

**EU Ecolabel for food and feed products –  
feasibility study  
(ENV.C.1/ETU/2010/0025)**

Sustainable products and services  
Clean technologies  
Resource efficiency



**GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN**

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## Glossary

ADEME	Agence de l'Environnement et de la Maîtrise de l'Energie
AFNOR	Association Française de Normalisation
CAP	Common Agricultural Policy
CIAA	(now FoodDrinkEurope)
DG Agri	Directorate-General for Agriculture and Rural Development
DG Mare	Directorate-General for Maritime Affairs and Fisheries
EEA	European Environment Agency
EIPRO	Environmental Impacts of Products (study)
EPA	Environment Protection Agency
FiBL	Research Institute of Organic Agriculture (Forschungsinstitut für Biologischen Landbau)
GHG	Greenhouse gases
GMO	Genetically modified organism
GPP	Green Public Procurement
GWP	Greenhouse warming potential
HDI	Human Development Index
HDPE	high-density poly-ethylene
IFOAM	International Federation of Organic Agriculture Movements
IPPC	Integrated Pollution Prevention and Control
IPTS	Institute for Prospective Technological Studies
JRC IES	Joint Research Centre Institute for Environment and Sustainability
LCA	Lifecycle assessment
MSC	Marine Stewardship Council
N <sub>2</sub> O	nitrogen dioxide
NGO	Non-Governmental Organisation
ODP	Ozone Depletion Potential
SCOF	Standing Committee on Organic Farming
SCP RT	Sustainable Consumption and Production Round Table
SME	Small to medium-sized enterprise
w.r.t.	with respect to
WTO	World Trade Organisation

Units Conventional SI units and prefixes used throughout: {k, kilo, 1000} {M, mega, 1,000,000} {G, giga, 10<sup>9</sup>} {kg, kilogramme, unit mass} {t, metric tonne, 1,000 kg}

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# 1 Executive summary

## Why this feasibility study?

The environmental impacts of the production and processing of food, feed and drinks make up between 20% and 30% of the total environmental impacts of consumable goods in the EU. In the case of eutrophication (the accumulation of nutrients in water causing a reduction in oxygen availability) they account for as much as 58% of the total impacts.

The EU Ecolabel is a voluntary scheme that forms part of overall EU policy to encourage more sustainable consumption and production. To date, the EU Ecolabel scheme has developed criteria for products in the non-food sector. The Regulation that governs the scheme (66/2010) aims to extend the EU Ecolabel into new product categories including food. However, the Regulation stipulates that before extending to the food sector, a feasibility study should be undertaken.

## Objectives

This feasibility study has three objectives:

1. To assess the feasibility of establishing reliable EU Ecolabel criteria covering the environmental performance of food, feed and drinks products throughout their whole lifecycle.
2. To assess the impact and the added value of establishing these EU Ecolabel criteria and implementing the scheme in the various sectors, and the impact this could have on organically certified products (including the risk of consumer confusion).
3. To evaluate the option of limiting the scope of the EU Ecolabel for food, feed and drinks products to organically certified products only.

The study has been undertaken by a consortium of three organisations led by Oakdene Hollins together with the Research Institute of Organic Agriculture (FiBL) and the University of Göttingen.

## Our approach

The approach undertaken to fulfil these objectives consisted of:

1. A literature review of the significant environmental impacts of food, feed and drink products by category and where in their lifecycle the main impacts occur.
2. A literature review to establish the labelling landscape and to identify any environmental impacts that are not being adequately covered either in terms of criteria, lifecycle stage, product groups or in terms of market penetration.
3. A survey of consumers in four member states (Czech Republic, Spain, the UK and Germany) to assess their perceptions and reactions to an EU Ecolabel on food and drinks products and the extent of any potential confusion with existing organic labels.
4. A survey of stakeholders followed by a workshop that included retailers, farming organisations, food, feed and drinks producers and processors, policy makers, consumer and environmental NGOs to assess their perceptions and reactions to an EU Ecolabel on food and drinks products and the degree of potential confusion with existing organic labels and potential conflicts with legally protected terms by the EC Regulation 834/2007 for organic production.

We also developed a number of scenarios to further explore these issues with the stakeholder community. These scenarios were:

- no EU Ecolabel at all for food, feed and drinks products
- the use of EU Ecolabel for organic products only
- an EU Ecolabel which included both organic and non-organic products
- limiting the EU Ecolabel to products not covered by organic labels
- an EU Ecolabel which focussed on environmental hotspots not covered by the organic label, such as the eating-out sector or animal feeds.

**Findings:**

Finding 1: The 'extraction of resources' or the primary production stage (agriculture, fisheries) is responsible for most of the significant environmental impacts of food, feed and drink products over their lifecycle, although this can vary between product categories. However, those impacts that are not easily measured (e.g. biodiversity loss, landscape pollution, soil fertility) cannot easily be included in a ranking of environmental impacts. The same is true for ethical or social issues (animal welfare, labour standards, and fair producer prices).

Finding 2: The extent of the environmental impact of food, drinks and feed products in the "extraction of resources" stage of their lifecycle results from an interaction between the practice employed and the place where the practice takes place because of the use of physical elements (land, water etc). Therefore, our overview of studies on the environmental impacts of food, feed and drink products over their lifecycle stages using the current body of literature can only provide a general picture. For a particular product, on a specific site employing specific production technologies the actual environmental impacts may differ significantly.

Finding 3: We found a gap in the labelling landscape which may present an opportunity for an EU Ecolabel. Even though environmental impacts may vary between product categories and lifecycle stages, most labels currently only concentrate on the environmental impacts of primary production and not, or only to a limited extent, the processing lifecycle stage. Therefore a focus on highly processed products would play to the strength of the EU Ecolabel (its lifecycle approach) by covering the environmental impacts of processing, transport and consumption, while the environmental impacts of primary production could be dealt with by cooperating with existing sufficiently strict agri/fishery labelling schemes. However the risk of a switch from existing labels to an EU Ecolabel cannot be discounted and this may lead to no net environmental impact if the criteria used are not significantly different.

Finding 4: Existing environmental food labels mainly employ input- or practice-based criteria, i.e. prescribing or banning certain defined practices in the production process. The disadvantages of such criteria are that they can lead to a shift of environmental burdens when practices or ingredients are substituted as well as hampering innovation. Output-based criteria can be more economically efficient and provide a transparent link with environmentally positive results. A number of initiatives are underway at the European level to develop environmental footprinting tools and multi-criteria methodologies and these may, in the future, provide the basis for developing more output based criteria for food, feed and drinks products. They will not be without challenges, in terms of the cost of assessment and the need for co-operation and openness between market actors throughout the supply chain.



Finding 5: A key finding from the consumer survey and workshop with stakeholders was that an environmental label for food, feed and drink products is expected to cover, not only environmental issues but also social and ethical issues such as fair remuneration for producers and animal welfare. The consumer survey revealed that animal welfare is an especially important factor in respect of meat and dairy products. Dealing with the interaction of animal welfare criteria with environmental protection criteria would be challenging. For example the intensification of animal rearing may reduce energy inputs but adversely affect the welfare of animals concerned.

Finding 6: In terms of implementing an EU Ecolabel for food, drinks and feed, the complexity of developing criteria and then verifying compliance should not be underestimated, based on the experience of existing organic (EU) and non-organic food certification schemes (SMK). This would also require a level of expertise that is not currently present in the national competent bodies charged with the administration of the EU Ecolabel scheme. Furthermore the process of multi-criteria assessment and verification is likely to be resource intensive. The costs involved could not be met from the current licence fees as these are limited by the EU Ecolabel Regulation. It is also important to recognise the costs of application, which may be particularly burdensome for SMEs.

Finding 7: The consumer survey revealed that labels are seen as valuable tools in making purchasing decisions and the majority of respondents, when presented with a choice, indicated a preference for a product that was both EU Ecolabelled and organically labelled. However, many respondents reported that they felt confused. This is exacerbated by the fact that the term “eco” (including similar derivatives) is used in connection with organically produced foods in many jurisdictions and associated with other meanings (e.g. resource efficiency) in others. When consumers were asked which environmental impacts a possible EU Ecolabel should cover, many issues were raised that were already covered by organically certified produce (e.g. animal welfare, no use of chemical pesticides, no artificial fertilizers, no GMO, low number of additives). Unsurprisingly, many consumers expected a product with an EU Ecolabel to be organically produced. In addition the use of the word “eco” is legally protected in the EU and therefore there may be some difficulty in using it within the logo ‘EU Ecolabel’ when it is placed on food products which are not organically produced. It should be noted that consumer confusion was lessened once respondents were provided with more information about the EU Ecolabel. This would suggest a significantly resourced communications campaign would need to accompany any extension of the EU Ecolabel to the food, drinks and feed sector.

Finding 8: Half of the stakeholders surveyed for this study supported an EU Ecolabel for food, drinks and feed products in one way or another, whereas the other half was against the use of such an Ecolabel at all. Moreover, we found that there was no scenario for which there was strong support. However a significant share of processors and retailers expected a positive effect and would thus form the target stakeholder group of a potential EU Ecolabel for food, feed and drink products. More importantly, there were a number of stakeholder groups who were clearly opposed to any scenario that included the introduction of the EU Ecolabel. These groups were food and drink umbrella organisations, farmers’ groups, the organic sector and environmental and consumer NGOs and administrations. Their reasons varied but mainly concerned the expected consumer confusion of an EU Ecolabel with organic labels and resulting adverse effects on the credibility of the organic label and its market share.

## Recommendations

The opportunity to extend the EU Ecolabel to food, feed and drink products will depend on:

- Development of a credible multi-criteria overall outcome based assessment system for primary production – this does not currently exist.
- Clarifying the legality of using the current Ecolabel and the term “eco” in respect of food, feed and drink products.
- If extended to non-organic products: finding solutions to avoid consumer confusion (e.g. a distinct label) – this may involve an extensive consumer communication campaign.
- An economic assessment of the full public and private costs of implementing the EU Ecolabel scheme (the costs for a consumer awareness/education campaign and costs for operators etc).

If these issues are resolved, possible candidate product categories for extending the EU Ecolabel to food, feed and drink products could be:

- yoghurt and cheese
- bread
- non-alcoholic beverages and
- processed fish.

At the present time, we recommend a combined approach. While clarifying the open issues, promote a discussion on the feasibility and potential of alternative options (e.g. including the option of extending the organic label to cover the environmental impacts of processing).

## 2 Introduction

### 2.1 Objectives

In December 2010 Oakdene Hollins, the Research Institute of Organic Agriculture (FiBL), and the University of Göttingen were commissioned by DG Environment of the European Commission to undertake a feasibility study into extending the EU Ecolabel to food and feed products (ENV.C.1/ETU/2010/0025).

The objectives of the study were to:

- Assess the feasibility of establishing reliable EU Ecolabel criteria covering the environmental performance of food, feed and drinks products throughout their whole lifecycle.
- Assess the impact and the added value of establishing these EU Ecolabel criteria and implementing the scheme in the various sectors.
- Evaluate the option of limiting the scope of the EU Ecolabel for food feed and drinks products to organically certified products only.

Meeting these objectives would allow recommendations to be made to the Commission as to which groups of products (if any) are particularly suitable for the EU Ecolabelling scheme and the potential benefits and risks which need to be considered and the next steps to be taken.

### 2.2 Background

The EU Ecolabel is a voluntary ISO Type I environmental label, i.e. independent of the manufacturer and producer. Initially established in 1992, its aim is to:

- decrease the environmental impacts of products throughout their lifecycle
- promote the resource efficiency of industrial production
- enable consumers to make informed decisions based on a product's environmental performance.

The award of an EU Ecolabel to a product is denoted by use of the following logo:



However, the scheme has had difficulty in terms of market penetration and, following a review, the scheme was revised in 2009/10 and a new Regulation<sup>a</sup> was published. Its objectives were to:

- streamline the way in which eligibility criteria are developed by focusing on the most significant environmental impacts throughout the product/service lifecycle, whilst maintaining a market orientation
- ensure that the top 10% to 20% environmental performers on the market could meet the criteria
- reduce the cost of the scheme by limiting the application and ongoing licence fees
- broaden its scope to possibly include food (hence this feasibility study).

The Ecolabel scheme is an important component of the EU's Sustainable Consumption and Production Action Plan<sup>b</sup> adopted by the Commission on 16 July 2008, complementing the Ecodesign Directive by providing a best practice benchmark and integrating with the Green Public Procurement (GPP) agenda.

<sup>a</sup> EU (2010) *EU Regulation 66/2010 on the EU Ecolabel*

<sup>b</sup> EC (2008) *On the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan*, COM(2008) 397 final, European Commission

The current market context for the EU Ecolabel is characterised by:

- A high degree of consumer interest and awareness of environmental issues. This is confirmed in, for example, the 2009 Eurobarometer survey<sup>a</sup> which indicated that more than 8 out of 10 Europeans felt that a product's environmental impact was an important factor in deciding which products to buy. However, awareness of the EU Ecolabel was variable and only 19% had bought a product bearing the EU Ecolabel.
- An increasing proliferation of ecolabels. Many of these relate to single issues, which can be difficult for consumers to prioritise.

The food and drink market exemplifies these issues (for example the use of multiple organic labels) and therefore there appears to be an opportunity for the EU Ecolabel to meet stakeholder demands for assurance to consumers that, on the basis of scientific evidence and analysis, the most significant environmental impacts are minimised across a products' lifecycle, rather than just one aspect of that product.

To achieve the objectives of the project, we have developed an integrated approach to determine the environmental aspects of extending the EU Ecolabel to food, while taking into account the potential impact on the consumer and on different stakeholders.

## 2.3 Approach

The food, feed and drink sectors have complex supply chains, many stakeholders and a great variability in consumer preferences. The impact, added value and feasibility of introducing a new environmental labelling scheme in these sectors are therefore not easily determined.

To understand the place of the EU Ecolabel in relation to existing labelling schemes, and the environmental impacts of food, feed and drinks, a desktop study of the relevant literature was performed. The results of the desktop study were used to support the frameworks for analyses in this report.

<sup>a</sup> The Gallup Organisation (2009) *Europeans' attitudes towards the issue of sustainable consumption and production*, EC DG Environment

To understand the position of consumers and different stakeholders, primary research was conducted. This research consisted of a consumer survey in four countries and a stakeholder survey and workshop.

### 2.3.1 Desktop study

To obtain a more in-depth understanding of the environmental impact of food, feed and drink product groups over their lifecycle stages, over 300 studies - which were a mixture of peer reviewed articles and studies from the body of grey literature on the subject - were reviewed to identify the most significant environmental impacts in the different lifecycle stages for each product category. Additionally, reviews and reports were analysed to capture the environmental aspects and impacts not included within conventional LCAs on food, feed and drink products.

### 2.3.2 Consumer survey

The consumer survey had three main objectives:

- To identify the influencing factors in the purchasing decision when consumers are confronted with products bearing environmental labels.
- To analyse the risk of confusing the consumer when presented with a choice between products labelled as organic and labelled with the EU Ecolabel.
- To understand the potential market relevance of an EU Ecolabel in comparison with an organic label. This was analysed by use of a preference test of products with different labels.

The survey was conducted in four different countries which were selected for the following reasons:

- Different stages of organic market development.
- Use of different terms in different languages for organically certified agricultural produce (see Table 1), as it was hypothesized that using a term containing "eco" for organic products could increase the risk of consumer confusion in the event of introducing an EU Ecolabel.
- Different food and food labelling traditions i.e. Western European, Central-Eastern and Mediterranean regions.

Table 1 summarises the rationale for choosing the Czech Republic (CZ), Germany (DE), Spain (ES) and United Kingdom (UK) and indicates the hypothesized risk of confusion in each of these countries.

Table 1: Overview of selected countries

Country	Development stage of organic market	Translation of the term "organic" in respect of foods
Czech Republic	Emerging	ekologické
Germany	Mature	ökologisch biologisch
Spain	Emerging	ecológico biológico orgánico
United Kingdom	Mature	Organic

Source: own

The product groups chosen, the degree of processing and the market penetration of organically certified products, were expected to influence the preference for a particular type of label for consumers. Taking these factors into account, we included the following products in the consumer survey (Table 2).

Table 2: Overview of selected products

Presence of organic products in the market	Processed products	Unprocessed products
High presence	Cheese	Apple
Low presence	Fish fingers	Beef

Source: own

There were 1,180 responses to the consumer survey, with nearly 300 respondents from each country. The respondents were categorised according to a number of socio-demographic indicators including gender, income and household size. Furthermore, they were asked to rank their environmental awareness, indicate the nature of their purchasing behaviour in respect of organic products and to what extent they were familiar with the EU Ecolabel as well as their national organic labels.

Factor analysis and regression analysis were used to identify the main factors influencing potential consumer confusion.

In order to see whether provision of more information about the EU Ecolabel scheme could decrease the risk of confusing the consumer with different environmental claims, the study sample was split; half of the respondents were provided with background information about the EU Ecolabel, the other half were not.

### 2.3.3 Stakeholder survey and workshop

The specific objectives of the market actors' survey and the stakeholder workshop were to understand their general perception of an EU Ecolabel for food, feed and drink and the potential synergies and conflicts with other labels (in particular the organic label).

The survey was conducted using a questionnaire over the web and the stakeholder workshop was hosted by DG Environment in Brussels.

The questionnaire was structured as follows (see detailed questionnaire in the Annex):

1. Collection of general information about the respondents.
2. Assessment of the respondents' general opinion on the feasibility of introducing the EU Ecolabel in the food and feed sector and the associated benefits and risks.
3. Evaluation of their perception of the risk of consumer confusion between the EU Ecolabel and existing organic labels.
4. Evaluation of their perception of the potential for added value.
5. Selection of three scenarios from a list of nine possible scenarios regarding the introduction of the EU Ecolabel in the food, feed and drink sector. By limiting the choice to a maximum of three scenarios, the participants in the survey were encouraged to clearly identify their preferences.

The survey was focussed on market and policy actors from four countries: the Czech Republic, Germany, Spain and the United Kingdom. Additionally, market and policy actors operating at a Europe-wide level were included in the survey.

The aim of the consultation was to ensure that at least three major stakeholder groups were included:

- food processors, retailers and wholesalers as well as farmer organisations
- trade associations of food processors and retailers, processor umbrella organisations; both for the food and drink industry and for non-governmental environmental and consumer organisations.
- national and EU governmental bodies.

Table 3 shows the types and number of actors who took part in the survey (a detailed list of the participating market actors, organisations and institutions is found in the Annex 4).

The stakeholder workshop was attended by 20 participants operating at the European level including representatives from industry (retailers and processor and their umbrella organisations from the organic and non-organic sector), NGOs (consumer and environmental umbrella organization), EU Ecolabel public bodies and Certification Bodies. In addition, five members from different DGs of the European Commission took part. The results from this workshop were used to analyse and develop the findings from the stakeholder survey.

*Table 3: Actors in the stakeholder survey*

Type of actor	Number of respondents <sup>1</sup>
Food and drink processors	28
Food and drink umbrella organizations, labelling and certification organizations (other than Ecolabel organizations)	22
Feed processors and feed retailers	3
Food and drink retailer, wholesaler and retailer umbrella organizations	14
Farmers' associations	11
Public administration other than Ecolabel Competent Bodies (respondents related to agriculture, fishery, health, consumers, environment or sustainability)	11
Ecolabel Competent Bodies	30
SCOF representatives	8
Consumer and environmental NGOs	10
Others (experts from research institutes)	2

*Source: own illustration based on the actors' survey*

<sup>1</sup>*n=113; multiple answers were possible, therefore the sum of respondents per category is higher than the total number of survey respondents*

## 3 Identifying significant environmental impacts for food, feed and drink products throughout their whole lifecycle

### 3.1 Introduction

#### 3.1.1 Objectives

The production, distribution, consumption and disposal of food, feed and drink products has significant environmental impacts throughout the biosphere. Under pressure from the public, interested NGOs and concerned businesses, controversies about the environmental impacts of food (e.g. local food, climate change, vegetarian diet, overfishing, etc.) are now not only debated in academia, but have also entered the public policy arena.

The EU Ecolabel is a voluntary ecolabel award scheme intended to promote products which have a reduced environmental impact during their entire lifecycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of products. In setting criteria for product categories, the EU Ecolabel Regulation<sup>a</sup> requires consideration of:

*(a) “the most significant environmental impacts, in particular the impact on climate change, the impact on nature and biodiversity, energy and resource consumption, generation of waste, emissions to all environmental media, pollution through physical effects and use and release of hazardous substances;”*

Of particular relevance to the food and drinks sectors, because of the presence of organic and fair trade labels which place emphasis on social and ethical issues, the EU Ecolabel Regulation also states that:

*(e) “Where appropriate, social and ethical aspects, e.g. by making reference to related international conventions and agreements such as relevant ILO standards and codes of conduct”*

This study has also taken into account the following other considerations, which are set out in the EU Ecolabel Regulation:

*(b) Substitution of hazardous substances by safer substances, via the use of alternative materials or designs, wherever it is technically feasible;*

*(c) The potential to reduce environmental impact due to durability and reusability of products;*

*(d) The net environmental balance between the environmental benefits and burdens, including health and safety aspects, at various lifecycle stages of the products;*

#### 3.1.2 Working definition of product categories and product groups

For the purposes of this study, a working definition of the food, feed and drinks product group had to be developed in order to:

- allow an analysis of the feasibility of establishing reliable criteria in different product categories and product groups within these categories
- identify a relevant dataset which can be used to identify hot-spots in environmental performance to enable product groups to be prioritised.

Product categories can be defined in terms of their basic functionality. The EU Ecolabel Regulation states that a product group is a set of products that serve similar purposes and are similar in terms of use, or have similar functional properties, and are similar in terms of consumer perception.<sup>b</sup>

The functional characteristics of food, feed and drink products are to provide nutrition or hydration or both. However, any one foodstuff provides only partial nutrition, because a diverse range of nutritious compounds are vital to live

<sup>a</sup> EU (2010) EU Regulation 66/2010 on the EU Ecolabel, Article 6, 3a-e

<sup>b</sup> EU (2010) EU Regulation 66/2010 on the EU Ecolabel

healthily. Because of this, consumers cannot simply choose to buy a particular kind of foodstuff with the lowest environmental impact without potentially compromising their health, as one product cannot perform the nutritional function on its own. Therefore the product categories selected should take into account the kind of nutrition different food products provide, to make sure that consumer choice cannot be skewed to an imbalanced diet because of labelling decisions between product categories.

The COICOP<sup>a</sup> categorisation of the food and drink sector provides a consumer-oriented functional categorization of food and drinks products, and has also successfully been used in earlier studies on the environmental impacts of food for the European Commission, such as the EIPRO study.<sup>b</sup> We have made a number of adaptations to the COICOP classifications to arrive at a suitable categorisation of food, feed and drink products for the purpose of this study:

- tobacco and narcotics were eliminated as they do not have the functional characteristic of providing nutrition or hydration
- feed as a category was added
- fruit and vegetables are combined because of their similarity in terms of use and production
- all drinks that reach the consumer in a liquid state have been placed in one category
- tea and coffee differ significantly from other beverages as they are mostly sold as solids (powder, beans, and bags) and have their own category.

We have therefore categorised food, feed and drinks as follows (Table 4):

Table 4: Product categories

Bread and cereals	Milk, cheese and eggs
Fruits and vegetables	Vegetable oil
Beverages	Tea and coffee
Sugar, jam, honey, chocolate and confectionery	Meat
	Ready meals
Fish and seafood	Feed

Source: Oakdene Hollins

The eleven product categories of food, feed and drink products shown above serve as a framework for assessing the feasibility of establishing reliable Ecolabel criteria for potential product groups within each category.

### 3.2 The aggregate environmental impacts of food, feed and drink products

In 2006 the Institute for Prospective Technological Studies (IPTS) published its report on the Environmental Impacts of Products (EIPRO).<sup>c</sup> The study identifies products with significant environmental impacts according to eight environmental impact criteria.

Table 5: Environmental impact categories covered by EIPRO

Eutrophication	Acidification
Abiotic depletion	Global warming potential
Ozone layer depletion potential	Photochemical oxidation
Human toxicity	Eco-toxicity

Source: Oakdene Hollins

From the EIPRO data it is clear that the share of total environmental impacts that can be linked to the consumption of food, feed and drink products is generally significant, ranging between 20% and 30% for most environmental impact categories, though as high as 58% for some specific impact categories (such as eutrophication). In an analysis of the EIPRO dataset by the project group, the different impacts for all of the food categories relevant to this study were ranked according to overall impact.

<sup>a</sup> UN, COICOP: Classification of Individual Consumption According to Purpose available at <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=5> [accessed 08.01.2011]

<sup>b</sup> Tukker A. et al. (2006) *Environmental Impact of Products (EIPRO) Annex report*. JRC European Commission IPTS, ESTO.

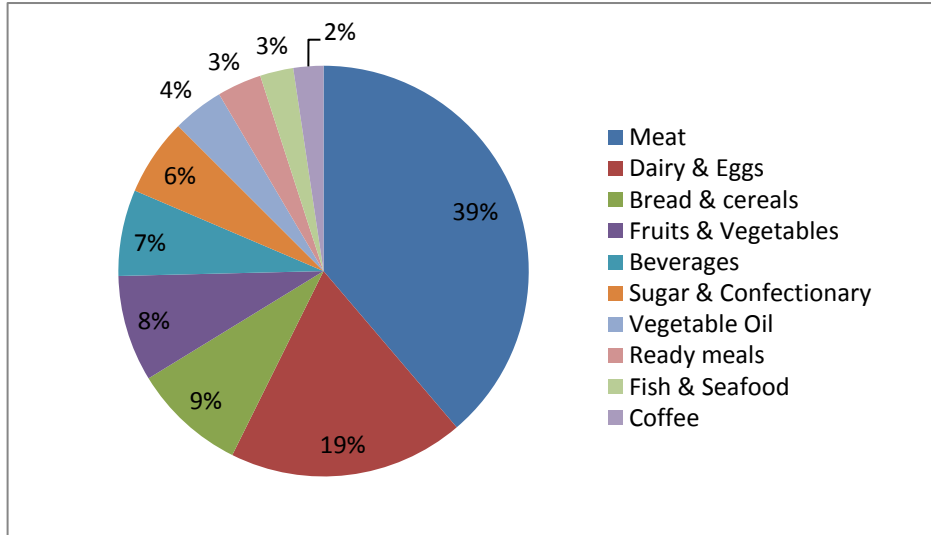
<sup>c</sup> Tukker A. et al. (2006) *Environmental Impact of Products (EIPRO)*. JRC European Commission IPTS, ESTO.



The results of the analysis (Figure 1) reveal that meat production has the highest overall impact on the environment for many of the impact categories, while fish and seafood are ranked lowest on most impacts. The food categories that thereafter score high in terms of these eight impact categories are dairy & eggs, bread

& cereals, fruits & vegetables and beverages. It should be noted that the low environmental impact assigned to fish and seafood is an artefact of the methodology. The EIPRO study does not capture all environmental impacts: for example, in this case the effect on biotic resources (e.g. fish stocks) is not included.

Figure 1: Share of environmental impact of food products according to EIPRO



Source: Oakdene Hollins based on EIPRO study

Note: The category 'feed' has been excluded as feed consumption by consumer is only marginal. Most feed is consumed indirectly via the consumption of animal products (meat, dairy, eggs) and its effects are included in those categories.

However, the foregoing analysis suffers from a number of significant drawbacks. Firstly, environmental impacts that are not easily quantified (e.g. biodiversity loss, landscape pollution, soil fertility) are not easily included in a ranking to determine the most significant environmental impacts of food, feed and drink products over their lifecycle. The same is true for ethical or social issues (animal welfare, labour standards, and fair producer prices). The most important issues largely missing in this overview are summarized in Table 6.

Table 6: Impact categories missing in the EIPRO data set

<b>Fish stock depletion</b>	<b>Landscape pollution</b>
<b>Soil fertility</b>	<b>Wildlife protection</b>
<b>Deforestation</b>	<b>Animal welfare</b>
<b>Water usage</b>	<b>Biodiversity</b>

Source: Oakdene Hollins, FiBL

Additionally, because large differences in environmental impacts exist for the same type of products depending on the type of agricultural production (organic, integrated, conventional), the processing techniques,

modes and distances of transportation, and the way the food is finally consumed, any overview of studies on the environmental impacts of food, feed and drink products over their lifecycle stages using the current body of literature can only provide a general picture. Between specific sites employing different production technologies the actual environmental impacts may differ significantly.

Therefore, even though this overview offers guidance for the analysis in the remainder of the study, its results need to be complemented with a more detailed analysis describing a larger variety of impacts and with more complete information on the distribution of the impacts over each stage of the product's lifecycle. A more general analysis of the environmental hot spots of food production was therefore undertaken.

### 3.3 Environmental hot spots in food, feed and drinks in different stages of the lifecycle

The standards document ISO 14024 for Type I Ecolabelling sets out the lifecycle stages that should be considered in criteria setting:

*“Lifecycle stages to be taken into account when developing the product environmental criteria should include: extraction of resources, manufacturing, distribution, use and disposal relating to relevant cross-media environmental indicators.”<sup>a</sup>*

Our literature review has been structured to reflect the lifecycle of food, feed and drink products. The consumer stage is included in our review to ensure that the environmental impacts of use and disposal are considered.

#### 3.3.1 Primary production

Agriculture and cultivation is typically responsible for over 90% of eutrophication and about 50% of greenhouse gas (GHG) emissions during the lifecycle of most food products. It is also the stage most damaging to biodiversity through emission of toxic chemicals to ecosystems. For some products, especially meat and dairy, these impacts are so large that the impact of subsequent lifecycle stages is largely insignificant. If the processing is very intense (e.g. some cheeses) or if the impact of the agricultural stage is lower than average (e.g. fruit and vegetables) then the impact of other lifecycle stages becomes more important.<sup>b</sup> One example is the role of transport. Whilst long distance transport has been found to contribute significantly to the energy use and global warming potential (GWP) of apples<sup>c</sup>, it is not significant for meat. Agricultural production not only dominates the impact categories captured by LCAs, but also other impacts, such as

<sup>a</sup> ISO (2001) *Environmental labels and declarations Type I environmental labelling Principles and procedures (ISO 14024:1999)*, Edition: 2001-02-01, Article 5.4

<sup>b</sup> Foster C. et al. (2006) *Environmental Impacts of Food Production and Consumption*. Defra Science and Research Projects. [Online] 2006. [accessed 24-3-2011]  
<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14071>

<sup>c</sup> Jones A. (2002) *An Environmental Assessment of Food Supply Chains: A Case Study on Dessert Apples*. Environmental Management, Vol. 30-4, pp.560-576.

biodiversity, soil fertility and landscape. Animal welfare is another relevant impact of primary production, even though it is an ethical - not an environmental consideration. For fisheries, the impact of the primary production stage is thought to be between 70% and 95% of the total impact.<sup>d</sup>

#### 3.3.2 Processing

From a lifecycle perspective the processing of foods can generate significant environmental impacts<sup>e</sup>, though they are usually less than those from primary production. Examples of significant environmental impacts or critical issues arising from processing are given below in Table 7:

Table 7: Examples of significant environmental impacts from processing

Category	Environmental impacts	
<b>Global Warming Potential</b>	Cereals: baking of bread, preparation of pasta Dairy: butter, yoghurt, cheese, ice cream Fruits & vegetables: chips	Sugar & confectionery: sugar beet/sugar cane Meat: beef, pork, poultry Fish & seafood
<b>Water use</b>	Dairy: milk, cheese Meat: poultry	Sugar & confectionery: sugar beet/sugar cane
<b>Waste</b>	Fish & seafood: solid waste and waste water	
<b>Non-renewable resources</b>	Cereals: baking of bread, preparation of pasta Dairy: butter, yoghurt, cheese, ice cream Fruits & vegetables: chips	Meat: beef, pork, poultry Fish & seafood
<b>Animal welfare</b>	Meat: beef, pork, poultry	Fish: especially aquaculture

Source: Oakdene Hollins

Additionally, the use of hazardous chemicals – not only during processing, but also in disinfection and cleaning operations can have environmental impacts. Waste from processing is also an important issue not only because of its direct environmental impacts, depending on the

<sup>d</sup> Thrane M. (2004) *Environmental Impacts from Danish Fish Products* PhD dissertation (main report). Aalborg University, Dept of Development and Planning

<sup>e</sup> Poritosh R. et al. (2009) *A review of lifecycle assessment (LCA) on some food products* Journal of Food Engineering Vol 90, 1, pp.1-10.

route of disposal, but also because of the embedded environmental impacts from upstream processes.

### 3.3.3 Transport

Due to the generally high environmental impacts of the primary production phase the impacts of transport are generally comparatively low, but can become significant when the mode of transport has particularly high emissions (air freight), or where the environmental impacts of the upstream stages are particularly low. Examples may be fresh produce, e.g. fruits or vegetables. These can have significantly lower environmental impacts if they are not transported and can be produced locally (provided no heated greenhouses have to be employed). Another example is bottled water, which has a negligible environmental impact in the processing stage and whose overall impact is therefore dominated by transport and packaging.

Animal welfare is an important issue if live animals are being transported.

### 3.3.4 Packaging

The situation in respect of packaging is similar to transport – in most cases the impact of packaging is not significant relative to the primary production, consumption and processing lifecycle stages. This may seem surprising given the prominent role of food packaging waste.<sup>a</sup> For example, in the UK approximately half of the packaging waste (5 million tonnes per year) is from food and drink products.<sup>b</sup> Another survey in the UK showed that ca.5% of the average weight of a shopping basket is packaging.<sup>c</sup> However, investigating the environmental impacts due to the production, use and disposal of packaging leads to comparatively low and overall insignificant impacts relative to the impacts of primary production and processing.

<sup>a</sup> EMA EDS (2007) *Shopping Choices – Attraction or Distraction?* for IGD

<sup>b</sup> LGA Analysis and Research (2009) *War on Waste – Summary - food packaging study: wave 3*

<sup>c</sup> Local Government Association *Food packaging basket* [Online accessed: 12-1-2011] <http://www.lga.gov.uk/lga/aio/1616668>

One of the main exceptions is the packaging of beverages. In the most extreme case of bottled water, transport and packaging make up most of the environmental impacts. But even for milk, using packaging in high density polyethylene (HDPE) containers is responsible for one third of the energy use over the lifecycle.<sup>d</sup>

Most importantly, besides being a source of environmental impacts, packaging can also contribute to a reduction of impacts. This is due to its role in preserving the product and thus avoiding wastage, especially in developing countries<sup>e</sup>:

*“Losses at almost every stage of the food chain may be reduced by using appropriate packaging. [...] The global food packaging industry has a lot to contribute not only in addressing food losses but also in ensuring food safety as well as enhancing global food trade, which is a key to economic development of varying economies.”*

### 3.3.5 Retail

The direct environmental impacts of retailing are generally due to energy use and associated greenhouse gas emissions. Studies of the impacts of various lifecycle stages yielded the following general results<sup>f</sup>:

- for non-frozen goods typically less than 5% of energy consumption and associated greenhouse gas emissions is due to the retailer stage
- for frozen goods the impact of retail can become significant, especially for vegetables and fruits.<sup>g</sup>

Food waste within the retail sector is another important issue: According to a study by the

<sup>d</sup> Foster C. et al. (2007) *The Environmental, Social and Economic Impacts Associated with Liquid Milk Consumption in the UK and its Production*, Defra

<sup>e</sup> Manalili N.M., Dorado M.A., van Otterdijk R. (2011) *Appropriate Food Packaging Solutions for Developing Countries*, FAO

<sup>f</sup> Foster C. et al. (2006) *Environmental Impacts of Food Production and Consumption*. Defra Science and Research Projects. [Online accessed 24-3-2011]

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14071>; Foster C. et al. (2007); Büsser S., Jungbluth N. (2009) *LCA of Chocolate Packed in Aluminium Foil Based Packaging ESU Services*

<sup>g</sup> e.g. frozen carrots: retail together with distribution cause 38% of greenhouse gas emissions (Foster C. et al. 2006, p.51)

FAO<sup>a</sup> around 1-8% of food products are wasted in the retail and distribution stage in Europe. However, the waste arising from retail and distribution is again smaller than from primary production and processing and especially from household consumption.

The impacts of retailing will be felt especially for products which have an otherwise low overall environmental impact per kilogramme, such as vegetables and fruits. For products such as meat or dairy the high impacts in the primary stage of production will dwarf any impacts from the retailing activity.

More generally a discussion paper in the US stated that:

*“Most importantly, the direct environmental impacts of the foodservice and food retail industries are not particularly significant in terms of their magnitude (with the important exception of food safety) and, thus, do not demand new or drastically modified legal or regulatory structures.”<sup>b</sup>*

However, besides direct impacts retailers have a significant influence on consumer behaviour.<sup>c</sup> As a report on the fisheries labels pointed out<sup>d</sup>: The main drivers for ecolabels are the purchasing managers of retailers, not consumers. By deciding which products to put on the shelves and how to market them retailers can boost the sales of labelled products.

### 3.3.6 Consumer

The behaviour of the consumer can lead to significant environmental impacts. For products such as frozen spinach, freezer storage can contribute up to 75% of the energy used during its lifecycle.<sup>e</sup> Similarly, for all products requiring

cooking (e.g. tea, coffee, pasta), the consumer will be the main determinant of energy use. Finally, a crucial element is food waste. It is estimated that ca.25% of the food purchased is wasted by consumers.<sup>f</sup> Reducing food waste would not only reduce the direct environmental impacts of disposal (e.g. GHG emissions) but, more importantly, the environmental impacts that have been accrued along the supply chain to produce the food in the first place. However, it is unlikely that the use of an ecolabel is the appropriate policy instrument for influencing these consumer behaviours, since they are likely to form a part of a wider web of practices reinforced and supported by other factors and behaviour patterns. General communication campaigns, such as the ‘Love Food Hate Waste’ campaign in the UK may be more appropriate and effective.

### 3.3.7 Conclusions on the environmental impacts over the lifecycle stages

The analysis of the literature above revealed the following:

- The ‘extraction of resources’ or the primary production stage (agriculture, fisheries) is responsible for most of the significant environmental impacts of food production.
- The manufacturing of food, feed and drinks has a significant impact on the environmental performance of processed products.
- Distribution or ‘transport’ is significant in special cases.
- The impact of packaging is dependent on the product and the type of packaging.
- The retail of products was not significant.
- The role of the consumer can be significant but may be difficult to influence via the use of labelling.

The data confirms the common themes identified in the EIPRO study (e.g. the large impact of primary production). They also reveal significant differences between products depending on their degree of processing and in how they will be ultimately used by the consumer.

<sup>a</sup> Gustavsson J. et al. (2011) *Global food losses and food waste Extent, causes and prevention* [Online accessed 16-5-2011] [http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna\\_fef%5Buid%5D=74045](http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna_fef%5Buid%5D=74045)

<sup>b</sup> Davies T., Konisky D.M. (2000) *Environmental Implications of the Foodservice and Food Retail Industries* Resource for the Future Discussion Paper 00-11 p.76

<sup>c</sup> Davies T., Konisky D.M. (2000)

<sup>d</sup> NORA (2005) *Ecolabel for marine captured fish: a Nordic Fisheries Initiative* Nordisk Atlantsamarbejde [Online accessed 14-5-2011] <http://www.nora.no/files/13/20080606144145271.pdf>.

<sup>e</sup> ESU Services (2010) *Die Ökobilanz von Nahrungsmittelproduktion und Konsum: Handlungsmöglichkeiten der Akteure-PPP* [Online accessed 28-1-2011] <http://www.esu-services.ch/publications/food/>

<sup>f</sup> Segre A. et al. (2010) *Joint declaration against food waste*; Quedest T., Johnson H. (2009) *Household Food and Drink Waste in the UK* WRAP

## 4 The impact of establishing an EU Ecolabel for food, feed and drink products

### 4.1 The existing labelling landscape

A large number of labels have been established in the food, feed and drink sector to guide consumers toward more sustainable products. This section examines the European food labelling landscape to help identify where there might be an opportunity for the EU Ecolabel to drive more sustainable consumption and production of food and feed products. The analysis was undertaken in two stages:

#### Stage One:

The Global Ecolabel Index<sup>a</sup>, the International Directory of organic food wholesale and supply companies and the food, feed and drink Ecolabels referred to in a variety of secondary sources<sup>b,c,d</sup> were used to identify the existing labelling landscape.

To reduce the number of labels to a manageable size for evaluation in this study, it was agreed to focus on those that aim explicitly at environmental improvement. Therefore quality labels, religious labels, safety and health labels and regional production labels were excluded. Within the remaining labels, all ISO type II self-declared environmental labels were also excluded from the analysis as the quality of these labels is often difficult to assess.

Altogether about 80 labels were examined (the long-list of these labels can be found in Annex 5) and evaluated on the basis of the following five aspects:

1. the range of product categories that are eligible for labelling (broad, limited, single-category)
2. the scope of environmental impacts covered by the label (single issue, multiple issue, ethical/social).
3. their relation to organic agriculture
4. their coverage of environmental impacts over a product's lifecycle
5. their geographic coverage
6. the basis of the criteria.

The outcome of this analysis shows that seven main types of labels can be identified on the European market: these are presented in Table 8. In the last column we identify the leading labels for that category.

The following conclusions can be drawn from the analysis presented in Table 8:

- The labels that take a full lifecycle approach have a limited product reach and are single issue.
- Only one label - the European Organic label - covers a wide range of food categories, a broad range of impact categories including ethical issues, considers more than just the agricultural stage of the product lifecycle and is currently used in all European countries.
- The Dutch Milieukeur label is a non-organic counterpart, focusing on more than the agricultural stage and caters also to conventional farmers. It is however only intended to serve the consumer market in the Netherlands.

<sup>a</sup> Ecolabelindex.com

<sup>b</sup> ACSI, FRC (2010) Hintergrundbericht labels für Lebensmittel.

<sup>c</sup> University of Hertfordshire (2010) *Effective Approaches to Environmental Labelling of Food Products Appendix A. Literature Review for Defra*

<sup>d</sup> SAI Platform, 2009. Agriculture Standards benchmark Study

Table 8: Coverage of food, feed and drink ecolabels on the European market

Product Coverage	Criteria range	Organic	Lifecycle approach	Geographic reach	Basis of criteria	Key leading labels
Broad	Multiple environmental issue and ethical/ social	Yes	No	Europe	Principles of organic agriculture	EU Organic label
Broad	Multiple environmental issue and ethical/ social	Yes	Limited	Inter-country, Regional	Principles of organic agriculture	KRAV Demeter BioSuisse
Broad	Multiple environmental issue And ethical/social	Yes	No	National or regional reach	Principles of organic agriculture	Private organic standards e.g. Soil Association Bioland Standard Biozebra Agricultura Ecologica (Spain)
Broad	Multiple environmental issue	No	Limited	National	Environmental protection / scientific evidence	Milieukeur Ecolabel: The Netherlands
Single category: fish	Limited environmental issue	No for wild fish, yes for farmed fish.	No	International	Best practices in sustainable fishing	MSC
Limited	Multiple environmental issue Social	No	No	National	Best practices in sustainable farming	LEAF Marque
Limited	Single issue	No	Yes	International	Output based carbon indicator	Carbon Trust

Source: Oakdene Hollins

## 4.2 The EU Ecolabel in relation to other labels

In accordance with the EU Ecolabel Regulation, EU Ecolabel criteria should be capable of being implemented on a Europe-wide basis and the criteria for eligibility should be based on scientific evidence taking into account the best techniques to reduce environmental impacts. In this step, we therefore examined the degree of fit of existing labels with these requirements.

We investigated the labels identified in the last column of Table 8 and determined the basis of the criteria they used. Our findings are highlighted below:

- The EU Organic label, as well as some private organic standards labels, are used across Europe.
- The principles of organic agriculture are not based on scientific evidence but on a set of fundamental principles.<sup>a</sup> However, there is

<sup>a</sup> IFOAM see [www.ifoam.org](http://www.ifoam.org)

evidence that organic practices often lead to better environmental performance than their non-organic counterparts.<sup>b</sup>

- Stichting Milieukeur is a non-organic label based on lifecycle assessments using best practice, but it does not have a European reach, being confined to the Netherlands. An assessment of their standards and its impacts remains difficult however due to their bonus points system, as shown in the case of animal welfare.<sup>c</sup>
- The MSC and the LEAF Marque are based on a set of best practices for sustainable fishery and agriculture respectively.
- The Carbon Trust Carbon Footprint label is based on scientific evidence, but the basis of their criteria is limited to one environmental indicator.

<sup>b</sup> See EU research projects: [www.organic-revision.org](http://www.organic-revision.org), [www.organic-inputs.org](http://www.organic-inputs.org), [www.qlif.org](http://www.qlif.org), [www.orwine.org](http://www.orwine.org), etc.

<sup>c</sup> Ferrari P. et al. *Report on (dis-) advantages of current animal welfare standards for animals, based on the main findings of EU and national research projects*. Project report D2.3. *EconWelfare*. [Online accessed 15-1-2011] [www.econwelfare.eu](http://www.econwelfare.eu)

The result of our analysis is shown in Table 9.

Table 9: Comparison of Ecolabel and other environmental food labels

Label	European reach	Basis of criteria
EU Ecolabel	Yes	Environmental protection / scientific evidence
EU Organic label	Yes	Principles of organic agriculture
National Organic labels: KRAV, Soil Association, Bioland, Demete, Agricoltura ecologica etc.	Yes	Principles of organic agriculture, with some further criteria based on scientific evidence
Stichting Milieukeur	No	Environmental protection / animal welfare - scientifically supported
MSC	Yes	Sustainable fishing
LEAF MARQUE	No	Sustainable farming
Carbon Trust	Yes	Output based carbon indicator

Source: Oakdene Hollins

This analysis has revealed that none of the existing European food, feed and drink labels cover all the significant environmental impacts of agriculture, processing, packaging, transport and consumption adequately, nor are they based on scientific evidence regarding the best technologies for environmental protection as required by Article 6(3) of the Ecolabel Regulation.

There is therefore a clear gap for a label that can reduce the environmental impact of the product over its whole lifecycle.

Recognising this, the private sector has recently initiated further organic standards (e.g. the 'Bio-Plus' approach). These initiatives focus on output-oriented indicators and specific assessment systems (e.g. LCA based) to better fulfil consumer expectations. Another interesting example is the 'Nature and More' flower label of the largest organic wholesaler for fruit and vegetables in the Netherlands, which, for each product (based on a Code System), provides environmental information about the impact on soil, water, air, energy, animal welfare, biodiversity as well as social aspects.<sup>a</sup>

<sup>a</sup> www.natureandmore.com

### 4.3 Estimated environmental benefits and burdens

According to a report on the benefits of the EU Ecolabel scheme<sup>b</sup> two types of beneficial environmental impacts can be distinguished:

- Direct impacts, which are obtained by using a labelled product instead of a non-labelled product.
- Indirect impacts, which are obtained by the influence of the EU Ecolabel on other market actors. For example, where EU Ecolabel criteria as internal benchmarks, or influence the criteria setting process of other labels.

#### 4.3.1 Direct impacts of the EU Ecolabel for food, feed and drink products on the environment

The direct impact of the EU Ecolabel for a chosen impact category has been estimated for a variety of non-food products according to the following formula<sup>c</sup>:

$$\text{Scenario} = \% \text{ Sales} \times \Delta$$

<sup>b</sup> AEAT in confidence (2004). *The Direct and Indirect Benefits of the European Ecolabel – Final Report*. DG Environment EU Commission [http://ec.europa.eu/environment/ecolabel/about\\_ecolabel/reports/benefitsfinalreport\\_1104.pdf](http://ec.europa.eu/environment/ecolabel/about_ecolabel/reports/benefitsfinalreport_1104.pdf) [online accessed 16-1-2011]

<sup>c</sup> AEAT in confidence (2004). *The Direct and Indirect Benefits of the European Ecolabel – Final Report*; Eq.1, page 3. DG Environment EU Commission [http://ec.europa.eu/environment/ecolabel/about\\_ecolabel/reports/benefitsfinalreport\\_1104.pdf](http://ec.europa.eu/environment/ecolabel/about_ecolabel/reports/benefitsfinalreport_1104.pdf) [online accessed 16-1-2011]

With Scenario A = direct impact of the EU Ecolabel on a selected environmental impact category  
 $\%Sales$  = sales of EU Ecolabel products of that product category in percent  
 $\Delta$  = difference in environmental impact between the EU Ecolabel and other products

This equation indicates that a high environmental benefit can be expected if there is a large difference in environmental performance between an EU Ecolabelled product and other non-ecolabelled product and in addition a high number of EU Ecolabel products are sold.

However this approach is complicated in respect of food, feed and drink products because of the strong presence of other, potentially competing, environmental labels, especially organic or – for fisheries – MSC. It is not clear how the introduction of the EU Ecolabel will influence the sales of products with other labels. Three possible scenarios can be envisaged:

Table 10: Scenarios of direct impact

Sales of labelled products	Interpretation	Expected environmental impact
Reduction	Introduction of EU Ecolabel leads to confusion/loss of confidence in labelling and to a lose-lose situation	Negative effect
No change	EU Ecolabel grows at the cost of other labels (win-lose)	Little effect
Increase	EU Ecolabel grows by recruiting mainly from conventional producers	Positive effect

Source: Oakdene Hollins

This analysis shows that an environmental benefit is not guaranteed if the growth of the EU Ecolabel is due to producers switching from other labels. In these cases the environmental net impact will be minimal if the criteria are not significantly different. Furthermore the introduction of the EU Ecolabel to food, feed and drink products might lead to disagreements between labelling organisations resulting in a loss of consumer confidence in all

environmental labels. However, if the EU Ecolabel manages to recruit applicants with non-labelled products and manages to co-operate with existing labelling schemes, so that consumer confusion can be avoided, there could be a net environmental benefit.

The EU Ecolabel regulation, stipulates that criteria should be set so as to allow the environmentally best performing 10-20% of products on the market to be certified. The impact of the introduction of an EU Ecolabel to any product group would therefore be due to:

- companies increasing their performance in order to achieve compliance with EU Ecolabel criteria
- companies that already comply are able to increase their sales and therefore drive other, less well performing products out of the market.

No data on either of the two effects are available, and a reliable estimate regarding the direct environmental benefit of the introduction of the EU Ecolabel to food, feed and drink products is not possible within this study. However, we can distinguish between agricultural practices in terms of their impact on the environment (Table 11). The table shows that promoting certain agricultural practices could provide a good basis for setting criteria, as it is possible to distinguish those agricultural practices that deliver the best environmental performance.

#### 4.3.2 Indirect impacts of the EU Ecolabel for food, feed and drink products on the environment

Based on the literature review and stakeholder comments the indirect impacts on the environment are summarised in Table 12.

Whilst most of the indirect environmental impacts of the introduction are positive, the issue of consumer confusion may lead to negative impacts, not only for consumers, but for the environment.

Again a reliable estimate of the indirect environmental impacts is not possible. This is not only due to a lack of data, but also due to the fact that indirect impacts are highly



dependent on the details of the implementation of such a scheme.

