity of small and local suppliers to meet demand.

Other related environmental objectives include: increase the demand for organic food, reduce waste and improve the data collection and measurement of performance.

In the light of this Initiative, model specification clauses have been developed³⁹, based on the following guidelines:

- The procurement of organic food, integrated production food and animal products produced with high level welfare standards
- Clearly label any genetically modified products used, including the presence of any genetically modified ingredients used in the preparation of the food
- Develop menus that take advantage of seasonal products
- Menus have to be varied, healthy and nutritional, with a large amount of fruit and vegetables, and a pricing policy shall be in place to give an incentive for the selection of healthier options
- Use the energy and water provided by the Authority (on the basis of a metered supply or other arrangement). Invest in energy and water saving devices and equipment where this is economic to do so over the life of the contract and institute and maintain procedures to monitor and control the use of energy and water

³⁸ See: <http://www.defra.gov.uk/farm/policy/sustain/procurement/index.htm>.

³⁹ See: <http://www.defra.gov.uk/farm/policy/sustain/procurement/pdf/psfpi-clauses.pdf>.



- Replace hazardous substances with more benign substances, such as biodegradable cleaning products, solvent-free paints, products without HFCs, HCFCs, halons, etc.
- Reduce the amount of waste produced from meals not consumed and waste in general by: avoiding the use of disposable cutlery, plates and cups; serving milk, condiments and sauces in re-usable containers where it does not compromise food safety; and minimising packaging
- Segregate all waste generated in performing the contract
- Use recycled materials in the manufacture of crates, pallets, boxes, cartons, cushioning and forms of packaging, where these fulfil other packaging specifications and use packaging that is capable of recovery for further use or recycling
- Within []⁴⁰ months/year(s) implement an EMS that applies to the catering unit. The EMS will identify key impacts, method of management and reporting. The contractor shall provide performance indicators
- Help the Authority safeguard biodiversity by holding traditional food days at least []⁴¹ times a year to give consumers the opportunity to taste varieties of fruit and vegetables and meats from breeds of farm animals that are at risk of extinction because of the market's concentration on just a few commercial lines
- Monitor products and other aspects and provide reports to the Authority (at the intervals and in a format agreed with the Authority).

4.5.9 Conclusions

As can be observed, each country, region or city has developed its own criteria when purchasing food or contracting catering services. The only criterion proposed by all guidelines is the procurement of organic products. On other issues, they differ from one to the other but all of them aim to minimise the impacts identified in section 2, which will therefore be considered when proposing the criteria.

⁴⁰ The guidance leaves the length of time selected to the discretion of the contracting authority.

⁴¹ As above



5 Verification issues

The main environmental specifications recommended in the [Product Sheet](#) for the procurement of food or catering services are related to compliance with EU organic Regulations. As all foodstuffs labelled or sold as “organic products” must be produced in accordance with EC Regulation (EEC) No 2092/91 and from 1 January 2009 must be marked with the EU-logo for organic food except for imported food from third countries, verification of compliance is straightforward for contracting authorities.

For aquaculture products, according to the new EU Regulation, national rules or, in the absence thereof, private standards accepted or recognised by the Member States shall apply until detailed EU wide production rules are laid down.

Integrated Production products can be verified as such if they have been certified by a competent body - in most cases a national agency.

Where food consists of or contains GMOs this must be clearly indicated in the product label (for pre-packed products) or in the product display (for non pre-packed products). So the label of the product should serve as means of proof.

Where food derives from animals fed with GMOs, this labelling is not compulsory, so no information in that regard will be available.

As regards the use of vehicles with lower emission levels, the bidders or contractors will have to present the technical sheet or registration documents of the vehicles (see [Product Sheet on Transport](#)).

Restaurants/catering services that have been awarded the Nordic Swan ecolabel can present their certificate as means of proof for a series of criteria.

On the other hand, verification of additional specifications presented in the criteria regarding the environmental performance of catering services will have to be done taking into consideration environmental management systems or control during the execution of the contract as well as other appropriate documents.



6 Life-cycle costing considerations

In many cases, organic products are more expensive than conventional products. However, prices diverge depending on the demand and the availability. Thus, although the percentage of organic products in European markets has grown considerably in recent years, price and availability varies significantly by country and individual product group.

As far as organic vegetables are concerned, the largest markets in the EU are in Germany, France and the UK. These three are major importers of organic vegetables. On the other hand Spain, Italy and the Netherlands are major exporters of organic vegetables.