*Table 11: Differences in environmental impact*

Product	Practice	Impact
Fruit and vegetables	Use of green-houses <sup>a</sup>	Up to 6x carbon footprint of non greenhouse gas produce
Cattle	Maize forage diet <sup>b</sup>	Significant increase in GHG emission and eutrophication due to higher content of less efficient soya meal Higher degree of soil erosion and run-offs in maize cultivation
Cattle	Clover as feed <sup>c,d</sup>	Reduces need for fertilizer (-10% primary energy and GHG emissions), improved carbon sequestration, but approx. +8% land-use
Sugar cane	Intensified farming with more inputs <sup>e</sup>	Water-use and eutrophication: increase up to 100x

Source: Oakdene Hollins

*Table 12: Indirect environmental impacts*

Impact	Example/potential	Effect
Driving criteria of other labels	EU Ecolabel criteria for impact categories or lifecycle stages not well covered (GHG emission; water; processing, consumer) could serve as role model and drive other labels to progress their own development	Positive
Internal benchmarks	Labelling criteria may be used as internal benchmarks of companies, even though companies may not apply for the award of the label	Positive
Increase confusion of consumers	A new label may increase confusion among consumers, leading to less trust in labelling in general, and fewer purchases of labelled products. This impact is especially relevant due to the potential for confusion regarding the term 'eco'.	negative
Avoid proliferation of labels	A strong and credible EU Ecolabel also covering non-organic products can avoid the generation of private eco-labels by producers/processors/retailers not satisfied with existing labels.	Positive
Preparation for mandatory measures	Introduction of voluntary measures increases the acceptance subsequently increasing the stringency of mandatory regulations	Positive
Competence building	Increasing knowledge about environmental impacts among food chain actors through the discussions surrounding the new label	Positive

Source: Oakdene Hollins

<sup>a</sup> Barilla Center for Food and Nutrition (2009) *Double Pyramid: healthy food for people, sustainable food for the planet.*

<sup>b</sup> Foster C. et al. (2001) *The Environmental, Social and Economic Impacts Associated with Liquid Milk Consumption in the UK and its Production.* for Defra

<sup>c</sup> Foster C. et al. (2001)

<sup>d</sup> Niggli, U. et al. (2009) *Low Greenhouse Gas Agriculture: Mitigation and Adaptation Potential of Sustainable Farming Systems* FAO

<sup>e</sup> Foster C. et al. (2006) *Environmental Impacts of Food Production and Consumption.* Defra Science and Research Projects. [Online accessed 24-3-2011] <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14071>

## 5 Market actors' views in respect of the introduction of the EU Ecolabelling scheme in the food and feed sector

### 5.1 *Expectations of the benefits of the introduction*

As background to the survey, market actors were asked whether the current labelling landscape was sufficient to reward companies for high environmental performance. As can be seen in Figure 2, a mixed result was obtained. EU Ecolabel bodies and environment public bodies were especially dissatisfied with the status quo, whereas organisations representing processors of food seemed to be content. When asked the same question for the feed sector no clear result was obtained, reflecting the lower focus of stakeholders on the feed sector.

As the EU Ecolabel aims to help actors promote their environmentally-friendly products, stakeholders were asked whether they would expect such an effect from the introduction of the EU Ecolabel to the food, feed and drink sector.

As Figure 3 shows, around half of the group of retailers and some processors did see this potential, whereas the other half - including all farmers' organisations - did not expect such a benefit.

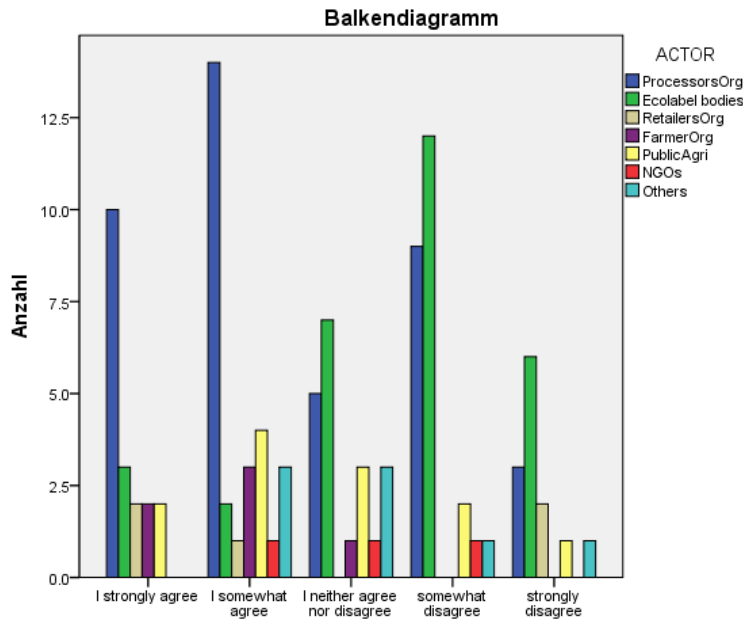
The organic food processors, in particular, expect that the introduction of the EU Ecolabel will have a very negative impact on their product positioning due to possible consumer confusion. However, a significant share of processors and retailers expected a positive effect for the positioning their products, and would thus form the target stakeholder group of a potential EU Ecolabel for food, feed and drink products.

This result was repeated when stakeholders were asked whether the EU Ecolabel will "be submerged" by the large number of existing labels. While a majority of stakeholders expected the EU Ecolabel to have a low impact, individual actors (e.g. some retailers) disagreed strongly and expected consumers to recognise the label.

Although some companies expect positive effects, most stakeholders expected negative financial effects from the introduction of an EU Ecolabel for food, feed and drinks products.

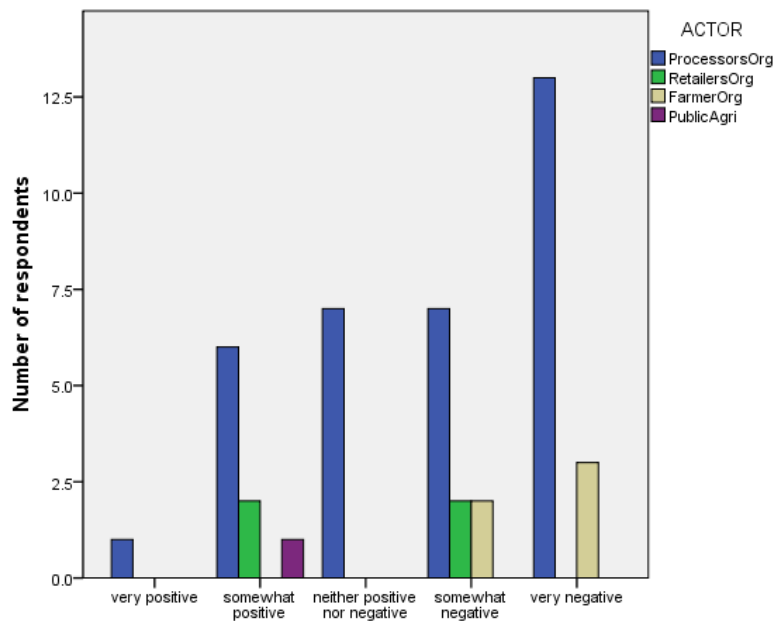
When asked an open question regarding the impacts of introducing the EU Ecolabel, stakeholders mentioned a broad variety of potential benefits (Table 13).

Figure 2: Agreement with the statement “The current labelling landscape in the food and drink sector is sufficient to reward companies for high environmental performance” according to different types of actors



Source: own illustration based on the actors' survey; ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

Figure 3: Agreement with the statement “The effects of introducing the EU Ecolabel in the food, feed and drink sector on the image and product positioning of our products / the producers we represent will be...” according to the different actors



Source: own illustration based on the actors' survey; ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

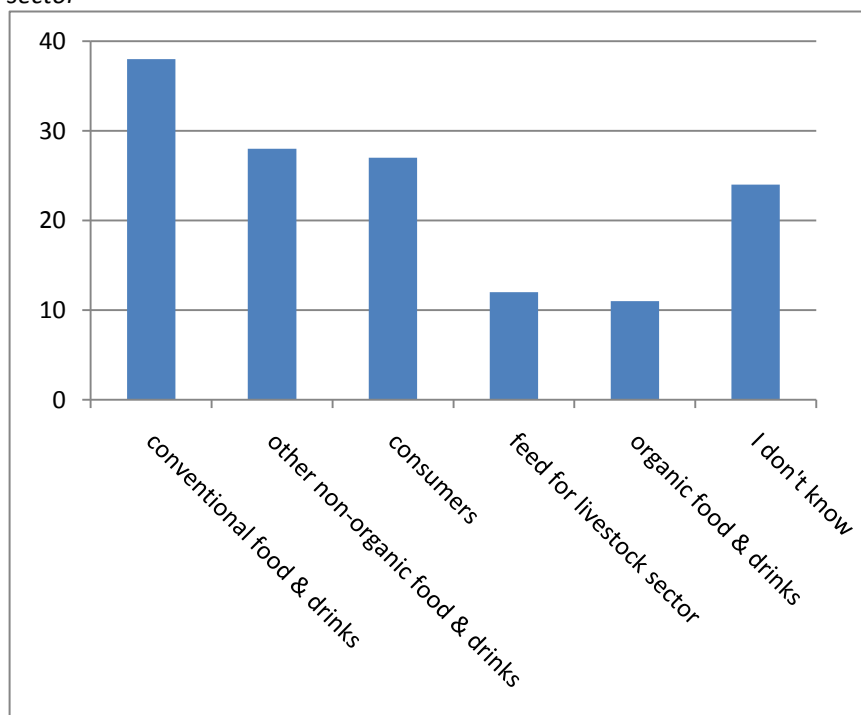
Table 13: Stakeholder expectations: Benefits of an EU Ecolabel

<b>For the environment:</b>
• Harmonisation of environmental labels.
• Positive environmental impacts.
<b>For consumers:</b>
• Will help consumer to identify environmental friendly products at the point of sale. <sup>a</sup>
• More environmental friendly products on the market.
• Reliable European logo transferring certified information on the food product.
<b>For producers and chain actors:</b>
• Will help producers to provide environmental friendly products based on criteria.
• Alternative for organic labels which are too complex to be produced at large scale.
• Compensation for companies producing more environmental friendly.
<b>For civil society:</b>
• Increase of public awareness and trust.
<b>For public bodies:</b>
• Lifecycle assessment tool to point out differences between products.
• Tool proposing a comprehensive approach to sustainability criteria. Such tools do not exist.
• Fostering more transparency, benchmarking and progress in food sustainability labels.

Source: own study; KMO: .94; explained variance: 66 %

Note (a): One respondent mentioned also expectations such as: limited use of additives in food - decrease, admissible at present, levels of pesticides in food and feed - restrictions as to the content of heavy metals in food and feed - restrictions or exclusion of use of aromas, colours, taste substances in food which are carcinogenic, reduction of packaging wastes etc.

Figure 4: Who would particularly benefit from introducing the EU Ecolabel in the food, feed and drink sector



Source: Stakeholder survey (Multiple answers possible)

## 5.2 Who would benefit from the introduction?

The majority of the respondents, particularly processors, retailers and farmer associations and food and retailer organisations as well as public bodies other than Ecolabel Competent Bodies, assume that the non-organic food sector would particularly benefit from introducing the EU Ecolabel in the food, feed and drink sector (Figure 4).

Furthermore, about one quarter of the sample - mainly Ecolabel Competent Bodies - assumed that consumers would benefit from the introduction of the EU Ecolabel. Only a small number of respondents, often belonging to the group of Ecolabel Competent Bodies, assumed that the organic sector would benefit from the introduction of the EU Ecolabel.

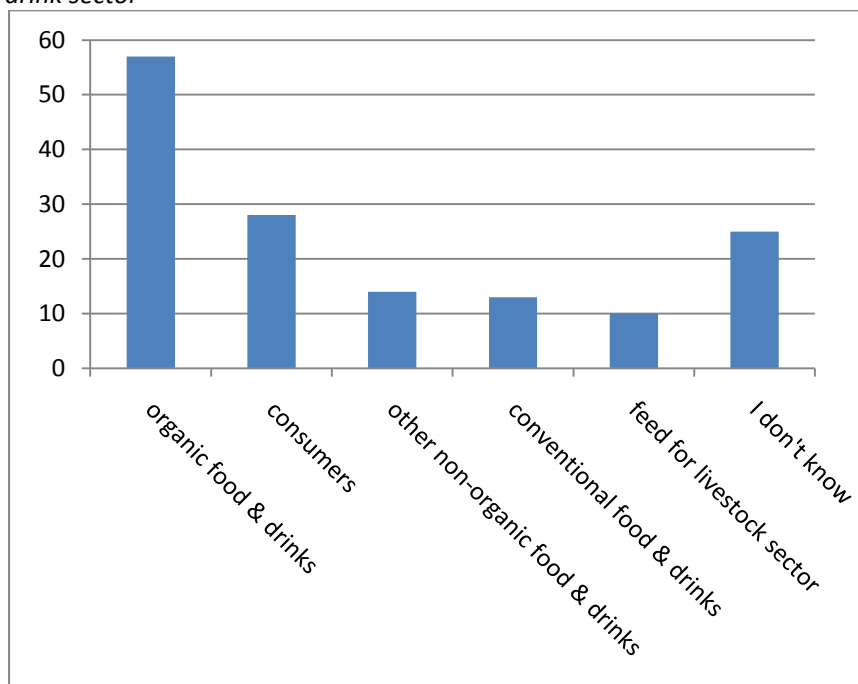
Several stakeholders mentioned that the answer will depend on the scope of the EU Ecolabel

scheme as well as the criteria included. Others assumed that the environment and fish stocks, as well as Green Public Procurement, would benefit. The share of respondents who chose the “don’t know” option was also relatively large

## 5.3 Who would be particularly disadvantaged by the introduction of the EU Ecolabel?

The majority of respondents (regardless of the type of organisation they represented) assumed that the organic sector would be particularly disadvantaged (see Figure 5). This is in line with the expectation that consumer confusion will harm the organic sector. A relatively large number of actors were of the opinion that consumers would be particularly disadvantaged by the introduction of the label.

Figure 5: Who would be particularly disadvantaged from introducing the EU Ecolabel in the food, feed and drink sector



Source: own illustration based on the actors' survey

Some actors expected that producers and service suppliers working in a non-sustainable way would be disadvantaged by the introduction of the EU Ecolabel. Several industrial representatives stated that none of the stakeholders would benefit. It was also

argued that processors would have higher costs and would therefore be disadvantaged, and that different actors in the supply chain might be misled by the label. Others stated that their answer would depend on how the EU Ecolabel related to organic products.

## 6 The impact on consumers

### 6.1 Label preferences

Our analysis of product preferences aimed to find out more about the potential market relevance for an EU Ecolabel and to estimate the likely extent of competition and overlap with the organic label.

Using a survey approach, consumers in four different countries (the Czech Republic, the UK, Spain and Germany) were asked to rank four differently labelled items from one product group (see Figure 6). For example, they had to decide whether they preferred fish fingers with an organic label, with an Ecolabel, with both labels or with no label.

The EU Ecolabel in combination with the organic label was preferred over the alternatives. The general assumption that two labels are preferred over one label was true in all countries in the study i.e. for most consumers an organic label connected with an EU Ecolabel is preferred because this product seems to be of better quality than a product with only one label.<sup>a</sup> Furthermore, products with no label were ranked last in all countries.

There also seemed to be a correlation between the knowledge that a consumer has of a label and the preference for that labelled product. For example, consumers in the Czech Republic and Germany who were familiar with the organic label preferred it to the unfamiliar EU Ecolabel. Consumers in Spain and the UK who were as well aware of the EU Ecolabel as the organic label had problems deciding which labelled product to choose. In this case the decision was somewhat product-specific. UK consumers exhibited these difficulties with

processed products: unprocessed products were ranked in the same way as in Germany or the Czech Republic. This implies that, the EU Ecolabel is almost as 'important' as the organic label in respect of 'processed' products. Spanish consumers preferred the organic over the EU Ecolabel when the product was commonly found in the organic sector (e.g. cheese and apples, Figure 7 and Figure 8). Other products were ranked in the same way as in Germany and the Czech Republic. (For details see Annex).

There were no differences in ranking when consumers were given information about the EU Ecolabel for food. Only in the UK did consumers have a problem choosing between organic and EU Ecolabel fish fingers after they read the information about the EU Ecolabel: in that case the ranking was not clear (rank 2 or 3).

Comparing the organic shopper groups (group 1 = rarely or never; group 2 = sometimes; group 3 = frequently or very frequently) the frequent buyers of organic products seemed to be more aware of labelling. Their ranking (rank 1 = EU Ecolabel and organic label; rank 2 = organic label; rank 3 = EU Ecolabel; rank 4 = no label) was more clearly defined than average. Non- or infrequent buyers of organic products did not seem to be very interested in labels at all (Figure 9). In some cases, they ranked the unlabelled product first, revealing that organic preferences and label preferences are correlated.

In summary, 52% of all consumers in the different countries would prefer the product with both the EU Ecolabel and the organic label (Figure 10). 22% rank the organic-only labelled product in first place, while 18% of all consumers are not attracted to any labels.

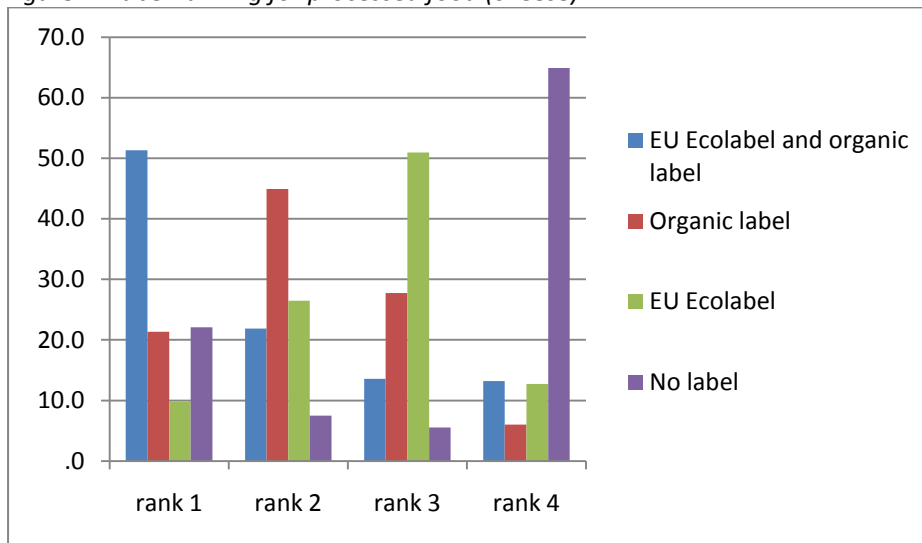
<sup>a</sup> We did not test whether this is true when a product displays more than two labels

Figure 6: Design of the measuring of product preference



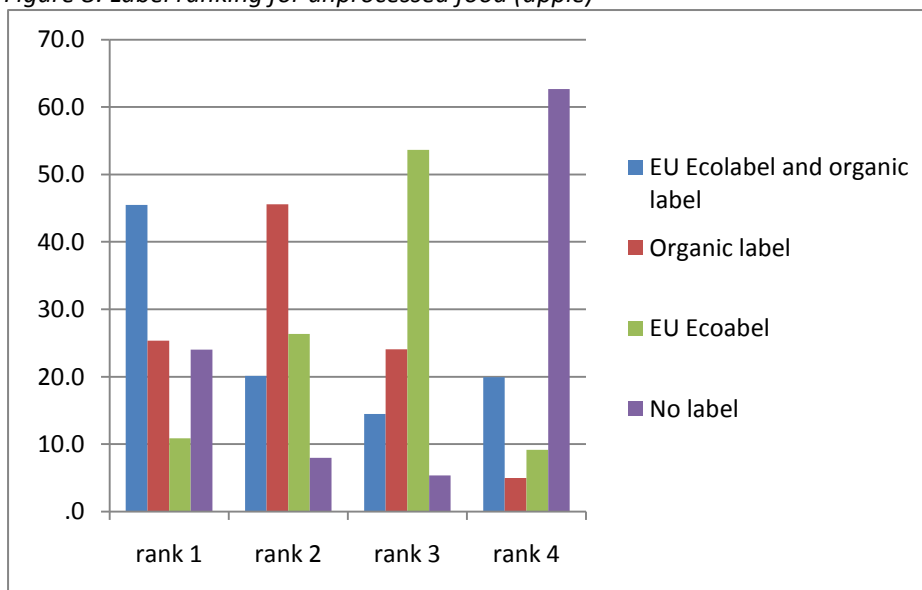
Source: own study

Figure 7: Label ranking for processed food (cheese)



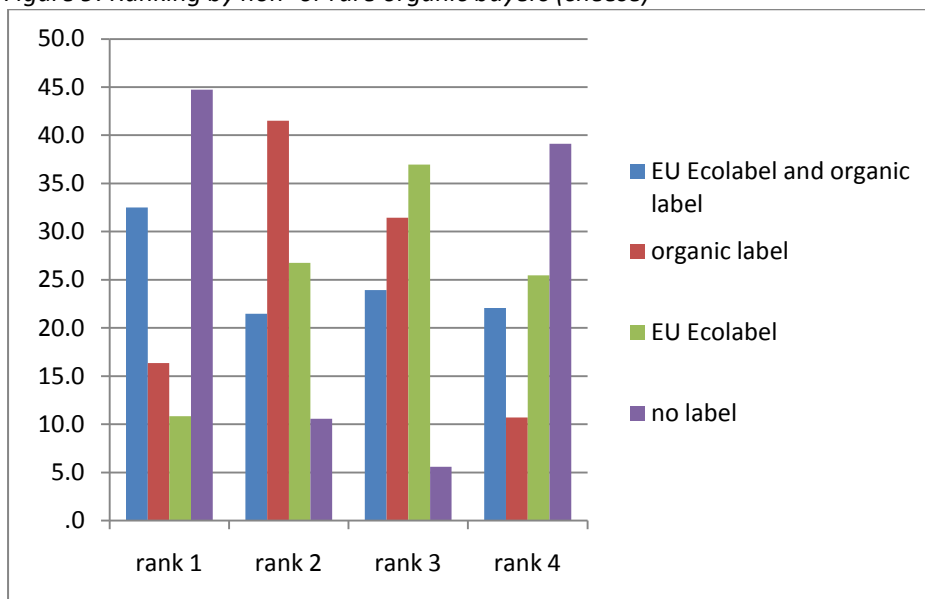
Source: own study

Figure 8: Label ranking for unprocessed food (apple)



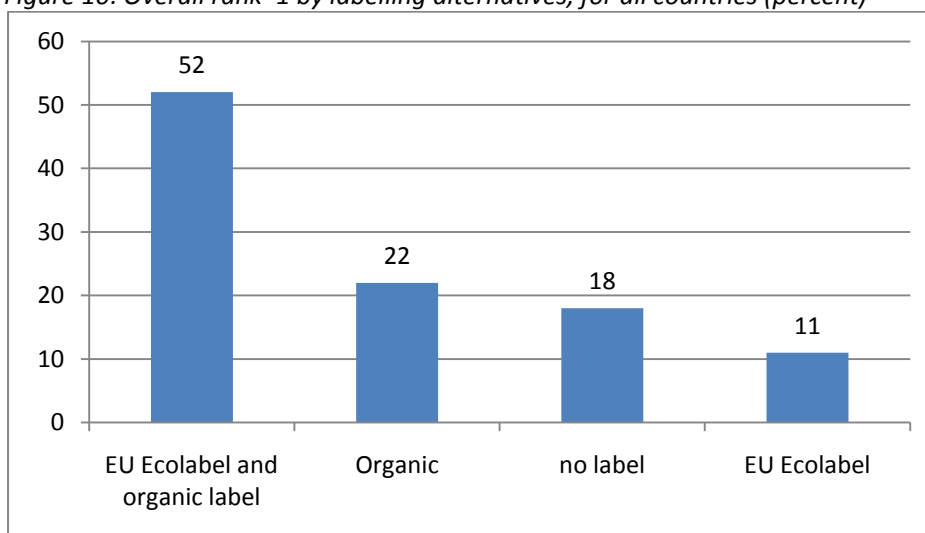
Source: own study

Figure 9: Ranking by non- or rare organic buyers (cheese)



Source: own study

Figure 10: Overall rank=1 by labelling alternatives, for all countries (percent)



Source: own study

## 6.2 The risk of consumer confusion

The risk of contributing further to consumer confusion by introducing another environmental label with similar attributes to existing labels has been the subject of research with consumers. Harper et al. (2007)<sup>a</sup> found that consumers are mostly satisfied with the current amount of information on food labels, but that a significant minority (38%) perceived the provided

information as difficult to understand, or even false. 41% of consumers claim to feel confused or overloaded by the information provided and desire greater clarity. Consequently, empirical studies concerning the market actors and consumer perceptions and evaluations are necessary to study the feasibility of extending the scope of EU Ecolabel to the food, feed and drink sector.

When considering labelling food, feed and drink products with an EU Ecolabel, consumer confusion can be separated into two dimensions: 'cognitive dissonance', in which consumer expectations of organic issues might

<sup>a</sup> Harper L., Souta P., Ince J., McKenzie J. (2007) *Food labelling consumer research What consumers want: A literature review*. Food Standards Agency



fit with an environmental friendly label including the EU Ecolabel, leading to uncertainty over which labelled product to buy (content issues), and ‘term confusion’, in which consumers cannot see any differences because the products are labelled similarly. This can be due to:

- the specific term ‘eco’: in some countries ‘eco’ indicates organic farming and therefore means the same as ‘organic’
- similar expectations of the two labels: consumers might not be able to differentiate between the content of the two labels. This might cause trade-offs during consumption.

The risk of confusion, the preference for specific products and the possible influencing factors may correlate with the stage of development of a country’s organic market.

To investigate the potential for confusion we used three different assessment methods. Firstly, consumers in each country were asked what they associated with the terms ‘eco’ and ‘organic’ (hence, for Germany, ‘bio’ and ‘öko’). Secondly, respondents were asked about the ease of ranking the different products. Here the consumers had to evaluate whether the labels confused them or not. Thirdly, they were asked to evaluate the content criteria for an environmental friendly label and an organic label. Any overlap might indicate difficulties distinguishing between these two terms, which might lead to confusion.

### 6.2.1 Associations with wording

The use of the terms ‘eco’ and ‘organic’ require closer analysis, because the terms have different meanings in different languages and could cause confusion. Furthermore, confusion can also be ascribed to a very different (country-specific) understanding of what is ‘eco’ and ‘organic’. This describes the situation in Germany; where the term ‘eco’ is associated with topics such as economics and energy (Table 14).

Table 14: Associations with wording (Germany)

Term	‘bio’	‘eco’	‘öko’
Main associations	Without chemicals (fertilizers, pesticides), without additives, natural and healthy	Economics, energy	Same as ‘bio’

Table 15: Associations with wording (Czech Republic)

	‘bio’	‘eco’	‘eko-logické’
Main associations	Without chemicals (fertilizers, pesticides), without additives, natural and healthy	Ecological (organic), without chemicals	Environmentally friendly

Table 16: Associations with wording (UK)

	‘organic’	‘eco’	‘ecological’
Main associations	Grown naturally without chemicals (fertilizers, pesticides)	Ecological and environmentally friendly	Same as ‘eco’ (sometimes connected with sustainability)

Hence using the EU Ecolabel in Germany, particularly without translating the term ‘eco’, could cause confusion because consumers’ understanding of the ‘eco’ label does not appear to correspond to the expressed meaning of the EU Ecolabel. For the Czech Republic and the UK the term itself does not seem to be a problem. As in Germany, Czech and UK consumers associate ‘organic’ with “chemical free, without pesticides and fertilizers”. In the UK the term ‘eco’ is strongly connected to an environmentally-friendly product, in the Czech Republic the term ‘eco’ is somewhat more associated with organic. In these countries, where the two terms are similar, it might be possible to ascribe content specific issues to an Ecolabel.

In comparison to the countries mentioned above, Spanish consumers associated the term 'bio' with healthy products. The term 'eco' is associated with organic and environmentally-friendly products, as is the term 'organic'. In Spain, 'eco' has a similar meaning to 'orgánico', and use of such interchangeable terms could cause confusion.

Table 17: Associations with wording (Spain)

	'bio'	'eco'	'orgánico'
<b>Main associations</b>	Healthy, natural, environmentally friendly	Ecological (organic) and environmentally friendly	Natural, organic, environmentally friendly

The research shows the term 'eco' is not understood in the same way in every country across Europe and, in some languages, there is potential for confusion with the 'organic' label.

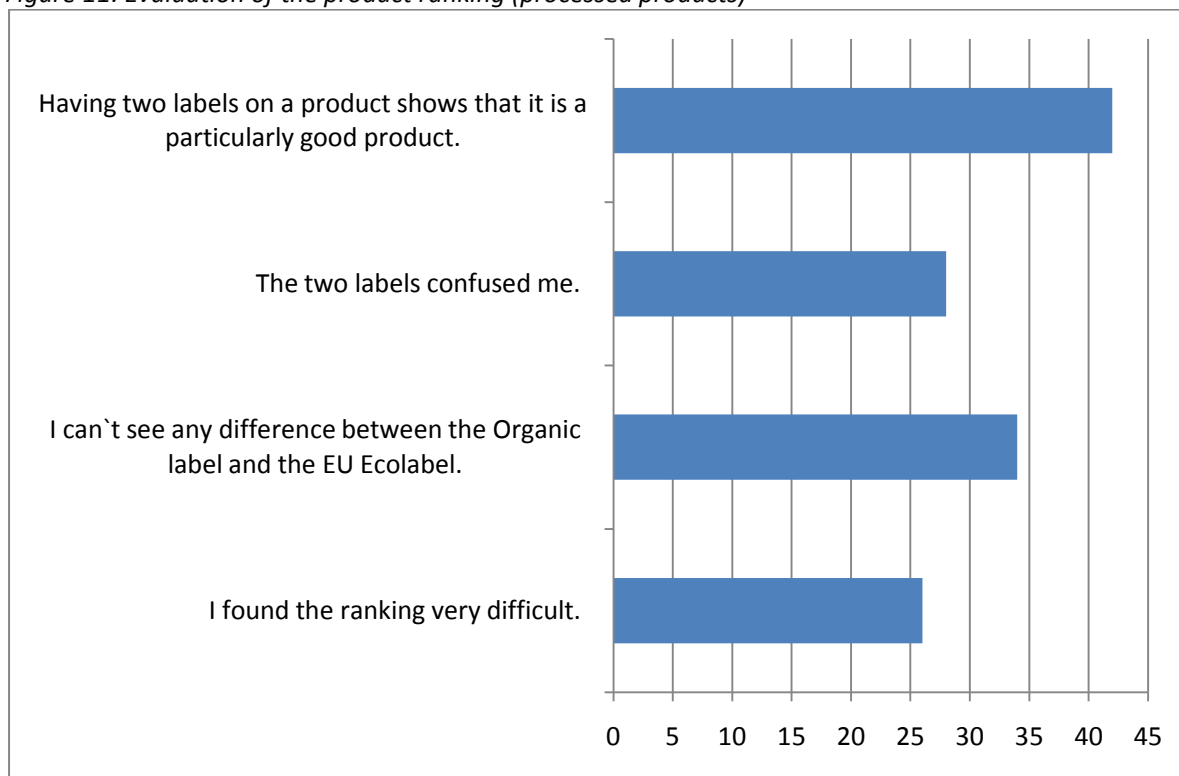
### 6.2.2 Evaluation of product ranking

After ranking the different products, respondents were asked about how easy it was to do the ranking and about whether or not they were confused when seeing two labels.

The results (Figure 11) demonstrated that 28% of the consumers in the study were confused by two labels on a product, although over 30% had difficulties seeing the differences between the organic label and EU Ecolabel. Furthermore, over 40% 'agree' or 'agree completely' that two labels on a product indicate that it is particularly good.

These results underline the previous conclusion that a significant group of consumers are confused about the differences between an organic label and the EU Ecolabel. However, it should be noted that the study design only allowed for comparison between two labels rather than multiple labels as is the case in the real world. We do not know how consumers would react when the price tickets are on display in addition to other labels.

Figure 11: Evaluation of the product ranking (processed products)

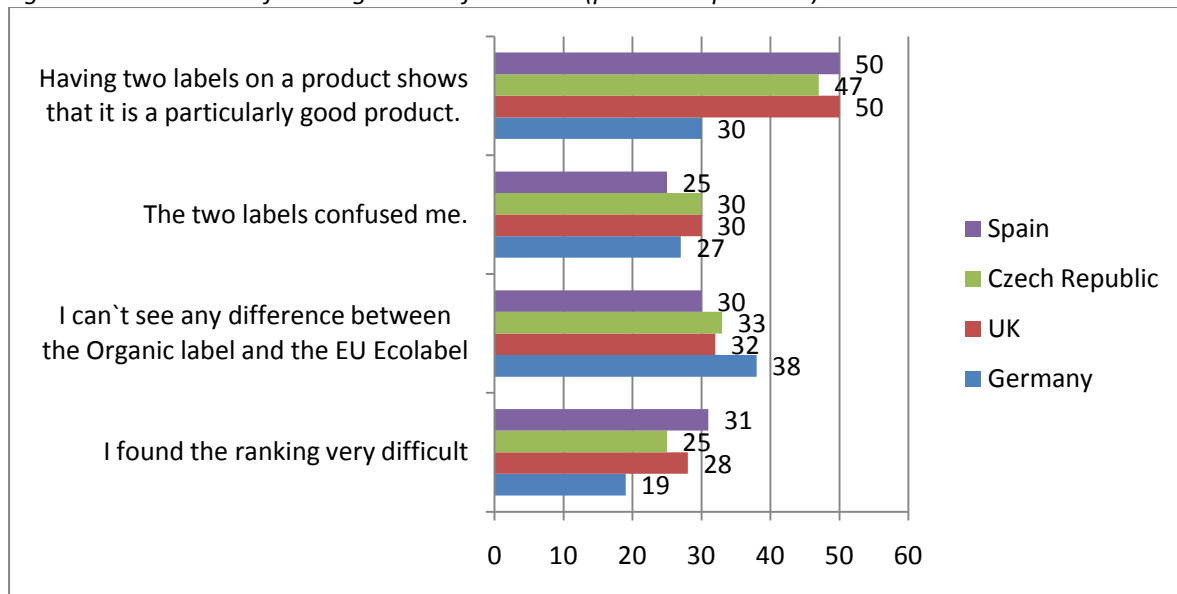


Source: own study  
5 point Likert Scale: summarize "agree" and "agree completely" in percent;  
Note: results for unprocessed products almost the same.

Comparing all countries shows that German consumers in particular are most sceptical concerning labels on a product (Figure 12).

In such cases, the likelihood of ‘information overload’ and ‘reactance’ effects are quite high.

Figure 12: Evaluation of ranking and confusion risk (processed products)



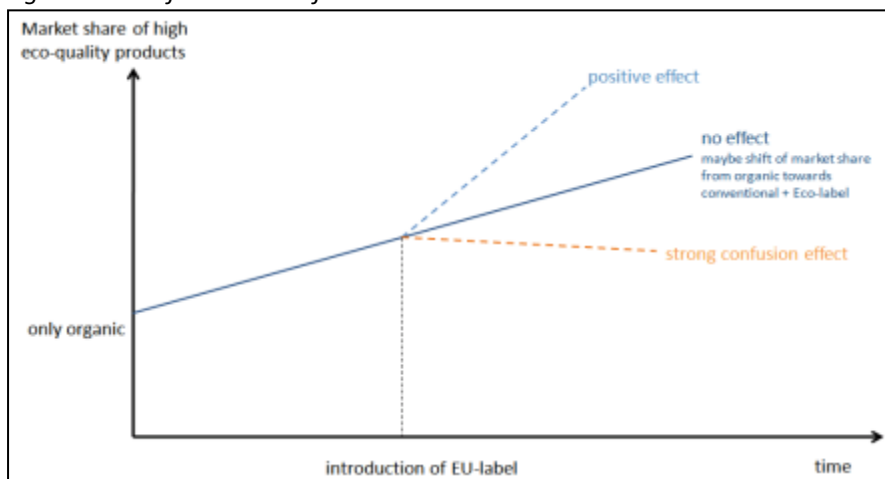
Source: own results  
5 point Likert Scale: summarize “agree” and “agree completely” in per cent

### 6.3 Confusion of consumers related to organic food

Consumers will generally not feel overly confused if a second label appears on a product. Rather, most consumers prefer two labels to one. Even buyers of organic products would buy products bearing both ‘eco’ and ‘organic’ labels rather than ‘only’ an organic product: for them, an additional environmental label would have a positive effect.

However, there are also consumers who do not ‘buy into’ the idea of labels and who will not buy products with an additional label. In between these two extremes is the possibility that there would be no overall change except for a shift of market share from organic towards conventional and EU Ecolabelled products. The possible effects of confusion and ‘information overload’ on the overall market is given in Figure 13.

Figure 13: Confusion and information overload



Source: own study

In markets where the EU Ecolabel is familiar, and for processed food, the differences in consumers' preference between an EU Ecolabel and an organic label are small. 'Organic' consumers might decide to switch to the EU Ecolabel: for example in the UK, cheese labelled with the EU Ecolabel was ranked nearly as highly as the organically labelled cheese. This poses a problem if the EU Ecolabel covers non-organic products, as the survey showed that consumers may erroneously expect to find organic produce in EU Ecolabel products. While this aspect of consumer confusion may not impact on the overall market share of environmentally labelled products, it misleads consumers and leads to a reduction of market share of organic labelled products. This worry is shared by many stakeholders who voiced their concerns regarding misleading consumers with the potential concomitant damage to the organic market.

In this case, clear communication of EU Ecolabel criteria is necessary to differentiate it from organic products. This might be an expensive exercise.

In countries where the EU Ecolabel is not very common, the organic label is preferred over the unfamiliar EU Ecolabel: here the problem of competition between labels is relatively unimportant.

Overall there is a need for credible and large-scale communication to inform consumers about the environmental benefits of the EU Ecolabel. It will only be meaningful if it can be easily understood. Such a campaign would be especially important if the EU Ecolabel covers non-organic products, in order to avoid consumer confusion and thus possible damage to the organic market.

Furthermore it is important to inform consumers of the advantages of an EU Ecolabel compared to other labels.

## 6.4 Evaluation of expectations regarding the contents of labels

The confusion risk for consumers may relate to the different stage of development of the 'organic' market in each of the four countries surveyed. As mentioned above, the overall content analysis shows that consumers expect an environmental label to contain many criteria used in relation to organically certified products (Table 18).

*Table 18: Main issues/impact categories of an environmental food label for German consumers*

Top issues and impact categories
Animal welfare
No chemical pesticides
Few additives
No GMOs
Organic agriculture

*Source: based on the consumer survey*

The perceived overlap of criteria between an organic label and an expected EU Ecolabel shows that there may be a real risk of confusion between the different labelling systems in the minds of consumers. While there are country-specific differences, the survey showed that in countries such as Germany and the UK no clear separation between the contents of both labels is being made. Consequently, consumers may be misled into believing that an EU Ecolabelled product contains organic produce.

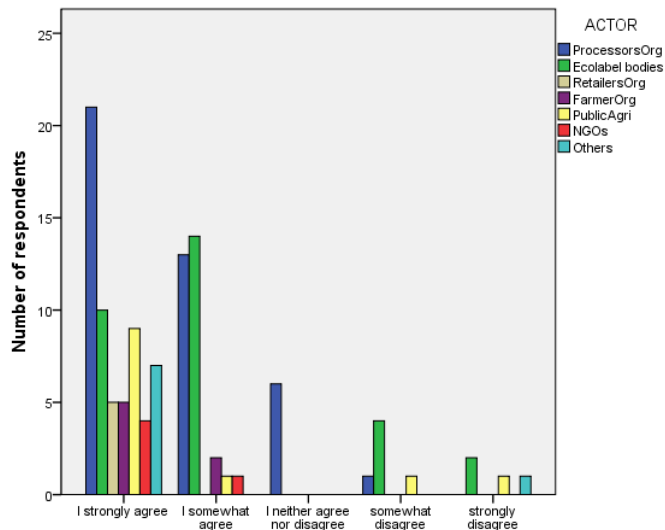
This risk of consumer confusion is also reflected in the perceptions of market and policy actors. A majority of respondents strongly agreed with the statement "Consumers would confuse a possible EU Ecolabel with organic labels" (see Figure 14). This concern was shared among all types of actors included in the survey. To evaluate market and policy stakeholders' opinions regarding the consequences of this confusion, two more questions were posed:

1. When asked whether confusion between an organic label and an EU Ecolabel actually matters, as long as the total turnover of environmentally-friendly products increases, the reactions of stakeholders were split. Organic farming associations and public bodies strongly stated that confusion did matter. However,

organisations representing processors adopted the pragmatic view that confusion did not matter as long as there was a net environmental benefit.

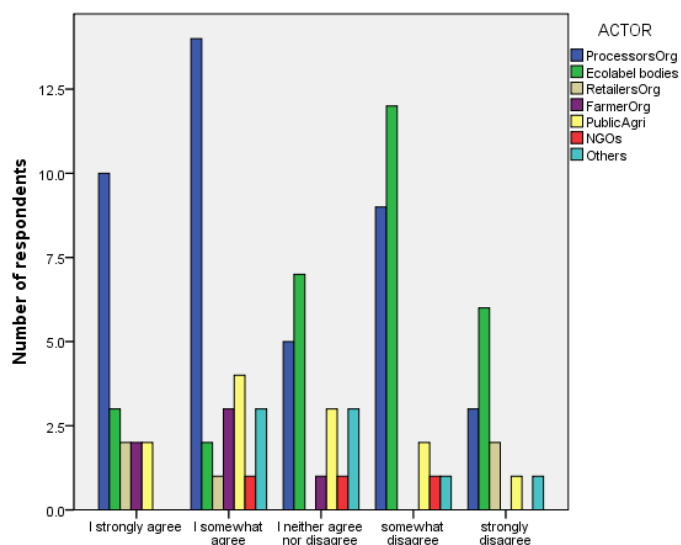
- When asked whether confusion between an organic label and an EU Ecolabel would harm the organic sector, most stakeholders agreed: Confusion will harm organic producers and labelling organisations.

Figure 14: Agreement with the statement “Consumers would confuse a possible EU Ecolabel with organic labels” according to the different types of actor



Source: own illustration based on the actors’ survey; ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

Figure 15: Agreement with the statement “potential consumer confusion between 'eco' and 'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmental friendly products” according to different types of actors



Source: own illustration based on the actors’ survey; ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

### 6.4.1 Factors influencing confusion

‘Confusion’ was measured according to responses to the statement “The two labels (EU Ecolabel and organic label) confused me” and is the dependent variable of the regression model. The results from the whole dataset identified the key factors which reduce or enhance confusion. Ten factors were found (Table 19), describing for example environmental issues of organic products, buying behaviour of the consumers, and the attitude towards environmental protection (see Annex for details).

*Table 19: Overview of influencing factors*

No	Factor name
1	Environmental criteria for organic products
2	Buying behaviour and attitude towards organic and environmental products
3	Environmental criteria for environmentally-friendly product
4	Organic agricultural criteria for an organic product
5	Attitude towards environmental protection
6	Farm’s own feed and fertilizers for environmentally-friendly products
7	Attitude towards environmental and economic progress
8	Eating/cooking behaviour
9	Trust of labels
10	Organic agricultural criteria for environmentally-friendly product

Source: own study; KMO: .94; explained variance: 66 %

For the regression analysis we considered these ten factors as well as issues such as age and gender of respondent, the extent to which the respondent was an existing consumer of organic products, the amount of background information provided and the country in which

the respondent was domiciled (see Annex for details).

The results of the regression model revealed that five of ten factors have a strong correlation with risk of confusion. The strongest correlation is with “buying behaviour and attitude towards organic and environmental products” (see Figure 16): the more positive the attitude towards these products and the more organic products are bought, the less the confusion between the organic label and the EU Ecolabel.

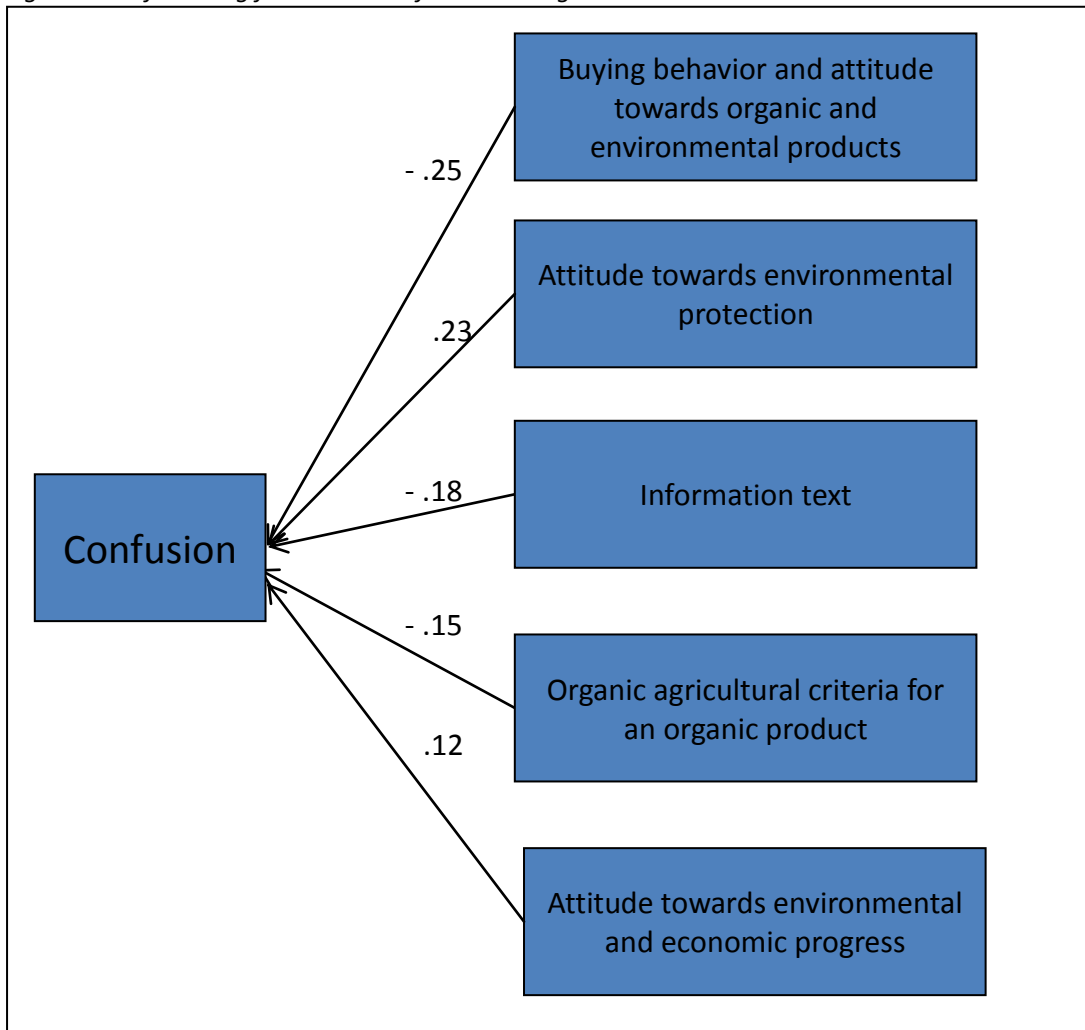
“Attitude towards environmental protection” also had a significant influence on confusion. In this case the risk of confusion is higher when the consumers have a critical attitude towards environmental protection and think that environmental protection should not hinder economic growth.

Providing information about the EU Ecolabel also had a positive influence. Those consumers who were knowledgeable about the EU Ecolabel were less confused.

“Attitude towards organic products” also correlates with confusion: consumers who are well informed about organic products are less confused about the two labels than are uninformed consumers.

Overall these results give an idea of the potential factors that could reduce confusion between the organic label and an EU Ecolabel. Consumers are less confused when they are familiar with organic products (e.g. they buy them or they have a positive attitude towards them). Furthermore, provision of information about the EU Ecolabel can also help to reduce this potential for confusion.

Figure 16: Influencing factors on confusion – a regression model



Source: Own study

R-Square: 0.11; standardized beta value

## 7 Feasibility of developing reliable criteria

### 7.1 Significant issues highlighted by the EU Ecolabel Regulation

The EU Ecolabel Regulation 66/2010 specifies in Article 4 additional issues to consider in the development of criteria. These are:

- substitution of hazardous substances
- health and safety aspects
- durability and reusability
- social and ethical aspects.

#### 7.1.1 Substitution of hazardous substances

With recent evidence that organophosphate pesticides use is tied to lower IQ in children<sup>a</sup>, the debate on the use of synthetic chemicals in agriculture has been rekindled. By adding food, feed and drink products to the EU Ecolabel scheme, there will for the first time be ecolabelled products that are deliberately ingested. This will make the substitution of hazardous and potentially detrimental substances particularly important when developing criteria.

The importance of restricting hazardous substances is reflected in Europe-wide regulations, such as EU Regulation 1107/2009 concerning the placing of plant protection products on the market. The widespread use of hazardous substances, especially in the agricultural but also in the processing and distribution stages, requires the development of suitable criteria regarding the type of substances which it is permissible to use. Besides criteria regarding a ban of certain hazardous substances, criteria regarding the correct use - especially of pesticides – will be required. Examples of the typical applications for which hazardous substances are used are provided in Table 20.

<sup>a</sup> Bouchard M.F. et al. (2011) *Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year Old Children* Environ Health Perspect 2011 doi:10.1289/ehp.1003185; Engel S.M. et al. (2011) *Prenatal Exposure to Organophosphates, Paraoxonase 1, and Cognitive Development in Childhood* Environ Health Perspect 2011 doi:10.1289/ehp.1003183; Rauh V. et al. (2011) *7-Year Neurodevelopmental Scores and Prenatal Exposure to Chlorpyrifos, a Common Agricultural Pesticide* Environ Health Perspect 2011 doi:10.1289/ehp.1003160

Table 20: Hazardous substances and antibiotics used in the production of food, feed and drink

Applications	Lifecycle stage
Anti-fouling agent	Fishing
Disinfectants	Agriculture, food processing, transport/distribution, retail
Fumigant	Agriculture
Fungicide	Agriculture
Growth promoters	Agriculture
Herbicide	Agriculture
Insecticide	Agriculture
Rodenticide	Agriculture, food processing, distribution
Seed treatment	Agriculture

Source: Oakdene Hollins

#### 7.1.2 Durability and reusability

Durability of products plays an important role in sustainable development as it allows the prevention of waste by avoiding the need for new production. Durability of food products can be largely influenced by the packaging employed and the degree of consumer education on handling and storage. According to a study<sup>b</sup> in the UK, ca.25% of all purchased food is thrown away by the consumer. More robust or 'smart' packaging might help to reduce this waste by maintaining the quality (and appearance) of the products. However, the aim of improving durability needs to be balanced with the aim of reducing packaging waste, as well as with any health impacts that might arise from food conservation techniques e.g. freezing, canning, radiation.

The question of reusability is not of significant relevance to this study.

#### 7.1.3 Health and safety aspects

Health and safety aspects are important both in relation to the production processes and the final products. Considerations regarding potential risks to the health of consumers are included in the aims and objectives of current

<sup>b</sup> Quested T., Johnson H. (2009) *Household Food and Drink Waste in the UK* WRAP



Ecolabel criteria for other products, such as hand-dishwashing detergents, textiles and floor coverings.<sup>a</sup> The role of hazardous substances regarding health is relevant both for employees in the food chain and for consumers, and has been discussed above (Section 7.1.1).

Additionally, while food products are essential for human beings, the excessive consumption of certain products poses significant health risks such as obesity, diabetes or alcoholism. The recognition of these risks is reflected in various mandatory and voluntary restrictions, e.g. relating to the purchase of alcohol by children. By taking such impacts into account when selecting product categories and in the development of criteria, the risk of reputational damage to the EU Ecolabel brand that might be caused by promoting products considered detrimental to health could be reduced.

#### 7.1.4 Social and ethical aspects

Ethical issues in relation to food mainly relate to animal welfare considerations and have given rise to specific labelling schemes (e.g. the UK's RSPCA Freedom Food label).<sup>b</sup> Social issues have also been embedded in labels, with Fair Trade being the best known example.

The consideration of social and ethical aspects is crucial in the food sector to:

- enable a fully sustainable approach to labelling by extending the focus from environmental to social and ethical issues
- manage the risk of damaging the EU Ecolabel brand by endorsing unethical products
- reflect the concerns of consumers as confirmed in our survey.

It is important to note that animal welfare is already part of the criteria for the organic label.

<sup>a</sup> e.g. criterion on formaldehyde emissions from wooden furniture and wooden floor coverings

<sup>b</sup> RSPCA Freedom Food RSPCA [Online accessed 20-4-2011] [http://www.rspca.org.uk/freedomfood/aboutus/-/article/FF\\_AboutUs](http://www.rspca.org.uk/freedomfood/aboutus/-/article/FF_AboutUs)

## 7.2 Additional issues that may need to be taken into account

There are a number of other issues associated with environmental protection that are regarded as significant by policy makers, the industry and consumers. These may be more perceived than real (in terms of being supported by scientific evidence) but they still warrant discussion in this study, as they play an important role in deciding whether an EU Ecolabel for food, feed and drink products is attractive to stakeholders.

Issues highlighted by the literature review are:

- use of genetically modified organisms
- food miles
- local food
- food packaging.

### 7.2.1 Use of genetic modified organisms (GMOs)

EC policy in respect of the environment aims for a high level of protection taking into account the diversity of situations in the various regions within the EU. It is based on the principle that preventative action should be taken, that environmental damage should be rectified at source, and that the polluter should pay. In this context, environmental protection requirements allow Member States to take provisional measures, for non-economic environmental reasons, subject to a Community inspection procedure.<sup>c</sup>

The use of GMOs (e.g. modified soya as feed for beef) is highly controversial within the EU, with some Member States banning imports and the planting of GM crops. However, whilst evidence regarding detrimental impacts on e.g. biodiversity from the extensive use of insecticide and herbicides for some GM crops has been found, no clear evidence regarding the detrimental environmental impacts of GMOs has been accepted by the scientific community.<sup>d</sup>

<sup>c</sup> Treaty establishing the European Community - Part Three: Community policies - Title XIX: Environment - Article 174 - Article 130r - EC Treaty (Maastricht consolidated version) - Official Journal C 325, 24/12/2002 p. 0107 - 0108

<sup>d</sup> Wolfenbarger L.L., Phifer P.R. (2000) *The Ecological Risks and Benefits of Genetically Engineered Plants* Science Vol.290, pp.2088-2093

In a situation of uncertain scientific evidence, the main argument against the use of GMOs is based on the precautionary principle. It should also be noted that the Council Regulation (EC) No 834/2007 on Organic Production and Labelling<sup>a</sup> does not allow the use of GMOs or products thereof in the production of organic food.

### 7.2.2 'Food miles' and local food

The 'food miles' issue has attracted much attention in the media, and there is a push from concerned members of the public to develop an agenda for local food.<sup>b</sup> However, we have not found a scientific basis to include these aspects in their own right. Rather, they need to be assessed in the full context of all lifecycle stages.<sup>c</sup> For example, where greenhouse cultivation is employed, the negative environmental impacts of locally-based production, as compared to a more geographically distant location where greenhouses are not needed, may exceed any gains from a reduced transportation impact.

This approach may also help to avoid the danger of raising non-tariff trade barriers by discriminating against imports from countries outside the EU or the EEA.

### 7.2.3 Food packaging

Food packaging is another issue that consumers may consider to be significant, reflected for example in the discussion of excessive packaging of confectionery.<sup>d</sup> However, a review of LCAs of food products shows that, for many products, packaging does not have a significant share in overall lifecycle environmental impacts. Even though this is acknowledged by many studies, there is also recognition that packaging issues need to be addressed, because it is usually the packaging and not the product that is first in contact with the consumer<sup>e</sup> and therefore is the first impression the consumer has of the

product. Reflecting this special position, the development of a packaging criterion may be important in establishing the credibility of any future EU Ecolabel for food products.

## 7.3 Significant environmental issues that were identified in the consumer and stakeholder consultation exercises

In the market and policy stakeholder survey, respondents were asked to indicate which environmental impact categories an EU Ecolabel for food and feed should include. Participants could choose up to 17 categories and add further categories if they wished to. Figure 17 gives an overview of the result.

This analysis revealed that stakeholders consider a broad range of environmental impacts to be of similar importance. However, an analysis of rankings per individual stakeholder type revealed that the indicated relevance of the impact categories slightly differs between different actor groups (see Table 21).

In the consumer questionnaire, respondents were asked to evaluate different criteria for an environmentally-friendly product (such as one with the EU Ecolabel). They were asked to do the same for an organic product. The choices included in this evaluation were based on criteria in the Organic Regulation and 'image based criteria' for organic, such as naturalness. Additionally, specific environmental issues, e.g. packaging or waste were added to the evaluation (see Table 22).

<sup>a</sup> Council Regulation (EC) No 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91

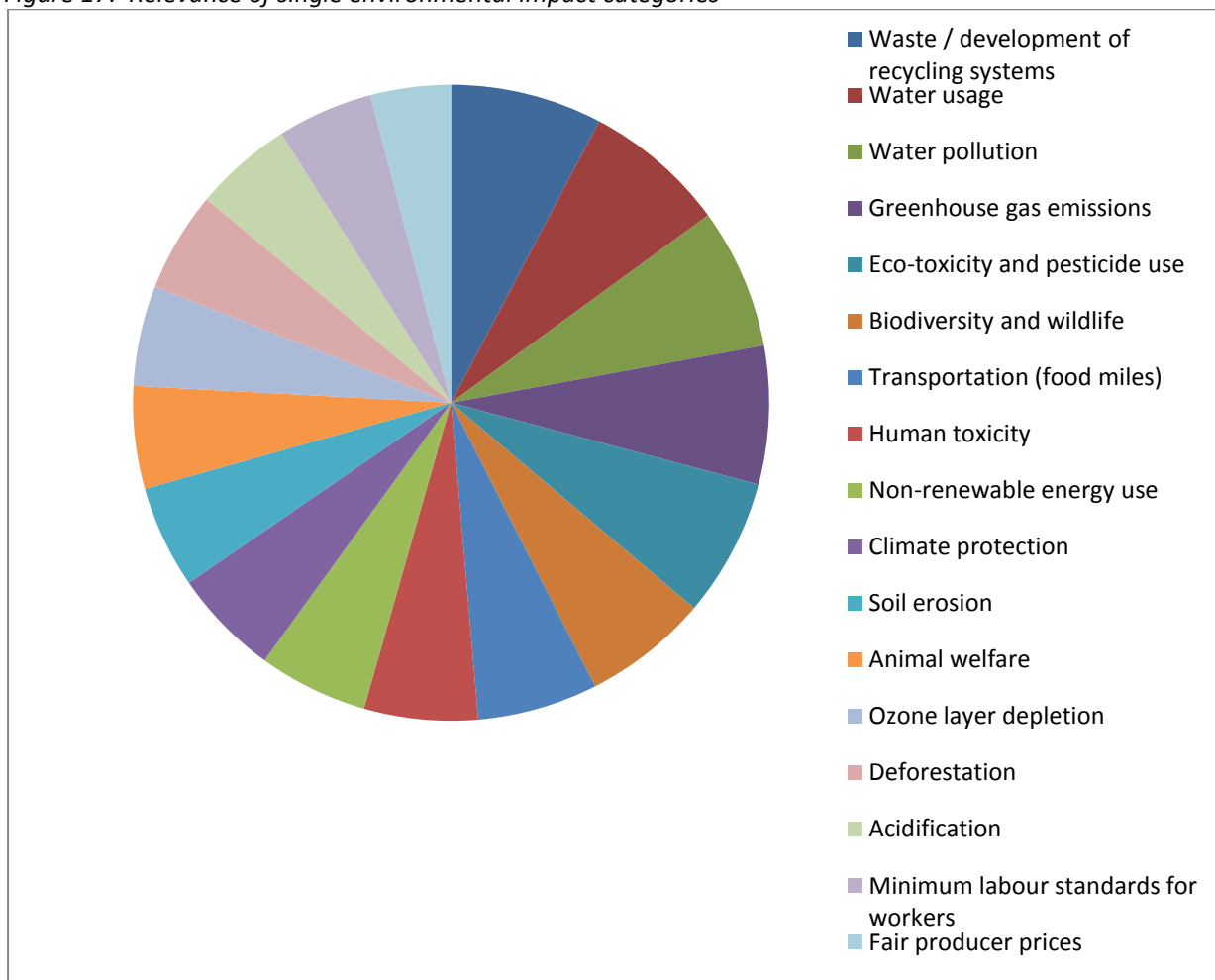
<sup>b</sup> Macdiarmid J. et al. (2011) *Livewell: a balance of healthy and sustainable food choices* WWF

<sup>c</sup> Smith A. et al. (2005) *The Validity of Food Miles as an Indicator of Sustainable Development* AEA Technology Environment for Defra

<sup>d</sup> BBC *A Case of Over-Egging* [Online accessed 5-3-2011] [http://news.bbc.co.uk/2/hi/uk\\_news/magazine/7990446.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/7990446.stm)

<sup>e</sup> BBC *A Case of Over-Egging*

Figure 17: Relevance of single environmental impact categories



Source: Oakdene Hollins based on the actors' survey

Table 21: Relevance of impact categories per stakeholder type

Stakeholder	Impact category of most relevance
Food processors and food umbrella or labelling organisations	Waste reduction and the development of recycling systems, Reduction of greenhouse gas emissions, Water usage, Eco-toxicity
Ecolabel Competent Bodies and environmental and consumer NGOs	Water usage and water pollution, Waste reduction and the development of recycling systems
Food retailers, retailer organisations and wholesalers	Eco- and human toxicity, Waste reduction and the development of recycling systems, Reduction of GHG emission, Water usage, Water pollution
Farmers' associations	Human toxicity

Source: own based on the actors' survey

Table 22: Environmental attribute choices in the consumer survey

No chemical pesticides	Few additives	High animal welfare	Little waste
Environmentally-friendly processing	Environmentally-friendly packaging	Fair prices	No artificial fertiliser
Regional production	Climate protection	Short transport distance	Low noise pollution
Use of renewable energy	Low energy usage	Organic farming	No GMO

Source: own, based on consumer survey

While differences between the indicated importance of each attribute were generally small, an analysis of consumer rankings revealed that a credible environmental label should provide an indication that the product has the following attributes:

- it is produced without chemical pesticides
- it contains few additives
- it considers animal welfare
- it produces little waste
- it is processed and packaged in an environmentally-friendly way
- it is organically produced.

A comparison of these rankings with the results from the same question but in respect of an organic product revealed that, except for the aspect of “Is processed and packaged in an environmentally-friendly way”, the attributes expected from an environmentally-friendly product and an organic product were similar.

When comparing the issues raised by market and policy actors with those raised by consumers, there are significant differences (Table 23).

*Table 23: Comparison of main issues / impact categories for stakeholders and consumers*

Stakeholders' main impact categories	Consumers' main issues and impact categories (example: Germany)
Waste / development of recycling systems	Animal welfare
Water usage	No chemical pesticides
Water pollution	Few additives
Greenhouse gas emissions	No GMOs
Eco-toxicity and pesticide use	Organic agriculture

*Source: based on the actors' survey and consumer survey*

One key point is that market and policy actors typically characterise a good environmental label by coverage of issues aligned with environmental science, whereas consumers associate an environmental food label to a large degree with issues which are at the core of organic agriculture such as no chemical pesticides, few additives and no GMOs and including the attribute ‘organic’ itself.

## 7.4 Linking compliance with criteria to superior performance in selected impact categories

The EU Ecolabel regulation expects such criteria to “be determined on a scientific basis considering the whole lifecycle of products”.<sup>a</sup> This implies that scientific evidence needs to be available that links the compliance with such criteria to actual environmental benefits. Additionally, it is necessary to consider the impacts over the whole lifecycle in order to avoid improving a single lifecycle stage to such an extent that it leads to a deterioration of environmental aspects in other stages.

Furthermore, in general, good practice would be to use “the best available techniques for measuring and assessing impacts that are robust and credible”.<sup>b</sup>

### 7.4.1 Output-based criteria

Ideally, compliance with any set criteria should then link directly to an environmental benefit. Criteria that establish such a link as directly as possible are known as ‘output-based’ criteria.<sup>c</sup> Output-based criteria define limit values for outputs associated with the lifecycle stages of the product which have impacts on the environment. A typical example of such an output-based criterion would one that limits the maximum amount of sulphur dioxide that could be emitted during production.<sup>d</sup> Sulphur dioxide emissions are directly linked to acidification impacts.

The advantages of output-based criteria are three-fold:

1. **Output-based criteria have a relatively high degree of certainty:** If an output-based criterion (e.g. the maximum acceptable level of emissions) is exceeded, then it is unambiguous that this product is associated with a higher potential

<sup>a</sup> EU (2010) *EU Regulation 66/2010 on the EU Ecolabel* Article 6 (3)

<sup>b</sup> University of Hertfordshire (2010) *Effective Approaches to Environmental Labelling of Food Products - Report for Defra*

<sup>c</sup> University of Hertfordshire (2010)

<sup>d</sup> A typical example of such an output based criterion used in current Ecolabel regulation is the limit value on SO<sub>2</sub> emissions during the production of titanium dioxide for paints.

environmental impact than products with lower emissions. In fact, the actual expected benefits can be estimated based on the emission threshold and an estimation of the number of enterprises that have made changes to their businesses to comply with the output based criteria.

2. Output-based criteria do not prescribe specific production processes: They do not prescribe how the production, distribution or consumption of a product should occur, but they focus on the level of associated impacts. As such, the actors involved remain free to choose whatever method or technology they see fit to achieve compliance. This approach is generally considered to be economically more efficient, and less burdensome for business.
3. Trade-offs within an environmental impact category: Using a criterion that covers the output of an aspect of the whole lifecycle avoids the need to deal with trade-offs within the impact category. For example, reducing the emissions of GHGs during primary production can be achieved in a number of ways. For example, producing tomatoes in Spain instead of in greenhouses in Sweden may use less direct energy input: however, this advantage may be offset by having longer transport distances. A comparison of the lifecycle carbon footprints of the alternatives would allow an evaluation as to whether this trade-off is beneficial or detrimental to the overall output of greenhouse gases.

We conclude that such criteria best fulfil the requirement of Principle 3 of the guidance document issued by the Food Sustainable Consumption and Production Round Table:

*“The environmental assessment shall be based on scientific data and methodologies that are sufficiently thorough and comprehensive to produce results that are accurate and reproducible. The applied assessment methods shall be recognised and widely accepted in*

*scientific or professional disciplines or be otherwise scientifically defensible.”<sup>a</sup>*

There are however, characteristics of output-based criteria that prevent these criteria from being employed successfully:

1. Output-based criteria have a high cost of measurement: If there is a limit value on emissions, the most reliable way to prove compliance is to actually measure the emissions. However, even for well-defined point sources (such as the stack of an industrial facility) a fair and reliable measurement will be costly. This will not be a problem if measurements have to be taken anyway due to existing regulations (e.g. IPPC), but may be prohibitive otherwise, especially for SMEs. For many output-based criteria, however, measurement is much more difficult. Whether it is the measurement of the actual emissions of methane from a given herd of cows to establish the climate change impact of a cattle farm, or a survey of the number of the species present on a farm to establish the richness of biodiversity, for many parameters no practicable and affordable solutions for use in an EU Ecolabel are currently available.
2. Uncertainties in methodologies to avoid direct measurement: As outlined above, direct measurements are either too expensive or not technically and/or economically feasible. In these cases, methodologies are employed to estimate the emissions or impacts of certain pollutants from the practices and technologies employed, the raw materials used and the prevailing local conditions. Even though some models are very accurate (e.g. estimating GHG emissions from vehicles based on the distance and the fuel efficiency of the vehicle), others contain significant uncertainties (e.g. in the assessment of greenhouse gas emissions (N<sub>2</sub>O emissions, carbon sequestrations), soil erosion and animal welfare.

<sup>a</sup> European Food SCP Round Table (2010) *Voluntary environmental assessment and communication of environmental information along the food chain, including to consumers – Guiding Principles* p.12

Additionally, other assessments, such as eutrophication and ecotoxicity, suffer from a lack of reliable data - for example in capturing site-specific and farm-specific conditions.

3. **Difficulties in assessment:** Both the problems of costs of measurements and methodological uncertainties are exacerbated by the need for credible assessment by a third party. This may lead to either the need for expert knowledge within the Certification Body or to the involvement of other third party experts involved in certifying certain levels of emissions according to established norms and standards. Additionally, if output criteria are set for the whole supply chain of a product, it would require all food supply chain actors to collaborate to provide evidence for compliance with the set criteria.

The shortcomings of currently available output-based measures and the demand for improved methodologies have been recognised by the industry. For example the Food SCP RT stated:<sup>a</sup>

*“The Members of the Round Table recognise the need to establish a scientifically reliable, practical and harmonised environmental assessment methodology for food and drink products across Europe – including, as appropriate, product category specifications – to form the basis for voluntary communication of environmental information along the food chain, including consumers.”*

Currently, several initiatives are underway to resolve these issues and to develop a reliable and economically feasible methodology to arrive at data suitable for output-based criteria. These involve carbon footprints, as well as water footprints and ultimately an environmental footprint, as shown Table 24.

<sup>a</sup> European Food SCP Round Table (2010) *Voluntary environmental assessment and communication of environmental information along the food chain, including to consumers – Guiding Principles* p. 3

Table 24: Examples of initiatives to develop methodologies

Institution	Project	Comments
ISO	ISO 14046, Water footprint – Requirements and guidelines <sup>b</sup>	Includes both volumetric footprint as well as impact assessment
French Grenelle	National experimentation for the environmental display on products <sup>c</sup>	Based on a multi-criteria approach (methodologies, product category rules and databases based on work carried out by the AFNOR ADEME platform and ADEME), results expected end of 2012
EU	Environmental footprint of products <sup>d</sup>	Technical guide developed by JRC IES; final methodological guidelines expected end of 2012
Food SCP RT	Environmental assessment methodology <sup>e</sup>	Provision of guidelines expected not before 2012

Source: Oakdene Hollins

#### 7.4.2 Best Practice based criteria

Until now many existing schemes have resorted to using criteria prescribing ‘best practices’. Such practice-based criteria either require market actors to adopt certain practices and/or ban them from doing so. A typical example from the organic label would be prescribing the adoption of multi-annual crop rotation<sup>f</sup>, or banning the use of mineral nitrogen fertilisers.<sup>g</sup>

<sup>b</sup> Raimbault M., Humbert S. (2011) *ISO considers potential standard on water footprint* ISO [Online accessed 15-5-2011]

[http://www.iso.org/iso/isofocusplus\\_bonus\\_water-footprint](http://www.iso.org/iso/isofocusplus_bonus_water-footprint)

<sup>c</sup> General Commission for Sustainable Development *Display of the environmental characteristics of products* [Online accessed 17-5-2011]

<http://www.developpement-durable.gouv.fr/IMG/pdf/LPS39EN.pdf>

<sup>d</sup> For further details see

[http://ec.europa.eu/environment/eussd/product\\_footprint.htm](http://ec.europa.eu/environment/eussd/product_footprint.htm)

<sup>e</sup> For further details see <http://www.food-scp.eu/node/25>

<sup>f</sup> Council Regulation (EC) No 834/2007; Article 12 (1b)

<sup>g</sup> Council Regulation (EC) No 834/2007; Article 12 (1e)

In general such practice-based criteria do not require sophisticated measurement or monitoring techniques. Furthermore, unlike a product ‘footprint’, they are usually restricted to individual stages of the lifecycle, thus avoiding the need for collaboration between different food supply chain actors for their assessment. As such, it is usually easy for applicants to provide evidence of compliance, and therefore relatively straightforward for Certification Bodies to assess the validity of claims made.

However, practice-based criteria have significant disadvantages:

1. They are highly prescriptive: They do not allow actors the freedom to choose the technologies most suitable for them and their circumstances.
2. They do not unambiguously deliver environmental benefits. While in some cases the link between practices and environmental impacts is well understood, these links can be often “complex, indirect and, in some cases, not fully understood”.<sup>a</sup> The inclusion of certain criteria is therefore sometimes contentious.
3. They can lead to an environmental burden being shifted from one stage of the lifecycle to another: In some cases, compliance with the best practice in one lifecycle stage may lead to denying the application of technologies in other lifecycle stages that could lead to a better outcome overall. For example, if best practice criteria were set for emissions from transport this might exclude importing produce from countries where an advantageous climate might lead to higher yields and thus to lower emissions in primary production. Consequently, such a criterion is not able to deal with the trade-off between the environmental impacts of primary production versus transportation.

The disadvantages of practice-based criteria have been recognised in the ISO 14024 standard for Type I labels, which advises against the use of such criteria<sup>b</sup>:

*“Criteria that directly or indirectly require or exclude the use of particular processes or production methods without justification shall be avoided. Any exclusions of certain substances should be based on scientific methodology meeting Principle 3 of ISO 14020.”*

On the other hand, whilst an unequivocally proven link between compliance and environmental benefits is preferable, such a high level of confidence in long term net environmental benefits is not mandatory. For example, according to the ISO standard 14024 on Type I environmental labels, it is sufficient to have scientifically based data to support environmental claims<sup>c</sup>:

*“The development and selection of criteria shall be based on sound scientific and engineering principles. The criteria should be derived from data that support the claim of environmental preferability.”*

Because of the uncertainty in the effectiveness of practice-based criteria, it is likely that, in the long run, labelling schemes aiming to achieve measurable environmental benefits against specific indicators will have to move to more direct output-based criteria. This will be facilitated by a better understanding of environmental impacts and the development of more accurate methodologies.

There are also other key challenges in assessing the environmental impacts of food, feed and drink products in a reliable manner. Two such issues – seasonality for agriculture and site specific circumstances for agriculture and processed food and drinks – are discussed in more detail in the next sections, as these are of much greater importance in food, feed and drink than in the existing non-food product categories covered by the EU Ecolabel.

<sup>a</sup> University of Hertfordshire (2010) *Effective Approaches to Environmental Labelling of Food Products - Report for Defra* p10

<sup>b</sup> ISO (2001) *Environmental labels and declarations Type I environmental labelling Principles and procedures (ISO 14024:1999)* Edition:2001-02-01, Article 6.4.2.1

<sup>c</sup> ISO 14024:1999 Article 5.14

### 7.4.3 Seasonality

Consumers are often encouraged to reduce their environmental impacts by buying food that is 'in season'. However, to date, no major food labelling system has made 'seasonality' part of its catalogue of criteria. This is probably due to the fact that, while it seems evident that buying produce out of season will increase its environmental impact, it is by no means certain that this additional impact is significant over the whole lifecycle of the product concerned. Perhaps more importantly, the property of being 'out of season' is rather a coarse proxy for low environmental performance and can be captured better by trying to control for the underlying factors:

- special technology that is needed to grow food outside the normal season
- storage requirements
- transportation distances from countries where the produce is 'in season'.

The use of special technology that allows the growth of food outside of the 'normal' season is best exemplified by the case of greenhouse produce. Greenhouses allow an extension of the growing season and have become commonplace for many products. However, whether - for example - growing vegetables in a greenhouse increases their environmental impact depends very much on how the greenhouse is operated and maintained. A more reliable approach in this case is to target the actual impacts or best practices of greenhouses and not 'seasonality' itself. Separate criteria for greenhouse produce and products from the land are found in existing labels and ensure an acceptable impact from operating greenhouses.<sup>a</sup>

Storing food, feed or drink may lead to environmental impacts due to the need for refrigeration (abiotic depletion, global warming potential, ozone depleting potential) or additives to prevent fouling or spoilage by pests (eco-toxicity, human toxicity). Regarding the latter, a large variety of technologies exist, some of them without significant environmental impacts. Again, it is more reliable to focus

<sup>a</sup> Klimatmärkning för Mat (2010) *Criteria for Mitigation of Climate Impact from Food Production and Distribution* Klimatmärkning

criteria directly on prevention e.g. attack by pests instead of using measures of 'seasonality'.

The environmental impacts of the refrigeration of food, feed and drinks only becomes prominent when the overall environmental impact of the food in question is low. This is particularly true for vegetables and fruits, but not for fish or meat where the environmental impact of refrigeration is generally considered to be of little significance compared to the other impacts of these products. For example, a study determined that the storage of apples over four months added 15% of energy consumption.<sup>b</sup> Another estimated that storing frozen spinach contributed more than 50% to greenhouse gas emissions.<sup>c</sup>

Freezing food can also have a significantly beneficial influence in reducing food waste, both within the supply chain and at the consumer stage of the product's lifecycle. It is therefore necessary to balance the environmental burdens of refrigeration with the environmental benefits of reduced waste. The same argument can be employed regarding other conservation technologies, such as canning. Again, studies have shown that for products with a high overall impact, e.g. fish, the impact of canning is comparably low and that the fish harvesting stage accounts for 70-95% of the impact regardless of which impact category is considered.<sup>d</sup>

Finally, seasonality is often connected to local food. If 'out of season' food is offered, it is often food that has been imported from other countries or regions where it can currently be grown. The environmental impact of transport can sometimes be significant (see Section 3.3.3). In relation to the issue of seasonality, transporting food over longer distances provides an alternative to using technologies such as greenhouses. However, if the impact of transport is significant the impact data need to be captured in any case.

<sup>b</sup> Blanke M.M., Burdick B. (2005) *Food (miles) for Thought - Energy Balance for Locally-grown versus imported Apple Fruit* Environ Sci & Pollut Res. 2005, Vol.12(3) pp.125-127

<sup>c</sup> Büsser S., Steiner R., Jungbluth N. (2008) *LCA of Packed Food Products- the function of flexible packaging* ESU Services

<sup>d</sup> Hospido, A. et al. (2006) *Environmental assessment of canned tuna manufacture with a lifecycle perspective* Resources, Conservation and Recycling Vol.47 pp.56-72



Overall, while buying produce that is 'in season' may be environmentally beneficial compared to buying stored or transported products within the same product group, 'seasonality' itself is not a reliable criterion for environmental performance within that product group, especially as - in some cases - providing food out of season may not cause significant additional environmental impact.

It would be better to develop criteria to cover the underlying impacts, such as the operation of greenhouses, storage facilities or transportation distances. Besides, although consumers can be 'nudged' to buy products in season, their product preferences in terms of taste and the influence of 'cultural' factors may be difficult to change. If the EU Ecolabel is to have an impact on consumer purchasing decisions, it should offer the consumer the choice to purchase an Ecolabelled product at any time of the year.

#### 7.4.4 The role of site-specific conditions

A major issue in assessing the environmental impacts of food, feed and drink products is how to take local conditions into account. While some environmental impact categories have no site-specific dimension (e.g. global warming potential<sup>a</sup>, abiotic depletion, ozone depletion potential), for others local conditions can make a significant difference in terms of the type and magnitude of environmental impact. A good example is water use. The water footprint of a product which details the amount of groundwater and surface water used during production is only meaningful when set in the context of the 'water stress' in the geographic region in which the products are produced. For example, the same amount of water used in a region with abundant water resources may give rise to much greater concern in an arid or semi-arid region. A similar problem arises with respect to other environmental impact categories, such as acidification or eutrophication, as the actual environmental impacts depend on the local conditions.

Therefore some environmental impacts will require a bespoke, site-specific assessment. This raises the question of how to develop general, standardised criteria<sup>b</sup>:

*"Bespoke site-specific assessments are generally non-standard and consequently this conflicts with the objective of using a common approach for all products. Thus the key will be to develop standard site-specific assessment techniques...["]"*

Even though water use may be the prime example of site-specific differences in primary production environmental impacts, there are additional examples from other parts of the lifecycle of food and drink products. One of these is particularly relevant because it touches on the European scale of the EU Ecolabel. In a study on the environmental impact of soft drinks it was reported that the environmental impact of glass bottles is small if the bottles can be refilled, but large if they have to be re-melted.<sup>c</sup> For the product used in the study, this meant that domestic consumption of the soft drink in glass bottles led to small environmental impacts, as a corresponding collection and refilling system was in place. However, if the drink was exported, the bottles could no longer be collected for refilling and therefore environmental impact increased significantly; however they could then be re-melted as part of a recycling scheme. It would therefore not be enough to set "zero waste to landfill" as an output-based criterion for glass use, as re-melting and refilling are alternative methods of disposal. The local practice in respect of recycling and the extent to which bottles are exported would determine the final environmental impact. The same is true for abiotic depletion and GHG emissions linked to the use of electricity: different countries have different electricity grid mixes. It would be very difficult to favour processors in one country over another because they perform badly on some indicators due to factors that are outside their control. However, the EU Ecolabel has faced this difficulty in setting criteria for other non-food product categories, and utilised an

<sup>a</sup> While emissions of GHGs have a global impact, the link between the use of energy and the amount of GHG emitted may well have local dimensions e.g. due to variations in the electricity mix.

<sup>b</sup> University of Hertfordshire (2010) *Effective Approaches to Environmental Labelling of Food Products - Report for Defra* p20

<sup>c</sup> Nilsson K., Sund V., Florén B. (2011) *The environmental impact of the consumption of sweets, crisps and soft drinks* TemaNord 2011:509, SIK for the Nordic Council of Ministers

average European fuel mix for assessing the GHG impact of energy use.

The same is true for output-based criteria. Currently, the ISO is developing a standard for water footprinting.<sup>a</sup> Besides rules for the determination of the ‘volumetric’ water footprint it will also include rules on how to weight that water consumption according to local conditions, especially the water stress experienced in the watershed. However, the data needed to assess this accurately and reliably is at the moment not available, which would mean that at this point in time such criteria would be difficult to implement.

Site-specific issues are therefore a significant challenge in developing reliable criteria for food, feed and drink products. The fact that existing labels rarely tackle these problems is mainly due to the fact that water-use - for which this issue is most significant - is generally not included in the catalogue of environmental impacts covered. Yet the examples given highlight the need to develop criteria that are able to adjust for such regional differences. Current developments in ecological footprinting offer the potential for such an impact based water footprint in the future.

## 7.5 Dealing with trade-offs between environmental impacts and the risk of environmental burden shifting

Deciding on the significance of relative impacts often involves a value judgement. Furthermore, excellent performance with regard to one indicator may lead to poor performance in another indicator. For example, intensification of livestock production might lead to a reduction in GHG emissions because of the shorter lifetime of the livestock.<sup>b</sup> However, it is easy to imagine that such intensification might have a negative effect on animal welfare. These trade-offs across environmental impact categories are quite common in the food, feed and drink products (Table 25).

<sup>a</sup> Raimbault M., Humbert S. (2011) *ISO considers potential standard on water footprint* ISO [Online accessed 15-5-2011] [http://www.iso.org/iso/isofocusplus\\_bonus\\_water-footprint](http://www.iso.org/iso/isofocusplus_bonus_water-footprint)

<sup>b</sup> Sonesson U., Cederberg C., Berglund M. (2009) *Greenhouse gas emissions in beef production* Klimatmärkning

Table 25: Examples of trade-offs across impact categories

Practice	Product	Improvement	Deterioration / Risk
Intensification	Beef	GHG, land-use	Animal welfare, biodiversity, deforestation (from soy meal)
Intensification	Crops	Land-use	Eutrophication, water-use, GHG
Use of GMOs	Fish	Waste from aquaculture	Risks around GMOs
Use of recycled paper for packaging	General	Food waste	Risk of contamination by hazardous substances (inks from newspapers)
Canning for conservation	Vegetables	Food waste	Energy use for production / transport / recycling of cans

Source: Oakdene Hollins

A composite label such as the EU Ecolabel will need to aggregate the performance results of the individual impact categories into a single result. There is no clear guidance on how to do this in the examined literature. In the context of an LCA, the ISO standard 14044:26 advises against weighting to combine different impacts and to arrive at single indicator for environmental performance. In the similar context of environmental labelling (ISO 14024:2009), the only guidance given on how to solve this issue, is as follows<sup>c</sup>:

*“Regardless, the study shall show that the selection of product environmental criteria will not lead to the transfer of impacts from one stage of the lifecycle to another or from one medium to another without a net gain of environmental benefit.”*

While this advice highlights the issue of trade-offs both between lifecycle stages and across environmental impact categories, it does not solve the problem of how to determine the “net

<sup>c</sup> ISO (2001) *Environmental labels and declarations Type I environmental labelling Principles and procedures (ISO 14024:1999)* Edition:2001-02-01 Article 6.4.1

gain of environmental benefit” as this is not defined.

To solve this problem, three approaches are currently available:

- Defining a hierarchy of environmental, ethical and social impacts or benefits.
- Employing a model linking individual impact categories to so-called end-point categories.
- Identifying relevant trade-off situations and evaluating them separately.

Most labels are based on transparent principles which allow them to develop a hierarchy of environmental impacts or benefits and thus to come to a decision in a trade-off situation. For example, the basic principles of organic agriculture are concerned with the use of agricultural processes that are based on ecological systems and use resources internal to the system, thus restricting the need for external inputs, especially the use of chemically synthesised substances.<sup>a</sup> These principles focus on the input side of agriculture and not on any polluting outputs, and determine a hierarchy which puts restrictions on external inputs ahead of outputs e.g. reductions of pollutants.

The case of the trade-off around flame weeding can be used as an example: Flame weeding is preferable to the use of herbicides in organic agriculture. However, the trade-off involved in avoiding the input of external substances is a higher contribution to abiotic depletion and emission of GHGs. As the application of herbicides clearly violates the higher principle of limiting the addition of chemically synthesised inputs, this trade-off is regarded as acceptable.

The EU Ecolabel Regulation provides no comparable principles that would allow the ranking of different environmental, ethical or social impacts.

Alternatively, it would be possible to use models to link the various environmental impacts, e.g. global warming, acidification or eutrophication, to so-called ‘end-point categories’ such as the impacts on humans or ecosystems. A well-

developed system is ReCiPe<sup>b</sup>, which is a further development of the Eco-indicator 95 and its successor the Eco-indicator 99. Aimed at optimising internal processes of operations, this system aspires to connect ca.18 different environmental impact categories (mid-point level) to just three end-point impacts: human health, ecosystems damage and resource scarcity. Even though some important impacts (e.g. water use) cannot yet be included due to a lack of reliable methodology to include site specific factors, such models make an attempt to actually overcome the issue of trade-offs across environmental issues. Currently, work on developing an ecological footprint (e.g. French Grenelle<sup>c</sup>) is based on such a model.

These tools currently seem most promising in dealing with the problem of aggregating environmental impacts and arriving at a single environmental score. However, besides the methodological difficulties that remain, these methods are currently not applicable in the context of the EU Ecolabel due to the complexity of the evaluation leading to considerable cost and requirement for expertise.

A different solution would be to identify the relevant trade-offs and then develop an individual bespoke solution for each one. As there are many trade-offs within and between environmental impact categories, this would likely be a lengthy and resource intensive process. A candidate for such a case-by-case approach would be the use of airfreight as means of transport, which involves trading off potential social and economic advantages for developing countries with the associated additional emissions of greenhouse gases. Table 26 gives three alternative solutions adopted by three food labels.

<sup>a</sup> Council Regulation (EC) No 834/2007 on organic production and labelling of organic products

<sup>b</sup> See <http://www.lcia-recipe.net>

<sup>c</sup> General Commission for Sustainable Development *Display of the environmental characteristics of products* [Online accessed 17-5-2011] <http://www.developpement-durable.gouv.fr/IMG/pdf/LPS39EN.pdf>

Table 26: Solutions for dealing with air freight

Label	Solution
<b>BioSuisse (organic)<sup>a</sup></b>	Airfreight prohibited (very strong focus of the label on Swiss produce)
<b>Soil Association (organic)<sup>b</sup></b>	Airfreight allowed but needs to be documented during the assessment
<b>Klimatmärkning (organic &amp; non-organic)<sup>c</sup></b>	No explicit prohibition of airfreight, but CO <sub>2</sub> limits based on the Human Development Index (HDI) of the supplying country. While it is effectively prohibited for developed countries, it is allowed for countries with a low HDI

Source: Oakdene Hollins

The diversity in solutions reflects the differences in values and principles underlying these labelling organisations. Additionally, it reflects the history of the process of developing criteria, with Klimatmärkning being the most recent and most differentiated solution to this problem.

As has been shown, trade-offs pose substantial problems in the development of reliable criteria, which can be aggregated to produce a meaningful overall result. Until the development of an accepted and feasible methodology for an ecological footprint, the most promising approach for the EU Ecolabel is to deal with trade-offs on a case-by-case basis. The main challenge will be to arrive at a joint European position on the values involved in each of the judgements.

<sup>a</sup> Bio Suisse (2011) Summary of the Bio Suisse Standards<sup>®</sup>, version 1.1.2011 [Online accessed 20-4-2011] [http://www.bio-suisse.ch/media/en/pdf2011/a\\_eng\\_information\\_note\\_summary\\_of\\_bio\\_suisse\\_standards\\_2011.pdf](http://www.bio-suisse.ch/media/en/pdf2011/a_eng_information_note_summary_of_bio_suisse_standards_2011.pdf)

<sup>b</sup> Soil Association (2007) *Should the Soil Association tackle the environmental impact of air freight in its organic standards*; Soil Association (2011) *Air Freight: A Review of the Soil Association's Position*

<sup>c</sup> Klimatmärkning för Mat (2010) *Criteria for Mitigation of Climate Impact from Food Production and Distribution* Klimatmärkning

## 7.6 The resources required to develop and apply criteria for the EU Ecolabel and for applicants

Extending the existing EU Ecolabel scheme to food, feed and drink products and operating it will involve expenditure of significant resource both for the European Commission in the development of criteria and for the applicants and the organisations assessing the applications (the EU Ecolabel Competent Bodies).

A particular distinction needs to be made between the development of criteria and assessment procedures covering primary production (agriculture, fishery, aquaculture) and those criteria that cover the remaining stages in the lifecycle of food products (processing, transport, retail, consumption). Primary production is in general the most complex lifecycle stage and significantly different from those criteria typical for the non-food products currently included within the EU Ecolabel scheme. The remaining stages – processing, transport and storage, retail, consumption – are more comparable to existing criteria for the non-food products covered by the existing Ecolabel.

### 7.6.1 Resources required to develop criteria for an EU Ecolabel for food, feed and drink products

The development of suitable criteria for primary production processes can be a lengthy and resource-intensive process. It took the European organic umbrella organisation IFOAM five years after developing the first draft criteria document to finally agree a basic standard.<sup>d</sup> Regarding a label to cover the climate change impacts of food, it took approximately three years after KRAV started before the first draft criteria were published.<sup>e</sup> Both labels used mainly practice-based criteria. In the case of output-based criteria, the time to develop a suitable set of criteria is expected to be even longer, due to the need to develop a suitable methodology in the first place (for example, the current efforts to develop a Europe-wide

<sup>d</sup> Szeremeta A. et al. (Eds.) (2010) *Organic Aquaculture* IFOAM

<sup>e</sup> Bonnedahl K.J., Eriksson J. (2010) *The role of discourse in the quest for low-carbon economic practices: A case of standard development in the food sector* European Management Journal

methodology for an environmental footprint will take an estimated two years).<sup>a</sup> The reason for the length of time needed to develop suitable criteria is the complexity of primary production. Not only is primary production usually responsible for a number of different significant environmental impacts, but these are also often interlinked leading to the problem of how to deal with trade-offs between them.

### 7.6.2 Resources required to apply for the EU Ecolabel and to assess such applications

Criteria should not only provide a reliable test of superior environmental performance, but should also be feasible to assess: The applicant needs to be able to provide evidence for compliance with the criteria without undue cost, and the Certification Bodies need to be able to assess these claims within a reasonable time-span and with the financial means and expertise available to them. At the same time, the level of assessment needs to be sufficient to prevent 'green-wash' and to ensure a reliable verification of the claims made by applicants, which is consistent across the EU (and EEA).

Currently, the EU Ecolabel Regulation expects its certification organisations, the Competent Bodies, to charge a fee *"according to the real administration costs of processing the application"*.<sup>b</sup> However, the maximum level of fee is set to €1,200 per assessment. For an SME this fee is reduced to €600, while for micro-companies it is limited to €350. Overall this implies that criteria need to be defined in such a way as to allow the processing of an application that falls within these boundaries.

The cost of certifying an operator is estimated to be in the range €1,500 to €3,000 per operator per year. However, the certification of a fishery can be more expensive. If undertaken by the Marine Stewardship Council (MSC) a typical certification costs approximately US\$10,000 and US\$250,000 for small and large fisheries respectively.<sup>c</sup>

Existing labels for primary production require on-site audits of typically one half to a full day, involving agricultural experts. Whilst assessments for the products currently covered by the EU Ecolabel may already require on-site audits, the assessors do not need to be experts in the industry to be assessed.<sup>d</sup>

Furthermore, if output-based criteria - such as environmental 'footprints' - are utilised, the costs of assessment will increase significantly. Currently, certification of 'carbon footprints' of stand-alone products from the food, feed and drink sector are often in the range of €10,000 to €20,000. Consequently, output-based criteria would initially place a high economic burden on the industry. This is especially true for SMEs, which may not have the sales volume to cover these extra costs. In this respect, it should be noted that the EU Ecolabel states that *"care shall be taken not to introduce measures whose implementation may impose disproportionate administrative and economic burdens on SMEs"*.<sup>e</sup>

Efforts are currently underway to improve the methodology of environmental footprints, including the generation of an extended dataset to allow quicker and less costly assessments. For the future it is expected that this will lead to a significant cost reduction.

### 7.6.3 Changing recipes and suppliers

A concern raised by stakeholders is the issue of how to deal with the complex and often quickly changing nature of food, feed and drinks supply chains. This is especially the case when primary products are bought on the world market and suppliers change frequently. Because environmental impacts are very site-specific (e.g. water-use due to water scarcity, GHG emissions due to land-use changes) the corresponding environmental assessment could potentially change with each change in the supply chain. This problem would be especially severe if output-based criteria are being used.

<sup>a</sup> See [http://ec.europa.eu/environment/eussd/product\\_footprint.htm](http://ec.europa.eu/environment/eussd/product_footprint.htm)

<sup>b</sup> EU (2010) *EU Regulation 66/2010 on the EU Ecolabel* Annex III (1)

<sup>c</sup> *FAO Private standards and certification in fisheries and aquaculture*.  
[Online accessed 18-5-2011]  
<http://www.fao.org/docrep/013/i1948e/i1948e.pdf>

<sup>d</sup> While Annex V (5a) of the EU Ecolabel Regulation 66/2010 requires "sound knowledge covering all the conformity assessment activities", it does not require expertise in the product categories themselves.

<sup>e</sup> EU (2010) *EU Regulation 66/2010 on the EU Ecolabel* Article 8(4)

One example would be the purchase of cocoa beans for chocolate. Often cocoa is planted after deforestation of the tropical rainforest. If cocoa is produced in an area where this deforestation has taken place more than twenty years ago, the emission of GHG from this land-use change would no longer be included into a carbon footprint. Switching to a supplier whose cocoa fields have only recently been cleared by deforestation may mean the carbon impact is now higher and that the product fails to comply with the relevant criterion. This would mean very frequent assessment of suppliers. One solution would be that different processors in the food industry work together with a sufficiently developed group of suppliers so that a consistent supply of criteria-compliant food is available.

A study of the US organic market shows this is possible and stated that for processors “The majority of organic firms source their supplies from more than one channel, often doing business with brokers, distributors, and growers simultaneously.”<sup>a</sup> The organic sector is thus proof of the fact that it is possible to deal with these issues in the supply chain, which is additionally confirmed by the emergence of complex organically certified products.<sup>b</sup>

However, flexibility is only possible if the market is sufficiently developed i.e. a sufficient number of suppliers are able to provide certified products. To phrase it differently, a new label will have difficulties in the initial phase of its existence when only few industry actors comply with the criteria. This problem could be avoided if the EU Ecolabel, perhaps in its initial phase, allows products which are accredited under different labelling schemes to be potential products for processing under the EU Ecolabel scheme.

<sup>a</sup> Logistics Review p10 *Organic Food Supply Chains* [Online accessed 21-4-2011] [http://cscmp.org/Students/downloads/Winter03\\_04.pdf](http://cscmp.org/Students/downloads/Winter03_04.pdf)

<sup>b</sup> e.g. pizza

## 7.7 Selecting product groups for an EU Ecolabel for food, feed and drink products

### 7.7.1 Criteria for product selection

As the analysis of the feasibility of developing criteria has shown that, in general, the development of reliable criteria covering the whole lifecycle will be difficult for food, feed and drink products. Criteria need to be bespoke for defined product categories. In the case of introducing the EU Ecolabel to food, feed and drink products the question arises as to which product groups would potentially be the first candidates.

The issues discussed so far lead to the following set of properties for an ideal product group:

Table 27: Properties of the ideal product category

Aspect	Issues
<b>Environmental impact of the EU Ecolabel</b>	High overall environmental impact of product category. High improvement potential by adopting best practice.
<b>Interaction with existing labels / Consumer confusion</b>	As little overlap with existing labels as possible.
<b>Expectations of consumers</b>	Significant processing. Uncontroversial products.
<b>Assessment</b>	Manageable within the existing organisational (EU Ecolabel) framework.

Source: Oakdene Hollins

In the following sections, each of these aspects will be discussed and the chosen product categories compared against them.

### 7.7.2 Environmental impact of the EU Ecolabel

The EU Ecolabel Regulation states, in Article 6(3)a, that criteria should cover the most significant environmental impacts and this suggests the focus should be on lifecycle stages and product categories with a high environmental impact. Such impacts would result from a combination of high impact per unit of product and the volume of production

and consumption. Even though the EIPRO study<sup>a</sup> could only investigate a selection of important environmental impacts, it is clear that animal products (such as meat and dairy & eggs) are the most prominent, followed by beverages and bread. Product groups such as fruits & vegetables, vegetable oil or ready meals either do not impact significantly on the environment compared to animal products such as meat etc., or are produced in relatively low volumes so that they do not make a comparable overall environmental impact. Other environmental impacts not covered by the EIPRO study, such as soil erosion or biodiversity, are expected to follow the overall trend of the other impact categories. The main exception is products from marine fisheries, which score low on many impact categories included in the LCA methodology, but score very high on biodiversity loss because of unsustainable fish stocks.

However, the environmental impact of a label ultimately depends on the improvement that is possible from switching from conventional practices and technologies to practices and technologies that lead to compliance with the criteria of the label. The higher the difference between the impacts of the average producer and the best 10-20%, the higher the impact the EU Ecolabel can have. While studies point to very significant gains to be made (see Section 4.3), not enough literature is available to compare the possible impacts achievable in each product category. It is however fair to expect that the improvement potential - in absolute terms of impacts - is higher, the higher the overall impact is. Products such as meat or dairy that may promise the most positive environmental impact, while fruits & vegetables or vegetable oil promise the least.

### 7.7.3 Interaction with existing labels / consumer confusion

A major obstacle to the introduction of the EU Ecolabel for food, feed and drink products is the presence of already well established environmental labels in this market. The interaction of the EU Ecolabel has two major aspects:

- First, introducing a new label is considered to increase competition in the labelling market. This may be beneficial if labels of low 'quality' can be displaced from the market, but there is no guarantee that high quality labels might not also suffer. In order to avoid this, stakeholders have recommended (see Section 3) focussing the EU Ecolabel on the product groups and/or environmental impacts less well covered by existing labels. The smaller the overlap between an EU Ecolabel and existing labels, the lower the risk of negative interactions between them.

Product groups that are not well covered by existing labels include ready meals or certain beverages (soft drinks, bottled water). Environmental impacts not well covered, are mainly the lifecycle stages other than primary production. The environmental impacts of these later lifecycle stages (processing, transport, packaging, retail, consumption) were only covered by approximately 15% of the labels reviewed. As such, it may be interesting to focus an EU Ecolabel initially on products with a significant impact in processing, transport or consumption. Examples could include dairy, processed fish, bread and bakery products or beverages.

Products dominated by primary production, such as meat or fruits & vegetables, are less suited as their main impacts are already well covered by existing labels.

- The second aspect of interaction with existing labels is at the level of the consumer. The study has shown that there is a risk of consumers confusing what the EU Ecolabel stands for with, for example, organic produce. This is a concern that is widely shared among stakeholders. Again one of the solutions to avoid this issue is to choose product groups not well covered by existing labels, especially not by organic labels. As organic labelled products exist for nearly all product groups with only few exceptions (such as marine fish or bottled water) it will be difficult to achieve this goal.

<sup>a</sup> Tukker A. et al. (2006) *Environmental Impact of Products (EIPRO)*. JRC European Commission IPTS, ESTO.

#### 7.7.4 Expectations of consumers

The consumer survey revealed that, in some countries, consumers expect an EU Ecolabel to contain not only aspects associated also with other existing labels, but also aspects of processing and packaging. In the UK, the less known EU Ecolabel was preferred to the organic label – but only for processed products.

These findings are in line with the discussion about the overlaps and other interactions with other labels. Focussing on food, feed and drink products with a high share of processing impacts may not only help avoid competition with existing labels but may also help fulfil consumers' expectations. Again, products such as dairy, bread, processed fish or beverages may be of interest.

Another important issue to be considered is the protection of the brand value of the EU Ecolabel, especially in the initial phase of the introduction. Starting with products whose environmental or health impacts are highly controversial in the public debate may not be ideal, and may provide a barrier for market actors to endorse the label. Even though the food industry has rightly pointed out that it is not about 'unhealthy products', but about 'unhealthy diets', the discussion in the public arena does not necessarily reflect this. Consequently, starting the EU Ecolabel on products such as spirits, soft drinks, bottled water or chocolate bars and sweets may lead to negative discussions.

From an environmental point of view, the meat product group might be similarly controversial. Starting the EU Ecolabel on meat production might be misunderstood as endorsing the consumption of meat which is in contrast to the general perception that meat consumption in Europe is generally too high, not only from an environmental but also from a health perspective.

#### 7.7.5 Assessment

Introducing the EU Ecolabel to a given food category implies setting up the methodologies and expertise to assess compliance with appropriate criteria. As discussed before,

assessment of the processing, distribution and retailing stage combined with an assessment of the quality of information given to consumers is well within the scope and ability of existing EU Ecolabel bodies. However, the prospect of assessing primary production is daunting. Unlike existing product categories, a much higher level of expertise in the product is required, and regular on-site audits are generally unavoidable.

Without investing in the capacities to allow credible certification of primary production, this problem could be solved either by choosing products with little primary production or by referring assessment of primary production to suitable existing labels and focussing on the later lifecycle stages.

Whilst the first approach would limit the EU Ecolabel to products such as bottled water, the second approach will open up a much broader choice of options. Most of the added value of the EU Ecolabel would be gained if the products had significant impacts outside primary production, which would point to highly processed products.

#### 7.7.6 Evaluation of suitable product groups

The discussion of the various properties of the 'ideal' product category is summarised in Table 28 which assumes, as a starting point, that an EU Ecolabel for food, feed and drink would include criteria for primary production (i.e. agriculture). For each product group the table shows whether:

- its environmental impact is considered significant to warrant an Ecolabel
- negative interactions with existing labels can be minimised
- the expectations of consumers can be fulfilled
- a scientific based assessment is economically feasible.

As can be seen, no product group is able to pass the test of minimising interactions with established labels (e.g. organic, MSC). Furthermore, the provision of a scientific based, yet economical feasible assessment is a major hurdle.



Table 28: Evaluation of product categories assuming assessment of primary production

Food category	Significant environmental impact	Minimise interaction with existing labels	Fulfilling expectations of consumers	Credible assessment	Overall
Meat	+	-	-	-	-
Dairy & eggs	+	-	0	-	-
Feed	-	-	-	-	-
Vegetable oil	0	-	0	-	-
Sugar & confectionery	-	-	-	-	-
Bread & cereals	0	-	0	-	-
Ready meals	-	-	+	-	-
Fruits & vegetables	-	-	-	-	-
Beverages	+	-	+/-	-	-
Fish & seafood	0	-	0	-	-

Source: Oakdene Hollins

We then considered an EU Ecolabel that did not have criteria that related to primary production but instead relied on another label. This would have the advantage of reducing competition with existing labels but would still require the development of criteria for selection of appropriately stringent third party labels in respect of primary production.

In order to add value, the product groups selected should cover environmental impacts not already covered by the selected primary production labels e.g. where the processing life cycle stage is important in terms of its environmental impact. Table 29 shows the results of this approach.

Table 29: Evaluation of product categories without assessment of primary production

Food category	Significant environmental impact	Minimise interaction with existing labels	Fulfilling expectations of consumers	Credible assessment	High share of processing	Overall
Meat	+	/	-	+	0	-
Dairy & eggs	+	/	0	+	+	0/+
Feed	-	/	-	+	0	-
Vegetable oil	0	/	0	+	+	0
Sugar & confectionery	-	/	-	+	+	-
Bread & cereals	0	/	0	+	+	0/+
Ready meals	-	/	+	+	+	-
Fruits & vegetables	-	/	-	+	0	-
Beverages	+	/	+/-	+	+	+/-
Fish & seafood	0	/	0	+	0/-	0

Source: Oakdene Hollins

On this basis, five product categories can be identified as possible candidates for the EU Ecolabel:

- dairy & eggs
- vegetable oil
- bread & cereals
- beverages
- fish & seafood.

Within each of these product categories there will be some products that are more favourable for the introduction of an EU Ecolabel than others. This can be due to differences in, for example:

- the added value that can be provided by an EU Ecolabel compared to a primary production label (e.g. due to a higher/lower degree of processing; the higher significance of packaging or waste processing)
- existing controversy in the public sphere concerning the social benefits of these products.