On November 2005, the European Commission reported⁴² that, on average, organic farming represented 3.6 % of the total Utilised Agricultural Area. The highest rates are found in Austria (9.7%), Italy (8.1%), Sweden (7.2%), Finland (7.1%), Greece (6.8%), Denmark (6.1%) and the Czech Republic (6.0%).

The same report shows that the highest shares of organic products sold on national markets were observed in Denmark (5%), Sweden (3%) and Germany (2.6%). At the opposite end, some other countries had very low organic shares of the total foods market with 0.1% or 0.2%. These were Spain, Greece, Portugal, Hungary and the Czech Republic.

Having this framework in mind it is easier to understand that the price differences between organic products and conventional products (what is usually known as price premium) alter very much from country to country and from product to product. For organic products, the typical price premium that consumers have to pay is about 50–60%⁴³. The Association of Hospitals in Vienna analysed the price increase that buying organic food could cause. The study concluded that if 50% of all purchased food was organic, prices would increase by 30%, while purchasing 100% organic milk, meat or vegetables would produce an increase of 10%, 15% or 25% respectively⁴⁴.

The EU study “Costs and Benefits of Green Public Procurement in Europe”⁴⁵ confirms that green versions of food products (defined as organically grown crops or adequate animal housing, fulfilling the IFOAM or EU standards) are more expensive than non-green versions. Nevertheless, for some products the real price differences per cup or per serving are quite low as the share of the costs of the (organic) raw product (e.g. coffee beans) as compared to the total selling costs of the end product (cup of coffee) would be far below 10% for both green and non-green versions. This means that if real costs were used, the green end product (cup of coffee) would be marginally more expensive than a non-green one.

⁴² European Commission Report: Organic farming in the European union facts and figures, November 2005.

⁴³ From Kristensen, N.H., Nielsen, T., Hansen, M.W., Hansen, A., Midmore, P., Padel, S., Seymour, C., Furum, S., LeFlock-Wadel, A., Hamm U. (2004): The value adding process along the supply chain for organic agriculture products.

⁴⁴ The Procura⁺ Manual. Ed by Simon Clement, Christoph Erdmenger, 2003.

⁴⁵ Costs and Benefits of Green Public Procurement in Europe. Part 1: Comparison of the Life Cycle Costs of Green and Non-green Products, Germany, 2007.



As the annex to the Communication from the European Commission on the European Action Plan for Organic Food and Farming (June 2004) shows, the reasons for this significant price difference are the higher costs related to organic production, both at production (farm) and distribution levels.

At the production (farm) level, the higher costs may be due to lower productivity or animal density, additional labour input, lower intensive specialisation and, of course, the costs of certification. The distribution chain of organic products also presents some characteristics that involve higher costs. Mainly, there is a lack of economies of scale: the small production volumes imply higher transport and distribution costs per unit, and there may be problems with continuity of supply or unsold products.

However, despite these differences in the availability, production and distribution between conventional and organic products, the inclusion of these products in public food services will not always imply a cost rise. There are some strategies to reduce the final cost of both direct purchases of organic foods as well as that of catering contracts using organic foods:

- Starting the process by including environmental criteria in a specific product group. The best choice would be selecting the products with the lowest price difference and highest availability in the area; and then later widening the range, when market developments may have reduced the price.
- Using the “price capping” mechanism: when the organic criteria are introduced as award criteria, the total weighting given to this criterion limits the price increase. E.g.: if organic products receive a maximum of 5 points from a total of 100 points, organic products would increase the price by a maximum of 5%. This is a useful approach when market conditions are uncertain, however, it does not guarantee the purchase of organic products (because the organic element is not set as a minimum requirement and therefore the offers may well not include any organic products).
- Modifying current catering practices can reduce the total cost: revising the menus, introducing seasonal food, joining purchases or services.
- The costs of catering services can be reduced by buying organic products directly from the producer, and thus saving the distribution costs.



7 Recommended criteria options

There are many different approaches to reducing the environmental impacts of food purchasing as outlined in section 2.

For authorities which **purchase food directly**, the main environmental impacts will be reduced through the purchase of organic products – these criteria therefore form the main part of the **Core** criteria.