**Based on this analysis it is recommended to consider the following products as particularly relevant for an EU Ecolabel for food, feed and drink products:**

*Table 30: Recommended product categories*

Food category	Favorable products	Less favorable products
Dairy & eggs	Yoghurt, cheese	Eggs, milk
Vegetable oil	All vegetable oil	-
Bread & cereals	Bread	Cakes
Beverages	Fruit juices, wine, beer	Spirits, bottled water, soft drinks
Fish & seafood	Processed fish	Unprocessed fish

Source: Oakdene Hollins

## 8 Challenges and difficulties in introducing the EU Ecolabel in the food, feed and drink sector

### 8.1 Key concerns

Based on the stakeholder consultation process, the consumer survey and the literature review it is possible to identify the following challenges and difficulties associated with introducing the EU Ecolabel in the food, feed and drink sector.

Because of their relevance to the potential for success of introducing an EU Ecolabel in the food, feed and drinks sector, and because they are shared between stakeholder groups, two of these concerns are investigated in more depth:

- Coherence with existing regulations and policies.
- Protection of the term 'eco' and similar derivations.

### 8.2 Coherence with existing regulations and policies

A key concern of many stakeholders, which is also reflected in the literature, is the question of whether an EU Ecolabel for food, feed and drink products could be aligned with existing environmental and economic regulations and policies.

In general, there seems to be no problem with introducing the EU Ecolabel in relation to other regulations as long as it is in line with the four priority areas in 6<sup>th</sup> Environmental Action Programme (climate change, nature and biodiversity, environment and health, and natural resources and waste)<sup>a</sup> but there are some issues that deserve some special attention (Table 32):

<sup>a</sup> See <http://ec.europa.eu/environment/newprg>

Table 31: Stakeholder expectations: Drawbacks and risks of an EU Ecolabel

<b>For public bodies:</b>
Legal problem with EU Ecolabel (Conflict with EU legislation for organic production and Codex Alimentarius Guidelines for organically produced food)
Costs and resources for meeting a set of different sustainability criteria
Difficult to implement one set of EU Ecolabel criteria for all products
Difficult to define the scope; some products might not be included
Missing overall assessment system, standard is set on the basis of perceived impacts rather than on scientific grounds, while current LCA methodologies are not fully developed yet to cover all relevant environmental impacts-How to address variability in sourcing (e.g. as a result of seasonal influences).
High effort and resources needed for raising public awareness and to communicate complexity of EU Ecolabel criteria
<b>For consumers:</b>
Confusion with organic labelling
Confusion regarding what the EU Ecolabel stands for
<b>For civil society:</b>
Unlikely that recognition and understanding of the Ecolabel would reach high levels
Wrong scope: Lifecycle analysis done in the Scandinavian countries showed that the primary environmental benefits - and potential benefits - of sustainable farming are found in agricultural practices, and not in processing or distribution; here 'organic' is already available and it is useless to have an additional environmental label with less impact.
<b>For producers and chain actors:</b>
Expected low impact on market
Hindering organic market development
High costs of data provision for complex supply chains with limited current data (small suppliers are expected to suffer especially)
Due to the high frequency of innovation in their ingredients, recipes and formulations and variability in sourcing of ingredients, resulting in frequent changes in their environmental characteristics, setting useful Ecolabel criteria for food products may be quite a challenge
Possible misuse and green washing due to significant economic interest (well established and resourced control system needed)

Table 32: Examples of issues and regulations of special relevance for an EU Ecolabel for food, feed and drink

Topic raised	Relevant regulation/standard (see foot notes for reference)
Protection of the term 'eco' for organic food, feed and drink	EU Organic Regulation EC 834/2007 Codex Alimentarius
Environmental labels as trade barriers	The Agreement on Technical Barriers to Trade (WTO)
Organisation of accreditation and certification	FAO Guidelines

Source: Oakdene Hollins

### 8.3 Protection of the term 'eco' and similar derivations

According to EU Regulation 834/2007 which governs the use of the term 'organic', the term 'eco' may only be used with products from organic agriculture in connection with food, feed and drink products<sup>a</sup>:

*"The terms referred to in paragraph 1 [such as 'bio' and 'eco'] shall not be used anywhere in the Community and in any Community language for the labelling, advertising and commercial documents of a product which does not satisfy the requirements set out under this Regulation, unless they are not applied to agricultural products in food or feed or clearly have no connection with organic production."*

A similar restriction of the use of the term 'eco' is found in the Codex Alimentarius<sup>b</sup>, which is used as a point of reference in settling disputes in the WTO.<sup>c</sup> In addition, both the Codex Alimentarius as well as the EU legislation state that it is not just the wording in the logo, but what the term or logo in the labelling and in the advertising material, is suggesting to the purchaser. This legal protection has been introduced to protect consumers from misleading claims as well as market actors from unfair practices, which distort the market. The

<sup>a</sup> EU Regulation 834/2007 Article 23 (2)

<sup>b</sup> Codex Alimentarius (1999) *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods* GL 32--1999

<sup>c</sup> WTO Codes see <http://www.iso.org/iso/wto-tbt-scd.pdf>

fact that this is taken seriously by organic labelling organisations is exemplified by the fact that legal cases have been brought to court and won regarding the incorrect use of the term 'eco' for non-organic products.<sup>d</sup>

If it is found that the EU Ecolabel cannot be extended to non-organic food for legal reasons, criteria would need to be set such as to limit the scope of the EU Ecolabel for food, feed and drink to organically certified products.

Environmental labels also have the potential to raise non-tariff trade barriers, making it difficult for other countries to export their produce. Consequently, the WTO has raised this issue and an agreement on technical trade barriers has been reached. This is reflected in the ISO standard for Type I labels as follows<sup>e</sup>:

*"Procedures and requirements for environmental labelling programmes shall not be prepared, adopted or applied with a view to, or with the effect of creating unnecessary obstacles to international trade."*

Additionally, the WTO agreement<sup>f</sup> demands special attention is given to developing countries and to recognize that they may:

*"encounter special difficulties in the formulation and application of technical regulations and standards and procedures for assessment of conformity with technical regulations and standards, and desiring to assist them in their endeavours in this regard"*

In the context of an EU Ecolabel for food, feed and drink products, the main issues are expected to be the criteria covering transport and the use of output-based criteria: While the environmental impacts of transport may be significant for a number of products and modes of transport, criteria prohibiting imports of food altogether ('Local Food') or limiting the

<sup>d</sup> In 2004 a Spanish organic producer organisation won a law suit against the government of Spain for the use of the term 'bio' for non-organic products (Judgment Official Journal of the European Union J C 217, 03.09.2005, p.16).

<sup>e</sup> ISO (2001) *Environmental labels and declarations Type I environmental labelling Principles and procedures (ISO 14024:1999)* Edition:2001-02-01, Article 5.15

<sup>f</sup> WTO Agreement on Technical Barriers to Trade p1 available at [http://www.wto.org/english/docs\\_e/legal\\_e/17-tbt\\_e.htm](http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm) (accessed 5-6-2011)

maximum amount of travel distance directly (e.g. the 'Food Miles' concept<sup>a</sup>) are in danger of being interpreted as non-tariff trade barriers and might be contested in a WTO dispute. However, the WTO does recognise the legitimate objective of protecting the environment but requires any such standards to be based on scientific information.<sup>b</sup> While 'Food Miles' has been discredited as a good proxy for environmental impacts from transport<sup>c,d</sup>, other indicators - such as the carbon footprint associated with transport - may be acceptable. Such criteria, however, should not be adopted on a 'broad brush' basis, but should follow the WTO's demand to recognise the special needs of developing countries.<sup>e</sup>

One approach currently found among existing labels is the criteria document for transport used by the Swedish climate change label Klimatmärkning. This label uses a limit value for the maximum carbon footprint related to transport to limit the environmental impacts during this stage of the lifecycle. This limit value is raised for countries with a low HDI and the criterion abolished altogether for countries with very low HDI.<sup>f</sup>

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<sup>a</sup> Paxton A. (2011) "The Food Miles Report", Sustain

<sup>b</sup> WTO *Agreement on Technical Barriers to Trade* Article 2.2

<sup>c</sup> Weber C.L., Matthews H.S. (2008) *Food-Miles and the Relative Climate Impacts of Food Choices in the US* Environ. Sci. Technol. 2008, Vol.42, pp.3508-3513

<sup>d</sup> Smith A. et al. (2005) *The Validity of Food Miles as an Indicator of Sustainable Development*. AEA Technology Environment for Defra

<sup>e</sup> WTO *Agreement on Technical Barriers to Trade*, Article 12

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<sup>f</sup> Klimatmärkning för Mat (2010) *Criteria for Mitigation of Climate Impact from Food Production and Distribution* Article 12.5

## 9 Scenarios and implementation strategies

### 9.1 Introduction

This section outlines the results of stakeholder consultation on nine scenarios for the development of a potential EU Ecolabel for food, feed and drink products and appropriate potential implementation strategies.

### 9.2 Scenarios preferred by different actors in the on-line survey

Nine possible Scenarios were identified based on the literature review. These scenarios were discussed with stakeholders in a pre-test and then revised to reflect this discussion. They were then evaluated and presented to the participants in our market actor survey.

- Scenario 1 - no EU Ecolabel
- Scenario 2 - EU Ecolabel for organic and conventional
- Scenario 3 - EU Ecolabel for specific products not covered by organic
- Scenario 4 - EU Ecolabel for specific focus areas, e.g. transport, storage, packaging
- Scenario 5 - EU Ecolabel for hotspots not covered by existing labels
- Scenario 6 - EU Ecolabel for organic products with additional environmental standards
- Scenario 7 - EU Ecolabel as a business-to-business label scheme only
- Scenario 8 - EU Ecolabel for the eating-out sector only

- Scenario 9 - EU Ecolabel only for feed.

In the on-line stakeholder survey, participants were able to choose three scenarios and rank these in order of preference to get a clearer picture on the preferences of the different stakeholder groups. An overview of the results is given in Table 33.

Table 33 shows that in each group of stakeholders a significant proportion is in favour of an EU Ecolabel for food, feed and drink products in one form or another. However there is also a large proportion of participants in the stakeholder survey against the introduction of the Ecolabel scheme in the food, feed and drink sector. A detailed analysis of the results is given in the Annex.

The four scenarios that had most support from actors in the different stakeholder exercises were:

- Scenario 1 - no EU Ecolabel
- Scenario 2 - EU Ecolabel for organic and conventional
- Scenario 3 - EU Ecolabel for specific products not covered by organic
- Scenario 6 - EU Ecolabel for organic products with additional environmental standards.

The next sections detail the views and suggestions made in respect of each of these four scenarios.

Table 33: Overview on the scenarios most preferred by different actor groups

Scenario	Processors and processor organisations	Ecolabel Competent Bodies and env'tal public administration	Retailers and retailer organisations	Farmer organisations	Public administration food and agriculture	NGOs	Others	Total
1 - no Ecolabel	25	6	3	4	8	2	5	53
2 - for organic and conventional	7	7	2	0	1	0	2	19
3 - specific products not covered by organic	5	6	2	0	1	1	0	15
4 - specific focus areas	0	3	0	1	0	0	1	5
5 - specific hotspots not covered	2	3	0	0	0	0	0	5
6 - for organic products with additional env'tal standards	1	7	1	2	1	2	0	14
7 - as a business-to-business label scheme only	0	0	0	0	0	0	0	0
8 - for the eating-out sector only	0	0	0	0	0	0	0	0
9 - for feed	0	1	0	0	0	0	0	1
<b>Total</b>	<b>40</b>	<b>33</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>5</b>	<b>8</b>	<b>112</b>

Source: own illustration based on the actors' survey

### 9.2.1 Scenario 1 - No EU Ecolabel

In evaluating this scenario, many of the participants in the stakeholder exercises made reference to the methodological challenges in developing science based criteria in the food, feed and drink sectors. Both output-based criteria and best practice criteria currently lack sound scientific processes that reliably link compliance to environmental benefits. Furthermore, it was noted that the 'No EU Ecolabel' Scenario avoided conflicts with the organic label and consumer confusion.

However, other participants in the stakeholder exercises pointed out that a priori dismissing the introduction of the EU Ecolabel in the food, feed and drink sector could be a missed opportunity for stimulating 'greener' consumption in these sectors. This is in line with the perceptions from the consumer survey: 76% of the consumers were interested in the possible extension of the EU Ecolabel to food products. The results from the consumer survey indicate that consumer perception generally leans toward the idea that

a product is 'environmentally friendly' when all production and processing stages are environmentally friendly.

### 9.2.2 Scenario 2 - Ecolabel for both organic and conventional products

The participants in the stakeholder exercises argued that this scenario had the advantage of providing clear and simple information to consumers, in particular for environmentally-friendly non-organic products. The disadvantages of this scenario were identified as:

- confusion of consumers will disturb the development of the organic market
- undesirable competition with organic labels
- legal issues regarding the use of the term 'eco' for non-organic products.

### 9.2.3 Scenario 3 - Ecolabel for products not covered by the organic label

The responses in the stakeholder exercises indicated that a particular advantage of an EU Ecolabel for food, feed and drink products would be that it could fill the gap for non-agricultural products, such as a label for wild fish, water and salt and there would be no conflict with organically labelled products. A disadvantage is that the confusion between 'eco' and 'organic' among consumers would only partly be solved and that these products cover only a small percentage of the market. Furthermore, there could be undesirable competition with existing labels (e.g. with the Marine Stewardship Council label).

### 9.2.4 Scenario 6 - Ecolabel for organic products with additional environmental standards

The advantage of this scenario would be that it would minimise consumer confusion. It would contribute to the further development of organic agriculture, and there would be no risk of legal challenges in respect of the use of the term 'eco'.

The disadvantages could be that there might also be some confusion among some consumers when faced with two different labels for 'organic', but this will depend on presentation (and indeed already occurs).

Also, an issue arises regarding the desired goal of the EU Ecolabel to only be applied to the 10-20% environmentally best performing products on the market: the market shares of organic produce differ vastly between European countries (Table 34). In 2007, the share of organic products in total turnover of food products was about 2% in the EU-15.<sup>a</sup>

On the basis of total market share, organic food does not seem to cater to the top 10-20% of the European market. However, the market shares do differ between products within Member States: some products (e.g. bread, eggs, milk, yoghurt) in some Member States already meet the 10-20% market share criterion. Additionally, some European countries have published action

plans to promote organic agriculture and to raise the market share of organic towards levels of around 10%.<sup>b</sup>

Table 34: Organic market share in selected European countries

Country	Organic market share %
Denmark	6.7
Austria	5.3
Switzerland	4.9
Germany	3.4
Luxembourg	3.3
Italy	3.0
Netherlands	2.1
France	1.7
Belgium	1.3
Norway	1.3

Source: European Commission (2005) *Organic Farming in the European Union – Facts and Figures*

## 9.3 Implementation options and measures to reduce risks

Considering the evaluation of the scenarios and the challenges that need to be met when introducing the EU Ecolabel in any form, five implementation options emerge. In the following Section, these options are discussed based on the previously described conditions and requirements. The further development of the options, which is aimed at improving their acceptability, is based on the feedback from the stakeholders in the survey and workshop. These improved scenarios or options are:

- Option A: No Ecolabel for food, feed and drink – alternative approach(es).
- Option B: Distinct EU environmental label (other than the EU Ecolabel) for both organic and conventional food and feed products.
- Option C: EU environmental label (other than the EU Ecolabel) for products not covered by the organic label.

<sup>b</sup> Organic Action Plan *Organic Action Plans in Europe - Compilation of results from the EU funded research project ORGAP*. [Online accessed 10-5-2011] [http://www.orgap.org/documents/action\\_plan\\_targets.pdf](http://www.orgap.org/documents/action_plan_targets.pdf); Gonzalez, V. et al. (2011) *Organic Action Plans in Europe in 2010* In: Willer, H., Kilcher, L. (Eds, 2011): *The World of Organic Agriculture. Statistics and Emerging Trends 2011* FiBL-IFOAM Report. IFOAM, Bonn and FiBL, Frick

<sup>a</sup> DG Agri European Commission (2010) [http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/facts\\_en.pdf](http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/facts_en.pdf)



- Option D: EU Ecolabel limited to organic products.
- Option E: EU Ecolabel limited to products certified by certain agricultural or fishery labels.

For each of these options, an assessment of the impacts and possible implications were evaluated and these are described below. A distinction was made regarding the expected best result (best case) or worst result (worst case). This allows for a more realistic analysis of the range of potential impacts. A differentiation between environmental, economic and societal impacts was also made.

### 9.3.1 Option A: No Ecolabel for food, feed and drink – but alternative approach(es)

#### Potential impacts

The impact of Option A ‘No Ecolabel – alternative approaches’ will depend on whether the public and private actors can - and will - develop other approaches. The two key measures in the context of labelling will be the development of criteria within the organic regulation to better incorporate climate change and water use as well as the processing, transport and consumption stages of the lifecycle of products, as well as co-operation to ensure better information exchange on sustainability issues and standards performance regarding environmental and other sustainability issues. It is difficult to make a more detailed impact assessment, but it is expected that current initiatives<sup>a</sup> towards greater sustainability will be continued.

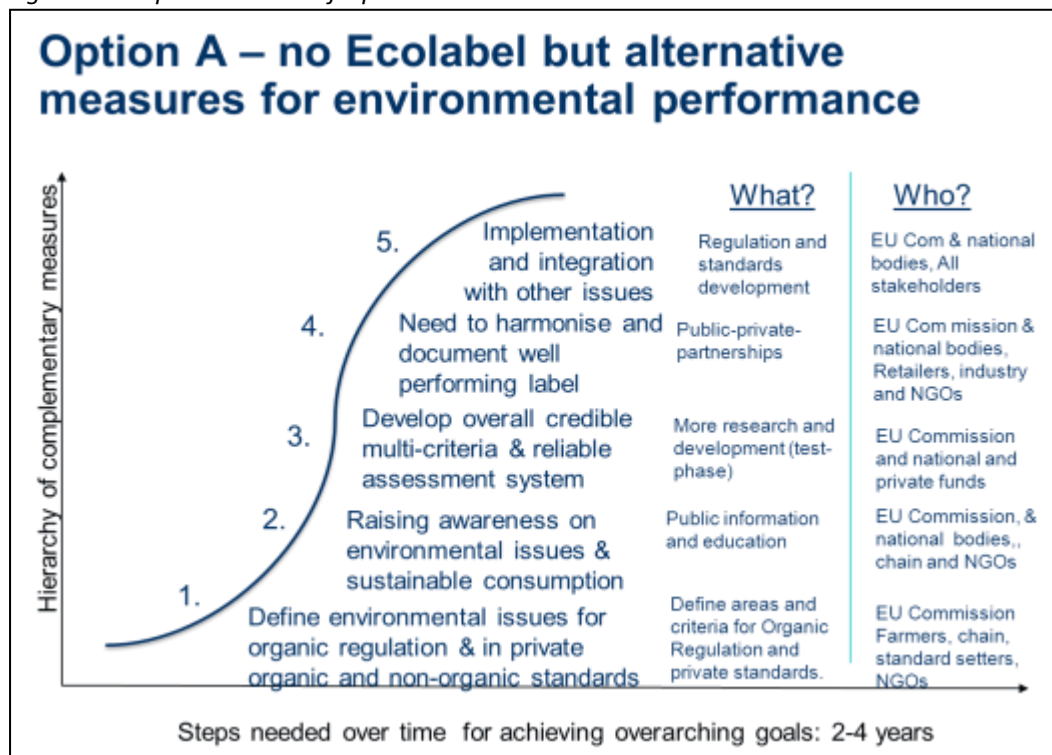
#### Implementation steps and measures

In order to achieve a satisfactory result from an environmental perspective, a stepwise approach is recommended for Option A as shown in Figure 18. First, the relevant environmental issues have to be defined for organic regulations and private organic and non-organic standards (step 1). Once this is defined, public information and education campaigns are needed to raise awareness of these environmental issues and sustainable consumption in general (step 2). More research and development is needed to develop overall credible multi-criteria and a reliable assessment system (step 3). Public/private partnerships should be supported to harmonise and document well-performing labels (step 4). In the development of improved regulations and standards other societally-relevant issues (e.g. social performance, animal welfare etc.) should also be integrated and implemented (step 5).

In this Option, DG Environment will play a lead role as they can initiate and co-ordinate the process in collaboration with DG Agriculture and the private sector. An important element will be the co-ordination of a Europe-wide, credible, reliable, multi-criteria assessment system, including better data access and exchange about the environmental impacts of the agri-food sector. Furthermore, as well as the demand side, the supply side should also be considered. The current revision of the Common Agricultural Policy (CAP) could contribute to stimulating more environmentally-friendly farming systems.

<sup>a</sup> e.g. the UK organic label organisation Soil Association organised a consultation on the air transport of organic products. As a result, a monitoring system was introduced with the aim to reduce the energy use and climate impact of air transports; initiative to develop a climate label by KRAV (Sweden)

Figure 18: Implementation of Option A



**9.3.2 Option B: A distinct EU environmental label for both organic and conventional food and feed products**

(identification and exploitation of synergies).

As the scenario to use the EU Ecolabel both for organic and non-organic products was most contested by the stakeholders, several solutions to improve the acceptability of this scenario were made.

The key points for Option B are to find solutions to the problem of confusion, to the competition problem, to the legal problem and to the lack of an overall reliable and workable assessment system. This option would need the following measures to be implemented to overcome these problems and conflicts:

- Find a solution to avoid confusion and to resolve the potential legal issue regarding the protection of the term 'eco'.
- Ensure fair competition.
- Develop a reliable overall assessment system, at least on a comparable level with organic certification system, in order to avoid 'green-washing' of non-organic products.
- Ensure complementary measures to avoid organic market distortion and development

**Potential impacts**

On the assumption that this option will lead to sales of at least 10% more environmentally-friendly products (including organic products), this option involves significant costs. The following figures are based on expert estimations:

- Costs for audit/inspection from €1,500 to €3,000 per operator per year, depending on the additional requirements set.
- Transaction costs for operators for adaptation measures from €1,500 to €4,000 per operator per year, depending on what additional requirements are set.
- Additional research costs for the development of an overall assessment system over whole Europe.
- Costs for better information for consumers through an information campaign explaining a new environmental label (other than the EU Ecolabel) or new logo in the food sector.
- In a worst-case scenario (if the logo is still confusing) there will be high costs both for the EU and for the private sector if there were court cases filed because of the

misuse of the EU Ecolabel logo for non-organic food products. Furthermore, reputational costs are expected to arise in this case.

- The costs for operators might be reduced through the integration of the requirements in existing standards and certification schemes.

Regarding the societal impact, this scenario can improve the consumer’s choice of environmental friendly products. However, there are also potential negative impacts due to confusion for consumers and market actors, which in the worst case could result in a significant loss of market share for organic products.

From an economic perspective it is questionable whether operators can actually realize higher prices for their products to cover these additional costs.

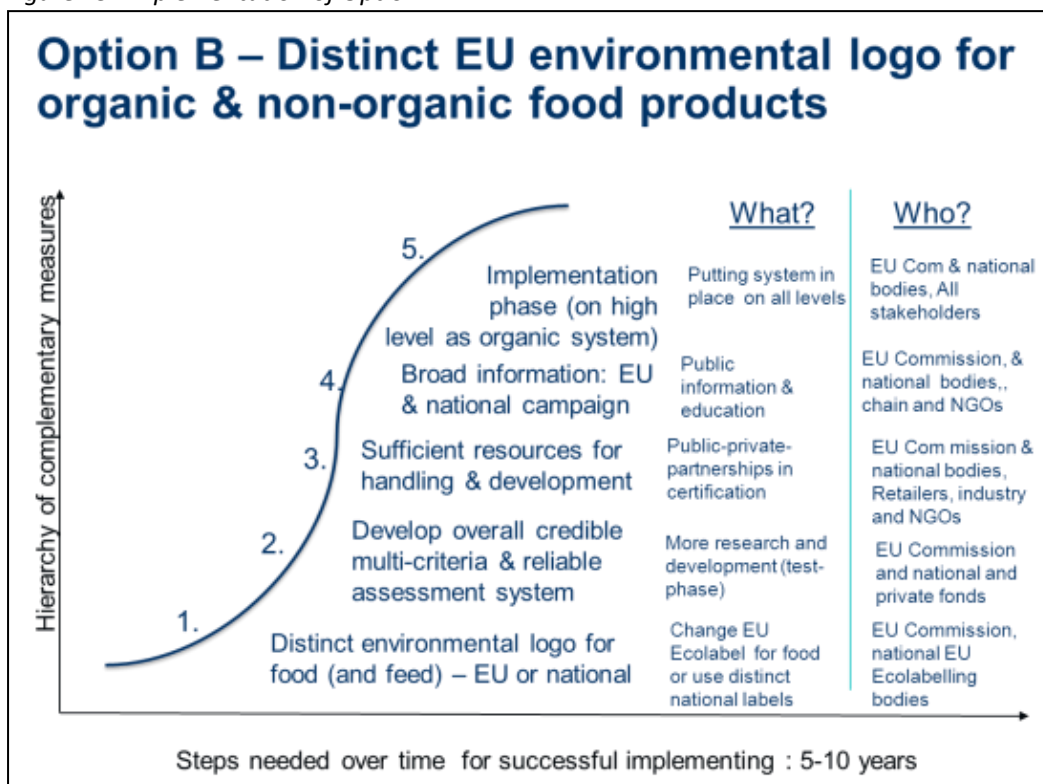
**Implementation steps and measures**

Firstly, an environmental label has to be created which is distinct from existing labels (step 1,

Figure 19). Once this is defined, research and development is needed to develop credible multi-criteria and a reliable assessment system (step 2). Public/private partnerships should be supported to harmonise and document well-performing labels (step 3), accompanied by public information and education campaigns to raise awareness of these environmental issues and of sustainable consumption in general (step 4). In developing improved regulations and standards, the system should be placed on a level at least comparable to the organic label to ensure consumer confidence in the new label (step 5).

The advantage of this option is that conflicts with existing labelling schemes can be avoided. Important steps will be the creation of a distinct logo other than the EU Ecolabel (to avoid confusion and overcome legal problems), a reliable assessment system, and sufficient resources for management of the scheme together with a consumer information campaign.

Figure 19: Implementation of Option B



### 9.3.3 Option C: EU environmental label for products not covered by the organic label

This scenario is difficult to assess, as it will depend on how many of the product groups not presently covered by the organic farming regulation can be taken up within a potential EU Ecolabel. From the stakeholder workshop very few product groups were identified (e.g. marine fishery products or bottled water).

#### Potential impacts

The environmental impact of this option will be very limited, as most food and feed products are already covered by organic labelling schemes. With regards to economic impact, the costs would be certainly much lower than in the Option B. However, whilst the issue of competing against the organic label may be averted, there will be competition with the MSC label. This latter scheme has developed into one of the foremost schemes on the market with regard to sustainable fisheries, and has also been accepted by retailers<sup>a</sup> and consumers as a guarantee of environmentally-friendly fish products.

#### Implementation steps and measures

There will be a need to identify suitable product groups and then to develop a reliable overall assessment system (at least equivalent to the organic system of certification).

### 9.3.4 Option D: EU Ecolabel for organic products with additional environmental standards

In line with the provision in the EC Regulation, the option of limiting the EU Ecolabel to organic products was also investigated in this feasibility study. According to many stakeholders, limiting the EU Ecolabel to organic products would provide the only option for successfully expanding this scheme to food, feed and drink products.

This option limits the use of the EU Ecolabel to organic products from primary production but with additional requirements to reduce their environmental impact in subsequent lifecycle stages. In this case the first criterion for the award of the EU Ecolabel would be that the raw produce is certified by an organic labelling

scheme. Additional criteria would then deal with the environmental impacts in processing, transport and storage, retail and consumption.

To improve acceptability, the elaboration and development of these criteria should be undertaken via a broad participatory process and should be co-ordinated between DG Environment, DG Agriculture and the private sector for organic farming (IFOAM) as well as consumer and environmental groups.

The 'organic' system is based on practice-based criteria, which allows it to be a practicable and affordable system. While output-based criteria are not yet included at a European level, some private organic labelling bodies have started including such criteria; for example KRAV from Sweden is setting environmental requirements for processing, distribution and energy use in horticulture, Synabio in France have a running program "Bioentreprise durable"; there is also initiative called "bio-duurzaam" as well as the flower initiative of "Nature and More" for organic products in the Netherlands. In addition, BNN (Bundesverband Naturkost and Naturwaren) in Germany works on a branch codex.

Crucially, while meta-studies attribute significant environmental advantages of organic farming over conventional methods, for some products environmentally advanced non-organic methods yield comparable environmental benefits and it would therefore be difficult to justify their exclusion from the EU Ecolabel.

#### Potential impacts

Due to the stronger promotion of organic labels which would result from adoption of this option, more farms and processors can be expected to convert to organic practices, leading to an overall environmental benefit. In the medium term, the most relevant product groups could achieve a market share above 10% (which would be easy to achieve in several countries). Additionally, there could be an indirect stimulus for non-organic producers to convert to organic production. Taking a less optimistic view, market development might take longer and will depend on national policies in the respective countries (e.g. organic action plans for organic farming, national information campaigns, direct payments, etc).

<sup>a</sup> Such as Marks & Spencer and Sainsbury's in the UK

It is important to note that - according to the consumer survey - more than 50% of consumers across the four countries preferred products with two labels over products with one label. Hence labelling organic products with both the organic and the Flower logo of the EU Ecolabel is expected to increase their attractiveness for consumers.

This option has the advantage of avoiding consumer confusion and would allow co-operation with the existing organic labelling schemes. It would also avoid the costs of establishing a new certification scheme for primary production which, as explained in the previous chapter is currently not within the competence of the existing Competent Bodies of the EU Ecolabel.

This option would also mean no market distortion and enables organic farmers to continue to obtain a premium price for their products. The additional costs for operators are expected to be of the same order per EU

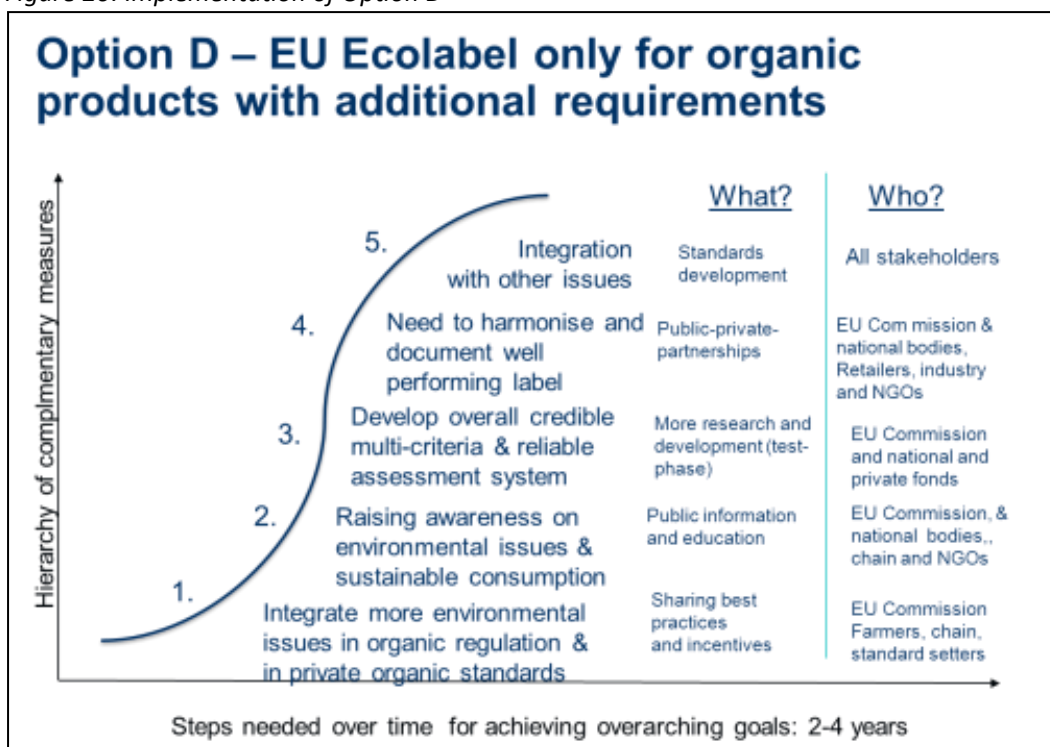
Ecolabel application as those for comparable products (e.g. textiles).

From a societal perspective, this option can improve the image of both the EU Ecolabel and of the organic label. It will also put pressure on the organic market sector to further develop environmental requirements.

One risk of this option would be a legal challenge by non-organic, yet environmentally well advanced, producers whose products fall within the 10-20% best products and who demand the award of the EU Ecolabel.

In Option D there is a need to define additional requirements (mainly for processing and distribution) and to integrate these requirements within the EU Organic regulation and certification systems and/or in private organic standards. Furthermore, better information on the impact of the agri-food sector and the different standards will be important (as in Option A).

Figure 20: Implementation of Option D



### Implementation steps and measures

The first step is to integrate more environmental issues into organic regulations and private organic standards by sharing best practices and by introducing an incentive system (step 1,

Figure 20). Secondly, a large public information and education campaign is needed to raise awareness of these environmental issues and of sustainable consumption in general (step 2). Furthermore, research and development is

needed to develop credible multi-criteria and a reliable assessment system (step 3). Public/private partnerships should be supported to harmonise and document well-performing labels (step 4). The last step involves the implementation of the environmental standards, possibly together with other relevant issues (step 5).

### **9.3.5 Option E: EU Ecolabel limited to products certified by agricultural or fishery labels**

This option can be considered as a further development of Option B, with a simplified implementation for agricultural production, or as a development of Option D without limiting the EU Ecolabel to organic products but rather extending it to any sufficiently strict environmental primary production label.

Again, the first criterion of the EU Ecolabel would be that the raw produce has been certified by a sufficiently strict and credible labelling scheme. While this could be an organic label, it could also be a non-organic scheme, provided it leads to a product falling within the best 10-20% of environmental performers.

While this option would avoid a legal challenge by non-organic producers demanding acceptance by the EU Ecolabel, it faces, like Option B, a legal challenge regarding the

application of the EU Ecolabel and the term 'eco' to non-organic products. Similarly, the issue of consumer confusion needs to be tackled, as well as setting measures to avoid damaging the organic market.

However, in contrast to Option B, this scheme would not face the issue of setting up an assessment system for primary production and could be implemented in a shorter period.

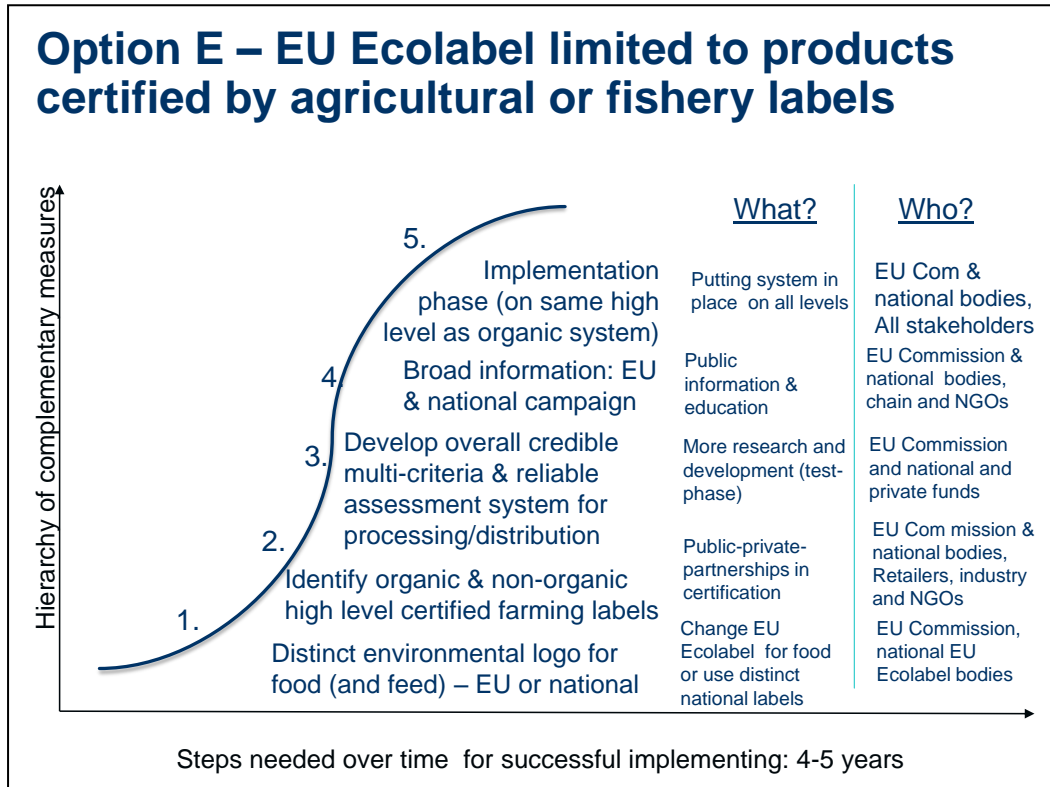
#### **Potential impacts**

A positive environmental impact can be expected, as this option could not only promote organic products, but also provide an incentive for producers from the non-organic sector to improve their environmental performance.

Additional costs for operators are expected to be similar to those for comparable existing ecolabelled products (e.g. textiles).

Regarding the societal impact, this scenario can improve consumer choice in respect of environmentally-friendly products. Additionally, it would raise the profile of the EU Ecolabel scheme. However, there are also potential negative impacts due to potential confusion for consumers and market actors. The risk of damage to the organic market is expected to be lower than for Option B.

Figure 21: Implementation of Option E



#### Implementation steps and measures

First, an environmental label which is distinct from existing labels has to be created (step 1, Figure 21). Second, organic and non-organic high level certified farming labels need to be identified (step 2). Further research and development will be needed to develop credible multi-criteria and a reliable assessment system (step 3), accompanied by large public information and education campaigns to raise awareness about these environmental issues and sustainable consumption in general (step 4). The last step involves the implementation of the environmental standards (step 5).

As with Option A, this option needs first to clarify the legal position regarding the use of the term 'eco' for non-organic food products.

#### 9.3.6 Comparison of different options

Table 35 summarises the measures which might be needed to implement the different options. It shows that for several options the same measures are of high relevance, i.e. whichever option is chosen, there is a need to consider these measures (including the hierarchy which might be needed for a successful implementation (see above)).

With regard to the last option “Adapt and limit EU Ecolabel regulation for food, feed and drink (partly linked to measure 1)”, either a new label - distinct from organic labels - has to be created for environmentally-friendly produced food, feed and drink products, or the use of the EU Ecolabel should be restricted to organic products to avoid confusion.

Table 35: Necessity of measures to make scenario more acceptable

<b>OPTIONS: Necessity of measures to make the scenario more acceptable</b>	<b>A No Eco-label but alternative approach</b>	<b>B Non-org + org. with distinct label</b>	<b>C Selected product groups (distinct label)</b>	<b>D Ecolabel limited to organic</b>	<b>E Ecolabel limited to certification schemes</b>
Legal problem: change Ecolabel logo for food (distinct logo)	Not relevant	Very relevant	Very relevant	Less relevant	Very relevant
Reduce consumer confusion with better information / data	Also with no EU Ecolabel important	Very relevant	Relevant	Relevant	Very relevant
Add environmental issues in EU Organic Regulation and in private standards	Very relevant	Not relevant	Less relevant	Not relevant	Not relevant
Stronger cooperation with private labels and Certification Bodies	Very relevant	Very relevant	Relevant	Relevant	Very relevant
Better overall credible assessment system	-	Very relevant	Relevant	Relevant	Relevant
Adapt and limit EU Ecolabel regulation for food, feed and drink (partly linked to measure 1)	Not relevant	relevant for distinct logo	relevant for logo	relevant for limiting to organic	relevant for distinct logo

Source: own illustration based on the actors' survey and stakeholder workshop



## 10 Conclusions

### 10.1 The significant environmental impacts

A review of the literature, combined with a survey of both consumers and stakeholders, has helped to identify the environmental impacts considered significant for the development of an EU Ecolabel for food, feed and drink products. An overview is given in Table 36:

Table 36: Significant issues identified

<b>Greenhouse gas emissions</b>	<b>GMOs</b>
<b>Use of non-renewable resources (abiotic depletion)</b>	<b>Fish stock depletion</b>
<b>Water use</b>	<b>Impacts on biodiversity</b>
<b>Eutrophication</b>	<b>Soil degradation and soil erosion</b>
<b>Food waste</b>	<b>Ecotoxicity</b>
<b>Acidification</b>	<b>Social issues</b>
<b>Animal welfare</b>	

Source: Oakdene Hollins

This list is extensive and reflects the complexity of agricultural systems. Not all issues will be relevant for each product and for each stage of the lifecycle; the variety of food, feed and drink products on the market demands an in-depth analysis of each product category and between products within a given category.

Unlike for many of the product categories currently covered by the EU Ecolabel, social and ethical issues play a very important role in food production and are also considered as important by consumers and other stakeholders. This is especially true for animal welfare, which scored as the most important 'environmental' aspect in some of the consumer surveys. Additionally, the issue of GMOs used for food production was flagged as being of great concern to consumers and therefore should be dealt with by an EU Ecolabel for food.

### 10.2 Development of reliable criteria for environmental impacts

There are many examples of criteria that manage to capture environmental impacts. Whilst output-based criteria are in general more desirable because they allow measurable environmental benefits and do not prescribe the use of certain technologies (thereby hampering innovation) they often suffer from difficulties in methodology, especially regarding their practical application as a tool acceptable to both market actors and certification organisations.

High quality practice-based criteria can be found for many different environmental impacts. However, as the links between these criteria and proven environmental benefits are less clear and often contain uncertainties, care needs to be taken to apply them only in those cases where output-based criteria are not feasible. While this is currently still the case for the majority of environmental impact categories in the food, feed and drink sector, further developments of ecological footprints may one day allow the substitution of practice-based criteria by output-based criteria.

Overall, our study concludes that:

- Output-based criteria are the ideal but not sufficiently developed to be economically feasible.
- Current development of methodological approaches may open the possibility for improved and harmonised criteria in the near future. This may be a possible 'game changer'.
- No approach is available to aggregate different environmental impacts to an overall net environmental impact.

### 10.3 *Advantages and disadvantages of an EU Ecolabel for food, feed and drink products*

The initial impact of introducing the label is expected to be low, as early adopters of the label will already have achieved the desired level of environmental performance, and will not need to improve their operations to obtain the label.<sup>a</sup>

In the long run a significant obstacle is the presence of many well-established, credible labels in the food, feed and drink sector. The EU Ecolabel may not deliver environmental benefits if the applicants are already certified by other labels. In the worst case it is even possible that the entry of the EU Ecolabel into the food, feed and drink may lead to disagreements and consumer confusion, resulting in a loss of trust in environmental labels in general and an overall negative environmental impact.

To guarantee environmental benefit it is crucial that a potential EU Ecolabel for food, feed and drink is introduced in such a way that it reinforces other well-established labels. According to the participants in the stakeholder exercises, this is most likely to be possible by focussing on products not covered by existing labels, or with a strong share of impacts outside of the scope of current labels (e.g. in the processing stage of the product's lifecycle). Alternatively, limiting the EU Ecolabel to products certified by agricultural labels is a possibility.

The consumer survey reveals that consumers see ecolabels as valuable tools in making purchasing decisions. While some considered that an EU Ecolabel could reduce the proliferation of labels in the food and drink sector, others do not see the value in having another label. For purchasing decisions, most consumers preferred products with more labels over products with one or no label. While the level of confusion experienced was not significant, consumers' expectations regarding the contents of the labels were confused, and this remains an important issue. In some

countries (e.g. Germany) the term 'eco' is associated more with resource efficiency than with environment. Whilst this problem is not new and already applies to existing ecolabelled products, it might be more difficult to obtain market share if the EU Ecolabel were to be used for both organic and non-organic products as 'organic' is likely to be seen as more environmentally-friendly than a 'resource efficiency' label.

In general however, the types of environmental issues consumers expect to be covered by an EU Ecolabel are typical of organic produce (e.g. banning pesticide use or mineral fertilizers). If an EU Ecolabel were introduced to non-organic food products, some consumers may therefore believe these products to have the characteristics of organic produce. This confusion is, however, less apparent amongst those with high environmental awareness and knowledge about organic products. This group were accepting of the idea of two labels and could appreciate the differences between 'eco' and 'organic' labelling.

The issue of consumer confusion was also a concern for many of the industry and policy stakeholders consulted.

The respondents to the stakeholder survey considered a broad communication campaign as being crucial to combat these issues. This was also confirmed by analysis of the consumer survey, which identified the provision of background information about the EU Ecolabel as being a determining factor in the extent of confusion experienced. Such a campaign would need to take into account the differences between countries due to the different words used to denote organic produce, as well as due to the different market penetration rates of organic products. Additionally, the use of the word 'eco' is currently legally restricted to the use of organically-produced food, feed and drink products. This issue requires further investigation by competent legal advisers, but could prevent the use of the EU Ecolabel logo in this field.

About half of the stakeholders did not support an extension of the EU Ecolabel to food, feed and drink products, while the other half

<sup>a</sup> FAO *Private standards and certification in fisheries and aquaculture* [Online accessed 18-5-2011]  
<http://www.fao.org/docrep/013/i1948e/i1948e.pdf>

supported at least one of the scenarios offered to introduce the EU Ecolabel.

The potential positive impacts of introducing an EU Ecolabel for food, feed and drink products are mainly perceived by stakeholders from some individual companies (e.g. processors, retailers) as well as policy makers and EU Ecolabel Competent Bodies. The negative impacts are predominantly perceived by umbrella organisations, environmental and consumer NGOs as well as public bodies, organisations and companies involved in organic agriculture.

Consequently, while a number of companies are open to an EU Ecolabel for food, feed and drink products, a significant number of stakeholders oppose this step and the implementation of the scheme may need to accommodate these views.

The implementation options presented to stakeholders, and their evaluations of them, confirmed that there are several ways to achieve the goal of improving the environmental performance of the agricultural-food sector.

The large majority of the supply-chain actors, as well as NGOs, are alert to potential confusion of an EU Ecolabel with existing organic labels and of distortion of the organic market. Hence this issue needs to be taken seriously. A broad and large communication campaign is likely to be necessary to avoid confusion with existing labels. However, there would be no guarantee that such an information campaign would be sufficient.

We also noted the significant additional expertise likely to be required within national EU Ecolabel Competent Bodies in order to undertake the assessment and ongoing compliance activities in respect of a food ecolabel, particularly where primary production is to be certified. We also note that the fees chargeable in respect of assessment and licence fees are limited by the EU Ecolabel Regulation, and therefore this would need to be amended if the appropriate expert resources are to be deployed.

In addition, there are likely to be significant additional costs for smaller companies in meeting any specified criteria.

#### **10.4 The option to limit an EU Ecolabel for food, feed and drink products to 'organically' certified products**

In line with the EC Regulation governing the EU Ecolabel, the option (or further developed scenario) of limiting the EU Ecolabel to organic products was investigated in more depth (Option D). This option would have the advantage of avoiding consumer confusion and would thus not involve the problem of how to ensure fair competition. It would also avoid the costs of establishing a new certification scheme for primary production.

However, an issue might arise regarding the desired goal of the EU Ecolabel to reach the 10-20% environmentally best-performing products in the majority of the EU-27 Member States.<sup>a</sup> Very few organic products achieve such a high market share, and only in some countries. Additionally, the organic system uses practice-based criteria, which do not align with the output-based approach (such as ecological footprints) which can encourage innovation and are recommended by the relevant ISO standards for ecolabelling. However, the shortcomings of currently available output-based measures and the demand for improved methodologies provide an opportunity to integrate output-based criteria into organic regulations in the medium term. Crucially, while meta-studies identify significant environmental advantages to organic farming over conventional methods, for some products advanced non-organic methods yield comparable environmental benefits, and it will be difficult to justify their exclusion from the EU Ecolabel.

#### **10.5 Suitable candidate products groups for an EU Ecolabel for food, feed and drink products**

We have identified that not all product groups in the food, feed and drink sector are equally suitable for the introduction of an EU Ecolabel. Unlike existing labels focussing on primary production, the EU Ecolabel takes an overall

<sup>a</sup> This might change in the near future due to strong efforts of countries to promote organic farming through national action plans.

lifecycle approach and is therefore required to cover the processing, transportation and consumption stages in the lifecycle of products. Consequently, selecting highly processed food, feed and drink products would play to the strengths of the EU Ecolabel, in particular the existing expertise available in the Competent Bodies, and may offer the highest environmental benefit. This approach would also fit well with the findings that a significant number of consumers associate an EU Ecolabel with environmentally-friendly packaging, and that some retailers and food processors can see some added value in the introduction of an EU Ecolabel to the food, feed and drinks sector.

Finally, it is recommended to avoid products such as bottled water or meat, as they are seen as controversial in the public arena.

**The likely product groups that would be suitable in the early phase of introducing an EU Ecolabel for food, feed and drink would therefore be:**

- **dairy**
- **bread**
- **non-alcoholic beverages**
- **processed fish products.**

Other product groups could be considered as part of a later implementation phase.

## **10.6 Recommended next steps**

It is therefore recommended to:

- Obtain legal advice regarding the potential conflict between the use of the word Ecolabel in respect of food, feed and drink products and the protection of the word 'eco' in the context of food products by the EC Regulation 834/2007 and the Codex Alimentarius organic guidelines.
- Obtain legal advice regarding the possibility of restricting the EU Ecolabel to only organic produce.
- Closely follow existing projects which are developing ecological footprints to assess their suitability as a basis for the development of criteria for an EU Ecolabel for food, feed and drink products.
- Closely liaise with DG Agriculture and DG Mare, as well as with European umbrella organisations, to co-ordinate strategies to deliver more sustainable production and consumption of food, feed and drink products.
- Investigate the possibility – in respect of the assessment of primary production - of using existing well established labels, both in the organic and the non-organic sector, to maximise the benefit from co-operation and avoiding conflict with existing labels.

The outcome of these actions will enable a final decision to be made as to which of the suggested options for an introduction of an EU Ecolabel for food, feed and drink products is feasible.

## **11 Appendices**

***Annex 1: Consumer Survey***

***Annex 2: Consumer Survey Methodology and Extra Results***

***Annex 3: Stakeholder Consultation Questionnaire***

***Annex 4: Stakeholder Consultation Detailed Results***

***Annex 5: Stakeholder Workshop Minutes***

## Annex 1: Consumer Survey

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Anzeigeoptionen  
Info: Hier können Sie optional die Anzeigeoptionen verändern. Wenn Sie eine Sprache auswählen, die keine eigenen Textelemente hat, werden die Textelemente der Standardsprache angezeigt.

Anzeigeoptionen einstellen:

- Filter anzeigen
- Pretest-Kommentare anzeigen
- Todos anzeigen
- Trigger anzeigen
- Plausichecks anzeigen
- Randomisierung abschalten
- Interne Verlinkungen ausblenden
- Nur den Fragebogen ausdrucken

Sprache

### Informationen zur Umfrage Kopie von EU Ecolabel Spanisch

Umfrage-Nr. 221420  
Autor Cosima von Cossel  
Mitarbeiter  
Start 2011-05-10 00:00:00  
Ende 2011-06-10 00:00:00

### Fragebogen

1 [Seiten-ID: 1199239] [L]  
Begrüßung  
Estimado(a) encuestado(a),

Hay cada vez más marcas y etiquetas de productos alimenticios que prometen ciertas cualidades de sus productos, pero no siempre satisfacen las expectativas de los usuarios. Por ello la Universidad de Goettingen (Alemania) ejecuta esta consulta, la cual abarca de manera especial las actitudes de los usuarios hacia las marcas y etiquetas de los productos alimenticios.

Nos complacería que usted fuese uno de los encuestados haciéndonos saber sus opiniones sobre el tema antedicho.

Considere por favor ofrecernos alrededor de 20 minutos paa responder el cuestionario.

Agradecemos de antemano su participación a la vez que le deseamos una encuesta divertida.

Atentamente,  
Dra. Nina Stockebrand  
Tel.: 0049 551/79774524  
Correo electrónico: nstocke@uni-goettingen.de

2 [Seiten-ID: 1199240] [L]  
Geschlecht  
Es usted  
 Hombre  Mujer  
¿En qué año nació usted?  
19

3 [Seiten-ID: 1199241] [L]  
Einschätzung Umweltbewusstsein  
Cómo catalogaría usted su propia mentalidad de conservación ambiental en la siguiente escala entre 0 y 100:  
Indíquelo por favor en la siguiente escala.

0 10 20 30 40 50 60 70 80 90 100

conciencia ambiental

4.1 [Seiten-ID: 1225897] [L]  
Zwischen-Endseite

5 [Seiten-ID: 1199242] [L]  
Bio Kauf Häufigkeit  
Cómo evaluaría usted su comportamiento respecto a la compra de productos Bio?  
Indíquelo por favor en la siguiente escala.

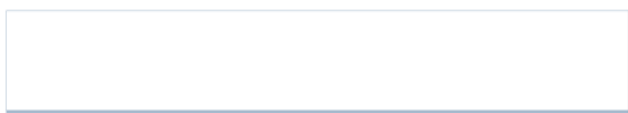
Muy frecuentemente frecuentemente a veces raras veces nunca

yo compro productos bio...

6 [Seiten-ID: 1199243] [L]  
Bekanntheit Label  
¿Qué nombre o letra de los que aparecen en la etiqueta de un producto alimenticio es el primero que se le ocurre en este momento? Diga por favor el nombre de la letra.

1 von 13 11.07.2011 09:12

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7 [Seiten-ID: 1199244] [L]

Wissen Label

A continuación se le presenta una lista de etiquetas de productos alimenticios; cuáles de ellas conoce usted? Para cada una de estas etiquetas, marque con una cruz si usted recuerda haber visto la etiqueta, si sabe su significado, si compra el producto o si no la conoce: Es válido marcar más de una respuesta; por favor vea el final de esta página para así evaluar las etiquetas aquí mostradas.



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.

8 [Seiten-ID: 1199245] [L]

Wissen Label 2

continuación



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.



- Recuerdo haberla visto.    
  Conozco lo que significa.    
  Compró el producto.    
  No lo conozco.



- Recuerdo haberla visto.       Conozco lo que significa.       Compró el producto.       No lo conozco.



- Recuerdo haberla visto.       Conozco lo que significa.       Compró el producto.       No lo conozco.



- Recuerdo haberla visto.       Conozco lo que significa.       Compró el producto.       No lo conozco.

9 [Seiten-ID: 1199246] [L]

Assoziationen

Muchos productos alimenticios usan con frecuencia descripciones que pueden interpretarse de maneras diversas. Por favor háganos saber con qué asocia usted los siguientes términos; escriba por favor lo que cada término le sugiere.

"bio"

"eco"

"Orgánico"

10.1 [Seiten-ID: 1199248] [L]

Erklärung EU Ecolabel

Quisiéramos mostrarle más de cerca la etiqueta EU-Ecolabel. La EU-Ecolabel es el símbolo oficial del medio ambiente en la Unión Europea e identifica una serie de productos y servicios (como por ejemplo, productos de limpieza, electrodomésticos, papel y productos de jardinería) con características favorables al medio ambiente. La etiqueta EU-Ecolabel se basa en criterios tales como el ahorro de materias primas, la reducción de la energía utilizada y los desechos generados ruante la producción y procesamiento de un determinado producto. También el cuidado del clima es tomado en cuenta.



En estos momentos la UE está averiguando si también tiene sentido aplicar esta etiqueta en referencia a los productos alimenticios. La base para dicha evaluación de los productos alimenticios fueron criterios concernientes a aspectos ambientales relativos al ciclo de vida de cualquier producto: desde la producción de los alimentos, pasando por su procesamiento, transporte y venta, hasta su uso y eliminación de desechos; todo a la luz de la influencia del producto sobre el ambiente en su conjunto.



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Le interesa a usted este planteamiento?

- Sí  No

10.2 [Seiten-ID: 1199249] [L]

Vorstellung Labels

En el siguiente recuadro hay dos etiquetas: una es la EU-Ecolabel y la otra es la Bio-Siegel.

Alt-Text / Antwortkategorie 1

Alt-Text / Antwortkategorie 2

Le interesa a usted la identificación de los productos alimenticios?

- Sí  No

11 [Seiten-ID: 1199250] [L]

Einleitung

Cuando usted va de compras, ¿qué productos alimenticios prefiere? De la siguiente lista, vea por favor los distintos productos. Algunos productos tienen la etiqueta EU-Ecolabel y otros la etiqueta de Agricultura Ecológica.

Alt-Text / Antwortkategorie 1

Alt-Text / Antwortkategorie 2

Ahora tiene en pantalla un mismo producto en cuatro presentaciones diferentes. Coloque por favor todas las presentaciones en una hilera de modo que el producto de su mayor predilección ocupe la primera posición, el que le sigue en su predilección en segunda posición, y así sucesivamente.

12.1 [Seiten-ID: 1199252] [L]


Auswahl Käse

Ordene por favor los siguientes productos en hilera. Coloque el producto de su mayor predilección en la primera posición, el que le sigue según su preferencia en segunda posición y así sucesivamente. Hágalo dándole click al producto y arrastrándolo con el ratón (mouse) en el campo a la derecha de su pantalla.

Conteste por favor esta pregunta aún si usted no come el producto; en tal caso, coloque también una cruz en la casilla correspondiente.

Cuando usted señale con el cursor (ratón) alguna figura, aparecerá un texto con la identificación correspondiente.

- No como queso.

EU-Ecolabel y ecologico	
EU-Ecolabel	
Sin etiqueta	
ecologico	

12.2 [Seiten-ID: 1199253] [L]

auswahl Fischstäbchen

Ordene por favor los siguientes productos en hilera. Coloque el producto de su mayor predilección en la primera posición, el que le sigue según su preferencia en segunda posición y así sucesivamente. Hágalo dándole click al producto y arrastrándolo con el ratón (mouse) en el campo a la derecha de su pantalla.

Conteste por favor esta pregunta aún si usted no come el producto; en tal caso, coloque también una cruz en la casilla correspondiente.

Cuando usted señale con el cursor (ratón) alguna figura, aparecerá un texto con la identificación correspondiente.

- No como barras de pescado.

13 [Seiten-ID: 1199254] [L]

Begründung Wahl

¿Por qué ha colocado usted ese producto en la primera posición? Explique por favor sus motivos con algunas breves palabras.

14 [Seiten-ID: 1199255] [L]

Bewertung Aussagen Wahl

Cuando usted colocó al producto antedicho en la primera posición con respecto a los otros productos, Cuáles características del producto consideró usted? Pensaba usted que, en comparación con los otros productos, el que usted eligió era...

	Mucho mejor	Mejor	Similar	Malo	Muy malo
Credibilidad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No es malo para el ambiente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
su consumo es seguro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usted sintió que hacía algo bueno	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sabroso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15 [Seiten-ID: 1199256] [L]

Bewertung Rangfolgenbildung

¿Cómo evalúa usted las siguientes formulaciones en relación con la clasificación que usted hizo?

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Me fué muy difícil hacer la clasificación.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No percibo diferencias de significado entre una etiqueta y la otra.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambas etiquetas me causaron confusión.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Si hay dos etiquetas para un mismo producto, entonces este es especialmente bueno.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16.1 [Seiten-ID: 1199258] [L]

Auswahl Äpfel

Repita por favour el procedimiento para el producto siguiente:

Ordene por favor los siguientes productos en hilera. Coloque el producto de su mayor predilección en la primera posición, el que le sigue según su preferencia en segunda posición y así sucesivamente. Hágalo dándole click al producto y arrastrándolo con el ratón (mouse) en el campo a la


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derecha de su pantalla.

Conteste por favor esta pregunta aún si usted no come el producto; en tal caso, coloque también una cruz en la casilla correspondiente.

Cuando usted señale con el cursor (ratón) alguna figura, aparecerá un texto con la identificación correspondiente.

No como manzanas.

EU-Ecolabel y ecologico	
Sin etiqueta	
EU Ecolabel	
ecologico	

16.2 [Seiten-ID: 1199259] [L]

Auswahl Fleisch


Repita por favour el procedimiento para el producto siguiente:

Ordene por favor los siguientes productos en hilera. Coloque el producto de su mayor predilección en la primera posición, el que le sigue según su preferencia en segunda posición y así sucesivamente. Hágalo dándole click al producto y arrastrándolo con el ratón (mouse) en el campo a la derecha de su pantalla.

Conteste por favor esta pregunta aún si usted no come el producto; en tal caso, coloque también una cruz en la casilla correspondiente.

Cuando usted señale con el cursor (ratón) alguna figura, aparecerá un texto con la identificación correspondiente.

No como carne.

17 [Seiten-ID: 1199260] [L]

Begründung Wahl

¿Por qué ha colocado usted ese producto en la primera posición? Explique por favor sus motivos en breves palabras.

18 [Seiten-ID: 1199261] [L]

Bewertung Auswahl unver

Cuando usted colocó al producto antedicho en la primera posición con respecto a los otros productos, Cuáles características del producto consideró usted? Pensaba usted que, en comparación con los otros productos, el que usted eligió era...

	Mucho mejor	Mejor	Similar	Malo	Muy malo
Credibilidad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No es malo para el ambiente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
su consumo es seguro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usted sintió que hacía algo bueno	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sabroso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19 [Seiten-ID: 1199262] [L]

Bewertung Rangfolgenbildung

¿Cómo evalúa usted las siguientes formulaciones en relación con la clasificación que usted hizo?

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Me fué muy difícil hacer la clasificación.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No percibo diferencias de significado entre una etiqueta y la otra.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambas etiquetas me causaron confusión.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Si hay dos etiquetas para un mismo producto, entonces este es especialmente bueno.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20 [Seiten-ID: 1199263] [L]

Übergang

En las próximas preguntas deseamos abarcar las características de los productos alimenticios que son benignos para el ambiente.

21 [Seiten-ID: 1199264] [L]

Bewertung umweltfreundliches Produkt

¿Qué características debe tener un producto alimenticio para poder verse como algo especialmente benigno para el ambiente mediante signos como –por ejemplo, la EU-Ecolabel? Conteste por favor completando la siguiente oración: "Como criterio ambiental en relación a un producto alimenticio, me resulta..."

	de importancia excepcional	muy importante	importante	un poco menos importante	poco importante
Que no use químicos para proteger a las plantas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que no use abonos artificiales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que se lo transporte desde distancias cortas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que necesite poco agua	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que el pienso provenga de la propia finca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que provenga de agricultura biológica o ecológica	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que cuide el clima	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que no use ingeniería genética	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que se lo abone con estiércol de la propia finca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que el precio sea justo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que consuma poca energía	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que la envoltura sea benigna para el ambiente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que tenga pocos aditivos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El manejo adecuado a la especie de animal de que proviene	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Fabricación artesanal

22 [Seiten-ID: 1199265] [L]

Bewertung umweltfreundliches Produkt 2

Prosiga por favor con la asignación de criterios. Hágalo completando la siguiente oración: "Como criterio ambiental en relación a un producto alimenticio, me resulta..."

	de importancia excepcional	muy importante	importante	un poco menos importante	poco importante
Que genere poca basura	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que implique poca contaminación acústica	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que use energías renovables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que sea de producción regional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Que el procesamiento ulterior sea benigno para el ambiente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Para mí, existen otros aspectos importantes que son:

23 [Seiten-ID: 1199266] [L]

Zuordnung Kriterien zu Label

Cuando usted piensa en un producto Bio que tenga la etiqueta de Agricultura Ecológica, y si se le pide ubicar al producto en la siguiente escala, ¿cómo lo catalogaría usted bajo los siguientes criterios?

¿A qué parte de esta escala correspondería –según usted, (el producto con) la etiqueta de Agricultura Ecológica? Cuando usted señala con el cursor (ratón) alguna figura, aparecerá un texto con la identificación correspondiente.

Alt-Text / Antwortkategorie 1

	Se aplica completamente	Se aplica	Apenas se aplica	A veces se aplica y a veces no	Apenas no se aplica	No se aplica	Absolutamente inaplicable
no usa químicos para proteger a las plantas	<input type="checkbox"/>						<input type="checkbox"/>
no usa abonos artificiales	<input type="checkbox"/>						<input type="checkbox"/>
se lo transporta desde distancias cortas	<input type="checkbox"/>						<input type="checkbox"/>
tiene pocos aditivos	<input type="checkbox"/>						<input type="checkbox"/>
necesita poco agua	<input type="checkbox"/>						<input type="checkbox"/>
proviene de agricultura biológica o ecológica	<input type="checkbox"/>						<input type="checkbox"/>

24 [Seiten-ID: 1199267] [L]

Zuordnung Kriterien zu Labe 2

¿Cuál es su opinión sobre (el producto con) la etiqueta de Agricultura Ecológica?

Alt-Text / Antwortkategorie 1

	Se aplica completamente	Se aplica	Apenas se aplica	A veces se aplica y a veces no	Apenas no se aplica	No se aplica	Absolutamente inaplicable
Se ve bien	<input type="checkbox"/>						<input type="checkbox"/>
No hay ingeniería genética	<input type="checkbox"/>						<input type="checkbox"/>

	Se aplica completamente	Se aplica	Apenas se aplica	A veces se aplica y a veces no	Apenas no se aplica	No se aplica	Absolutamente inaplicable
La producción fue a bajo costo	<input type="checkbox"/>						<input type="checkbox"/>
El producto tiene un precio justo	<input type="checkbox"/>						<input type="checkbox"/>
El producto es benigno para el clima	<input type="checkbox"/>						<input type="checkbox"/>
La calidad del producto es buena	<input type="checkbox"/>						<input type="checkbox"/>
El pienso proviene de la propia finca	<input type="checkbox"/>						<input type="checkbox"/>
Se manejó adecuadamente a la especie de animal de la que el producto proviene	<input type="checkbox"/>						<input type="checkbox"/>

25 [Seiten-ID: 1199268] [L]

Zuordnung Kriterien zu Label 3

¿Cuál es su opinión sobre (el producto con) la etiqueta de Agricultura Ecológica?

Alt-Text / Antwortkategorie 1

	Se aplica completamente	Se aplica	Apenas se aplica	A veces se aplica y a veces no	Apenas no se aplica	No se aplica	Absolutamente inaplicable
La fabricación fue artesanal	<input type="checkbox"/>						<input type="checkbox"/>
Consumió poca energía	<input type="checkbox"/>						<input type="checkbox"/>
Es un alimento seguro	<input type="checkbox"/>						<input type="checkbox"/>
El producto es natural	<input type="checkbox"/>						<input type="checkbox"/>
La envoltura es benigna para el ambiente	<input type="checkbox"/>						<input type="checkbox"/>
Sabe bien	<input type="checkbox"/>						<input type="checkbox"/>
Genera poca basura	<input type="checkbox"/>						<input type="checkbox"/>

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Se aplica completamente    Se aplica    Apenas se aplica    A veces se aplica y a veces no    Apenas no se aplica    No se aplica    Absolutamente inaplicable  
 Conserva la biodiversidad

26 [Seiten-ID: 1199269] [L]

Zuordnung Kriterien zu Label 4

¿Cuál es su opinión sobre (el producto con) la etiqueta de Agricultura Ecológica?

Alt-Text / Antwortkategorie 1

Se aplica completamente    Se aplica    Apenas se aplica    A veces se aplica y a veces no    Apenas no se aplica aplica y a veces no    No se aplica    Absolutamente inaplicable  
 Implica poca contaminación acústica

Se aplica completamente    Se aplica    Apenas se aplica    A veces se aplica y a veces no    Apenas no se aplica aplica y a veces no    No se aplica    Absolutamente inaplicable  
 Fue producido en la región

Se aplica completamente    Se aplica    Apenas se aplica    A veces se aplica y a veces no    Apenas no se aplica aplica y a veces no    No se aplica    Absolutamente inaplicable  
 Se produjo usando energías renovables

Se aplica completamente    Se aplica    Apenas se aplica    A veces se aplica y a veces no    Apenas no se aplica aplica y a veces no    No se aplica    Absolutamente inaplicable  
 El procesamiento ulterior será benigno para el ambiente

Para mí, existen otros aspectos importantes que son:

27 [Seiten-ID: 1199270] [L]

Übergang

Luego de haber considerado los distintivos de los productos alimenticios nos gustaría pasar a su actitud sobre el medio ambiente, así como su conciencia ambiental.

28 [Seiten-ID: 1199271] [L]

Umweltbewusstsein

¿Cómo considera usted los siguientes enunciados:

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Al comprar electrodomésticos, tomo en cuenta que estos consuman poca energía.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Procuro comprar productos cuya producción y uso tengan bajo impacto ambiental.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Me parece importante conservar el ambiente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29 [Seiten-ID: 1199272] [L]

politisches Umweltbewusstsein

¿Qué opina usted sobre los siguientes enunciados? ¿En qué medida los acepta o los rechaza?

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Si no se toman medidas políticas adicionales, la situación ambiental empeorará de manera dramática.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Si se siguen añadiendo normas ambientales, pronto uno no podrá hacer nada.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Si asumimos un comportamiento de protección ambiental tendremos también otras ventajas, como –por ejemplo, el ahorro de dinero o buenas consecuencias para la salud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los problemas ambientales son un problema gubernamental: como individuos no podemos arreglar nada.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Los esfuerzos de conservación ambiental no deben obstaculizar el crecimiento económico.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La conservación ambiental es un problema internacional y es función de la Unión Europea responsabilizarse de ella.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Las etiquetas informativas de los productos me ayudan a comprar de modo acorde con el ambiente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hay tantas etiquetas que una etiqueta unitaria como la EU-Ecolabel puede reducir la proliferación de etiquetas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30 [Seiten-ID: 1199273] [L]

Rangfolge Vertrauen

¿A quién confiaría usted más la elaboración de una etiqueta ambiental, esto es, la fijación de los estándares y controles? Ordene por favor las siguientes opciones colocando en primer lugar aquella en la que usted confía más.

Para ello, arrastre los términos de la izquierda hacia el campo a su derecha.

Empresas privadas nacionales	
Unión Europea	
Gobierno Español	
Empresas privadas internacionales	

31 [Seiten-ID: 1199274] [L]

Einstellung Bio

Cuando usted piensa en la agricultura ecológica y en los productos bio, ¿qué opinión le merecen los siguientes enunciados?

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Uno no sabe el contenido de un producto bio.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Para mí, los productos bio pertenecen a una categoría de comida sabrosa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La etiqueta de los productos bio no me dice mucho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los productos bio son benignos para el ambiente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Al comprar productos bio le hago un aporte a la sociedad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Me siento bien cuando compro productos bio.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Al comprar productos bio puedo hacer algo bueno para mi salud.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los productos bio no son mejores para el ambiente en comparación con los productos convencionales.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Para mí, las estructuras agrícolas de pequeña escala pertenecen a la agricultura bio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los productos bio prometen naturalidad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los agricultores bio son idealistas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32 [Seiten-ID: 1199275] [L]

Übergang

La sección siguiente se refiere a sus actitudes de compra y a su actitud hacia los productos alimenticios.

33 [Seiten-ID: 1199276] [L]

Einkaufsverhalten

Al comprar productos alimenticios hay muchos factores que pueden influir sobre la decisión que se toma. ¿Cómo evalúa usted las siguientes formulaciones?

	Se aplica completamente.	Se aplica.	A veces se aplica y a veces no.	No se aplica.	Absolutamente inaplicable.
Cuando compro productos alimenticios me fijo mucho en que la calidad del producto sea la mejor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frecuentemente como comida rápida.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Con gusto pago más por productos alimenticios de alta calidad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Procuro comer tan sanamente como sea posible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Me gusta cocinar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Los productos alimenticios con etiqueta son muy dignos de mi confianza.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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Los productos alimenticios con etiqueta no son más confiables que los demás productos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Para mí el sabor de los productos alimenticios es decisivo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compro intencionalmente los productos alimenticios que traen alguna etiqueta.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cuando voy de compras pongo atención en que los productos alimenticios sean benignos para el ambiente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Por favor no más etiquetas! Ya hay demasiadas en el rubro de los productos alimenticios.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cuando compro productos alimenticios me gustaría tener más información sobre si estos son benignos para el ambiente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Particularmente, compro muchos productos alimenticios en tiendas en las que los precios son bajos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34 [Seiten-ID: 1199277] [L]

Einstellung Produktion Lebensmittel

¿Cuál es su actitud hacia la elaboración de productos alimenticios? Evalúe –por favor, los siguientes enunciados:

	Se aplica completamente	Se aplica	A veces se aplica y a veces no	No se aplica	Absolutamente inaplicable
Un producto es benigno para el ambiente cuando toda su producción y elaboración lo son: desde la granja, pasando por el procesamiento, hasta la venta y el consumo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El término "bio" se refiere a más que benignidad ambiental.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Si un producto es benigno para el ambiente, no me importa que tenga aditivos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
En fin, las manzanas de Nueva Zelanda pueden ser más benignas para el ambiente que las de nuestro país.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La ingeniería genética puede dar un aporte importante a la conservación ambiental.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mantener las estructuras de la agricultura en pequeña escala son para mí más importantes que la eficiencia en la producción de las empresas grandes y sus productos baratos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La humanidad es más importante que el ambiente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Para mí es importante que el proceso de producción de las empresas sea controlado desde el punto de vista de su benignidad ambiental.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35 [Seiten-ID: 1199278] [L]

Übergang Sozio

Para finalizar deseamos preguntarle algo sobre sus datos personales.

36 [Seiten-ID: 1199279] [L]

Mitgliedschaft

¿Es usted un seguidor activo de alguna de las siguientes organizaciones?

	Si	No
Soy miembro de una organización grande de federaciones ambientalistas (p.ej. B.Bund, NABU, WWF, Greenpeace, etc).	<input type="checkbox"/>	<input type="checkbox"/>
Soy miembro activo de un grupo o iniciativa ciudadana ambientalista local.	<input type="checkbox"/>	<input type="checkbox"/>

37 [Seiten-ID: 1199280] [L]

Einkaufshäufigkeit Bio

¿Cuán frecuentemente compra usted productos bio en los siguientes tipos de establecimientos?

	Muy frecuentemente	Frecuentemente	A veces	Raras veces	Nunca
Supermercado (p.ej. (Eroski, El Corte Inglés, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supermercados de descuento (Lidl, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tiendas de productos biológicos y naturales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mercados semanales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Directamente al campesino	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

38 [Seiten-ID: 1199281] [L]

Kaufhäufigkeit Produkte

En promedio, ¿con cuánta frecuencia compra usted los siguientes productos?

	Muy frecuentemente	Frecuentemente	A veces	Raras veces	Nunca
Manzanas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Queso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carne de res	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Barras de pescado



39 [Seiten-ID: 1199282] [L]

Bildung

¿Cuál es el nivel de instrucción más alto que concluido por usted?

- Ninguno por ahora
- Básico general
- Vocacional básico
- Vocacional secundario
- Bachillerato (secundaria previa a la Universidad)
- Docencia
- Técnico
- Técnico superior especializado
- Universitario
- Otros

40 [Seiten-ID: 1199283] [L]

Einkommen

¿En cuál de las siguientes categorías ubicaría usted su ingreso neto familiar mensual?

- menos de 900 euros
- 900-1300
- 1301-1500
- 1501-2000
- 2001-2600
- 2601-3600
- 3601-5000
- mayor que 5000 euros
- no responde

41 [Seiten-ID: 1199284] [L]

Wohnsituation

Yo vivo...

- Solo (sola)
- En vivienda compartida
- Con mis padres
- Con mi pareja
- Con mi pareja e hijos
- Solamente con mis hijos
- Vive solo con su(s) hijo(s) o hija(s)

42 [Seiten-ID: 1199285] [L]

Anmerkungen

Deseamos terminar permitiéndole hacernos sugerencias sobre esta encuesta.

Si se diera nuevamente ante la ocasión, ¿participaría usted otra vez de esta encuesta?

- Sí       No       No lo sé

¿Hubo problemas técnicos durante la encuesta? ¿De ser así, indique cuáles?

¿Fue la encuesta comprensible o hubo algo en particular que no se haya entendido?

¿Tiene usted otras observaciones acerca de esta encuesta o del cuestionario?

43 [Seiten-ID: 1199286] [L]

Endseite

Muchas gracias por su participación!

Puede cerrar la ventana.

La encargada:

Dra. Nina Stockebrand

Tel.: 0551/79774524

Correo electrónico: nstocke@uni-goettingen.de

## Annex 2: Consumer Survey Methodology and Additional Results

### Introduction

The consumer questionnaire was designed to indicate the rate of confusion when consumers see both 'eco' and 'organic' labels on a product.

In the questionnaire, the participants were asked to write down their associations with the terms of 'eco' and 'organic'. This evaluation had to be done by the consumers twice; once for an 'environmentally-friendly product' (indicated by the presence of an Ecolabel) and once for an organic product. Comparing both evaluations, those attributes that participants associate with an Ecolabel, with an organic label, or both, can be identified. This would then allow the identification of possible EU Ecolabel criteria as well as an indication of where possible confusion might arise.

The analysis used to support the chapter on the potential market relevance of an EU Ecolabel was done by a 'preference ranking' of different products. These products varied in the labels (organic label vs. EU Ecolabel vs. no label) they carried. The participants were asked to rank four different products in order of preference.

To enable an analysis of the different potential factors influencing consumer confusion, several questions testing potential influencing factors were included in the questionnaire. In particular, influencing factors such as attitudes towards labels, organic products, environment, food production and food consumption in general were included in the questionnaire. In addition, the survey investigated whether constructs such as involvement concerning labels, knowledge about labels, buying behaviour or socio-demographic criteria have an influence on the rate of consumer confusion. For this analysis we used factor and regression analysis.

Furthermore, in all our analyses we used a split sample design: one half of the respondents was informed about the main content of the EU Ecolabel, the other half was not. The comparison of the two groups – the informed and the uninformed group – made it possible to reveal whether accurate information about the EU Ecolabel is important for decision-making and whether the provision of more accurate information about the EU Ecolabel could potentially decrease the risk of confusion between different labelling initiatives.

For data collection we used Respondi, the service provider for online-panels, who were responsible for fulfilling the quota of each country. Data collection for all countries took place from 21 April 2011 until 5 June 2011, when the final country sample was finished. The quota contains the characteristics gender (70% women/30% men); age and environmental consciousness (see Table A2-1). In total the sample of each country consists of almost 300 respondents, so that the whole data contains 1,180 respondents.

### Socio-demographics and environmental consciousness

In total the online questionnaire was able to reach 1,180 respondents – almost 300 consumers in each country. The comparison between the countries shows that the female/male ratio, average age and average income do not differ significantly. The average consumer of the survey was about 42 years old, had a household income of €2,001-2,600 per month and lived with a partner and children (see table below).

*Table A2-1: Description of the different samples*

Property	CZ	DE	ES	UK
Sample size respondents	296	295	291	298
Female/male	70% / 30%	55% / 45%	67% / 31%	69% / 29%
Average income pcm	Kr20 000-35 000	€2,001–2,600	€2,001–2,600	£1,771–2,300
Size of household				
With partner and children	35.5%	27%	40%	33%
Alone	8%	24%	8%	18%
With partner without children	11%	21%	28%	14%
With my partner (moved out)	16%	13%	12%	17%
With parents				
Average age	42 years	37 years	44 years	46 years
Age groups				
18-39 years	37%	33%	37%	35%
40-59 years	45%	43%	48%	46%
60 and older	19%	24%	15%	19%
Education				
High school		25%		15%
Vocational qualification	7%	18%	5.5%	16%
A-levels	41%	17%	35%	11%
University	31%	19%	33%	38%

Source: own survey

On average, consumers judged their environmental awareness as 70 (on a scale from 0 = none to 100 = very high). Furthermore they buy organic products “sometimes” i.e. most of the respondents are occasional organic shoppers (see Table A2-2).

*Table A2-2: Description of the different samples*

Property	CZ	DE	ES	UK
Frequency of organic shopping	46% sometimes	38% sometimes	48% sometimes	38% sometimes
Organic consumer groups				
Rarely/never	35%	32%	21%	33%
Occasionally	46%	38%	47.5%	38%
Frequently/very frequently	19%	29%	31.5	29%
Shopping stores for organic products (frequently/very frequently)				
Supermarket	46%	55%	57%	49%
Discounter	29%	45%	32%	20%
Organic shops	25%	17%	20%	23%
Average environmental awareness	70%	70%	80%	70%

Source: own survey

### Knowledge and attitudes towards labels

In order to analyse the knowledge of existing Eco labels the questionnaire contained several country-specific labels. On average, eight labels for each country were selected which covered environmental topics. However all consumers were asked about the EU Ecolabel and the EU organic label. They had four possible answers: “I recognise this”, “I know what this means”, “I buy it” and “I don’t know the label”.

There are some similarities between countries. On average 30-50% of consumers in all four countries knew a multitude of labels. However, there are differences concerning the aspects “I recognise the label” and “I know what this means”. Here the sample of four countries can be separated into two groups; the first group (United Kingdom, Spain) can be described as well informed about the labels and with a high recognition of the EU Ecolabel, while the second group (Czech Republic, Germany) the consumers recognised a lot of labels but did not know their exact meaning, even though they bought the products.

For example, in the UK over 20% answered that they knew what the EU Ecolabel, the EU Organic label and the Soil Association stand for, whereas in DE and CZ only 10% of the consumers think that they knew the meaning of the EU organic label, a national organic label and the EU Ecolabel. Respondents in Germany and Czech Republic recognized more labels than their UK counterparts, but did not really know the meaning of these labels see Tables below). Nevertheless they tended to buy products with such labels more than consumers of UK and ES.

*Table A2-3: Knowledge and use of labels (CZ)*

	I recognise this	I know what this means	I buy this
<b>National Environmental label</b>	48%	6%	21%
<b>Pro bio</b>	34%	5%	16%
<b>KEZ</b>	50%	12%	22%
<b>National organic label</b>	30%	7%	8%
<b>EU Ecolabel</b>	17%	2%	5%

*Source: own survey*

*Table A2-4: Knowledge and use of labels (UK)*

	I recognise this	I know what this means	I buy this
<b>EU Ecolabel</b>	37%	22%	13%
<b>EU organic leaf</b>	37%	22%	7%
<b>Reducing with the Carbon Trust - CO<sub>2</sub></b>	35%	20%	11%
<b>Soil Association (national organic standard)</b>	35%	24%	11%

*Source: own survey*

In the UK and Spain the EU Ecolabel is recognised most often: about 37% of English consumers had seen the EU Ecolabel before and 22% thought they knew its meaning. But only a small group of consumers in these countries actually bought products with that label (4% ES and 13% UK). In general, one can say that there is not much difference between the EU Ecolabel and organic labels when it comes to label recognition and understanding of the label in these two countries.

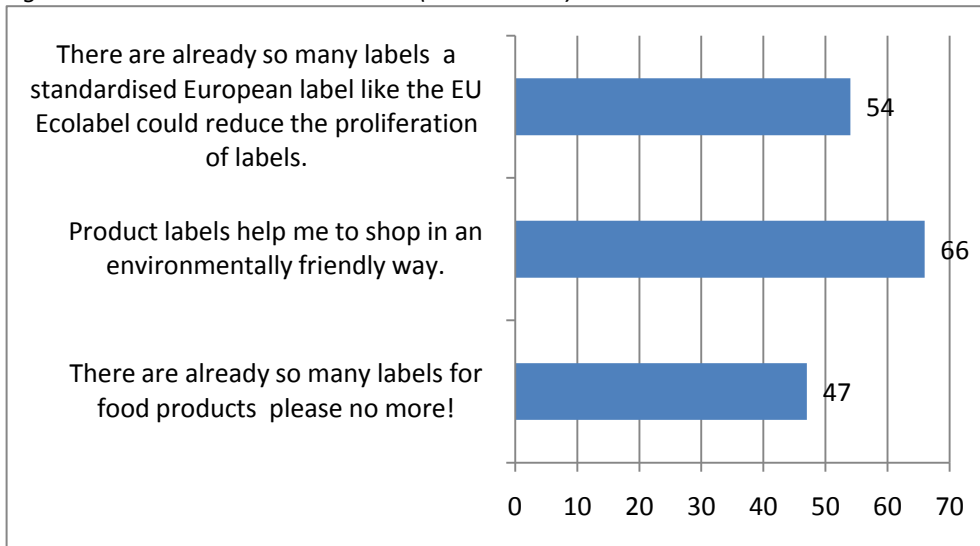
The recognition of the EU Ecolabel is much lower in Czech Republic and in Germany and the recognition of organic labels is higher than the EU Ecolabel. However, although 12-17% of the respondents recognized the EU Ecolabel, they often did not know what the label stood for and rarely bought EU Ecolabelled products.

### Attitudes towards labels

In total, 76% of respondents in the consumer survey who received information about the EU Ecolabel, its aim, and challenges, were interested in extending the EU Ecolabel to food products.

The respondent's attitude towards labels shows that most (66%) consumers in the four countries used product labels in order to shop in an environmentally-friendly way, and that 54% of them were interested in an EU standardised label (see Figure A2-1, which shows the aggregated percentage of the positive answers ("agree" and "agree completely") of the 5 point Likert scale).

Figure A2-1: Attitude towards labels (all countries)

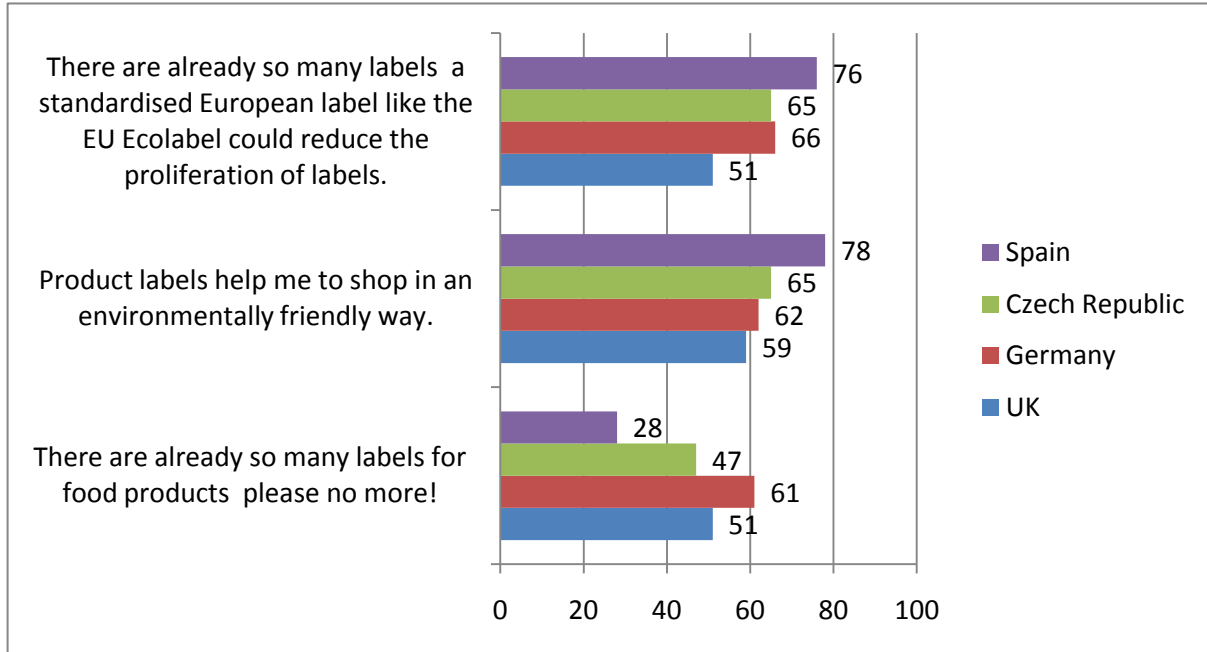


Source: own study.

Note: This figure shows the aggregated percentage of the positive answering (agree and agree completely) of the 5 point Likert scale.

The analysis of country specific evaluations showed that there are differences between the countries. For example, Spain seems to be the country most in favour of a new EU standardized label (76%), and only 28% of the respondents in Spain think that there are enough labels. This is quite different to the opinion of the German consumers, of whom 61% were sceptical about having more labels. However, 50% of German consumers think an EU standardized label would be able to reduce the amount of labels. The Czech and English consumers answered in a similar way (see Figure A2-2).

Figure A2-2: Attitudes towards labels in different countries

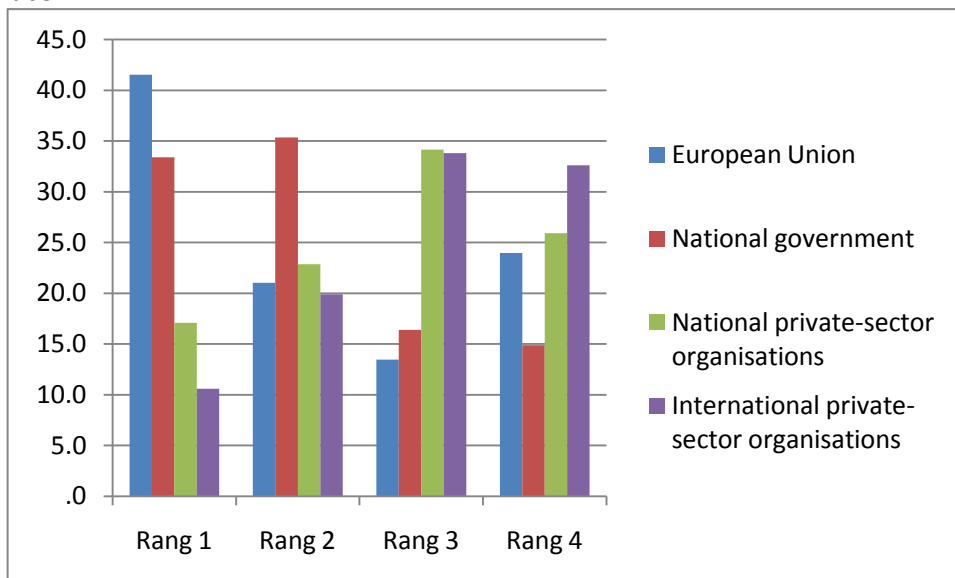


Source: own study.

Note: This figure shows the aggregated percentage of the positive answering (agree and agree completely) of the 5 point Likert scale.

Over 50% of total respondents in the consumer survey (CZ, DE, ES, UK) would accept another EU standardized label in order to reduce the amount of labels in their country. When asked to rank the nature of the institutions most suitable for introducing an Ecolabel in the food and drink sector, over 40% thought that the EU is most trustworthy for setting a new label with new standards. National governments were also ranked highly (Figure A2-3).

Figure A2-3: Ranking of the trustworthiness institutions concerning creating an environmental friendly label

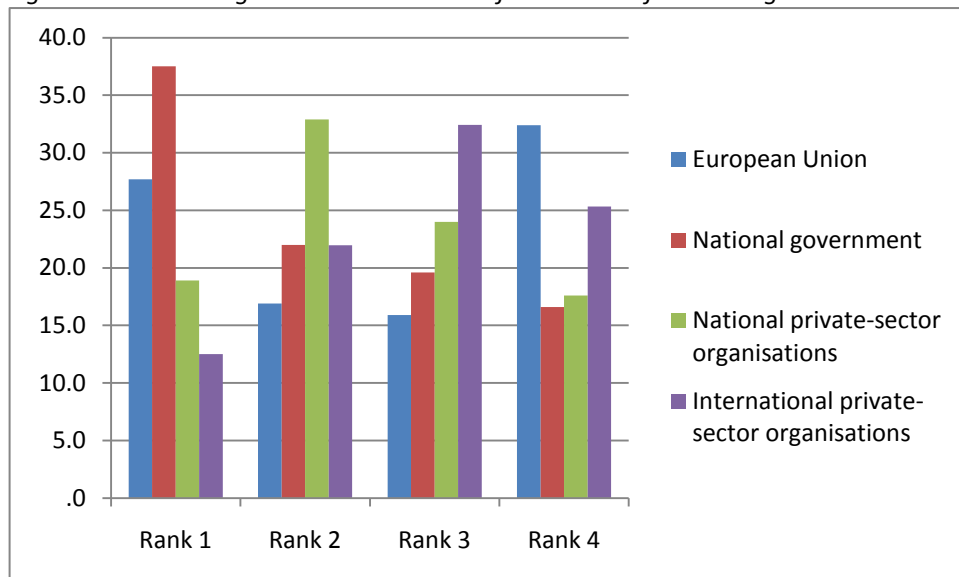


Source: own survey

However, in ranking the institutions that would be most trustworthy in introducing a new Ecolabel, the differences between the countries become obvious. Over 35% of Czech consumers rank the national government in first place, and over 30% rate the EU in fourth place (Figure A2-4). This shows a sceptical attitude concerning the EU setting a standardized label. A similar ranking can be seen in UK and DE.

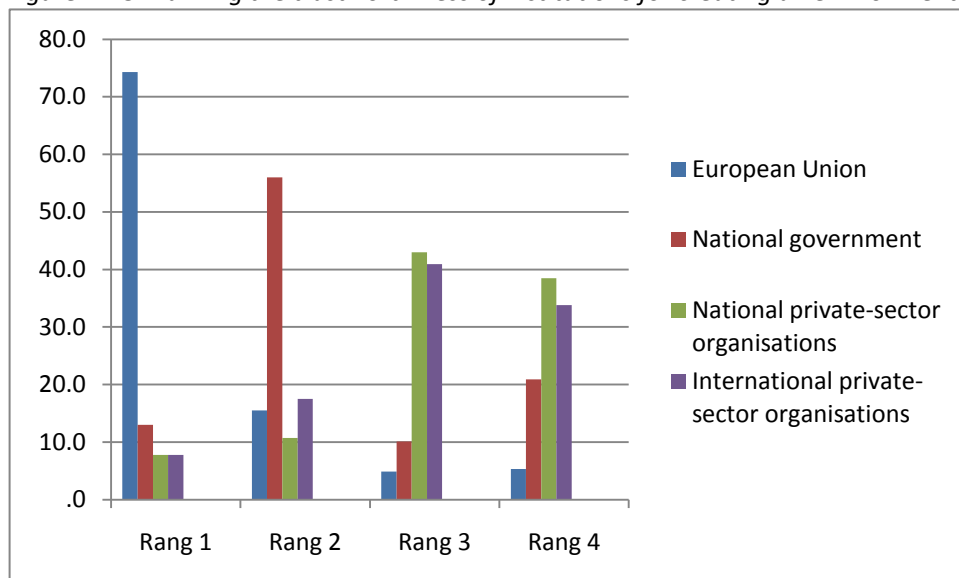
Totally different results are shown for Spain (Figure A2-5): More than 70% have the opinion that the EU should be responsible for labelling and is regarded as the more trustworthy institution.

Figure A2-4: Ranking the trustworthiness of institutions for creating an environmental friendly label (CZ)



Source: own survey

Figure A2-5: Ranking the trustworthiness of institutions for creating an environmental friendly label (ES)



Source: own survey

Whilst labelling is regarded as an important consumer policy instrument, many consumers characterise the current situation as one of ‘information overload’. The EU’s role as a standard-setting institution is generally accepted: however, there are large country specific differences.

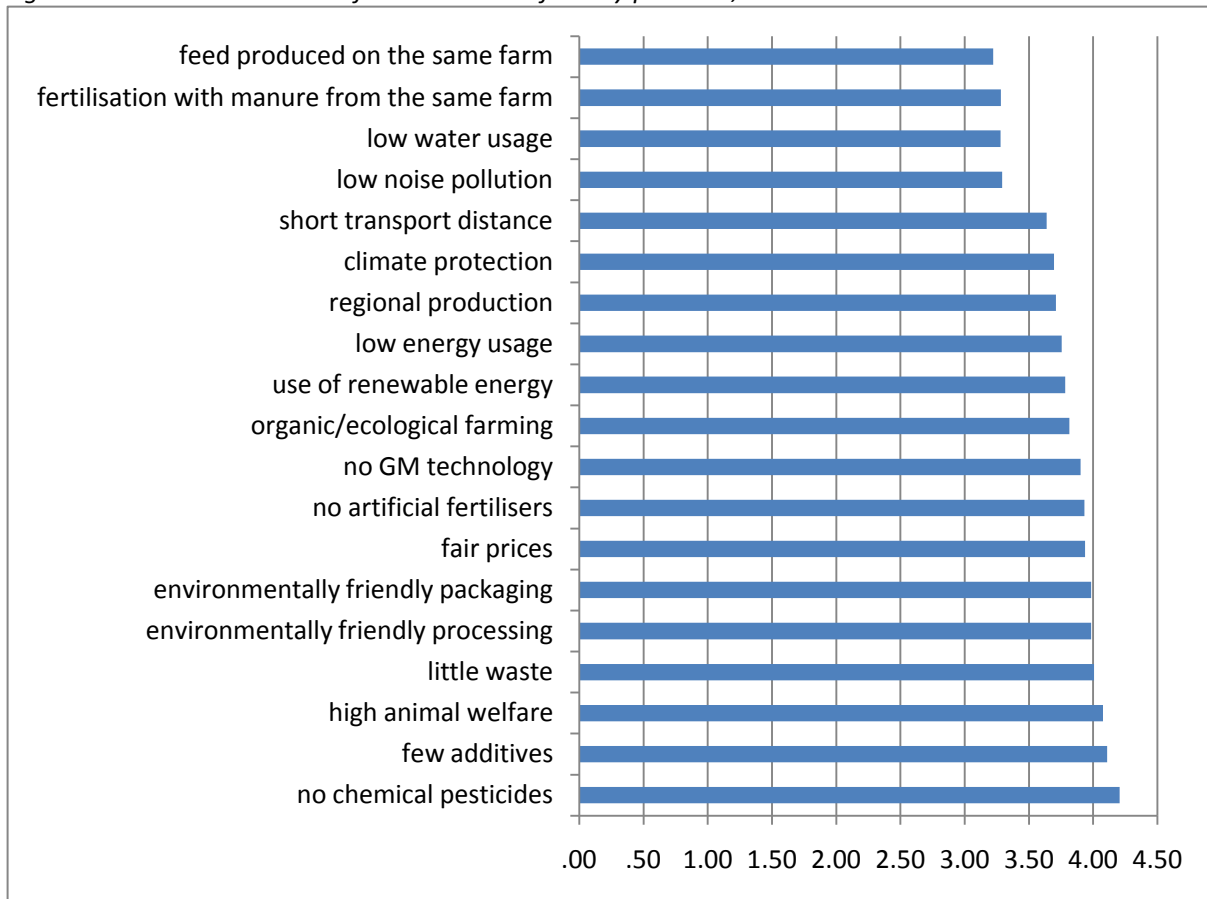
The criteria that consumers were asked to score as important to an EU Ecolabel include topics that are key to the organic principles, (such as no chemical pesticides and animal welfare) as well as broader ‘eco’ topics such as environmentally-friendly processing and packaging.

From this analysis (Figure A2-6) it could be concluded that interestingly, animal welfare – generally not seen as an ‘eco’ indicator - has a high importance for an environmental product. This is also apparent in the ranking of the other impact categories; the most important categories are a mix of organic attributes,



environmental issues and social criteria. However, it should be noted here that the standard deviation is low; only small differences in average importance were observed for the different impact categories, while on average none of the impact categories was considered unimportant. For environmentally-friendly products, respondents in the consumer survey expect a broad range of sustainability issues to be taken into account by the EU Ecolabel.

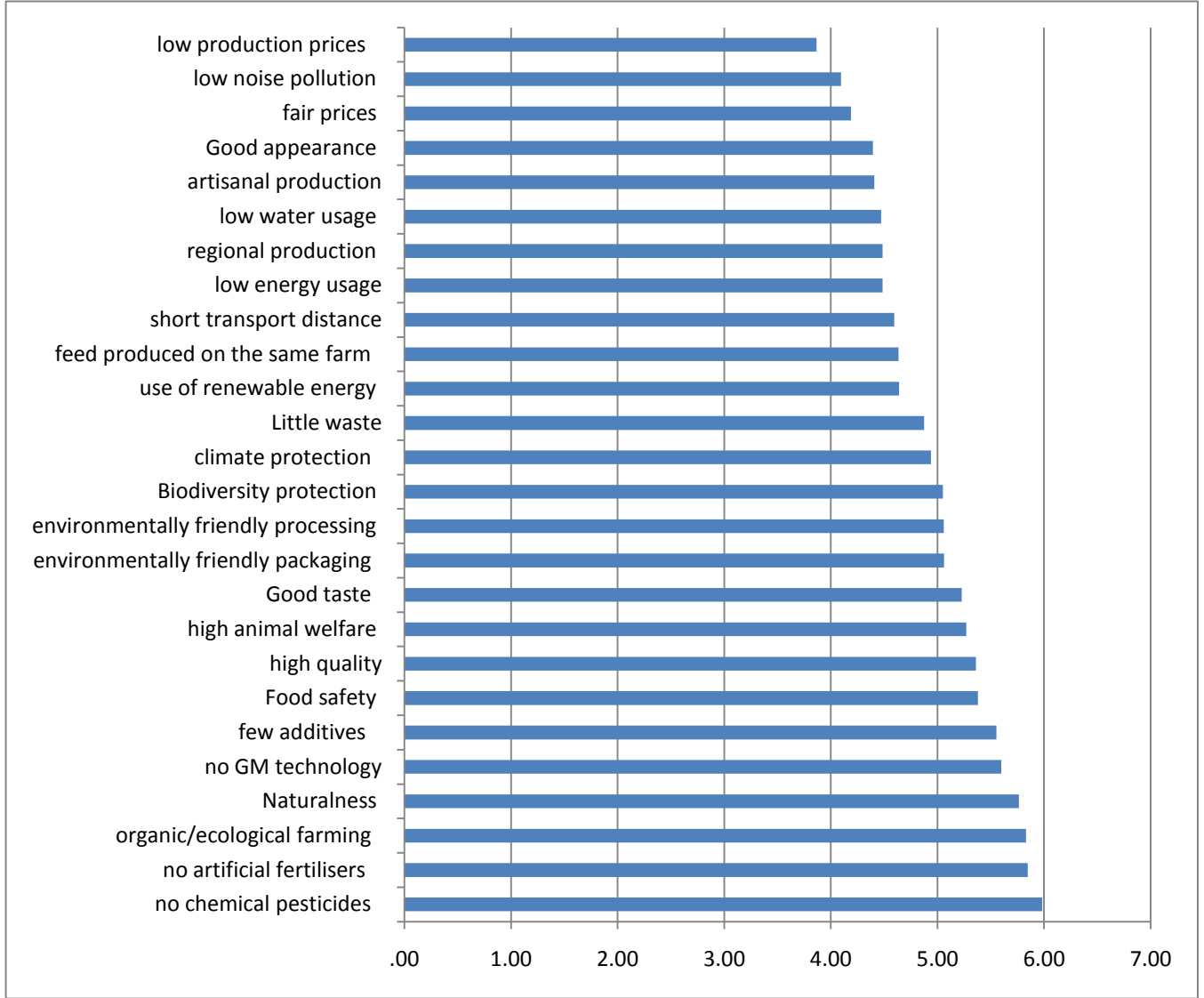
Figure A2-6: Possible content of environmental friendly products, such as an EU Ecolabel



Source: own study; 5 point Likert scale from 1 = not very important to 5 = extremely important

The analysis of the question “which criteria are important to be included in the accreditation of an organic product” (Figure A2-7) shows some similarities to the criteria for an ecolabel. Once again, the differences between all aspects are small but, interestingly, the issues expected for the organic product are in some cases identical with those for an ecolabelled product. There is less expectation that environmental aspects such as environmentally-friendly processing or packaging will be included in the criteria for organically certified products.

Figure A2-7: Expected content for organic products



Source: own study; 7 point Likert scale from 1 = do not agree at all to 7 = agree completely

## Annex 3: Stakeholder Consultation Questionnaire

LimeService - Your online survey service - Feasibility study 'EU Ecolabel for food and feed products'

### Feasibility study 'EU Ecolabel for food and feed products'

Dear Sir or Madam,

As announced earlier we are contacting you to enquire about your opinion on the feasibility of introducing a new European-wide label scheme in the food, feed and drink sector.

This feasibility study 'EU Ecolabel for food and feed products (ENV.C.1/ETU/2010/0025)' aims at providing recommendations to the European Commission on the potential extension of the EU Ecolabel to the food, feed and drink sector. We kindly ask you to complete the following questionnaire, which will take about 20 minutes to complete.