Due to varying market conditions in different EU countries it is not possible to recommend a specific minimum percentage for different organic food types. It is advisable to carry out some market research/sounding to determine what percentage of organic foodstuffs can be ordered, without substantially increasing costs. This percentage can be gradually increased in future tenders. If the contracting authority is not sure of the purchase price of organic products, the use of the specifications as award criteria is also an option.

Packaging waste can also be relatively easily addressed by awarding points for the avoidance of, or for the minimisation of, individual packaging; promoting recycled content in packaging and guaranteeing its recyclability and separability.

Other aspects, such as the procurement of Integrated Production produce can also help to significantly reduce environmental impacts. These aspects are covered in the **Comprehensive** criteria. Animal welfare is also addressed here.

For authorities who **outsource** their catering needs for a regular service (such as school catering) or for events, the recommended criteria focus on the products used; waste minimisation and selective collection; minimisation of transport impacts and the training of staff.

Contract performance clauses for transport are especially relevant for permanent rather than one-off (event) services, whereas criteria for waste minimisation related to cutlery and other tableware will be of special relevance in one-off services.

In order to guarantee environmental protection, bidders should describe the actions and procedures that will be taken during the performance of the contract in order to incorporate environmental management measures.

If the contracting authority is not sure about actual prices of organic and integrated produced products, the assessment of such products can be done by using award criteria.

The full recommended criteria sets can be found in the [Product Sheet](#).



8 Information sources

8.1. European legislation

- **EU Regulation (EC) No 834/2007** on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2007/l_189/l_18920070720en00010023.pdf
- **EU Regulation (EEC) No 2092/91** of 24 June 1991 on organic production of agricultural products: <http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1991/R/01991R2092-20000527-en.pdf>
- **EU Regulation (EC) No. 1804/1999** of 19 July 1999 supplementing Regulation 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs to include livestock: <http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1999/R/01999R1804-19990824-en.pdf>
- **Regulation (EC) No. 1830/2003** concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_268/l_26820031018en00240028.pdf
- **Directive 94/62/CE** of 20 December 1994 on packaging and packaging waste: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994L0062:EN:HTML>

8.2. European related websites

http://ec.europa.eu/environment/gpp/food_products_and_beverages_en.htm

http://ec.europa.eu/food/index_en.htm

http://ec.europa.eu/agriculture/index_en.htm

http://ec.europa.eu/fisheries/index_en.htm

8.3. Studies and other information sources

- Environmental Impact Of PROducts (EIPRO). Analysis of the life-cycle environmental impacts related to the final consumption of the EU-25, IPTS/ESTO project, May 2006: http://ec.europa.eu/environment/ipp/pdf/eipro_report.pdf
- Integrated crop management systems in the EU. Amended Final Report for European Commission DG Environment Submitted, Agra CEAS Consulting, May 2002: http://ec.europa.eu/environment/agriculture/pdf/icm_finalreport.pdf
- Joint Research Centre, Institute for Environment and Sustainability, Land Management & Natural Hazards Unit: <http://eusoiils.jrc.it/documents.html>
- The Procura⁺ Manual - A guide to cost-effective sustainable public procurement, ICLEI. 2007: http://www.procuraplus.org/fileadmin/template/projects/procuraplus/New_website/Printed_Manual/Procura_Manual_complete.pdf



- Specification for a more sustainable “Meals on Wheels Contract”, London Centre of Excellence, UK:
<http://www.lcpe.gov.uk/Library/Sustainable/Meals%20on%20Wheels%20Tendering%20Toolkit.pdf>
- Briefing: Re-localising food procurement, Friends of the Earth (Northern Ireland), 2003:
http://www.foe.co.uk/resource/briefings/relocalising_food_procurement.pdf
- Food and Agriculture Organization of the United Nations (FAO): www.fao.org
- Worldwatch Institute: www.worldwatch.org
- Study on costs/benefits of Green Public Procurement in Europe, Öko-Institut & ICLEI 2007, available at: http://ec.europa.eu/environment/gpp/index_en.htm
- Integrated Pollution Prevention and Control (IPPC) - Reference Document on Best Available Techniques in the Food, Drink and Milk Industries (BREF report):
<http://eippcb.jrc.es/pages/FActivities.htm>
- Guidelines for the Environmentally Sound Organisation of Events during Germany’s EU Council Presidency and G8 Presidency in 2007, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Federal Environmental Agency (UBA), Germany, 2006: <http://www.umweltdaten.de/publikationen/fpdf-l/3035.pdf>