Please do not hesitate and contact us if you need clarification or more instructions for completing the questionnaire. Thank you in advance for taking the time to complete the questionnaire. We guarantee that the information you provide us with will remain anonymous and that we will not reveal your identities to third parties.

There are 29 questions in this survey

#### Part 1

1

**Please enter your full name and surname (All information you provide in this survey is anonymised).**

Please write your answer here:

2

**Please enter the name of your company/organisation/department (All information you provide will be anonymised).**

Please write your answer here:

3

**Please indicate the kind of company, organisation or department you represent by checking the respective box(es).**

Please choose **all** that apply:

- Food or drink processor
- Food or drink umbrella or labelling organisation
- Feed processor or feed retailer
- Food or drink retailer
- Food or drink wholesaler
  
- Farmer association
- Public administration
- Consumer NGO

<http://umbrail.limequery.org/admin/admin.php?action=showprintablesurvey&sid=84133&lang=en>[08.07.2011 15:52:37]

LimeService - Your online survey service - Feasibility study 'EU Ecolabel for food and feed products'

Environmental NGO

Other:

**4**

**Please indicate your position within your company / organisation / department by checking the corresponding box(es).**

Please choose **all** that apply:

Executive board

Management

Category manager

Marketing & communication

Environmental / sustainability manager

Product development

Advisor

Policy officer

Other:

**5**

**Please indicate the product groups your company / organisation is specialised in.**

**Only answer this question if the following conditions are met:**

°

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 5 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 6 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **all** that apply:

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- Dairy
- Eggs
- Meat
- Cereals, bread & pasta
- Fruit & vegetable
- Fishery & aquaculture products
- Feed for livestock
  
- Tea & coffee
- Beverages
- Sweets & sugar
- Fat & oil
- Ready meals
- Other:

6

**Does your company / organisation have a sustainability strategy or a policy towards protecting the environment?**

**Only answer this question if the following conditions are met:**

.

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 5 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 6 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **only one** of the following:

- Yes
- No

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**7**

**Please describe in a few words the main aims of your company's strategy and how these aims shall be achieved.**

**Only answer this question if the following conditions are met:**

° Answer was 'Yes' at question '6 [6]' (Does your company / organisation have a sustainability strategy or a policy towards protecting the environment?)

Please write your answer here:

**8**

**Does your company already participate in environmental, organic or sustainable labelling schemes?**

**Only answer this question if the following conditions are met:**

°

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 5 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 6 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **only one** of the following:

Yes

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No

**9**  
**Which labelling scheme(s) does your company already use?**

**Only answer this question if the following conditions are met:**

° Answer was 'Yes' at question '8 [8]' (Does your company already participate in environmental, organic or sustainable labelling schemes?)

Please write your answer here:

**10**  
**Please indicate which of your company's / organisation's product groups are certified organic or certified by other sustainability label schemes.**

**Only answer this question if the following conditions are met:**

° Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose the appropriate response for each item:

	Certified organic	Other certifications (Fair Trade, MSC, etc.)
Dairy	<input type="radio"/>	<input type="radio"/>
Eggs	<input type="radio"/>	<input type="radio"/>
Meat	<input type="radio"/>	<input type="radio"/>
Cereals, bread & pasta	<input type="radio"/>	<input type="radio"/>
Fruit & vegetable	<input type="radio"/>	<input type="radio"/>
Fishery & aquaculture products	<input type="radio"/>	<input type="radio"/>
Feed for livestock	<input type="radio"/>	<input type="radio"/>
Tea & coffee	<input type="radio"/>	<input type="radio"/>
Beverages	<input type="radio"/>	<input type="radio"/>
Sweets, sugar	<input type="radio"/>	<input type="radio"/>
Fat, oil	<input type="radio"/>	<input type="radio"/>
Ready meals	<input type="radio"/>	<input type="radio"/>

**11**  
**What percentage of your company's turnover is achieved with certified organic products?**

**Only answer this question if the following conditions are met:**

°

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----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **all** that apply:

- less than 5 %
- 5-20 %
- 21-40 %
- 41-60 %
- 61-80 %
- more than 80 %
- I prefer not to disclose

## 12

### What percentage of your company's turnover is achieved with fair trade, MSC or other sustainably labelled products?

**Only answer this question if the following conditions are met:**

o

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **all** that apply:

- less than 5 %
- 5-20 %
- 21-40 %

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- 41-60 %
- 61-80 %
- more than 80 %
- I prefer not to disclose

## Part 2

This part of the questionnaire deals with the European Ecolabel. The European Ecolabel is an existing voluntary scheme, established in 1992 to encourage businesses to market products and services that are kinder to the environment. Currently, the label is only used in the non-food sector. Products and services awarded the Ecolabel carry the flower logo:



The EU Ecolabel is part of a broader action plan on Sustainable Consumption and Production and Sustainable Industrial Policy. Today the EU Ecolabel covers a wide range of products and services, including cleaning products, appliances, paper products, textile and home and garden products, lubricants and services such as tourist accommodation. The criteria behind the scheme are agreed at European level, following wide consultation with experts, and the label itself is only awarded after verification that the product meets these high environmental and performance standards. Products bearing the Flower logo can be marketed throughout the European Union and the EEA countries (Norway, Iceland and Liechtenstein). Ecolabel criteria are based on studies that analyse the impact of the product or service on the environment throughout its life-cycle, starting from raw material extraction in the pre-production stage, through to production, distribution and disposal.

**13**

**Did you know about the EU Ecolabel prior to this survey?**

Please choose **only one** of the following:

- Yes
- No

**14**

**Would you support the introduction of the EU Ecolabel in the food, feed and drink sector or not? Please explain your position in detail.**

Please write your answer here:

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**15**  
**What do you think would be the advantages and disadvantages of introducing the EU Ecolabel in the food and feed sector?**

Please write your answer here:

**16**  
**If introduced in the food and feed sector, which sustainability issues should the EU Ecolabel include? Please check the respective box(es).**

Please choose **all** that apply:

- Greenhouse gas emissions
- Ozone layer depletion
- Water usage
- Water pollution
- Acidification
- Biodiversity and wildlife
- Transportation (food miles)
- Eco-toxicity and pesticide use
- Deforestation
  
- Waste / development of recycling systems
- Non-renewable energy use
- Soil erosion
- Human toxicity
- Animal welfare
- Climate protection
- Fair producer prices

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Minimum labour standards for workers

Other:

**17**

**Do you have further comments on the sustainability issues you chose or suggested?**

Please write your answer here:

**Part 3**

**18**

**Please indicate your position on the following statements.**

Please choose the appropriate response for each item:

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
Consumers would confuse a possible EU Ecolabel with organic labels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU Ecolabel in the food, feed and drink sector will contribute to the protection of the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are already too many label schemes in the food and drink sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are already too many label schemes in the feed sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that potential consumer confusion between 'Eco' and 'organic' (ecological) harms the organic sector.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that potential consumer confusion between 'Eco' and					

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'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmentally friendly products.

The current labelling landscape in the food and drink sector is sufficient to reward companies for high environmental performance.

The current labelling landscape in the feed sector is sufficient to reward companies for high environmental performance.

**19 There are different views on the potential confusion and detrimental effects of a possible EU Ecolabel for food, feed and drink products in relation to organic labels. What is your position on these matters?**

Please write your answer here:

**20**

**Please indicate your expectations with regard to the following statements.**

**Only answer this question if the following conditions are met:**

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

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----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 5 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 6 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose the appropriate response for each item:

	...Very positive	...Somewhat positive	...Neither positive nor negative	...Somewhat negative	...Very negative
The effect of introducing the EU Ecolabel in the food, feed and drink sector on existing environmental, organic or sustainable label schemes will be...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The effects of introducing the EU Ecolabel in the food, feed and drink sector on the image and product positioning of our products / the producers we represent will be...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The financial effects of introducing the EU Ecolabel in the food, feed and drink sector for our products / the products we represent will be...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21

**Will your company or most of the companies you represent use the EU Ecolabel if it becomes available in the food, feed and drink sector in the future?**

**Only answer this question if the following conditions are met:**

o

----- Scenario 1 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 2 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 3 -----

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Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 4 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 5 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

----- or Scenario 6 -----

Answer was at question '3 [3]' (Please indicate the kind of company, organisation or department you represent by checking the respective box(es).)

Please choose **only one** of the following:

Yes

No

**22**

**If any, who do you think would particularly benefit from the introduction of the EU Ecolabel in the food, feed and drink sector?**

Please choose **all** that apply:

- Conventional food, drinks and feed sector
- Organic food, drinks and feed sector
- Other non-organic food, drinks and feed sector
- Feed for livestock sector
- Consumer
- I don't know
- Other:

**23**

**If any, who do you think would be particularly disadvantaged by the introduction of the EU Ecolabel in the food, feed and drink sector?**

Please choose **all** that apply:

- Conventional food, drinks and feed sector
- Organic food, drinks and feed sector
- Other non-organic food, drinks and feed sector
- Feed for livestock sector
- Consumers
- I don't know
- Other:

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**24**

**We would like to understand the difficulties associated with the actual implementation of the EU Ecolabel in the food, feed and drink sector. If possible at all, what conditions should be met to successfully introduce the EU Ecolabel for food, feed and drink products?**

Please write your answer here:

**25**

**Many food products are marked with a range of different labels, such as recycling symbols, national, private and EU organic labels, fair trade label, MSC, etc. What is your position on the following statements?**

Please choose the appropriate response for each item:

	I strongly agree	I rather agree	I neither agree nor disagree	I rather disagree	I strongly disagree
The EU Ecolabel is distinct to existing labels.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU Ecolabel can only be successfully introduced in the food, feed and drink sector if accompanied by a large-scale information campaign.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU Ecolabel will go under in the flood of existing labels and will not be recognised by consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU Ecolabel will help consumers identify environmental friendly produced products at the point of sale.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The EU Ecolabel will have a significant impact on consumers' product choice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As 'Eco' is the legal name for 'organic' in several European countries, the terminology of the EU Ecolabel needs to be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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changed.

**26**

**Do you have any further comments on the previous questions?**

Please write your answer here:

#### Part 4

**27**

**Please choose up to three scenarios that you agree with the most by using the following ranking 1=best scenario, 2 = second best scenario, 3 = third best scenario.**

**The EU Ecolabel...**

Please number each box in order of preference from 1 to 9

- ...will not be used in the food, feed and drink sector.
- ...will be used for organic and conventional products.
- ...will be introduced for specific products not covered by organic labelling schemes.
- ...will be introduced only for specific focus areas in processing, distribution, storage or packaging.
- ...will be introduced for specific hotspots not covered by existing labelling schemes.
- ...will be introduced only for organic products on the basis of additional environmental standards.
- ...will be introduced as a Business-to-Business label scheme only.
- ...will be introduced into the eating-out sector only.
- ...will be introduced only into the feed for livestock sector, but not in the food and drinks sector.

**28**

**Please explain your chosen preferences in more detail.**

Please write your answer here:

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**29**  
**Do you have further comments or recommendations?**

Please write your answer here:

Thank you very much for taking part in this survey.

If any further questions arise or information is required, please contact:

Hanna Stolz  
Forschungsinstitut für biologischen Landbau (FiBL)  
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Telefon +41 62 865-0413  
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E-Mail [hanna.stolz@fibl.org](mailto:hanna.stolz@fibl.org)

01.01.1970 – 01:00

Submit your survey.  
Thank you for completing this survey.

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## Annex 4: Stakeholder Consultation Detailed Results

### Methodology

FiBL, together with the project co-ordinator (Oakdene Hollins) and University of Göttingen, developed a semi-structured questionnaire. The questionnaire was translated into the languages of the four case study countries.

Pre-tests were conducted with about 10 actors from several countries during February-March 2011. Apart from providing improvements to the questionnaire based on the pre-test results, the pre-tests provided input for the consumer survey, ensuring that the views and concerns of food market actors could be taken into consideration for the design of the consumer study.

The market and policy actors' survey was conducted during April-June 2011. The respondents were approached by phone or by email. If they were interested taking part in the survey, they received the survey link together with a password.

### List of stakeholders consulted during the project

The listed stakeholders have either been invited or have asked to participate in the project.

*Table A4-1 List of stakeholders consulted during the project*

<b>ORGANISATIONS</b>
<b>Organic Umbrella Organisations</b>
IFOAM EU
<b>Food, Feed, Drink Industry – Umbrella Organisations</b>
Food SCP Roundtable
a.v.e.c. - Association of Poultry Processors and Poultry Trade in the EU
ACE - The Alliance for Beverage Cartons & the Environment
BRC – British Retail Consortium
CELCAA - European Liaison Committee of Agricultural and Agro-Food Trade
CIAA
Comité Européen des Entreprises Vins
Copa-Cogeca
ECPA-European Crop Protection Association
EuroCoop
EUROPEN - The European Organization for Packaging and the Environment
FEFAC
FEFANA - European Feed Additives and Premixtures Association
FDF – Food and Drinks Federation (UK)
Fertilizers Europe - European Fertilizer Manufacturers Association
French Federation of Retailers
FRESHFEL EUROPE
IFAH-Europe - International Federation for Animal Health - Europe
PFP – European Primary Food Processors Industry Association
PRO Europe - Packaging Recovery Organisation Europe
<b>Environmental and Consumer NGOs</b>
BEUC
EEB
Fédération Inter-Environnement Wallonie
Sustain

**PUBLIC BODIES**

European Commission

DG ENTR

DG MARE

DG AGRI (organic farming) (all SCOF members invited to take part in the survey)

DG ENV (Ecolabel)

DG SANCO (consumer policy and sustainable consumption)

DG SANCO (sustainability & food & labelling)

**PRIVATE ORGANISATIONS AND INDIVIDUAL COMPANIES**

**Labelling and certification organisations**

Organic	UK: 1; CZ: 2; DE : 1; ES: 2; DK: 1
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Conventional	NL: 1; DE: 1; CZ: 1
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EU Ecolabel	All Competent Bodies: 30 Incl. observers
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**Individual companies**

Cereals	CZ: 2; UK: 2; DE: 2
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Fruit and vegetables	CZ: 1; ES: 3; DE: 1
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Dairy and eggs	CZ: 1; UK: 1 ES: 1; DE: 5
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Meat	CZ: 1; ES: 2; DE: 2
------	---------------------

Vegetable oil	ES: 2; DE: 1; CZ: 1
---------------	---------------------

Sweets	UK: 1; DE: 1; ES: 1; CZ: 1
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Fish	ES: 1; DE: 1; CZ: 1
------	---------------------

Processed food	ES: 1; DE: 2; CZ: 1
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Beverages	DE: 2; ES: 1; CZ: 1
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Broad assortment of food and beverages	Multinational: 1
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Feed	Multinational: 1 DE: 1
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Retailers	ES: 1; UK: 2; DE: 2; CZ: 2
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The overview shows that the different actor groups' views and different product groups were well represented in the countries which were selected, as well as at a European level.

### **Spain – special survey**

Given that the rate of actors' response was very low in Spain and after having invited the selected actors several times to take part in the survey without success, the procedure was changed; the respondents were surveyed personally by phone by a Spanish native speaker from FiBL. Given that the on-line survey was too long to be carried out as a telephone interview, after having introduced the EU Ecolabel to the respondents, only the main questions were addressed:

- Type of company and background of respondent?
- What is your opinion of introducing the EU Ecolabel?
- What are the advantages and risks of introducing the EU Ecolabel?
- What are the obstacles that need to be solved for successfully introducing the EU Ecolabel?
- What is your opinion on the fact that many food products are already labelled with different types of labels?
- Would you use the EU Ecolabel in the future if introduced in the food, feed and drink market?
- What are the three most preferred scenarios out of the nine scenarios (each scenario was explained to the respondent)?

Thanks to this simplification it was possible to also have sufficient market actors from Spain.

### Results of the stakeholder survey

In the on-line stakeholder survey, the stakeholder's attitude to a number of scenarios was ranked. The basic idea was to get a clearer picture on the preferences of the different stakeholder groups.

Participants were able to choose between nine scenarios, which they had to number by using the following ranking: 1=best scenario, 2 = second best scenario, 3 = third best scenario.

Table A4-2 gives an overview of the scenario most preferred by different actor groups.

Table A4-2: Overview on the scenario most preferred by different actor groups

Scenario	Processors and processor organisations	Ecolabel Competent Bodies	Retailers and retailer organisations	Farmer organisations	Public administration food and agriculture	NGOs	Others	Total
1 no Ecolabel	25	6	3	4	8	2	5	53
2 for organic and conventional	7	7	2	0	1	0	2	19
3 for specific products not covered by organic	5	6	2	0	1	1	0	15
4 for specific focus areas	0	3	0	1	0	0	1	5
5 for specific hotspots not covered	2	3	0	0	0	0	0	5
6 for organic products with additional environmental standards	1	7	1	2	1	2	0	14
7 as a Business-to-Business label scheme only	0	0	0	0	0	0	0	0
8 for the eating-out sector only	0	0	0	0	0	0	0	0
9 for feed	0	1	0	0	0	0	0	1
<b>Total</b>	<b>40</b>	<b>33</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>5</b>	<b>8</b>	<b>112</b>

Source: own illustration based on the actors' survey

## Second most preferred scenarios

In the stakeholder survey the second most preferred scenario was ranked. Of the over 50 respondents who were against ecolabelling, most chose to limit the EU Ecolabel scheme either to organic products or to products not covered by organic labelling schemes.

*TableA4-3: Overview on the scenario second most preferred by different actor groups*

Scenario	Processors and processor organisations	Ecolabel Competent Bodies	Retailers and retailer organisations	Farmer organisations	Public administration food and agriculture	NGOs	Others
1 no Ecolabel	1	0	1	0	2	0	2
2 for organic and conventional	2	4	2	0	1	0	0
3 for specific products not covered by organic	6	3	3	2	3	2	1
4 for specific focus areas	2	5	0	0	0	0	1
5 for specific hotspots not covered	5	2	0	0	0	3	0
6 for organic products with additional environmental standards	6	7	0	2	4	0	0
7 as a Business-to-Business label scheme only	2	1	0	0	0	0	0
8 for the eating-out sector only	1	4	0	0	0	0	0
9 for feed	1	1	0	0	0	0	1
<b>Total</b>	<b>26</b>	<b>27</b>	<b>6</b>	<b>4</b>	<b>10</b>	<b>5</b>	<b>5</b>

*Source: own illustration based on the actors' survey*

### Third most preferred scenarios

The result of the ranking of the third ranked preference is similar to the ranking of the second choice, with the exception that some partial EU Ecolabel schemes were also indicated.

Table A37-4: Overview on the scenario third most preferred by different actor groups

Scenario	Processors and processor organisations	Ecolabel Competent Bodies	Retailers and retailer organisations	Farmer organisations	Public administration food and agriculture	NGOs	Others
1 no Ecolabel	2	1	0	1	0	1	0
2 for organic and conventional	0	3	0	0	0	0	0
3 for specific products not covered by organic	3	4	0	0	1	1	1
4 for specific focus areas	4	2	0	0	1	0	1
5 for specific hotspots not covered	5	4	0	1	2	0	0
6 for organic products with additional environmental standards	5	5	1	0	0	3	1
7 as a Business-to-Business label scheme only	1	0	1	0	2	0	1
8 for the eating-out sector only	0	1	0	0	0	0	0
9 for feed	1	2	0	0	0	0	0
<b>Total</b>	<b>21</b>	<b>22</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>5</b>	<b>4</b>

Source: own illustration based on the actors' survey

The on-line survey had a range of questions dealing with the expected benefits and risks/concerns of the introduction of the EU Ecolabel scheme. Some of these questions were quantitative and others were qualitative.

In this Annex we summarise the answers to the following questions:

- what are the benefits and risks,
- who will have advantages or disadvantages, and
- what might be the effects of the introduction of the EU Ecolabelling scheme?

### **Benefits of the introduction of the EU Ecolabelling scheme in the food and feed sector**

Below are the most often mentioned benefits in the stakeholder consultation (in order of popularity).

#### ***For environment:***

- Harmonisation of environmental labels.
- Positive environmental impacts.
- More environmental friendly products on the market.

#### ***For consumers:***

- Will help consumer to identify environmental friendly products at the point of sale.
- Reliable European logo transferring certified information on the food product.<sup>a</sup>

#### ***For producers and chain actors:***

- Will help producers to provide environmental friendly products based on criteria.
- Alternative for organic labels which are too complex to be produced at large scale.
- Compensation for companies producing more environmental friendly products.

#### ***For civil society:***

- Increase of public awareness and trust.

#### ***For public bodies:***

- LCA tool to point out differences between products.
- Tool proposing a comprehensive approach to sustainability criteria. Such tools do not exist.
- Fostering more transparency, benchmarking and progress in food sustainability labels.<sup>b</sup>

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<sup>a</sup> One respondent mentioned also expectations such as: limited use of additives in food- decrease admissible at present of levels of pesticides in food and feed- restrictions as to the content of heavy metals in food and feed,- restrictions or exclusion of use of aromas, colours, taste substances in food which are carcinogenic reduction of packaging wastes etc.-: *(for the time being as the Ecolabel criteria are not yet developed – this assumption cannot yet be made)*

<sup>b</sup> Explanation: Most, if not all, of the public or private schemes currently existing or under development focus on one criteria only (water footprint, carbon footprint) or do not look at the environmental impact as such (and not throughout the lifecycle) but only at production means at farm level (organic farming).



### **Risks of the introduction of the EU Ecolabelling scheme in the food and feed sector**

Below are the most often mentioned risks and concerns in the stakeholder consultation (in order of frequency).

#### ***For public bodies:***

- Legal problem with EU Ecolabel (Conflict with EU legislation for organic production and Codex Alimentarius Guidelines for organically produced food).
- Costs and resources for meeting multi-criteria set.
- Difficult to implement one set of EU Ecolabel criteria for all products.
- Difficult to define the scope; some products might not be included.
- Missing overall assessment system, standard is set on the basis of perceived impacts rather than on scientific grounds, while current LCA methodologies are not fully developed yet to cover all relevant environmental impacts: How to address variability in sourcing (e.g. as a result of seasonal influences)?
- High effort and resources needed for raising public awareness.
- Difficult to group and compare issues from animal welfare to labour standards and carbon emissions. These are subjective issues and impossible to group into one standard, evidenced by one label. They need to be considered and addressed separately, allowing consumers to weight the issues according to their own belief systems. In the case of feed, although important to some consumers, it is not a significant issue for most.
- The influence of the use phase, which can have a significant environmental impact for some foods, needs to be dealt with.
- LCA based environmental criteria might be contradictory to the EU Organic certification scheme.

#### ***For consumers:***

- Confusion with organic labelling.
- Confusion regarding what the EU Ecolabel stands for.
- Complexity of EU Ecolabel criteria difficult to be communicated to consumers.
- EU Ecolabel scheme has so far not proven to be a successful tool for communicating environmental information to consumers both in terms of its awareness amongst EU citizens and take-up by producers.
- Missing environmental consciousness of consumers (e.g. in Czech Republic).

#### ***For civil society:***

- Many aspects difficult to be measured (e.g. soil erosion or biodiversity).
- Unlikely that recognition and understanding of the Ecolabel would reach high levels.
- Wrong scope: Lifecycle analysis done in the Scandinavian countries showed that the primary environmental benefits – and potential benefits - of sustainable farming are found in agricultural practices, and not in processing or distribution. Here organic is already available; useless to have an additional environmental label with less impact.
- Even if the EU Food Ecolabel would be established on above principles, there are still some doubts on the impact of the Ecolabel on the sustainability of food and drink products as a whole, as it would only be applicable to restricted product categories, and within these, could only apply on the 10-20% best performing products on the market.

#### ***For producers and chain actors:***

- Expected low impact on market.
- Hindering organic market development.
- Expecting smaller suppliers to introduce effective measurement systems to demonstrate they have met standards set out by the label is not appropriate.

- Due to the high frequency of innovation in their ingredients, recipes and formulations and variability in sourcing of ingredients, resulting in frequent changes in their environmental characteristics, setting useful Ecolabel criteria for food products may be quite a challenge.
- If the label intends to communicate traceability for businesses, there are already traceability and auditing systems in place to enable this.
- The costs of data provision for complex supply chains with limited current data.
- For the purpose of improving sustainability of food and drink products in the market as a whole, a voluntary environmental information system for food and drink products that provides factual information on all products, enabling the consumer to make an informed choice, which is based on a full lifecycle approach rather than pre-determined criteria, is needed.
- Possible misuse and 'green-washing' (control system needed).
- Economic interests more relevant than impacts (risk of green-washing).
- Better to have voluntary information on lifecycle rather than EU Ecolabel to avoid consumers and legal problems.
- Even more bureaucracy for producers.

### The importance of consumer confusion the perspective of different stakeholders

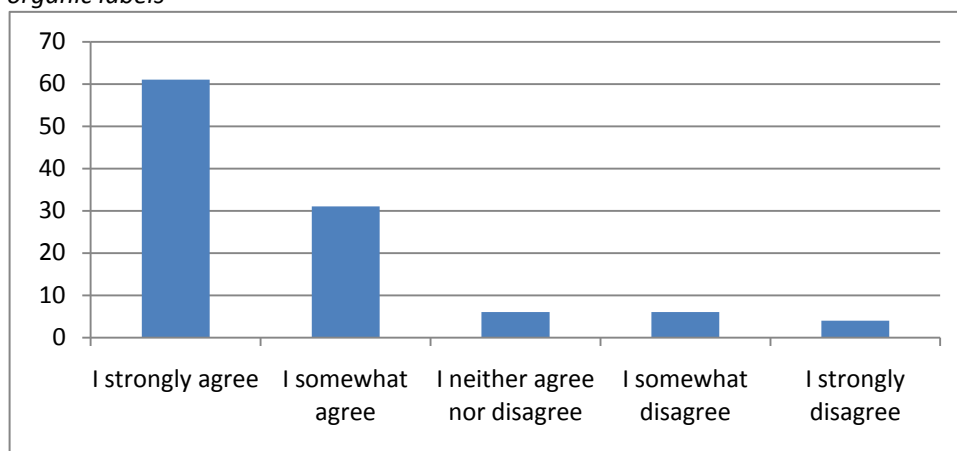
The stakeholder survey did address the issue of confusion with several questions. Participants had to rate the following statements with a scale of agreement or disagreement (5 point scale):

- Consumers would confuse a possible EU Ecolabel with organic labels.
- Potential consumer confusion between 'eco' and 'organic' (ecological) harms the organic sector.
- Potential consumer confusion between 'eco' and 'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmentally-friendly products.

#### Confusion with the organic labels

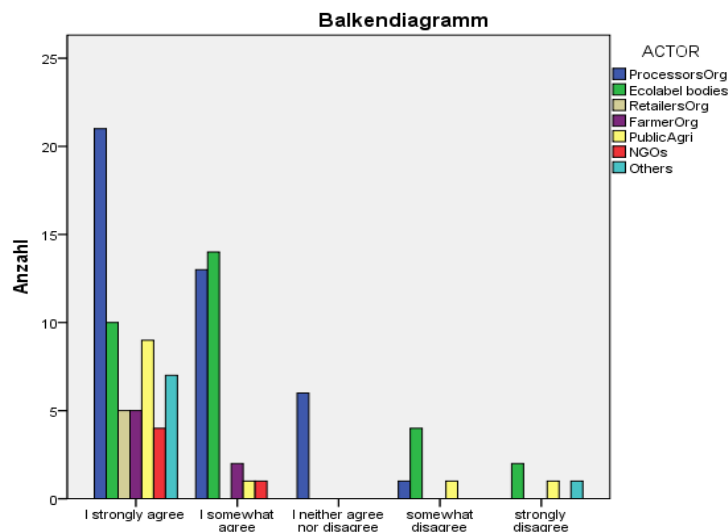
The vast majority of respondents strongly agreed with the statement “Consumers would confuse a possible EU Ecolabel with organic labels” (see Figure A4-1). This concern was shared among all types of actors included in the survey as shown in Figure A4-2.

Figure A4-122: Agreement with the statement “Consumers would confuse a possible EU Ecolabel with organic labels”



Source: based on own actor survey

Figure A4-2: Agreement with the statement “Consumers would confuse a possible EU Ecolabel with organic labels” according to the different types of actor



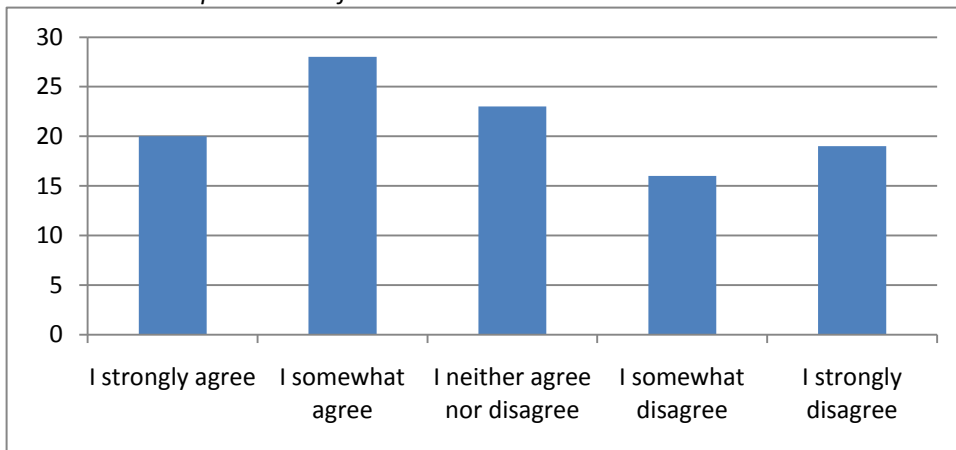
Source: own illustration based on the actors' survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Contribution of the EU Ecolabel scheme to the protection of the environment*

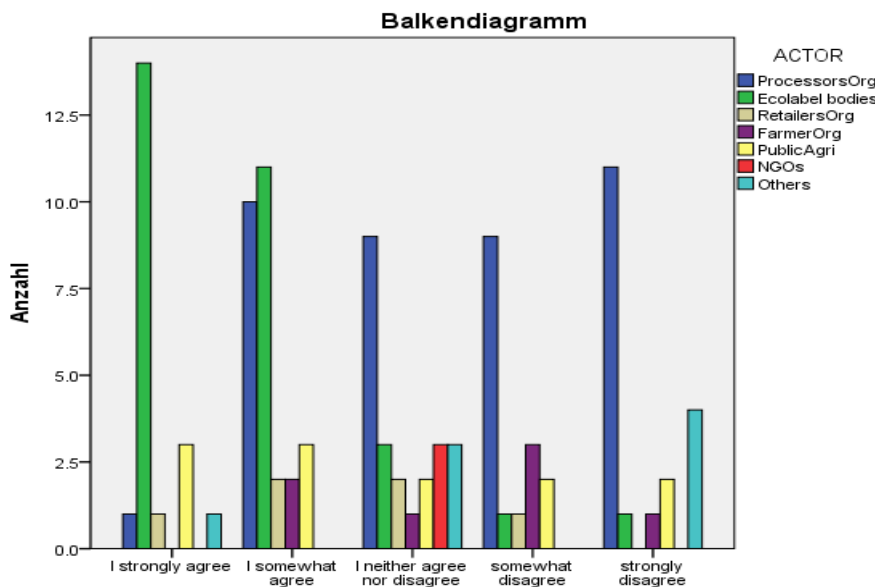
Heterogeneity of opinions was found towards the statement “The EU Ecolabel in the food, feed and drink sector will contribute to the protection of the environment” (see Figure A4-3). Although the category “I somewhat agree” was most often chosen, all other answer categories reached a relatively high level of agreement. Comparing the answers given by different actor groups, it was found that particularly the EU Ecolabel Competent Bodies and environment public bodies “strongly” or “somewhat” agreed with the statement (which has certain logic due to their professional involvement in this topic). The group of retailers, wholesalers, retailer organisations and umbrellas also tended to agree with the statement. In contrast, the processors and farmer organisations by majority disagreed with the statement (see Figure A4-4).

Figure A4-3: Agreement with the statement “The EU Ecolabel in the food, feed and drink sector will contribute to the protection of the environment”



Source: based on own actor survey

Figure A4-4: Agreement with the statement “The EU Ecolabel in the food, feed and drink sector will contribute to the protection of the environment” according to the types of actors



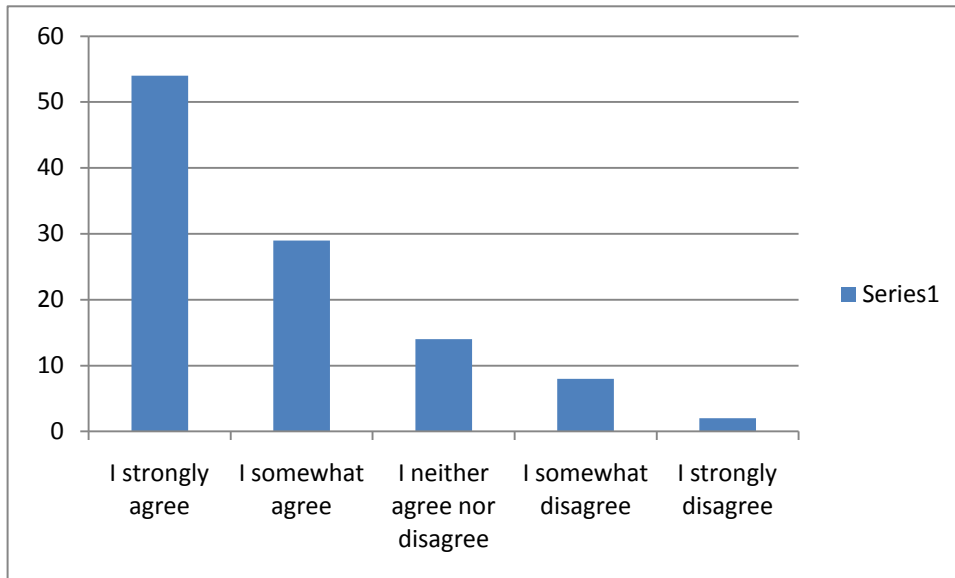
Source: own illustration based on the actors’ survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Existing labelling schemes in the food and drink sector*

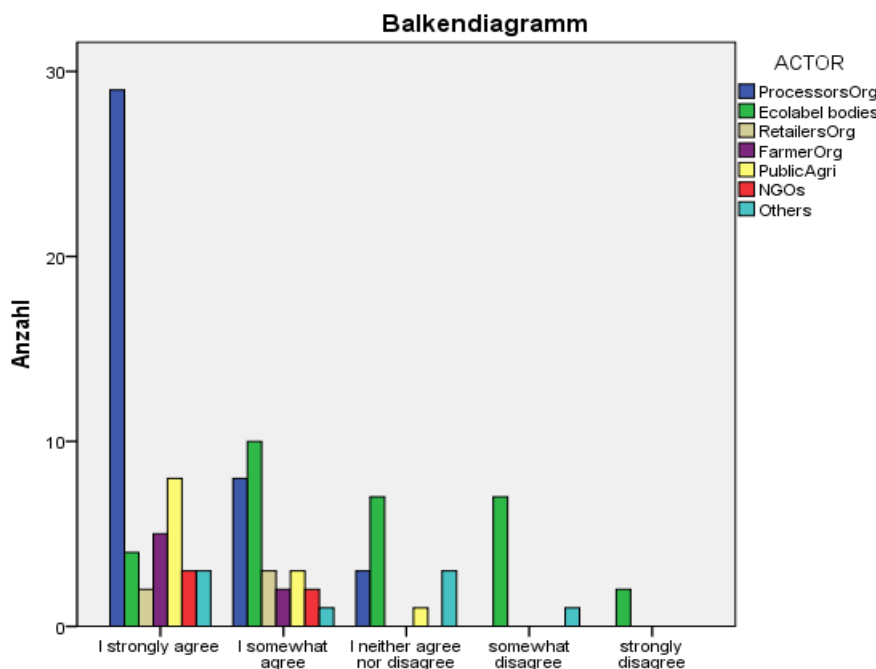
Furthermore, the vast majority agreed that there are already too many labelling schemes in the food and drink sector (as shown in Figure A4-5). This position is represented by all different types of actors except the EU Ecolabel Competent Bodies and environment public bodies (see Figure A4-6).

Figure A4-5: Agreement with the statement “There are already too many label schemes in the food and drink sector”



Source: based on own actor survey

Figure A4-6: Agreement with the statement “There are already too many label schemes in the food and drink sector” according to the types of actors



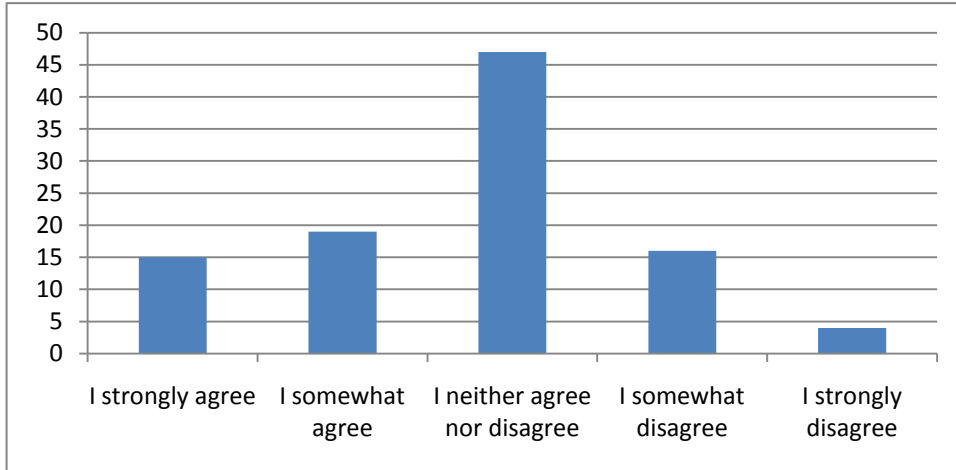
Source: own illustration based on the actors’ survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Existing labelling schemes in the feed sector*

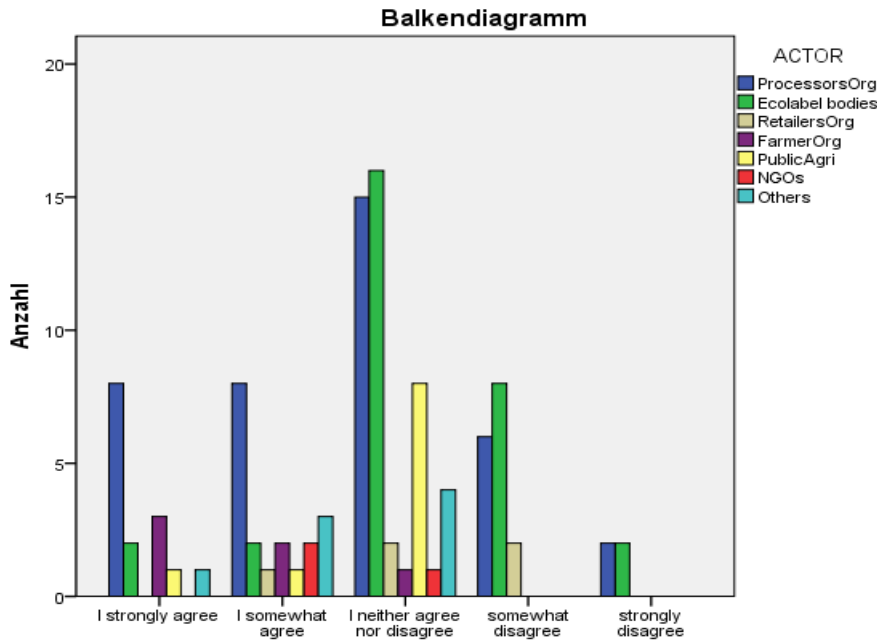
The statement “There are already too many label schemes in the feed sector”, addressing the labelling landscape in the feed sector, was evaluated slightly differently compared the labelling situation on the food sector addressed as previously described. The level of agreement was overall slightly lower as shown in Figures A4-7 and A4-8.

*Figure A4-7: Agreement with the statement “There are already too many label schemes in the food and drink sector”*



Source: based on own actor survey

*Figure A4-8: Agreement with the statement “There are already too many label schemes in the food and drink sector” according to the types of actors*



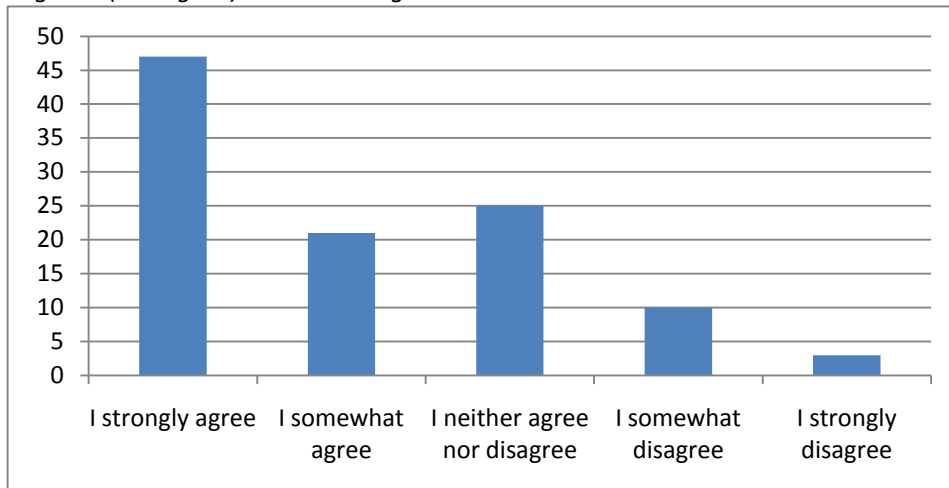
Source: own illustration based on the actors' survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Potential consumer confusion harming the organic sector*

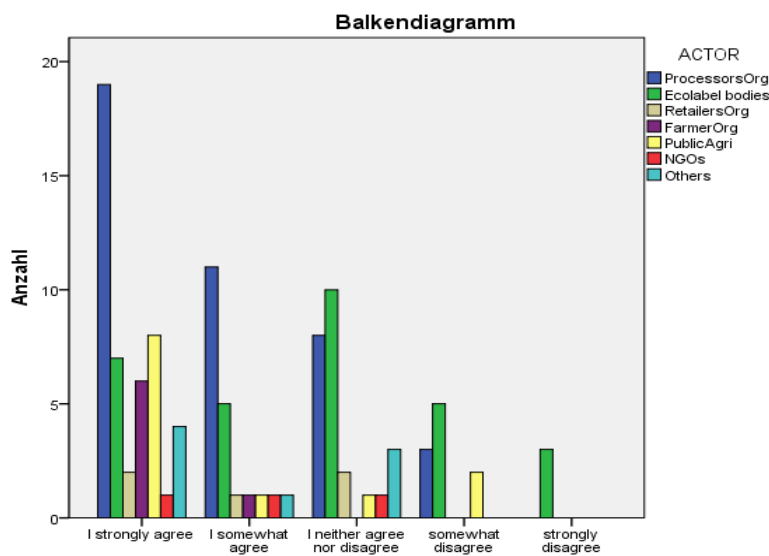
Most respondents expect that the potential consumer confusion between 'eco' and 'organic' (ecological) harms the organic sector (see Figure A4-9). This opinion is shared by most food, feed and drink representatives, while the EU Ecolabel Competent Bodies and environment public bodies only tend to agree with the statement (see A4-10).

*Figure A4-9: Agreement with the statement “The potential consumer confusion between 'Eco' and 'organic' (ecological) harms the organic sector”*



Source: own, based on actor survey

*Figure A4-10: Agreement with the statement “The potential consumer confusion between 'Eco' and 'organic' (ecological) harms the organic sector” according to the types of actors*



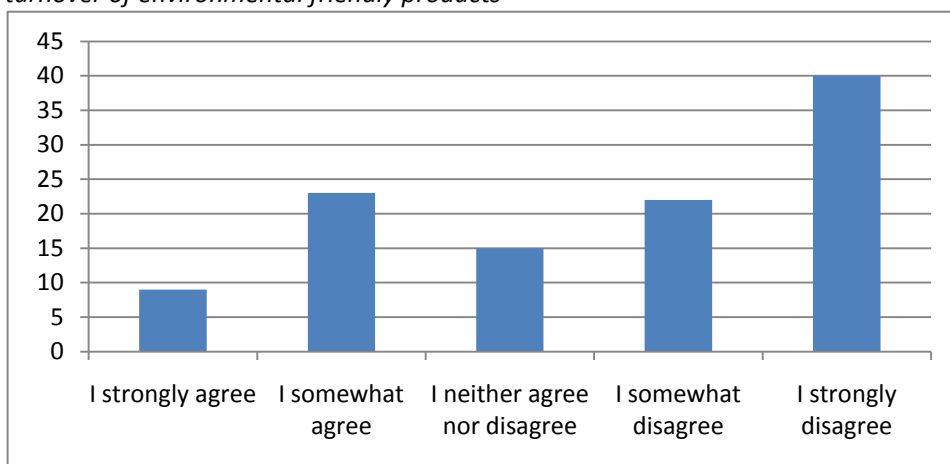
Source: own illustration based on the actors' survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Consumer confusion between 'eco' and 'organic'*

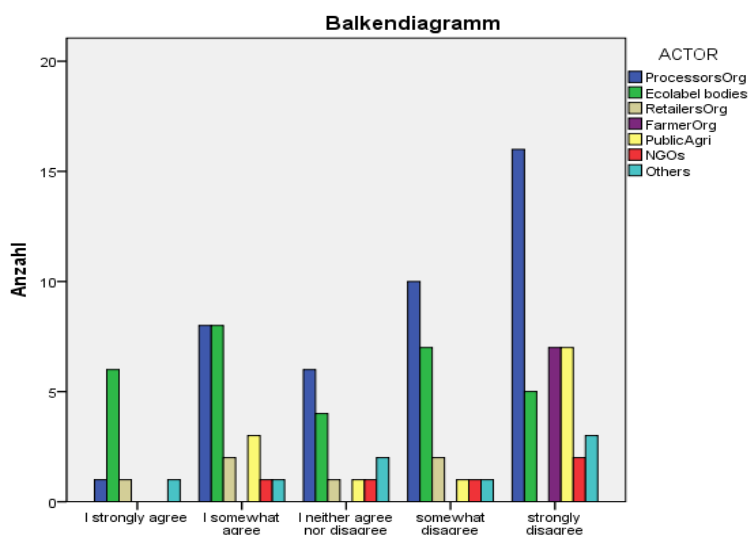
The majority of respondents disagree with the statement “Potential consumer confusion between 'eco' and 'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmental friendly products” as shown in Figure A4-11. Organic farming associations and public bodies of food, fish, consumption, health and agriculture particularly expressed their strong concerns towards this statement as shown in Figure A4-12.

*Figure A4-11: Agreement with the statement “potential consumer confusion between 'Eco' and 'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmental friendly products”*



Source: based on own actor survey

*Figure A4-12: Agreement with the statement “potential consumer confusion between 'eco' and 'organic' does not matter as long as introducing the EU Ecolabel in the food, feed and drink sector increases the turnover of environmental friendly products” according to different types of actors*



Source: own illustration based on the actors' survey;

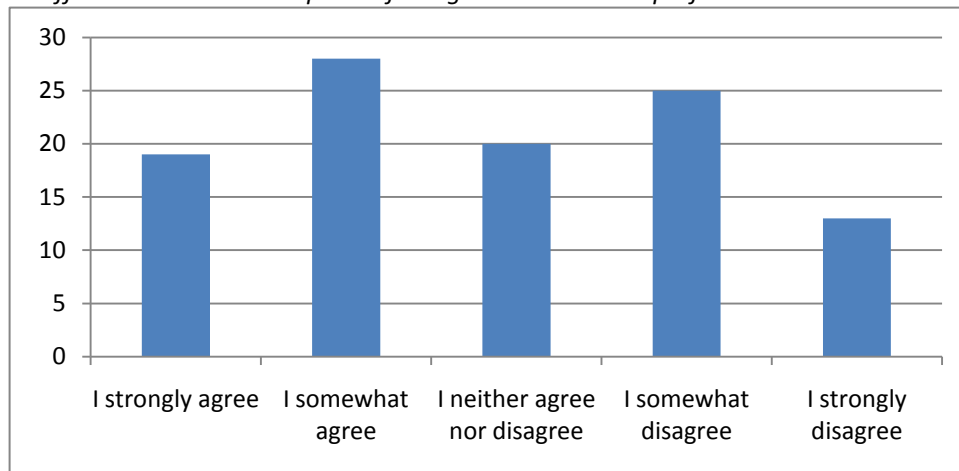
ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others



*Current labelling landscape sufficient to reward companies for high environmental performance in the food sector*

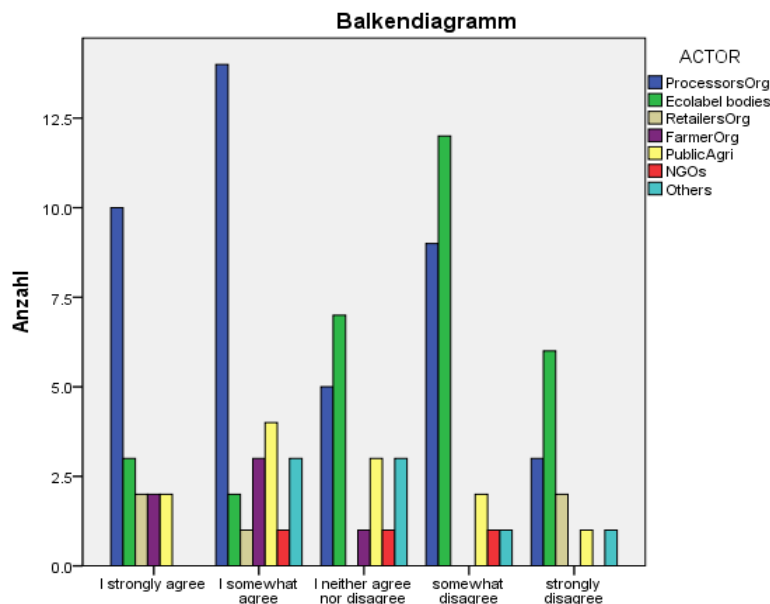
The actors' opinions towards the statement "The current labelling landscape in the food and drink sector is sufficient to reward companies for high environmental performance" were spread, as can be seen in Figure A4-13, although the answer category "I somewhat agree" was slightly more often chosen than the other answer categories. Comparing the answers given by the different actor groups shown in Figure A4-14, the EU Ecolabel Competent Bodies' and environment public bodies' opinions differ from those of the food, feed and drink representatives' opinions in that they assume more need for a new label scheme to reward companies for their high environmental performance compared than the other actor groups.

*Figure A4-13: Agreement with the statement "The current labelling landscape in the food and drink sector is sufficient to reward companies for high environmental performance"*



Source: based on own actor survey

*Figure A4-14: Agreement with the statement "The current labelling landscape in the food and drink sector is sufficient to reward companies for high environmental performance" according to different types of actors*



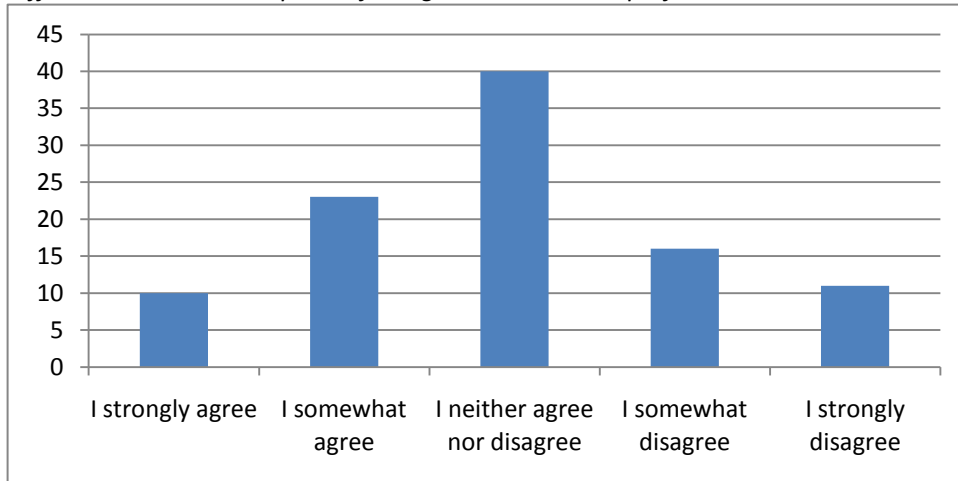
Source: own illustration based on the actors' survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

*Current labelling landscape sufficient to reward companies for high environmental performance in the food sector*

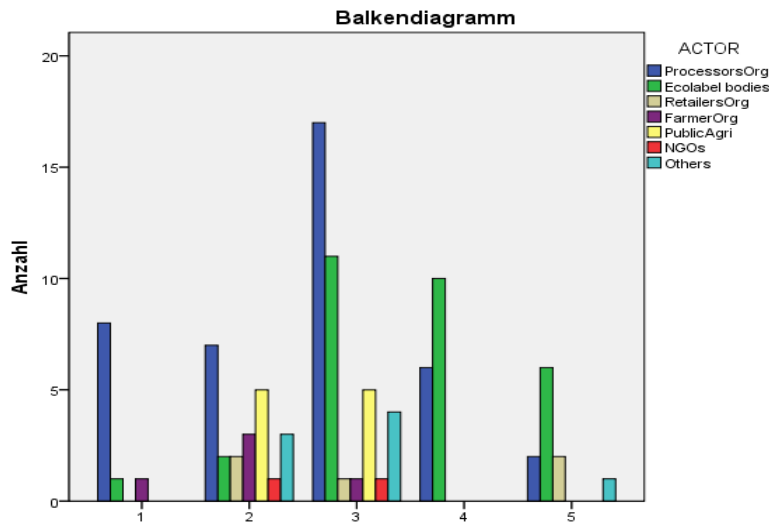
Opinions strongly differed with regard to the statement “The current labelling landscape in the feed sector is sufficient to reward companies for high environmental performance”. The category “I neither agree nor disagree” was most often chosen by the respondents (see Figure A4-15). This indicates that many respondents had no clear opinion on the issue. Again, the representatives of the food, feed and drink sector rather agreed with the statement, indicating that they do not think that it is necessary to introduce another label in the feed sector, while the EU Ecolabel Competent Bodies and environment public bodies were more in favour of this idea (see Figure A4-16).

*Figure A4-15: Agreement with the statement “The current labelling landscape in the feed sector is sufficient to reward companies for high environmental performance”*



Source: based on own actor survey

*Figure A4-16: Agreement with the statement “The current labelling landscape in the feed sector is sufficient to reward companies for high environmental performance” according to different types of actors*

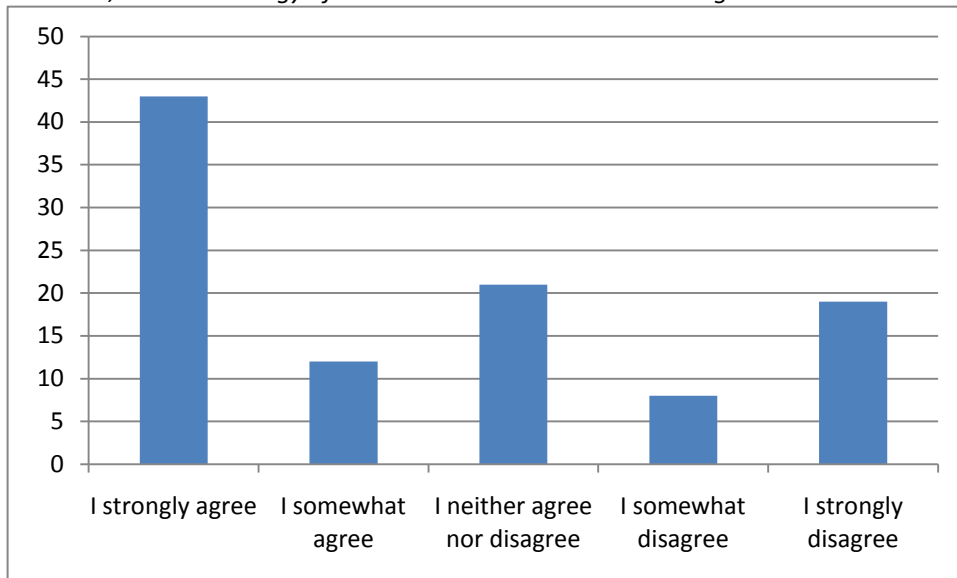


Source: own illustration based on the actors’ survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

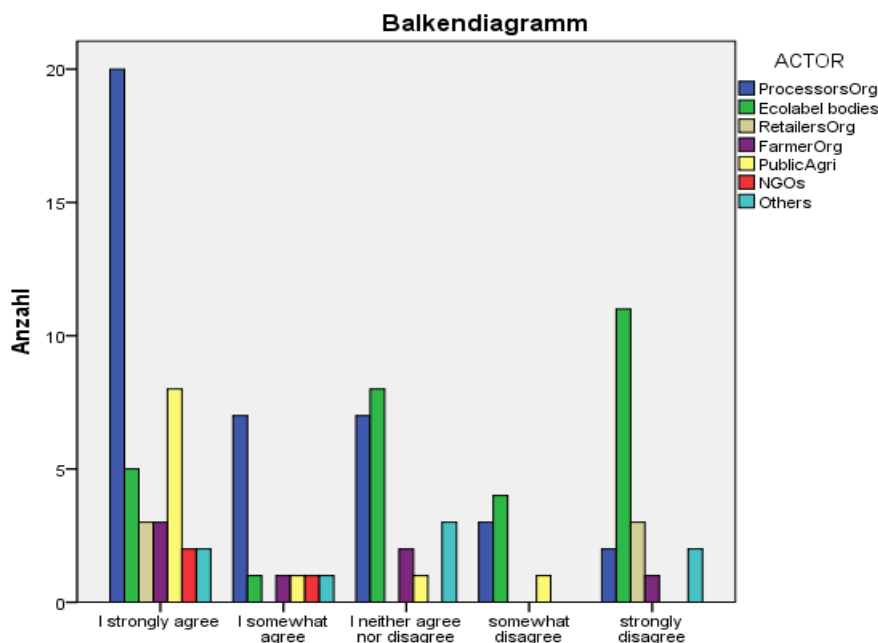
The actors' survey showed that the majority of actors agreed that the terminology of the EU Ecolabel needs to be changed as shown in Figure A4-17. This opinion was shared by the majority of the food, feed and drink representatives, while the EU Ecolabel Competent Bodies and public environment rather disagreed that the name of the EU Ecolabel should be changed (Figure A4-18).

Figure A4-17: Agreement with the statement "As 'Eco' is the legal name for 'organic' in several European countries, the terminology of the EU Ecolabel needs to be changed"



Source: based on own actor survey

Figure A4-18: Agreement with the statement "As 'Eco' is the legal name for 'organic' in several European countries, the terminology of the EU Ecolabel needs to be changed" according to the types of actors



Source: own illustration based on the actors' survey;

ProcessorsOrg=food and feed processors, processor organisations and umbrellas; Ecolabel bodies = Ecolabel Competent Bodies and environment public bodies; RetailersOrg=retailers, wholesalers, retailer organisations and umbrellas; FarmersOrg=farmer organisations, PublicAgri=Public bodies of food, fish, consumption, health and agriculture; NGOs=Consumer and environmental NGOs; others

**Advantages and disadvantages as well as problems and risks of the different scenarios**

The tables below summarises the main advantages, disadvantages and risks, which were elaborated in the stakeholder workshop or which were written down by the workshops participants individually and which were written in the comments to the on-line questionnaire.

(Aspects mentioned by several participants are in bold.)

*Table A4-5: No EU Ecolabel*

Advantages / benefits	Disadvantages / Risks	Conflicts	Solutions
<p><b>No confusion with regard to organic label</b>  <b>No conflict with organic</b>  <b>No legal problems</b>  <b>No new rules</b>                      No additional costs                      Promote organic more easily                      No legal problems with term 'eco'</p>	<p><b>Missed opportunity to improve environment</b>                      Ecolabels used with no harmonised rules                      Other labels will 'pop up' to fill this gap</p>	<p><b>No reduction of environmental problems</b>                      No EU instrument for non-organic products</p>	<p><b>More qualitative information about environmental impact/footprint of food products and labels needed</b>                      Need to improve organic regulation to environmental performance</p>

*Table A4-6: Ecolabel for both organic and conventional products*

Advantages / benefits	Disadvantages / Risks	Conflicts	Solutions
<p><b>Clearer and simpler information for consumers</b>                      Promote environmentally-friendly production</p>	<p><b>Confusion for consumers between Ecolabel and organic label</b>  <b>Partial overlapping/duplication of criteria with organic label certification</b>                      Environmentally-friendly label already in place (organic)                      Difficult to set good criteria                      Two different certification schemes (organic and Ecolabel) = higher costs for industry</p>	<p><b>Confusion will disturb organic market development</b>  <b>Conflict with weak organic label</b>  <b>Legal problem with EU legislation (term 'eco' protected)</b>                      Potential conflict with WTO / Codex Alimentarius (legal misuse of word eco for non-organic products)                      Risk of court case for EU with high costs and loss of consumer trust</p>	<p><b>Distinct logo (from organic) for environmentally-friendly products</b>  <b>Strong and clear communication needed to avoid confusion</b>  <b>Credible overall assessment system (on high level, as organic)</b>                      Minimum share of organic in combination with certification of processing companies                      Have only one label; remove other EU labels                      Consumer confusion will depend how it is presented to consumers</p>

Source: Minutes stakeholder workshop, Brussels

*Table A4-7: Ecolabel for products not covered by the organic label*

Advantages / benefits	Disadvantages / Risks	Conflicts	Solutions
<p><b>Label wild fish, water and salt</b>  <b>No conflict with organic</b>                      Fill label gap for non-agricultural products</p>	<p><b>Confusion of consumers due to limited coverage</b>  <b>Competition with other existing labels (e.g. MSC)</b>  <b>Market share too small</b>                      Simpler, clearer                      Big new rules for few producers</p>	<p><b>Confusion among consumers only partly solved</b>                      Restrict to textile and cosmetics                      Complex certification schemes</p>	<p><b>Strong and clear information campaign needed</b></p>

Source: Minutes stakeholder workshop, Brussels

Table A4-8: Ecolabel for organic products with additional environmental standards (Organic Plus)

Advantages / benefits	Disadvantages / Risks	Conflicts	Solutions
<p>No or less consumer confusion</p> <p>Further development of organic agriculture</p> <p>No legal problems with EU legislation and WTO (Codex Alimentarius)</p>	<p>Smaller part of the market</p> <p>Confusion among some consumers with two different labels for organic (will depend on presentation)</p> <p>Little difference between the two labels</p> <p>What value for EU Ecolabel?</p>	<p>Organic – overall environmentally very friendly (but not always in each impact category)</p> <p>Integration of two different management concepts in organic regulation, or add-on for organic</p>	<p><b>Include more environmental criteria in organic regulation and in private standards</b></p> <p>Scenario 4 should have two different scenarios: only organic +/- organic and the eco-flower (not mentioning Ecolabel)</p> <p>Add wild fish also in organic regulation as per wild plants</p>

Table A4-9: Scenarios less favoured in on-line actor survey

Scenarios	Advantages / Benefits	Disadvantages / Risks	Conflicts	Solutions
<b>Ecolabel only for specific hotspots not covered by existing labelling schemes</b>	Could cover products with limited impacts (beverages)	Only few products Only partial coverage	<b>Legal problem with Ecolabel regulation</b>	Needs more consumer information
<b>Ecolabel as Business to Business label</b>	Easier implementation Less consumer confusion	<b>No consumer visibility</b> No added value for consumer	<b>Legal problem with Ecolabel regulation</b>	
<b>Ecolabel in the feed sector</b>	Gives instrument for an anonymous part of the food chain	No visibility. Too small impact. Overlapping with organic label Only partial coverage		
<b>Ecolabel for specific focus areas in processing, distribution, storage or packing</b>	Clearer and simpler information to consumers Easy and cost-efficient	<b>Too limited approach – no lifecycle based approach</b>	<b>Legal problem with Ecolabel regulation</b>	
<b>Ecolabel for eating-out sector</b>	Clearer and simpler information to consumers Easy and cost-efficient	<b>Very limited coverage</b> <b>Very limited impact</b>		

## Annex 5: Existing Labelling Landscape

AGROBIO	Best aquaculture practices	Carbon Trust Carbon Reduction label	Deutsches Güteband Wein
4C Association	Better Sugarcane Initiative	CERTIFIED BULGARIAN OP	Deutsches Güteband Wein
Bio Natur Plus	Bio Hellas	Claro fair trade	Dolphin Safe
AB (Agriculture Biologique)	Bio Suisse	Climatop	Ecocert
Agriturismi Bioecologice	BIODAR	Conad il Biologico	EKO
AIAB	BioForum Biogarantie and Ecogarantie	Cradle to Cradle Certification	EQUITRADE
ALOA	Biogarantie	Danish Ø-mark	Estonian Organic Farming
AMA Biozeichen	Biokreis	Debio	EU Organic label
Aquagap	Bioland	DELINAT	
Basel Criteria for Responsible Soy Production	Bio-Siegel	Demeter	Fairtrade
Forest Stewardship Council	Luomu Sun Label	Preservando El Medio Ambiente (Preserving the Environment)	Stats-kontrolleret økologisk
Freedom Food RSPCA	Luomuliitto- The Ladybird label	Quality Standard Beef & Lamb	Tartan Label (Scottish Salmon Producers Org)
GLOBAL GAP	Marine Stewardship Council		TerraCycle
	Marine Stewardship Council (MSC)		The Union for Ethical Biotrade
IFOAM	Max Havelaar	Salmon safe	Totally Chlorine Free logo
IOFGA	Milieukeur Ecolabel: The Netherlands	Scottish Organic Producers Association	
KRAV	Nurture label	SEE What You Are Buying Into	UTZ Certified Good Inside
	Ø-label: Norway	Skal Eko Symbol	Whole Trade™ Guarantee
LEAF Marque	Organic Farmers & Growers Certification	Soil association organic standard	Wholesome Food Association
Linking Environment And Farming	Organic Food Federation	Soil Association Organic Standard	WindMade

## Annex 6: Stakeholder Workshop Minutes

### Introduction

On the 26th of May 2011, a one-day European workshop with traders and processors of food (both organic and non-organic food), representatives of NGOs and policy makers was conducted. Issues were: the benefits/synergies and risks/conflicts with the EU Ecolabelling scheme for different types of market actors, as well as the adaptation process for the market actors to fulfil the requirements of the Ecolabelling scheme taking into account expectations of consumers and civil society.

The workshop was structured as following:

### Selection of respondents

The final selection of companies in the food, feed and drink sector was made in consultation with European umbrella organisations both from the organic food sector (IFOAM EU Group) as well as from the non-organic sector, mainly umbrella organisation of the general food sector such as Eurocoop, Confederation of the Food and Drink Industries of the EU (CIAA) and COPA-Cogeca.

Also selected were experts who had a good overview on national food and feed markets (addresses of companies provided).

In order to ensure sufficient participation, a much higher number of market actors had been approached through direct contact mostly by telephone and by email. In the Czech Republic, Spain and in Germany, the project team was assisted by local market experts. Furthermore the aim was to have ca.15-20 representatives from NGOs (consumer organisations such as BEUC, European Environmental Bureau (EEB), environmental NGOs, etc.) as well as policy makers at European and national levels.

The selection of public bodies was made in collaboration with DG Environment, who requested that all national public bodies involved in the EU Ecolabel scheme, as well as those national representatives involved in the Standing Committee for organic farming, were approached. They obtained access to the on-line questionnaire on request. In order to avoid an over-representation of these types of public bodies, a separate analysis has been made of both groups, as both also have their specific interests.

## Minutes of the meeting



### *EU Ecolabel for food and feed products*

Over 20 persons participated in the stakeholder workshop on Ecolabelling (26<sup>th</sup> May 2011 in Brussels), representing different sectors and organisations: retailers and their umbrella organisations, food and drink umbrella organisations, organic food processors and their umbrella organisation, IFOAM EU, certification bodies for ecolabelling, consumer and environmental umbrella organisations (BEUC, EEB) and representatives of EU public and national bodies dealing with ecolabelling.

## 1 Introduction

Ferenc Pekar (DG Environment) explained the goal of the meeting and the context of the Ecolabel Regulation, which requires this study on the “Feasibility Study: EU Ecolabel for food, feed and drink”. Therefore it is important to provide a possibility to discuss the issues of stakeholders.

Otto Schmid (Moderator, FIBL) explained that his goal as a moderator is to take comments in order to clarify the situation and to get more in depth information on specific issues. He mentions that the workshop does complement the on-line stakeholder survey, which has been mostly completed.

The workshop had the following agenda on the feasibility of introducing the Ecolabel in the food, drink and feed sector:

13.15 - 13.25 h	Introduction
13.25 - 13:45 h	Short overview on preliminary results
13.45 - 13:50 h	Questions on the presentations
13.50 - 13:55 h	Collection of issues participants would like to raise regarding the EU Ecolabel
13.55 - 15:00 h	Group work Group 1: Suitability and feasibility of introducing the EU Ecolabel regarding different product groups Group 2: Benefits and risks of different scenarios – possible conditions to improve acceptability
15.00 - 15:15 h	Break
15.15 - 16:00 h	Plenary discussion on group work results
16.00 - 16:45 h	Plenary discussion on issues raised in relation with the EU Ecolabel
16.45 - 17.00 h	Summary of the plenary session and the meeting
17.00 h	End of the meeting

The moderator presented the objectives of the Workshop, which is to share opinions and discuss issues around:

1. Impacts of a potential extension of the EU Ecolabel to food, feed and drink products.
2. Benefits and/or disadvantages for different actors?
3. Synergies or conflicts with existing labels, especially the organic label?
4. Possible scenarios of implementation.



## 2 Short overview on preliminary results:

Helmut Sengstschmid (Co-ordinator – Oakdene Hollins) gave an overview on the main objectives:

- Feasibility of establishing criteria
- Impact and added value

The approach in the study was:

- Analysis of environmental impacts and existing labels
- Feasibility of Ecolabel criteria for food, drinks and feed
- Consumer survey: CZ, D, E, UK (ca. 300/country)
- Stakeholder consultation with questionnaire (ca. 120)
- Stakeholder Workshop.

Regarding the environmental impacts, the focus was on:

- **Analysis of life cycle stages:**  
The analysis of the life cycle stages in the food, feed and drink sector showed that:
  - Primary production has in general largest impacts
  - Processing is often causing an important impact on environment (depending on the sector)
  - Transport, packaging and retail have usually a smaller impact
  - Consumers have often a significant impact due to their consumption behaviour (e.g. food waste).
- **Analysis of food categories**
  - When analysing different food categories the most significant impacts had meat, dairy and eggs.
- Gaps exist despite extensive labelling land-scape on the EU market
  - Many organic labels for food exist, however all based on EU regulation for organic production – the EU regulation has a focus more on primary production.
  - To the best of our knowledge only very few labels reward high performance non-organic producers (e.g. NL: Milieukeur).
  - No multiple-issue life cycle label for non-organic producers in the European market.
- In principle it might be feasible technically, but (political) issues first to be resolved, such as:
  - Type of criteria: footprints versus best practices
  - Trade-offs;
  - Impacts of consumers
  - Fees for applicants
  - Complex and varying supply chains
  - “Eco” for non-organic food products
  - Non-tariff trade barriers (WTO).

### 2.1 Preliminary results from consumer survey from Germany

Otto Schmid (Moderator) explained the consumer study conducted by Nina Stockebrand from the University of Göttingen. The study is focused on a representative panel of 4 countries (Spain, Czech Republic, United Kingdom and Germany). He summarised the preliminary results of the on-line survey as well preliminary results from the consumer survey in Germany (see presentation).

The objective was:

- To analyse product preferences in order to assess the potential market relevance of the EU Ecolabel in comparison to other products
- To analyse the risk of confusion of organic labels and EU Ecolabel
- To analyse the different potential influencing factors on these two main objectives.

The survey was conducted in four countries (Spain, Czech Republic, United Kingdom and Germany), being determined by DG Environment together with the project team. This selection of countries was mainly for two reasons: One of the main reasons was that in these countries different terms are used for organic farming, which may create consumer confusion.. Another reason was also a potential interest in an Ecolabel scheme based on experiences from the non-food sector in different areas of Europe:

- Czech Republic ('eco' used for organic products);
- Spain ('eco' used for organic products);
- United Kingdom (organic);
- Germany ('bio' and 'eco' is used for organic);

From the consumer survey there are some interesting results, which can be made from the preliminary results in Germany:

5. Awareness of different labels in Germany: Many labels are known, but specific meaning of labels is often unknown. The best known labels are a Quality and safety label, the organic Bio-Siegel and the Blue Angel (a German Ecolabel for non-food, only 15 % knows the exact meaning). The EU Ecolabel is mostly unknown.
  6. Test of preferences for products with/without Bio-Siegel (German organic label) and EU Ecolabel in Germany showed: 1<sup>st</sup> rank: Products with both labels (more than 50 % of respondents); 2<sup>nd</sup> rank: Products with Bio-Siegel; 3<sup>rd</sup> rank: Products with EU Ecolabel; Last rank: No label. Bio-Siegel was preferred over EU Ecolabel, probably due to the higher recognition of the Bio-Siegel.
  7. For many consumers in Germany they expect almost similar attributes from environmentally friendly labelled products (with the EU Ecolabel) as from organic products, Regarding environmental friendly products, the following criteria are rated as important to consumers:
    1. Animal welfare
    2. No chemical pesticides
    3. Few additives
    4. No GMOs
    5. Local production.
- Regarding organic products the highly rated associations were: Bio-Siegel product associated with following criteria:
1. No chemical pesticides
  2. Organic agriculture
  3. No GMOs
  4. No artificial fertilisers
  5. Naturalness.
8. No clear distinction is made between Ecolabel and organic label products (potentially high risk of confusion between Ecolabel and organic label)
  9. Consumers in Germany focus on agricultural production when evaluating sustainability impact criteria. In contrast, low awareness of processing and distribution.
  10. Consumers in Germany do not make a difference between processed (fish fingers, cheese...) and unprocessed food.

## **2.2 Preliminary results of survey with main food actors**

O. Schmid explained that the objective of an on-line survey was to analyse in the EU and in selected countries to analyse:

- the different views of main actors on the feasibility of the EU Ecolabel in the food, drink and feed sector
- the benefits and risks of introducing the EU Ecolabel
- Possible implications of introducing the EU Ecolabel.

A broad range of actor groups have been included following criteria of representativeness and coverage.

The survey respondents: n = 93 (survey still running)

- Food and drink processors, Food and drink processors' organisations and umbrellas, Food and drink retailers and retailers' organisations, Feed processors and feed retailers, Farmers' associations, Public administration, NGOs, Certifiers (mostly Organic and EU Ecolabel).

A broad range of actor groups have been included following criteria of representativeness and coverage. 93 respondents have participated before 25<sup>th</sup> of May 2011 (minimum target was 60 persons), which will be grouped according the main categories: Food and drink processors, Food and drink processors' organisations and umbrellas, Food and drink retailers and retailers' organisations, Feed processors and feed retailers, Farmers' associations, Public administration, NGOs, Certifiers (mostly Organic and EU Ecolabel).

O. Schmid explained the preliminary results: The main environmental impact categories indicated by the involved actors as important for an EU ecolabelling scheme was very broad and covered over 14 categories. A detailed analysis will still be made related to the main actor groups. Main categories overall were: waste and recycling systems, water usage, water pollution and eco-toxicity and pesticide use and greenhouse gas emissions. There was a low coverage with the criteria, which consumers found important for an ecolabelling scheme.

A main difficulty might be that a broad range of sustainability impact categories recommended by actors, which might be challenging that an EU Ecolabel cover such a broad range of impact categories.

The main preferred scenarios, agreed out of nine scenarios were based on the preliminary analysis:

1. No EU Ecolabel (almost half of the respondents chose this as first ranked)
2. Scenario: Ecolabel for both organic and conventional products
3. Ecolabel for products not covered by the organic label
4. Ecolabel for organic products with additional requirements

A more detailed analysis of the scenario options showed a more differentiated picture. The group, which went for a no Ecolabel scheme ranked as second that it should be only for products not covered by organic labels or only for organic products. The group, which had favoured an option for organic and conventional products ranked as second option either only for organic products, or no Ecolabel or only for products not covered by organic labels. A third but smaller group, which favoured first an introduction only for products not covered by organic label ranked it as second option both for organic and conventional products and only for hotspots. The group which mentioned first that the ecolabelling should be only given for organic products with additional requirements had no clear second option

The speaker concluded that the opinions and preferences regarding the EU Ecolabel are diverse and that there is a need for discussion on possible solutions.

Another difficulty might be that a broad range of sustainability impact categories recommended by actors, which might be challenging that an EU Ecolabel cover such a broad range of impact categories.

### 3 Questions on the presentation so far

A member of a national Ecolabel body asked how the 4 countries have been selected.

Otto Schmid (Moderator) and Ferenc Pekar (DG Environment) explained that the budget for this study was limited, so that the countries have been selected from a geographic point of view and because some of these countries have an “eco” as an “organic label” name.

A member of a national Ecolabel body remarked that one of the slides of the presentation showed that packaging has a low impact, whereas in the fact it creates problems in terms of wastes.

Helmut Sengstschmid (Moderator – Oakdene Hollins) explained that the slide shows that in terms of environmental impact categories the impact of packaging is minor compared with the whole production.

### 4 Plenary discussion on group work results:

#### 4.1 **Group 1: Suitability and feasibility of introducing the EU Ecolabel regarding different product groups**

**Abstract:** summarised by Helmut Sengstschmid

The following first question was discussed:

*“Assume that it has been decided to introduce the EU Ecolabel to the food, feed and drink sector. Furthermore, the decision has been taken to start developing criteria for products in only two of the following product categories. Which of categories would be particularly well / ill-suited for the EU Ecolabel? How do we decide with which products therein to start with?”*

The group discussion came to the following conclusions:

- The most attractive categories mentioned were generally products not well covered by labels, e.g. such as ready meals (high degree of processing, little consumer confusion, higher need for more information). Other groups were meat and dairy (due to their high environmental impact, would include feed and animal welfare), Tea, coffee, cocoa (social aspects could be included), Fish & seafood (although partly covered by MSC, little consumer confusion, however competition).
- The least attractive categories were those with: strong presence of organic labels (consumer confusion); strong presence of Fair trade labels for coffee, tea & cocoa (consumer confusion); strong share of primary production (already existing labels). From the perspective of certification bodies’ ready meals was seen as too complicated without prior criteria for all the ingredients. Most feed is business to business handled - no need for an Ecolabel. And for pet food the market was seen too small.
- Mainly representatives of the food and drink industry considered it impossible to define a basis of comparison regarding the 10-20% best products. Even a comparison of orange juices would not be fair as there are still different types thereof.

Second question:

*“Assume that it has been decided to introduce the EU Ecolabel to the food, feed and drink sector. There is concern about damaging the brand “EU Ecolabel” by allowing contentious practices, like airfreight, use of GMO, awarding the label to “unhealthy “ products like sweets or spirits.*

*Which practices should be forbidden under an EU Ecolabel, because:*

- *they are in conflict with other policies and targets,*
- *they are too contentious and may harm the “EU Ecolabel” brand.”*

Critical issues were seen:

- GMOs: both by retailers and competent bodies. However, food industry strongly opposed the notion of excluding GMO from the EU Ecolabel.
- “Unhealthy” products: concern raised by organic, as well as considered by competent bodies. Food industry, however, strongly contested the notion of “unhealthy products”
- Organic products: From an organic producer point of view only organic raw materials should be eligible for the EU Ecolabel; otherwise it would be green wash.

#### **4.1.1 Comments in the plenary session:**

Representative of CIAA mentioned that the border between food products is unclear, so there is a risk of unfair discrimination of products.

A representative of a retailer umbrella organisation asked if group 1 has discussed about other possibilities than labelling and remarked that Ecolabel could have a problem if an Eco labelled product contains GMOs or a high level of alcohol.

Helmut Sengstschmid (Co-ordinator, Oakdene Hollins) replied that group 1 has not discussed about other possibilities than labelling.

A representative of the organic food processing sector mentioned that there is a risk of green washing with the Ecolabel and that there is already a tool, in the organic sector, in which more environmental issues could be incorporated in food, drink and feed products.

An organic food processor mentioned that the EMAS (Environmental Management System) approach, which his company is practicing since many years, give some interesting perspectives. If only the Ecolabel will be used by companies without an EMAS System and there is a risk that it will be inefficiently taken into account and might be even used for green washing. EMAS certification of companies and an Ecolabelling scheme or organic labelling scheme should be linked together.

A representative of a European retailer organisation made a comment on the interlinkages of the EMAS approach with food labelling will be studied and but that this decision is still waiting.

A member of a national Ecolabel body said that EMAS does certify the environmental management of a company but not the products and that the situation is not totally clear yet if these companies indeed bring on the market environmentally more friendly products.

An organic food processor clarifies that in his company there is already a data collection and that there are Product Carbon Footprint on each products. So there are already some instruments in place, also without Ecolabelling. Out of EMAS we can get a complete carbon footprint

A member of a national Ecolabel body said that the action of the EU in this domain is unclear and that it could be more precise.

The table below summarises the main advantages, disadvantages and risks, which were elaborated in the workshop and presented to the plenary. More detailed compilation of the worksheet responses are found in the Annex. **The figures on “go” and “no-go” are the results of the final preferences for the scenarios by the participants.**

Scenarios	Advantages /benefits	Disadvantages/Risks	Conflicts	Solutions
<b>1. No EU Ecolabel</b>  <i>(8 go / 4 no-go)</i>	<ul style="list-style-type: none"> <li>• Avoiding confusion of consumers</li> <li>• No conflict with organic</li> <li>• No new rules</li> <li>• Promote more easily organic</li> <li>• No legal problems with term “eco”</li> </ul>	<ul style="list-style-type: none"> <li>• Lost opportunity to improve the environment</li> <li>• No additional costs</li> <li>• Ecolabels used with no harmonised rules</li> </ul>		<ul style="list-style-type: none"> <li>• Incorporate an improved organic regulation to environmental performance</li> <li>• Provide foot prints</li> </ul>
<b>2. Ecolabel for both organic and conventional products</b>  <i>(4 go / 6 no-go)</i>	<ul style="list-style-type: none"> <li>• Promote environmentally friendly production</li> </ul>	<ul style="list-style-type: none"> <li>• Already environmentally friendly label in place (organic)</li> <li>• Partial overlapping with organic</li> </ul>	<ul style="list-style-type: none"> <li>• Confusion with organic food</li> <li>• 2 different certification schemes competing</li> <li>• Legal problem with EU regulation (term “eco” protected)</li> <li>• Conflict with WTO / Codex Alimentarius (legal misuse of word eco for non-organic products)</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum share of organic in combination with certification of processing companies</li> <li>• Have only one label – remove other EU labels</li> <li>• Consumer confusion will depend how it is presented to consumers</li> <li>• Only to companies with minimum share of organic products</li> <li>• Use other name for EU Ecolabel (e.g. Flower label)</li> </ul>
<b>3. Ecolabel for products not covered by the organic label</b>  <i>(5 go / 2 no-go)</i>	<ul style="list-style-type: none"> <li>• Label wild fish, water and salt</li> </ul>	<ul style="list-style-type: none"> <li>• Simpler</li> <li>• Clearer</li> <li>• Big new rules for few producers</li> </ul>		
<b>4. Ecolabel for organic products with additional environmental standards (Organic +)</b>  <i>(4 no-go)</i>	<ul style="list-style-type: none"> <li>• Further development of organic agriculture</li> <li>• No legal problems with EU legislation and WTO (Codex Alimentarius)</li> </ul>	<ul style="list-style-type: none"> <li>• Easier for consumers (will depend how the Ecolabel will be presented to consumers) as organic + or as 2 labels)</li> <li>• Little difference between the 2 labels</li> <li>• What value for EU Ecolabel</li> </ul>	<ul style="list-style-type: none"> <li>• Organic – overall environmentally very friendly (but not always in each impact category)</li> </ul>	<ul style="list-style-type: none"> <li>• Include more env. criteria in organic regulation</li> <li>• Scenario 4 should have 2 different scenarios: only organic + or organic and flower (not mentioning Ecolabel)</li> <li>• Add wild fish also in organic regulation just like as wild plants</li> </ul>

## 4.2 **Group 2: Benefits and risks of different scenarios – possible conditions to improve acceptability**

**Abstract:** Summarised by Otto Schmid

The goal was to find the Benefits/Advantages, Risks/Disadvantages, Main conflicts to be solved and Solutions to make scenarios more acceptable and that for each scenario. Basically there were four scenarios out of nine scenarios, which were discussed, but there was no consensus achieved.

The main focus of the discussion has been on the four following scenarios and their possible impacts:

- Scenario 1: No EU Ecolabel
- Scenario 2: Ecolabel for both organic and conventional products,
- Scenario 3: Ecolabel for products not covered by the organic label,
- Scenario 4: Ecolabel for organic products with additional environmental standards.

These four scenarios correspond to those that received the most votes in the on-line consultation process with the questionnaires.

### 4.2.1 **Preferences of the participants**

At the end of workshop, after the discussion, an investigation of the preferences for the scenarios by the present participants was made (one vote for and one vote for a no-go, putting points on the wall). It is clear that this investigation can only give an indication, due to the different background of the participants of the workshop.

From the participants were 8 in support of and 4 against the “no EU Ecolabel scenario” and this for different reasons (Confusion of consumer, competition with organic sector, double labelling with overlapping criteria, concerns about feasibility to get a harmonised assessment system, additional costs for little benefits). Instead it was proposed to inform consumers better and to integrate more sustainability issues in the organic regulation. Stakeholders favouring this position were both from industry, as well as from organisations around the organic label.

Only 4 participants wanted to introduce the Ecolabel for both organic and non-organic products, whereas 6 participants were against it. They proposed a step-wise introduction or better consumer information, the avoidance of the word eco in the Flower label, etc.

A minority of 5 participants favoured and 2 were against the scenario with the Ecolabel mainly for products not covered by organic regulation (e.g. seafood, out of home consumption).

More details how participants have seen benefits and risks as well as solutions for improvement are in the Annex.

Scenarios less favoured in on-line actor survey:

Scenarios	Advantages /benefits	Disadvantage s/risks	Conflicts	Solutions
5. Ecolabel only for specific hotspots not covered by existing labelling schemes (1 no go)			• Legal problem with Ecolabel regulation	
6. Ecolabel as Business to Business label (2 no go)				
7. Ecolabel in the feed sector				
8. Ecolabel for specific focus areas in processing, distribution, storage or packing			• Legal problem with Ecolabel regulation	
9. Ecolabel for eating-out sector (1 no go)				

See detailed report in Annex II.

#### 4.2.2 Comments

A member of a national Ecolabel body asked how it would be possible to change or adapt the EU Ecolabel (flower) logo, because of its definition in the European law, and because of its recognition on the market. The study could advise how to implement the flower into the food sector without causing confusion.

Otto Schmid (Moderator) replied that stakeholders and member states will have to be creative and that it will be a political decision.

A representative of a European retailer umbrella organisation added that such a new logo is also a financial decision because it will have a cost on the industry.

An expert from DG MARE noted that scenario 2 (Ecolabel for both organic and conventional products) and 3 (Ecolabel for products not covered by the organic label) could decrease consumers confusion because all food products would be specified. However the required environmental impact assessment could create confusion with private multi-criteria labels.

A representative of the organic food processing sector said that it is already the approach in organic farming to decrease consumer confusion with a multi-criteria approach. He also mentioned the legal problems with WTO – Codex Alimentarius organic guidelines and EC Regulation 834/2007 (legal protection of word “eco” and terms/claims of similar content for organic), if the Ecolabel for non-organic products will be used.

A member of a private label organisation mentioned that in the Netherlands, a label has been introduced which already combined food and non-food products.



A member of a consumer/environmental NGO stated that there is already confusion for consumers and that we should not increase this confusion by introducing an Ecolabel for organic and conventional products.

An expert from a private label organisation mentioned that where there are a huge number of labels, there are more risks of green washing. A scientifically (LCA) based European wide (EU Eco)label for food/feed/drinks could play an important role just to avoid green washing and could prevent the diarrhea of private labels.

A member of a national Ecolabel body said that more distance should be taken for the analysis and regrets that sometimes some arguments are not specifically addressing the risks/disadvantages of extending EU Ecolabel to Food & Feed, but are well-known arguments against the instrument EU Ecolabel in general .

A CIAA representative mentioned that the food chain is much more complicated compared with others chains assessed by the EU Ecolabel (e.g. paper).

A representative of the organic food processing sector mentioned that 2 different levels of labels (the Ecolabel scheme and the organic scheme) could create confusion.

A retailer representative commented that regarding scenario No 2 (organic and conventional products under the Ecolabel), it would be a good point to include initiatives from retailers. Regarding scenario No 3 this still creates confusion as only few product groups will be covered. Regarding scenario No 1, this is a matter of the footprint that has to be found. The question that has to be answered is: what do we want to promote as best product?

A representative of a retailer umbrella organisation adds that the legislator has to keep a look on the price: if all products promote environment it has a cost.

## 5 Plenary discussion on questions in relation with the EU Ecolabel

Otto Schmid (Moderator) explained that of the list of questions of the participants, not all can be discussed in the workshop, but that these will be addressed in the final report.

One group of questions, which was of more general nature on the need of an Ecolabel, was discussed in the plenary.

### 5.1 *Why it would be important to have new Ecolabel rules for food?*

A representative of the organic food sector stated that there are already a lot of rules. The needs of consumers have to be understood. There is already an environment friendly label/indication for food: the organic label whereas the Ecolabel should only be for non-food products.

A member of a private label organisation mentioned that sustainability is a trend and that water footprint and CO2 footprint can create a basis for the EU Ecolabel, but guidelines for an integrated framework must be provided.

Otto Schmid (Moderator) replied that a multi-criteria sustainability approach does already exist for example in organic agriculture (including animal welfare, biodiversity...) and many companies already go in this direction. The question is to define the priorities for the criteria setting for the Ecolabel, as the expectations both from the different stakeholder groups are very broad.

A member of a national Ecolabel body said that according to the fact that there are some reasons given if some sectors were excluded from Ecolabel, and asked to the DG Environment representative the reasons why we should introduce these sectors in the scope, in particular if any condition has changed in the last years

Ferenc Pekar (DG Environment) replied that this is the reason why a study on feasibility is launched.

A representative of the organic food processing sector mentioned that the question is how to find the best way between extending the Organic regulation and having an Ecolabel in addition to the Organic label and wording and if in this case there won't be risks of confusion. This kind of confusion will be a severe problem in countries where the organic label and production method is already called "Eco", as it is the case in Germany. Regarding to this language problem, what could be the best solution?

A representative of a consumer/environmental NGO reminded that the legislator must especially have a look on the consumers, which are the drivers of the market. So it is really important not to confuse them, otherwise there will be no drive towards a more environmentally friendly production.

## **5.2 What would be the benefits of the Ecolabel?**

Helmut Sengstschmid (Coordinator – Oakdene Hollins) asked what could be the benefits of the Ecolabel?

A representative of the organic food processing sector mentioned that extra costs would be needed to introduce two different management concepts in a company and to explain the difference between Organic and Ecolabel and that it is not a comfortable situation for the EU and the private sector.

A retailer representative stated that it is desirable to get towards harmonization. Organic may be not sufficient to defend an environment friendly production but nevertheless it would be nice to test the new label on a Business to Business approach in order to see what are the best products and practices to keep and to have an "ideal label".

A CIAA-representative mentioned that Ecolabel has not been a successful tool, CIAA therefore favors a voluntary environmental information system for food and drink products that provides factual information on all products, enabling the consumer to make an informed choice, which is based on a full life-cycle approach rather than pre-determined criteria. This is clearly reflected in the successful work that has been going on in the European Food Sustainable Consumption and Production (SCP) Round Table, a multi-stakeholder process, including the European Commission to develop scientifically reliable and comparable environmental assessment methodologies, based on the full support of the supply chain and a sound scientific knowledge base and recommendations on the voluntary communication of environmental information.

A representative of the organic food sector umbrella organisation (IFOAM EU) stated that this is a long term project and that the process is still at research level: there are no database, no link between calculation and how to speak with consumers.

A representative of a retailer umbrella organisation mentioned that today there is nothing else than organic label at EU level in terms of environment friendly products. Some big brands already have their private labels, but these ones are different from company to another.

Ferenc Pekar (DG Environment) informed that the preliminary results will be presented to the EU Ecolabelling board on the 10th of June 2011.

### 5.3 **Alternative proposal by one representative from a retailer umbrella organisation (Per Baumann, Eurocoop / Coop Sweden)**

The following points have been raised:

- Is confusion of the consumers a relevant argument?
- The other side of the coin is competition between the Flower and Organic
- ...and between representatives from the different "systems"

The core issue should be to agree on a common goal: Environmental improvement.

The crucial questions are: How to avoid competition between the systems? How to find a way forward (to the common goal) that means mutual recognition and cooperation?

Basically four different options:

- **Leave food to Organic and non-food to the Flower.** This is the way it is now. What can be learnt from the development so far? (Danish view!)
- **Double labelling.** Organic=Flower. What could be achieved by this? Would this increase the organic production? EP view?
- **Develop agricultural criteria, as well as processing ones, within the Flower.** Some have proposed criteria similar to those of Integrated Production. This will probably lead to fierce competition. Is that good or bad? Conventional farmer's organisation in Sweden, some Swan board people in the Nordic countries.
- **Mutual recognition and cooperation:** Make a significant difference between what the Flower and Organic deals with. Build trust and interdependence between the two. Develop how this could be done!

Three ways forward for the EU Flower for food products:

- The EU Flower will be used only on organic products
  - Advantages: No competition with organic labelling; All environmental aspects are considered, not just the raw material; No confusion of consumers as Organic=Flower.
  - Disadvantages: Double labelling could mean increasing costs; Further requirements on the already "good" organic products; Increased price difference to conventional products; Small amount of goods=small environmental impact.
- Eco-labelling of the operation (processing)
  - Advantages: All environmental aspects could be considered, not just the raw material; Could be applicable for all kind of processing; Could quickly attract many companies/products; If labelling of the article, great impact; Could be linked to EMAS; If not labelling of the article, quick and "inexpensive"
  - Disadvantages: Does not have an impact on agriculture where the biggest environmental impact is; if the product is labelled, there is a risk for confusing the consumer; If not labelling of the article, bad visibility
- As 2 but with requirements on a certain amount/share of organic raw material.
  - Advantages: All environmental aspects could be considered; Could be applicable for all kind of processing; Could quickly attract many companies/products; Could be linked to EMAS; If not labelling of the article, quick and "inexpensive".
  - Disadvantages: If not labelling of the article, bad visibility.

The final message in the presentation was: Flower + Organic=True

The time did not allow to have a discussion on this alternative scenario, therefore it is integrated in the minutes for further reflection.

## **6 Summary of the plenary session and the meeting**

Helmut Sengtschmid (Oakdene Hollins) summarised the main point of the discussion.

The Ecolabel flower and organic leaf are 2 solutions. Shall we work on 1 or on these 2 solutions? Some questions still exist in terms of confusion as well as in terms of harmonization.

## **7 Next steps**

Minutes of the workshop will be sent to participants. Conclusion from the workshop will be presented together with other preliminary results on the 10<sup>th</sup> June at the and a report shall be finalized by the end of June 2011.

## ANNEX I

### *Issues raised by workshop participants to be considered*

These issues have collected after the presentation of preliminary results have been collected in a written form to be considered in the Workshop and/or in the final report.

#### **Defining food categories**

- In which product groups is the EU Ecolabel most promising?
- For some food categories better than others?
- Difficulty to define product categories

#### **Scientific basis**

- EU Ecolabel CAN cover a broad range of impact categories: in fact same as non-food, on LCA basis (animal welfare etc. Also done in Milieukeur NL)
- How to address the consumer phase?
- How to make it purely environmental and not nutritional, organic, vegetarian etc.?
- Complexity and variability of supply chain
- How to deal with variability in sourcing?
- Diverse consumption practices for same products
- Trade offs/ criteria
- Current LCA methodologies not yet sufficient in support of food Ecolabel criteria
- Covering the full lifecycle and all environmental impacts

#### **Assessment and verification**

- Technical feasibility for small actors throughout the chain/costs, investments
- EMAS, ISO 14001 covers missing aspects of organic regulation
- How could certification of whole supply chain be feasible without administrative burden
- If EU Ecolabel would be introduced, what challenges regarding assessment and verification need to be considered
- Cost for SMEs (99% of food sector)
- Experiences in other member states or countries outside EU

#### **Consumer confusion**

- What is the risk of consumer confusion between organic and EU Ecolabel?
- Too many labels in food/drink market
- How will you explain the difference with an organic label to consumers?
- Eco in non-organic food is confusing to consumers
- Confusion with other labels incl. Environmental, nutritional, or packaging specific
- Confusion will be present for consumers by having eco and organic
- How to avoid consumer confusion?
- Ecolabel for food = confusion among consumers
- Consumer perception of different labels is not enough to devise an intelligent solution
- Credibility and avoid confusion
- Coherence with international initiatives?
- Avoid confusion, campaign/inform.

**Issues related to "organic"**

- Integration sustainability criteria into EU organic label (processing, packaging etc.)
- Combining EU Ecolabel with food /feed products is a no go area (legislation/competition with organic)
- Duplication of organic certification on EU level
- How to avoid competition between eco and organic labelling
- Which difference could the EU Ecolabel make compared to organic food? Examples needed in the study?
- Do not limit the Ecolabel to organic products
- Organic label should in the future cover environmental elements for processing track.

**Not fall behind of the status of quality which is achieved with organic regulation**

- How to deal with contradiction with organic label?
- Legal aspects cannot be resolved?
- Legal aspects of Eco and organic
- Legal aspects of Eco versus Organic related to EU rules and WTO (Codex Alimentarius)

**EU Ecolabel for food a desirable tool now? (PRIORITY)**

- Competition with other labelling schemes
- Credibility of conventional is damaged
- Private labels can solve additional value aspects
- Can Ecolabel be a stimulus to build sustainable food chains

**Relevant question: how could Eco and organic systems contribute to a better environment?**

- Why new rules?
- Priorities: extension to non-food categories not covered covered by organic label.
- 30% is against the introduction. How is this reflected in the opinions per part of the food chain?
- Extend first to other non-food

## ANNEX II:

### **Results Group Work - Group 1 Stakeholder Workshop 26<sup>th</sup> of May 2011, Brussels**

#### **Aims and Settings**

The aims of the tasks for this group were focussed around two research questions:

1. Food categories: *"Which food categories are well/ill-suited for an introduction of the EU Ecolabel?"*  
This question aims on the surface to support conclusions regarding for which food, feed and drink categories an EU Ecolabel should be introduced first, if at all. On a deeper level it investigates perceived risks and benefits of introducing the EU Ecolabel to certain categories.
2. Critical issue: *"The certification of which practices/products could damage the brand of the EU Ecolabel?"*  
This question is aimed at stakeholder perceptions on what consumers consider critical and to which degree this is significant.

#### **Participants**

Name	Company / Organisation
Ines Oehme	EU Ecolabel DE
Agathe Grossmith	Carrefour
Ineke Vlot	EU Ecolabel NL
Balazs Palyi	Confederation of the Food and Drink Industries of the EU (CIAA)
Emilie Prouzet	Eurocommerce
Joachim Weckmann	Märkisches Landbrot
Benjamin Vallin	European Commission, DG Enterprise & Industry

The group was moderated by H. Sengstschmid and Niels Sprong (both Oakdene Hollins).

#### **Food Categories**

##### **Aim**

The aim of the first part of the group work was to identify special issues related to applying the principles of the EU Ecolabel to certain categories of food, feed and drink.

To achieve this goal it was decided to ask the group to identify the two categories most suited for an EU Ecolabel, as well as those two least suited.

While the choice of categories was interesting, the elucidation of the reasons for these choices was the main objective.

##### **Question**

*"Assume that it has been decided to introduce the EU Ecolabel to the food, feed and drink sector. Furthermore, the decision has been taken to start developing criteria for products in only two of the following product categories. Which of categories would be particularly well / ill-suited for the EU Ecolabel? How do we decide with which products therein to start with?"*

(Details see Appendix)

**Results: Most Attractive Categories**

N	Category	Explanation
1.0	Products not well covered by labels	If there is little offer of environmentally labelled products already – retailers need to be able to have something to offer (position of a retailer)
1.1	Ready meal	Mentioned by 4 participants Perceived highest need for consumers to get information High degree of processing (fits well with (2.3)) Little consumer confusion to be expected, as no well-established labels exist
1.2	Beverages	Possibility to exclude e.g. spirits due on basis of their potential negative health effects (“drug addiction”)
1.3	Meat & dairy	Categories with highest environmental impact Significant differences in production allows for high potential to make a difference Can be done (example of Milieukeur) Animal welfare could be included (high on the list acc. to presentation given) Would include feed
1.4	Tea, coffee, cocoa	Possibility to include social aspects EU label particularly well suited to handle international aspects
1.5	Fish & seafood	Poorly covered by organic label (only aquaculture) Perceived need to validate criteria set forth by MSC An endorsement of MSC might be feasible Little consumer confusion In line with current political needs and desires and work on a legal framework

**Results: Least Attractive Categories**

N	Category	Explanation
2.0	All	It is considered impossible to define a basis of comparison regarding the 10-20% best products Even a comparison of orange juices would not be fair as there are still different types thereof. Position very strongly held by CIAA
2.1	Strong presence of organic labels	Mentioned by 3 participants; fits in well with (1.0) Confusion of consumers Conflict of labels
2.2	Strong presence of Fair-trade labels (coffee, tea, cocoa)	Mentioned by 3 participants Confusion of consumers & conflict of labels (links into (2.1)) Issues of assessment and verification
2.3	Strong share of primary production	Other labels already strong (links into (2.1))
2.4	Ready meal	Mentioned by both participants of Ecolabel Competent Bodies Too complex from an LCA point of view – difficult to define criteria for ready meals if criteria for ingredients are not yet developed (→ bottom up approach would be preferred) Categorisation: e.g. 10-20% of pizzas: is that fair to Pizza Margherita vs. Pizza Hawaii – different topics, different criteria
2.5	Fish & seafood	MSC already strong (links into (2.1))
2.6	Feed	Most feed is B2B and EU Ecolabel perceived as mainly a consumer label Pet food: market share too small



### Critical Issues

#### Aim

The aim of the second part of the group work was to identify practices or products that could pose significant risks to the “brand value” of the EU Ecolabel and should not be eligible for certification under the rules of a potential EU Ecolabel for food, feed and drink products.

To achieve this goal it was decided to ask the group to identify such issues.

While the choice of issues was interesting, the elucidation of the reasons for these choices was the main objective.

Due to time restrictions only three issues could be discussed in detail.

#### Question

*“Assume that it has been decided to introduce the EU Ecolabel to the food, feed and drink sector. There is concern about damaging the brand “EU Ecolabel” by allowing contentious practices, like airfreight, use of GMO, awarding the label to “unhealthy “ products like sweets or spirits.*

*Which practices should be forbidden under an EU Ecolabel, because*

- *they are in conflict with other policies and targets,*
- *they are too contentious and may harm the “EU Ecolabel” brand”*

**Results: Critical issues (in brackets & Italics = number of participants making this statement )**

N	Issue	Reasoning
1	GMO	Not critical: (2) As long as use of GMO has been approved by the EU there is no scientific basis for excluding it. Critical (3): Criteria which allowed GMO would not be able to pass the vote of the EU Ecolabel competent bodies. (2) An EU Ecolabel allowing GMO would not be acceptable by consumers (1).
2	“Unhealthy” products	Not relevant (1): “There are no unhealthy products, only unhealthy diets” ; products available on the EU market have passed scrutiny regarding adverse health effects. As a consequence there is no basis to exclude any food, feed or drink products from the EU Ecolabel. Critical: (1) Spirits should not be eligible for an EU Ecolabel due to their potential for alcohol abuse.
3	organic	Critical (1): Only products that contain organic raw materials should be eligible for the EU Ecolabel, otherwise it would be green wash.

## ANNEX III

### **Results Group Work - Group 2 - Scenarios Stakeholder Workshop 26<sup>th</sup> of May 2011, Brussels**

#### **Aims and Settings**

The aims of the tasks for this group work was to identify in a first step the benefits (advantages) and risks (conflicts) of different scenarios. Once these potential risks have been identified, possible ideas of potentials conditions/solutions to improve the acceptability of extending the EU Ecolabel were collected and discussed.

The main focus was on the four main scenarios, which were favoured by the majority of participants in the on-line actor survey in the Ecolabelling project.

#### **Participants**

<b>Name</b>	<b>Company / Organisation</b>
Per Baumann	Eurocoop, Coop Sweden
Gerard C.A. Luijckx	Unilever R&D Vlaardingen
Stefania Ministrini	ISPRA-EU Ecolabel IT
Pascal Greverath	Confederation of the Food and Drink Industries of the EU (CIAA) / Nestlé
Lukasz Wozniacki	BEUC and EEB European Environmental Bureau
Cecile Lepers	IFOAM EU Group /Synabio
Simone Mancini	ERRP, the European Retail Roundtable
Herman Docters van Leeuwen	SMK Milieuker
Alexander Beck	AOEL e.V.
Ferenc Pekar	European Commission, DG Environment
Jeroen van Laer	European Commission, DG Sanco
Xavier Guillou	European Commission, DG Mare
Agnieszka Bodera	European Commission, DG Agri

The group was moderated by Otto Schmid (FiBL), assisted by Pierre Sultana (Trainee).

#### **Methodology**

The group discussion has been conducted in the following way:

1. Participants had ca. 5 Minutes time to write down the benefits and risks for the four most mentioned scenarios in the survey (the results of the written work are summarised in the annex).
2. The main points for each of the scenarios were written on cards and were put on a wall, so that everybody could see it and comment it.
3. Each of the scenarios was discussed, with the main focus on the most crucial conflicts/risks, potential solutions and/or framework conditions to address these conflicts and to improve the acceptability of the scenarios.
4. A summary presentation was prepared and discussed in the plenary.
5. At the end of the whole workshop all participants had to vote for the most favoured amended scenario, which they considered to be feasible, as well as for the scenario, which they considered to be a "no go" (1 green point for "go" and a red point for "no-go").

**Questions**

The following two questions were answered in the worksheet.

*Question 1*

*What are the most important benefits and risks of each of the most highly ranked scenarios?*

*Question 2*

*In which way can the most important conflicts and risks in these scenarios be reduced or solved? What solutions or conditions do you propose to solve these?*

The results of the written comments of all participants are integrated in the table on the next pages.

**Ecolabelling Stakeholder Workshop 26 May 2011 Group Discussion 2:  
Benefits (Advantages) & Risks (Disadvantages, conflicts) - Solutions/conditions for better acceptance of certain scenarios**

SCENARIOS	Benefits / Advantages	Risks / Disadvantages	Main conflicts to be solved	How to make scenario more acceptable
No EU Ecolabel	No confusion with regard to organic label. (5) No additional costs for communicating EU ecolabel. (3) Simple - One concept for the industry. (2) Building consumer confidence on the market. Clear message to consumers. No additional label for foods. Keeping distinction between labels. No new rules. EU could promote more easily the organic logo.	Missed opportunity to improve environmental performance of products and agriculture. (2) Not a good further development of organic regulation in direction to more environmental performance. Other labels will pop-up to fill this "gap".	No reduction of environmental problems. (2) No EU instrument for non-organic products. System approach to be implemented on processing and trade level.	More qualitative information about environmental impact/footprint of food products needed. (3) Need to improve the organic regulation EC Reg 889/2009 with environmental aspects in organic regulation. (2) Avoid separate food ecolabels Other name for Ecolabel for food to be searched. More control of environmental claims by EU needed.
Ecolabel for both organic and conventional products	Clearer and simpler information to consumers. (2). No benefits with this scenario. (2). Potential to improve environmental performance and reduce environmental impact of products Making an investment, which makes environmental aspects clear. Easy and cost-efficient Mutual supporting. Fair treatment of products. An LCA basis would be a great benefit.	Possible confusion among consumers between Ecolabel and organic label. (7) Partial overlapping/ duplication of criteria with organic label certification. (3) Legal problems with WTO – Codex Alimentarius organic guidelines and EC Regulation 834/2007 (legal protection of word "eco" and terms/claims of similar content. Risk of court case.(3) (Perceived) competition among businesses. Not easy to set good criteria. Confusion between product realities linked to the needs of consumers. Higher costs. Simplistic	Confusion among consumers will disturb organic market development. (5) Conflict with weakening organic label. (3) Conflict with even criteria as in organic. System approach of organic farming to be implemented on processing and trade level very difficult. Two systems for industry (organic and ecolabelling).	No use of the term "eco". (2) Strong and clear communication needed to avoid confusion. (2) Use a clear distinct sign/logo (from organic). Need for better system of footprints which makes measuring sustainability more objective and open for every product. Remove organic and other environmental labels

SCENARIOS	Benefits / Advantages	Risks / Dis-advantages	Main conflicts to be solved	How to make scenario more acceptable
Ecotool for products not covered by the organic label	Use for wild fish (3), water (2) and salt (2). No conflict with organic. Drive to improve environmental impact of non-organic products. Fill the label gap for non-agricultural products.	Can non-organic be environmentally more friendly? No possibility to show that products are without GMO's. Additional state label Confusion of consumers. (6) Big new rules for few products. (2). Competition with other existing labels. (E.g. with MSC). (2) Too small impact. (2) Would only have very few opportunities for food. (2) Not fair treatment of different product categories.	Confusion among consumers not solved. (2) Restrict to textile and cosmetics. Complex certification schemes.	Strong and clear information campaign needed. (2) Restrict only to non-food Remove other environmental labels.
Ecotool for organic products with additional environmental standards (Organic +)	No or less consumer confusion. (2) Organic = perceived as more healthy and Ecotool as more environmentally friendly Improvement of the Organic regulation (EC Reg 834/2007) Can show additional services of s	Small part of the market (part of organic only) (2) Confusion among consumers with two different labels (2) Even smaller impact on environment Too costly to introduce a second label beside the already good one (organic label) Not a true environmental label. Discrimination of products - other than environmental criteria. Compared with organic only. Eventually Ecotool perceived as a label for packaging and specific work phases. Language problems with different logos. Need to put two logos into the organic regulation. More complicated consumer information. Not based on LCA (Life cycle assessment).	Just an add-on for organic Confusion among consumers Development of organic regulation Integration of two different management concepts	Additional requirements to be included in organic regulation (EC Reg 834/2007) = Organic + (3) Integrate the Ecotool concept in organic regulation. Remove the word organic and use only the Ecotool.
Ecotool only for specific hotspots not covered by existing labelling schemes	Could cover products with limited impacts (beverages).	Not fair treatment of different product categories Only partial coverage Needs more consumer information. Only few products.		

SCENARIOS	Benefits / Advantages	Risks / Dis-advantages	Main conflicts to be solved	How to make scenario more acceptable
Ecotag as Business to Business label	Easier implementation. Less consumer confusion.	No visibility for consumers. (2) Too small impact. No additional value for consumers. Nobody would use the label for B to B.	Legal problem with EU Ecotag regulation 66/2010 (7)	
Ecotag in the feed sector	Gives instrument for an anonymous part of the food chain.	No visibility. Too small impact. Overlapping with organic label. Only partial coverage. Nobody would use the label.		
Ecotag for specific focus areas in processing, distribution, storage or packing	Clearer and simpler information to consumers. Easy and cost-efficient. Mutual supporting.	Too limited approach – no LCA based approach according to Ecotag regulation. (3) Partial coverage. Eventually Ecotag perceived only as a label for specific phases. How can consumers understand the Ecotag – isn't it linked with raw materials?	Conflict with EU Ecotag regulation (3).	Recommendation to integrate sustainable criteria to processing, packaging and transport in organic label. Would need a lot of communication.
Ecotag for eating-out sector	Clearer and simpler information to consumers Easy and cost-efficient Mutual supporting Good reputation for participating restaurants Fill the label gap for non-agricultural products.	Very limited coverage. (2) Very limited environmental impact because of limited part of the food industry. (2) How to cover food waste issue? Better use "industry services" labels as EMAS. Confusion to consumers.		Find other ways to reduce environmental impact of eating out sector. Strong and clear information campaign needed. For certain share of organic food

Based on written statements of 14 participants at the Ecotagging Workshop on the 26<sup>th</sup> of May 2011

## 12 Bibliography

- (2010). *2009 Environment Policy Review, Staff Working Paper SEC 975 final*. European Commission.
- A Case of Over-Egging*. (n.d.). Retrieved Mar 05, 2011, from BBC:  
[http://news.bbc.co.uk/2/hi/uk\\_news/magazine/7990446.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/7990446.stm)
- Accenture. (2009). *Assessment of on-pack, wild-capture seafood sustainability certification programmes and seafood ecolabels*. Retrieved May 10 2011, from WWF:  
[http://assets.panda.org/downloads/full\\_report\\_wwf\\_ecolabel\\_study\\_lowres.pdf](http://assets.panda.org/downloads/full_report_wwf_ecolabel_study_lowres.pdf)
- AEA Technology. (2008). *Comparative Life Cycle Assessment of Food Commodities Procured for UK Consumption through a Diversity of Supply Chains*. Defra.
- AEA Technology in confidence (2004). *The Direct and Indirect Benefits of the European Ecolabel – Final Report*. DG Environment EU Commission. Retrieved Jan 16 2011, from EU:  
[http://ec.europa.eu/environment/ecolabel/about\\_ecolabel/reports/benefitsfinalreport\\_1104.pdf](http://ec.europa.eu/environment/ecolabel/about_ecolabel/reports/benefitsfinalreport_1104.pdf)
- Agnew D. et al. (2006). *Environmental benefits resulting from certification against MSC's Principles & Criteria for Sustainable Fishing*. Retrieved May 10, 2011, from Marine Resources Assessment Group, MSC:  
[http://www.msc.org/documents/environmental-benefits/MSC\\_EnvBenefits\\_Phase1\\_Executive\\_Summary\\_4May2006.pdf/view](http://www.msc.org/documents/environmental-benefits/MSC_EnvBenefits_Phase1_Executive_Summary_4May2006.pdf/view)
- Agreement on Technical Barriers to Trade*. (n.d.). Retrieved Jun 5, 2011, from World Trade Organisation:  
[http://www.wto.org/english/docs\\_e/legal\\_e/17-tbt\\_e.htm](http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm)
- AIC. (2009). *Feed Materials Assurance Scheme*. Retrieved Feb 13, 2011, from Agricultural Industries Confederation:  
<http://www.agindustries.org.uk/content.output/95/95/Trade%20Assurance/Trade%20Assurance%20Schemes/FEMAS.msp>  
x
- Aldaya M.M., Allan J.A., Hoekstra A.Y. (2010). Strategic importance of green water in international crop trade. *Ecological Economics*, 69, 887–894.
- Allen P., Kovach M. (2000). The capitalist composition of organic: The potential of markets in fulfilling the promise of organic agriculture. *Agriculture and Human Values*, 17, pp. 221–232.
- Anders S., Monteiro, D.M.S, Rouviere E. (2007). Objectiveness in the Market for Third-Party Certification Does market structure matter? *105th Seminar*.
- Assured Food Standards Technical Advisory Committee. (2010). *Code of Practice for On-farm Feeding*. Retrieved Feb 11, 2011, from Red Tractor Assurance: <http://www.redtractor.org.uk/feedcop>
- Ayalona O., Avnimelecha Y., Shechterb M. (2000). Application of a comparative multidimensional life cycle analysis in solid waste management policy: the case of soft drink containers. *Environmental Science & Policy*, 3 (2-3), pp. 135-144.
- Bachmann, S. (2011). Ein Teilnehmer, ein Sieger. *Der Schweizerische Beobachter*, 4 (74).
- Background material other reviews and benchmark studies. (n.d.).
- Balcombe K., Fraser I., Di Falco S. (2009). Traffic lights and food choice: A choice experiment examining the relationship between nutritional food labels and price. *Food Policy*, 35 (3), pp. 211-220.
- Barreiro-Hurlé J., Gracia A., de-Magistris T. (2010). Does nutrition information on food products lead to healthier food choices? *Food Policy*, 35 (3), pp. 221-229.

- Beck A., Kretzschmar U., Schmid O. (2005). *Concept papers outlining parameters for further development of Organic Food Processing - Crucial topics for the revision of the EU regulation 2092/91*. Frick: Forschungsinstitut für biologischen Landbau (FiBL).
- Beek, L. D.-V. (2011). *Draft Outlook Opinion of the Committee of the Regions on LOCAL FOOD SYSTEMS*. EU Committee of the Regions.
- Bellarby J. et al. (2008). *Cool Farming - Climate impacts of agriculture and mitigation potential*. Greenpeace.
- Berger M., Finkbeiner M. (2010). Water Footprinting: How to Address Water Use in Life Cycle Assessment? *Sustainability* 2010, 2, pp. 919-944.
- BfR. (2009). *Übergänge von Mineralöl aus Verpackungsmaterialien auf Lebensmittel*. Bundesinstitut für Risikobewertung.
- Big Room Inc, World Resources Institute. (2010). *Global Ecolabel Monitor 2010: Towards Transparency*. Retrieved Feb 1, 2011, from Ecolabelindex: [http://www.ecolabelindex.com/downloads/Global\\_Ecolabel\\_Monitor2010.pdf](http://www.ecolabelindex.com/downloads/Global_Ecolabel_Monitor2010.pdf)
- BioSuisse. (n.d.). *BioSuisse and its Import Policy*. Retrieved May 15, 2011, from BioSuisse: [http://www.bio-suisse.ch/media/en/pdf2010/Import/eng\\_information\\_note\\_portrait\\_2010.pdf](http://www.bio-suisse.ch/media/en/pdf2010/Import/eng_information_note_portrait_2010.pdf)
- BioSuisse. (2011). *Summary of the Bio Suisse standards*. Retrieved Apr 20, 2011, from [http://www.bio-suisse.ch/media/en/pdf2011/a\\_eng\\_information\\_note\\_summary\\_of\\_bio\\_suisse\\_standards\\_2011.pdf](http://www.bio-suisse.ch/media/en/pdf2011/a_eng_information_note_summary_of_bio_suisse_standards_2011.pdf)
- Blanke M.M., Burdick B. (2005). Food (miles) for Thought - Energy Balance for Locally-grown versus imported Apple Fruit. *Environ Sci & Pollut Res*, 12 (3), pp. 125–127.
- Blengini G.A., Busto M. (2009). The life cycle of rice: LCA of alternative agri-food chain management systems in Vercelli (Italy). *Journal of Environmental Management*, 90, pp. 1512–1522.
- Bonnedahl K.J., Eriksson J. (2010). The role of discourse in the quest for low-carbon economic practices: A case of standard development in the food sector. *European Management Journal*.
- Borgstedt S., Christ T., Reusswig F. (2010). *Umweltbewusstsein in Deutschland 2010. Ergebnisse einer repräsentativen Bevölkerungsumfrage*. BMU, UBA.
- Bouchard M.F. et al. (2011). Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year Old Children. *Environ Health Perspect*, doi:10.1289/ehp.1003185.
- Bougherara D., Combris P. (2009). Eco-labelled food products: what are consumers paying for? *European Review of Agricultural Economics*, 36, 321–341.
- Brécard D. et al. (2009). Determinants of demand for green products: An application to eco-label demand for fish in Europe. *Ecological Economics*, 69, 115–125.
- Brook Lyndhurst, Icaro Consulting. *Consumer understanding of green terms*. Defra.
- Brown, J. (2005). An account of the dolphin-safe tuna issue in the UK. *Marine Policy*, 29 (1), pp. 39-46.
- Buchspies B. (2011). *Life Cycle Assessment of High-Sea Fish and Salmon Aquaculture*. ESU Services.
- Büsser S., Jungbluth N. (2009). *Aluminium beeinflusst nur gering (Verpackung)*. ESU Services.
- Büsser S., Jungbluth N. (2009). *LCA of Chocolate Packed in Aluminium Foil Based Packaging*. ESU Services.
- Büsser S., Jungbluth N. (2009). *LCA of Yoghurt Packed in Polystyrene Cup and Aluminium-Based Lidding*. ESU Services.
- Büsser S., Steiner R., Jungbluth N. (2008). *LCA of Packed Food Products- the function of flexible packaging*. ESU Services.



Calderón L.A. et al. (2010). The utility of Life Cycle Assessment in the ready meal food industry. *Resources, Conservation and Recycling*, 54 (12), pp. 1196–1207.

Carlsson-Kanyama A. (2006). *Environmental information in the food supply system*. Swedish Defence Research Agency (FOI).

Chapagain A., Orr S. (2008). *UK Water Footprint - the impact of the UK's food and fibre consumption on global water resources Volume one*. WWF-UK.

Chapagain A.K., Orr S. (2009). An improved water footprint methodology linking global consumption to local water resources: A case of Spanish tomatoes. *Journal of Environmental Management*, 1219–1228.

Chiaromonti D., Recchia L. (2010). Is life cycle assessment (LCA) a suitable method for quantitative CO2 saving estimations? the impact of field input on the LCA results for a pure vegetable oil chain. *Biomass and Bioenergy*, 34 (5), pp. 787-797.

CIAA. (2011). *Data & trends for the European Food and Drink Industry*. CIAA.

CIAA. (n.d.). *Key food chain partners to launch sustainability roundtable*. Retrieved Feb 14, 2011, from CIAA: [http://www.ciaa.be/documents/press\\_releases/PR\\_EFSCPRT\\_final\\_260209.pdf](http://www.ciaa.be/documents/press_releases/PR_EFSCPRT_final_260209.pdf)

CIAA. (2008 (2nd Ed)). *Managing Environmental Sustainability in the European Food & Drink Industries*. CIAA.

CIAA. (2010). *The EU Food and Drink (F&D) Industry in Figures*. Retrieved Mar 11, 2011, from CIAA: <http://www.ciaa.be/documents/brochures/CIAA%20key%20figures%20bookmarkV6.pdf>

clientearth.org. (2011). *Environmental claims on supermarket seafood: Improving product labelling & consumer protection*. Retrieved Jan 24, 2011, from Client Earth: <http://www.clientearth.org/reports/environmental-claims-on-supermarket-seafood.pdf>

Coff C. (Coordinator) et al. (2007). *Ethical Traceability and Informed Food Choice - Final Report*. Retrieved Mar 24, 2011, from Ethical traceability: <http://chrcoff.dk/Rapporter/Ethicaltraceability.pdf>

Coff C. (Coordinator) et al. (2007). *Ethical Traceability and Informed Food Choice - summary*. Retrieved Mar 24, 2011, from Ethical traceability: <http://www.chrcoff.dk/Rapporter/Ethical%20Tracea%20summary.pdf>

COICOP. (n.d.). *Classification of Individual Consumption According to Purpose*. Retrieved Jan 8, 2011, from United Nations Statistics Division: <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=5>

COM. (2008). *On the Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan*. European Commission.

Compassion in World Farming. (2008). *The welfare of farmed fish*. Retrieved May 11, 2011, from CIWF: [http://www.ciwf.org.uk/includes/documents/cm\\_docs/2009/f/farmed\\_fish\\_briefing\\_aug2009.pdf](http://www.ciwf.org.uk/includes/documents/cm_docs/2009/f/farmed_fish_briefing_aug2009.pdf)

Consumer Food Trends-Defining Opportunities for Alberta's Agri-food Industry. (n.d.).

(2007). *Council Regulation (EC) No 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91*.

*Dairy roadmap*. (2011). Retrieved May 16, 2011, from DairyCo: <http://www.dairyco.org.uk/library/research--development/environment/dairy-roadmap.aspx>

Dalmeny, K. (2008). *Ethical Hijack*. Sustain: The alliance for better food and farming.

Davies T., Konisky D.M. (2000). Environmental Implications of the Foodservice and Food Retail Industries. *Resource for the Future*, (p. 76).

- De-Coding Seafood Eco-Labels.* (2011). Retrieved May 9, 2011, from Food & Water Europe:  
<http://documents.foodandwaterwatch.org/EUecoLabels-web.pdf>
- Defra. (2003). *Code of Recommendations for the Welfare of Livestock Cattle.* TSO Publications Centre.
- Defra. (2006). *Sustainable Consumption and Production Evidence Base: Measurement Methodologies Aims and Background.* Retrieved Feb 16, 2011, from Defra archive:  
<http://archive.defra.gov.uk/environment/business/scp/documents/measurement-methods.pdf>
- Delfs, R. (n.d.). *Marine scientists say MSC fails to protect global fish stocks.* Retrieved May 10, 2011, from Robert Delfs: Images and Words: <http://www.tabula-intl.com/>
- Display of the environmental characteristics of products.* (2010). Retrieved May 17, 2011, from General Commission for Sustainable Development: <http://www.developpement-durable.gouv.fr/IMG/pdf/LPS39EN.pdf>
- (2009). *Double Pyramid: healthy food for people, sustainable food for the planet.* Barilla Center for Food and Nutrition.
- Doublet G., Jungbluth N. (2010). *Life cycle assessment of drinking Darjeeling tea-Conventional and organic Darjeeling tea.* ESU Services.
- EC IPPC. (2006). *Reference Document on Best Available Techniques in the Food, Drink and Milk Industries.* European Commission.
- EC IPPC. (2005). *Reference Document on Best Available Techniques in the Slaughterhouses and Animal By-products Industries.* European Commission.
- EdComs. (2007). *Review and analysis of current literature on consumer understanding of nutrition and health claims made on food.* Food Standards Agency.
- Elferink E.V., Nonhebel S., Moll H.C. (2008). Feeding livestock food residue and the consequences for the environmental impact of meat. *Journal of Cleaner Production* , 16 (12), pp. 1227-1233.
- EMA, EDS. (2007). *Shopping Choices - Attraction or Distraction?* IGD.
- Engel S.M. et al. (2011). Prenatal Exposure to Organophosphates, Paraoxonase 1, and Cognitive Development in Childhood. *Environ Health Perspect* , doi:10.1289/ehp.1003183.
- Enterprise Europe Network, LCCI. (2008). *Product Labelling.* Retrieved Feb 1, 2011, from London Chamber of Commerce and Industry: <http://www.londonchamber.co.uk/DocImages/4115.pdf>
- Environmental footprint of products.* (n.d.). Retrieved from  
[http://ec.europa.eu/environment/eussd/product\\_footprint.htm](http://ec.europa.eu/environment/eussd/product_footprint.htm)
- (2010). *Environmental LIFE CYCLE Information for Products Used Every Day in Households.* EU Retail Forum for Sustainability.
- Environmental Signals 2000 (13. Eutrophication).* (2000). Retrieved May 11, 2011, from European Environment Agency:  
<http://www.eea.europa.eu/publications/signals-2000/page014.html>
- Epp A. et al. (2010). *Grenzen und Möglichkeiten der Verbraucherinformation durch Produktkennzeichnung.* Berlin: Bundesinstitut für Risikobewertung.
- Erickson A., Kramer-LeBlanc C.S. (1997). *Ecolabels: The Link Between Environmental Preferences and Green Practices. Strategy and Policy in the Food System: Emerging Issues.* Food Marketing Policy Centre.
- Ertug E. et al. (2011). Corporate Water Footprint Accounting and Impact Assessment: The Case of the Water Footprint of a Sugar-Containing Carbonated Beverage. *Water Resources Management* , 35 (2), pp. 721-741.

European Commission (2005) *Organic Farming in the European Union – Facts and Figures*. Retrieved May 05 2011, from ] [http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/facts\\_en.pdf](http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/facts_en.pdf)

EU. (2009). *COMMISSION REGULATION (EC) No 710/2009 detailed rules on organic aquaculture animal and seaweed production*. Retrieved May 9 2011, from EC: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:204:0015:0034:EN:PDF>

EU internal paper. (2010). *EU Ecolabel Relaunch – Marketing Strategy Proposal*.

(2010). *EU Regulation 66/2010 on the EU Ecolabel*. European Union.

European Commission. (n.d.). *Product labelling and packaging*. Retrieved Feb 1, 2011, from Europa: Summaries of EU Legislation: [http://europa.eu/legislation\\_summaries/consumers/product\\_labelling\\_and\\_packaging/index\\_en.htm](http://europa.eu/legislation_summaries/consumers/product_labelling_and_packaging/index_en.htm)

FAO. (2006). *Expert Consultation on the development of international guidelines for ecolabelling of fish and fishery products from marine capture fisheries*. FAO Fisheries Report.

FAO. (2009). *Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries*. Retrieved May 18, 2011, from FAO: <http://www.fao.org/docrep/012/i1119t/i1119t.pdf>

FAO. (n.d.). *Packaging developed countries*. Retrieved May 15, 2011, from FAO: [http://www.fao.org/fileadmin/user\\_upload/ags/publications/AFP\\_web.pdf](http://www.fao.org/fileadmin/user_upload/ags/publications/AFP_web.pdf)

FAO. (2011). *Private standards and certification in fisheries and aquaculture*. Retrieved May 18, 2011, from FAO: <http://www.fao.org/docrep/013/i1948e/i1948e.pdf>

FAO. (2002). *World agriculture towards 2015/2030*. FAO.

FCRN. (2008). *Cooking up a storm: Food, greenhouse gas emissions and our changing climate*. Food Climate Research Network.

FEC. (2008). *Where next for ethical labelling?* Food Ethics Council.

Ferrari P. et al. (2010). *Report on (dis-) advantages of current animal welfare standards for animals, based on the main findings of EU and national research projects. Project report D2.3*. Retrieved Jan 15, 2011, from EconWelfare: [www.econwelfare.eu](http://www.econwelfare.eu)

Flash EB. (2009). *Europeans' attitudes towards the issue of sustainable consumption and production*. Retrieved May 18 2011, from EU DG Environment: [http://ec.europa.eu/environment/ecolabel/about\\_ecolabel/reports/eurobarometer\\_survey.pdf](http://ec.europa.eu/environment/ecolabel/about_ecolabel/reports/eurobarometer_survey.pdf)

Food SCP. (2010). *Voluntary environmental assessment and communication of environmental information along the food chain, including to consumers – Guiding Principles*. European Food SCP Round Table.

Food Standards Agency. (2010). *Changes to the labelling requirements for animal feedstuffs*. Retrieved Feb 11, 2011, from Business Gateway: <http://www.bgateway.com/bdotg/action/ruDetail?itemId=1085305347&site=202&type=REGUPDATE>

Foster C. et al. (2006). *Environmental Impacts of Food Production and Consumption*. Retrieved Mar 24, 2011, from Defra Science and Research Projects: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14071>

Foster C. et al. (2007). *The Environmental, Social and Economic Impacts Associated with Liquid Milk Consumption in the UK and its Production*. Defra.

Friedmann H., McNair A. (2008). *Whose Rules Rule? Contested Projects to Certify 'Local Production for Distant Consumers'*. *Journal of Agrarian Change*, Vol. 8 (Nos. 2 and 3, April and July).

FSA. (2006). *Food Labelling Requirements: Qualitative Research*. Food Standards Agency.

- FSA. (1996). *The Food Labelling Regulations*. Retrieved Jan 28, 2011, from Food Standards Agency: <http://www.food.gov.uk/foodindustry/guidancenotes/>
- Genty A., Wolf O. (2010). *The identification of Priority Product Groups for the Development and Revision of Ecolabel and GPP Criteria - Towards a Working Plan*. Retrieved Mar 21, 2011, from CIRCA Communication: <http://circa.europa.eu/Public/irc/env/eueb/library?l=/>
- GESAMP. (2008). *Assessment and communication of environmental risks in coastal aquaculture*. Retrieved May 11, 2011, from FAO: <http://www.fao.org/docrep/010/i0035e/i0035e00.htm>
- Getz C., Shreck A. (2006). What organic and Fair Trade labels do not tell us: towards a place-based understanding of certification. *International Journal of Consumer Studies*, 30 (5), 490–501.
- Gibson R.H. et al. (2007). Plant diversity and land use under organic and conventional agriculture: a whole-farm approach. *Journal of Applied Ecology*, 44, pp. 792-803.
- Gonzalez, V. et al. (2011) Organic Action Plans in Europe in 2010 In: Willer, H., Kilcher, L. (Eds, 2011): *The World of Organic Agriculture. Statistics and Emerging Trends 2011*.
- GO-Science. (2011). *Foresight: The Future of Food and Farming*. The Government Office for Science, London.
- Grankvist G., Biel A. (2007). Predictors of purchase of eco-labelled food products: A panel study. *Food Quality and Preference*, 18, 701–708.
- Grankvist G., Lekeda H., Marmendal M. Values and eco- and fair-trade labelled products. *British Food Journal*, 109 (2), 169-181.
- Greenpeace. (2004). *A Recipe for Disaster: Supermarkets' Insatiable Appetite for Seafood*. Greenpeace.
- Groenhoej A. (2006). Communication about consumption: a family process perspective on 'green' consumer practices. *Journal of Consumer Behaviour*, 5 (6), 491-503.
- Grolleau G., Caswell J.A. (2006). Interaction Between Food Attributes in Markets The Case of Environmental Labeling. *Journal of Agricultural and Resource Economics*, 3 (1(3)), 471-484.
- (1999). *Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods*. Codex Alimentarius.
- Gustavsson J. et al. (2011). *Global food losses and food waste Extent, causes and prevention*. Retrieved May 16, 2011, from FAO: [http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna\\_fef%5Buid%5D=74045](http://www.fao.org/ag/ags/ags-division/publications/publication/en/?dyna_fef%5Buid%5D=74045)
- Halliday, J. (2011). *European local food logo, professionalised local food systems proposed*. Retrieved Feb 14, 2011, from FOOD Navigator.com: <http://www.foodnavigator.com/content/view/print/355558>
- Harper L., Souta P., Ince J., Mckenzie J. (2007). *Food labelling consumer research What consumers want: A literature review*. Food Standards Agency.
- Harrington, R. (2011). *Labelling MCS*. Retrieved May 6, 2011, from Marine Conservation Society: <http://www.mcsuk.org/downloads/fisheries/Labelling.pdf>
- Hau P., Joaris A. (n.d.). *Organic Farming*. Retrieved May 19, 2011, from European Commission: [http://ec.europa.eu/agriculture/envir/report/en/organ\\_en/report\\_en.htm](http://ec.europa.eu/agriculture/envir/report/en/organ_en/report_en.htm)
- Hertwich, E. et al. (2010). *Assessing the Environmental Impacts of Consumption and Production: Priority Products and Materials, A Report of the Working Group on the Environmental Impacts of Products and Materials to the International Panel for Sustainable Resource Management*. UNEP .
- Honkanen P. et al. (2006). Ethical values and motives driving organic food choice. *Journal of Consumer Behaviour*, 5, pp. 420-430.

- Hospido A. et al. (2006). Environmental assessment of canned tuna manufacture with a life-cycle perspective. *Resources, Conservation and Recycling*, 47 (1), pp. 56–72.
- Hospido A. et al. (2009). The role of seasonality in lettuce consumption: a case study of environmental and social aspects. *The International Journal for Life Cycle Assessment*, 14 (5), pp. 381-391.
- Hospido A., Moreira M.T., Feijoo G. (2003). Simplified life cycle assessment of galician milk production. *International Dairy Journal*, 13, pp. 783–796.
- Howard P.H., Allen P. (2010). Beyond Organic and Fair Trade? An Analysis of Ecolabel Preferences in the United States. *Rural Sociology*, 75 (2), pp. 244–269.
- Hughner R.S. et al. (2007). Who are organic food consumers-A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6, pp. 94-110.
- Humbert, S. (2010). *Water footprinting, life cycle assessment, and standardisation*. Retrieved May 6, 2011, from Quantis: [http://www.unglobalcompact.org/docs/issues\\_doc/Environment/ceo\\_water\\_mandate/5th\\_Working\\_Conference\\_NYC\\_2010/Humbert.pdf](http://www.unglobalcompact.org/docs/issues_doc/Environment/ceo_water_mandate/5th_Working_Conference_NYC_2010/Humbert.pdf)
- IFOAM EU Group. (2009). *Die neue EU-Öko-Verordnung EG Nr 834/2007*. IFOAM EU Gruppe.
- IGD. *Genetically Modified Foods - Consumer Research*. IGD.
- Iribarren D., Moreira M.T., Feijoo G. (2010). Life Cycle Assessment of fresh and canned mussel processing and consumption in Galicia (NW Spain). *Resources, Conservation and Recycling*, 55 (2), pp. 106–117.
- ISO. (2001). *Environmental labels and declarations Type I environmental labelling Principles and procedures (ISO 14024:1999) Edition: 2001-02-01*. ISO.
- Jacquet J.L., Pauly D. (2007). The rise of seafood awareness campaigns in an era of collapsing fisheries. *Marine Policy*, 31, 308–313.
- Jacquet J.L.; Pauly D. (2008). Trade secrets: Renaming and mislabeling of seafood. *Marine Policy*, 32, 309–318.
- Jacquet, J. et al. (2010). Seafood stewardship in crisis. *Nature*, 467, pp. 28-29.
- Jones, A. (2002). An Environmental Assessment of Food Supply Chains: A Case Study on Dessert Apples. *Environmental Management*, 30 (4), 560-576.
- Jungbluth N. (2010). *Die Ökobilanz von Nahrungsmittelproduktion und Konsum: Handlungsmöglichkeiten der Akteure*. ESU Services.
- Jungbluth N. (2010). *Die Ökobilanz von Nahrungsmittelproduktion und Konsum: Handlungsmöglichkeiten der Akteure-PPP*. Retrieved Jan 28, 2011, from ESU Services: <http://www.esu-services.ch/publications/food/>
- Jungbluth N., Faist Emmenegge M. (2004). *Rückmeldung an KonsumentInnen zu den Umweltfolgen ihrer Lebensmitteleinkäufe*. ESU Services.
- Jungbluth N., Tietje O., Scholz R.W. (2000). Food Purchases: Impacts from the Consumers' Point of View Investigated with a Modular LCA. *The International Journal of Life Cycle Assessment*, 5 (3), pp. 134-142.
- Jungbluth, N. (2000). *Umweltfolgen des Nahrungsmittelkonsums: Beurteilung von Produktmerkmalen auf Grundlage einer modularen Ökobilanz*. Diss. ETH Nr. 13499.
- Karmasin S. (2007). *LIFeStyle = HEALThstyle? Die Einstellung des Österreicher zu seiner Gesundheit*. Retrieved Mar 18, 2011, from PMCA: [http://www.pmca.at/veranstaltungen/images/fobi07/vortrag\\_karmasin.pdf](http://www.pmca.at/veranstaltungen/images/fobi07/vortrag_karmasin.pdf)
- Kiclsperger R., Schmid O., Hecht J. (2010). *Overview of animal welfare standards and initiatives in selected EU and third countries*. FiBL.

- Klimatmärkning för Mat. (2010). *Criteria for Mitigation of Climate Impact from Food Production and Distribution*. Klimatmärkning.
- Kuiper H.A., Davies H.V. (2010). The SAFE FOODS Risk Analysis Framework suitable for GMOs? A case study. *Food Control*, 21 (12), pp. 1662-1676.
- Lahteenmaki L. et al. (2010). Impact of health-related claims on the perception of other product attributes. *Food Policy*, 35 (3), pp. 230-239.
- Lang T. (2010). *You fund it, government buys it and we all pay*. City University, Centre for Food Policy. London: Good Food for our Money campaign.
- Lathrop K.W., Centner T.J. (1998). Eco-Labeling and ISO 14000: An Analysis of US Regulatory Systems and Issues Concerning Adoption of Type II Standards. *Environmental Management*, 2 (2), 163–172.
- LEAF Marque. (2008). *LEAF Marque Global Standard*. Linking Environment and Farming.
- Lebensmittel Label*. (2011). Retrieved May 18, 2011, from Konsumenten Schutz: [http://konsumentenschutz.ch/files/pdfs/downloads/06\\_11\\_detailbewertungen\\_labels.pdf](http://konsumentenschutz.ch/files/pdfs/downloads/06_11_detailbewertungen_labels.pdf)
- Lewis K.A. et al. (2010). *The contribution of UK farm assurance schemes towards desirable environmental policy outcomes*. Retrieved Mar 25, 2011, from Leaf UK: [http://www.leafuk.org/resources/000/562/790/kathyreport02\\_IJAS2010-495.pdf](http://www.leafuk.org/resources/000/562/790/kathyreport02_IJAS2010-495.pdf)
- LGA Analysis and Research. (2009). *War on Waste – Summary - food packaging study: wave 3*.
- LGA. (n.d.). *Food packaging basket*. Retrieved Jan 12, 2011, from Local Government Association: <http://www.lga.gov.uk/lga/aio/1616668>
- List of control bodies and control authorities in charge of controls in the organic sector provided for in Article 35(b) of Council Regulation (EC) No 834/2007*. (2010). Retrieved Feb 16, 2011, from European Commission: [http://ec.europa.eu/agriculture/organic/files/consumer-confidence/inspection-certification/EU\\_control\\_bodies\\_authorities\\_en.pdf](http://ec.europa.eu/agriculture/organic/files/consumer-confidence/inspection-certification/EU_control_bodies_authorities_en.pdf)
- Loacker S., Müller M. (2011). *Die Bio-Illusion*. Retrieved May 9, 2011, from Der Schweizerische Beobachter: [http://www.beobachter.ch/natur/natuerlich-leben/lebensmittel-ernaehrung/artikel/ernaehrung\\_die-bio-illusion/](http://www.beobachter.ch/natur/natuerlich-leben/lebensmittel-ernaehrung/artikel/ernaehrung_die-bio-illusion/)
- LOHAS. (2011). Retrieved Feb 18, 2011, from Lifestyle of Health and Sustainability: <http://www.lohas.com/>
- LOHAS. (2007). Europäer verhalten sich umweltbewusster als Amerikaner. *Ethisches Verbraucherverhalten*. Porter Novelli.
- Loureiro M.L. et al. (2002). Will Consumers Pay a Premium for Eco-labeled Apples? *The Journal of Consumer Affairs*, 36 (2).
- Loureiro, M. (2003). Rethinking new wines: implications of local and environmentally friendly labels. *Food Policy*, 28, 547–560.
- Lozano J., Blanco E., Rey-Maqueira J. (2010). Can ecolabels survive in the long run? The role of initial conditions. *Ecological Economics*, 69 (12), pp. 2525-2534.
- M. Demmeler, B. B. (2005). Energiebilanz von regionalen Lebensmitteln-Eine kritische Auseinandersetzung mit einer Studie über Fruchtsäfte und Lammfleisch. *Der kritische Agrarbericht*, pp. 182-188.
- Macdiarmid J. et al. (2011). *Livewell: a balance of healthy and sustainable food choices*. WWF.
- MacMillan T., Middleton J. (2010). *Livestock consumption and climate change: Progress and priorities*. Food Ethics Council, WWF.
- Making Local Food Work. (2010). *Influencing consumer buying behaviour*. MLFW.

- Manalili N.M., Dorado M.A., van Otterdijk R. (2011). Appropriate Food Packaging Solutions for Developing Countries.
- McCooley L. (2010). *CIAA Statement on Council Political Agreement on Food Labelling*. Retrieved Jan 25, 2011, from CIAA: [http://www.ciaa.be/documents/press\\_releases/CIAA\\_press\\_release\\_-\\_food\\_info.pdf](http://www.ciaa.be/documents/press_releases/CIAA_press_release_-_food_info.pdf)
- Meisterling K., Samaras C., Schweizer V. (2009). Decisions to reduce greenhouse gases from agriculture and product transport: LCA case study of organic and conventional wheat. *Journal of Cleaner Production*, 17, pp. 222-230.
- Meisterling K., Samaras C., Schweizer V. (2009). Decisions to reduce greenhouse gases from agriculture and product transport: LCA case study of organic and conventional wheat. *Journal of Cleaner Production*, 17 (2), pp. 222-230.
- Metra Martech. (2002). *The impact of labelling schemes*. Retrieved Mar 14, 2011, from Department for Business Innovation and Skills: <http://www.bis.gov.uk/files/file8163.pdf>
- Miller D.D., Mariani S. (2010). Smoke, mirrors, and mislabeled cod: poor transparency in the European seafood industry. *Frontiers in Ecology and the Environment*, 8, pp. 517-521.
- Mourad A.L. et al. (2006). A Simple Methodology for Elaborating the Life Cycle Inventory of Agricultural Products. *The International Journal of Life Cycle Assessment*, 12 (6), pp. 408-413.
- N., H. (2008). *Energy Use and Green House Gas Emissions in Organic Agriculture*. Danish Research Centre for Organic farming, International conference organic agriculture and climate change.
- Niggli U. et al. (2009). *Gesellschaftliche Leistungen der biologischen Landwirtschaft*. (unpublished).
- Niggli, U. et al. (2009). *Low Greenhouse Gas Agriculture: Mitigation and Adaptation Potential of Sustainable Farming Systems*. FAO.
- Nilsson K., Sund V., Florén B. (2011). The environmental impact of the consumption of sweets, crisps and soft drinks. *TemaNord 2011:509*.
- Nilsson K., Sund V., Florén B. (2011). *The environmental impact of the consumption of sweets, crisps and soft drinks*. Nordic Council of Ministers.
- NORA. (2005). *Ecolabel for marine captured fish: a Nordic Fisheries Initiative*. Retrieved May 14, 2011, from Nordisk Atlantsamarbejde: <http://www.nora.fo/files/13/20080606144145271.pdf>
- Oakdene Hollins. (2010). *FO0419: Appendix A. Literature Review*. Defra.
- Organic Action Plan. (n.d.). *Organic Action Plans in Europe - Compilation of results from the EU funded research project ORGAP*. Retrieved May 10, 2011, from Organic Action Plan: [http://www.orgap.org/documents/action\\_plan\\_targets.pdf](http://www.orgap.org/documents/action_plan_targets.pdf)
- (2010). *Organic Aquaculture*. IFOAM.
- Organic Food Supply Chains*. (n.d.). Retrieved Apr 21, 2011, from Logistics Review: [http://cscmp.org/Students/downloads/Winter03\\_04.pdf](http://cscmp.org/Students/downloads/Winter03_04.pdf)
- Oughton E. (2008). *Determining consumer expectations and attitudes towards organic/low input food quality and safety*. Quality Low Input Food.
- Padel S., Foster C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British Food Journal*, 107 (8), 606-625.
- Paxton, A. (2011). *The Food Miles Report*. Sustain.
- Pelletier N., Tyedmers P. (2008). Life Cycle Considerations for Improving Sustainability Assessments in Seafood Awareness Campaigns. *Environmental Management*, 42, 918-931.
- Ploeger A. *Organic Food and Consumer Acceptance – Recommendations for Emerging Markets*. University of Kassel.

- Poritosh R. et al. (2009). *A review of life cycle assessment (LCA) on some food products*. Journal of Food Engineering , 90 (1), pp. 1-10.
- Puigarnau, J. A. (2011). *Complementary considerations on legal issues on GMO cultivation ...* Retrieved May 15, 2011, from Council of the European Union: available at <http://register.consilium.europa.eu/pdf/en/10/st16/st16826-ad01.en10.pdf>
- Quested T., Johnson H. (2009). *Household Food and Drink Waste in the UK*. WRAP.
- Raimbault M., Humbert S. (2011). *ISO considers potential standard on water footprint*. Retrieved May 15, 2011, from ISO: [http://www.iso.org/iso/isofocusplus\\_bonus\\_water-footprint](http://www.iso.org/iso/isofocusplus_bonus_water-footprint)
- Rauh V. et al. (2011). *7-Year Neurodevelopmental Scores and Prenatal Exposure to Chlorpyrifos, a Common Agricultural Pesticide*. *Environ Health Perspect* :- . doi:10.1289/ehp.1003160 .
- Red Tractor Farm Assurance. (2010). *Beef and Lamb Standards*. Assured Food Standards.
- Reddy S., Lang T., Dibb S. (2009). *Setting the Table: Advice to Government on priority elements of sustainable diets*. Sustainable Development Commission.
- Royal Haskoning Ltd. (2007). *Sustainable Production and Consumption of fish and shellfish-Environmental Impact Analysis*. Defra.
- RSPCA. (n.d.). *Freedom Food*. Retrieved Apr 20, 2011, from RSPCA: [http://www.rspca.org.uk/freedomfood/aboutus/-/article/FF\\_AboutUs](http://www.rspca.org.uk/freedomfood/aboutus/-/article/FF_AboutUs)
- RSPCA welfare standards for farmed Atlantic salmon*. (2010). Retrieved May 11, 2011, from RSPCA: <http://content.www.rspca.org.uk/cmsprd/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobnocache=false&blobtable=MungoBlobs&blobwhere=1232992828497&ssbinary=true>
- Saarinen M., Thun R. (2009). *SWAN Labelling of Food Products*. MTT Agrifood Research, Finland Biotechnology and Food Research.
- Sainsbury K. (2008). *Review of Guidelines for Ecolabelling of Fish and Products from Capture Fisheries, and Recommended Minimum Substantive Requirements*. FAO Fisheries Report.
- Schader C., Stolze M., Gattinger A. (2011). *Environmental performance of organic farming. Draft Chapter Green technologies in food production and Processing*.
- Schleyerback K., v. Alvensleben R. *The Problem of Labeling and Branding Regional Products*. University of Kiel.
- Schultz I. et al. (2003). *Zielgruppen für den Bio-Lebensmittelmarkt*. Institute for Social-Ecological Research (ISOE).
- Segal R., MacMillan T. (2009). *Water labels on food: issues and recommendations*. Food Ethics Council.
- Segre A. et al. (2010). *Joint declaration against food waste*.
- Sensi, A. (1995). *Agriculture and acidification*. Retrieved May 11, 2011, from European Commission: [http://ec.europa.eu/agriculture/envir/report/en/acid\\_en/report.htm](http://ec.europa.eu/agriculture/envir/report/en/acid_en/report.htm)
- Silsoe Research Institute (BBSRC). (2005). *Determining the environmental burdens and resource use in the production of agricultural and horticultural commodities*. Defra.
- Smith A. et al. (2005). *The Validity of Food Miles as an Indicator of Sustainable Development*. AEA Technology Environment for Defra.
- Smith M.R., Koenig A. (2010). Environmental risk assessment for food-related substances. *Food Control* , 21 (12), pp. 1588-1600.



- Soil Association. (2011). *Air Freight: A Review of the Soil Association's Position*. Soil Association.
- Soil Association. (2004). *Organic Food: Understanding the consumer and increasing sales*. Soil Association.
- Soil Association. (2007). *Should the Soil Association tackle the environmental impact of air freight in its organic standards?* Soil Association.
- Soil Association. (2011). *The Lazy Man of Europe*. Soil Association.
- Sønderskov K.M., Daugbjerg C. (2010). The state and consumer confidence in eco-labeling: organic labeling in Denmark, Sweden, The United Kingdom and The United States. *Agric Hum Values/ Springer*.
- Sonesson U., Cederberg C., Berglund M. (2009). *Greenhouse gas emissions in animal feed production*. Klimatmärkning.
- Sonesson U., Cederberg C., Berglund M. (2009). *Greenhouse gas emissions in beef production*. Klimatmärkning.
- Stagl, S. (2002). Local Organic Food Markets: Potentials and Limitations for Contributing to Sustainable Development.
- Stolz H., Hamm U., Stolze M. (2007). Applicability of analysis techniques to determine consumer behaviour. *3rd QLIF COngress*. Hohenheim.
- Sustain: the alliance for better food and farming. (2010). *Plenty more fish in the sea?* Good Food for Our Money campaign.
- Szeremeta A. et al. (Eds.). (2010). *Organic Aquaculture*. IFOAM.
- Teufel J. et al. (2009). *Untersuchung zur möglichen Ausgestaltung und Marktimplementierung eines Nachhaltigkeitslabels zur Verbraucherinformation*. Öko-Institut.
- The Gallup Organisation. (2009). *Europeans' attitudes towards the issue of sustainable consumption and production*. European Commission Flash Eurobarometer.
- Thøgersen J. (2006). Predicting Consumer Choices of Organic Food Results from the CONDOR Project. *Joint Organic Congress: Understanding consumption*. Odense.
- Thomassen M.A et al. (2008). Attributional and consequential LCA of milk production. *The International Journal of Life Cycle Assessment*, 13 (4), pp. 339-349.
- Thomassen M.A. et al. . (2007). *Life cycle assessment of organic and conventional milk production in the Netherlands*.
- Thrane, M. (2004). *Environmental Impacts from Danish Fish Products. PhD dissertation (main report)*. Aalborg University, Department of Development and Planning, Aalborg, Denmark.
- (2006). *Tiefenanalyse der realisierten Nachfrage nach Öko-Lebensmitteln auf der Basis von Paneldaten*. University of Kassel.
- TNS Infratest Politikforschung. (2009). Online Survey Eco-label Flower - Results of a representative survey. TNS Infratest Politikforschung.
- Tobler C., Visschers V.H.M., Siegrist M. (2011). *Organic Tomatoes Versus Canned Beans: How Do Consumers Assess the Environmental Friendliness of Vegetables?* Retrieved Jan 9, 2011, from Environment and Behavior published online: <http://eab.sagepub.com/content/early/2011/01/07/0013916510372865>
- Torjusen H. et al. (2004). *European Consumers' Conceptions of Organic Food*. National Institute for Consumer Research, Norway.
- (24/12/2002). *Treaty establishing the European Community (Nice consolidated version) - Part Three: Community policies - Title XIX: Environment - Article 174 - Article 130r - EC Treaty (Maastricht consolidated version)*. Official Journal C 325.
- Tukker A. et al. (2006). *Environmental Impact of Products (EIPRO)*. IPTS, ESTO. JRC European Commission.

- Tukker A. et al. (2006). *Environmental Impact of Products (EIPRO) Annex report*. IPTS, ESTO. JRC European Commission.
- Tukker A. et al. (2009). *Environmental Impacts of Diet Changes in the EU*. IPTS.
- UK Cabinet Office. (2008). *Food Matters - Towards a Strategy for the 21st Century*. Retrieved Feb 1, 2011, from Cabinet Office of the UK: <http://webarchive.nationalarchives.gov.uk/> + [http://www.cabinetoffice.gov.uk/strategy/work\\_areas/food\\_policy.aspx](http://www.cabinetoffice.gov.uk/strategy/work_areas/food_policy.aspx)
- UK Cabinet Office. (2008). *Food: an analysis of the issues*. Cabinet Office of the UK.
- Underhill S.E., Figueroa E.E. (1996). Consumer Preferences for Non-Conventionally Grown Produce. *Journal of Food Distribution Research*, 27 (2).
- University of Hertfordshire. (2007). *Assessment of Reduction in Environmental Burdens through Targeted Measures compared with Whole Farm Approaches in Cropping and Livestock Systems Appendix C*. Defra.
- University of Hertfordshire. (2007). *Assessment of Reduction in Environmental Burdens through Targeted Measures compared with Whole Farm Approaches in Cropping and Livestock Systems*. Retrieved Mar 24, 2011, from Defra Science and Research Projects: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14988>
- University of Hertfordshire. (2007). *Assessment of Reduction in Environmental Burdens through Targeted Measures compared with Whole Farm Approaches in Cropping and Livestock Systems Appendix B*. Defra.
- University of Hertfordshire. (2007). *Assessment of Reduction in Environmental Burdens through Targeted Measures compared with Whole Farm Approaches in Cropping and Livestock Systems Appendix D*.
- University of Hertfordshire. (2010). *Effective Approaches to Environmental Labelling of Food Products - Appendix A. Literature Review*. Defra.
- University of Hertfordshire. (2010). *Effective Approaches to Environmental Labelling of Food Products - Appendix B. Analysis of environmental impacts and their integration and communication*. Defra.
- University of Hertfordshire. (2010). *Effective Approaches to Environmental Labelling of Food Products - Appendix C. Consumer and industry costs, benefits and behaviour*. Defra.
- University of Hertfordshire. (2010). *Effective Approaches to Environmental Labelling of Food Products - Appendix D. Development of a framework for practical and effective environmental labelling*. Defra.
- University of Hertfordshire. (2010). *Effective Approaches to Environmental Labelling of Food Products - Report*. Defra.
- Upham P., Dendler L., Bleda M. (2010). Carbon labelling of grocery products- public perceptions and potential emissions reductions. *Journal of Cleaner Production*, 19 (4), 348-355.
- v. Alvensleben R., Schrader S-K. (1998). Consumer Attitudes towards Regional Food Products - A Case-Study for Northern Germany. *AIR-CAT workshop "Consumer Attitudes towards Typical Foods"*. Dijon: Institute for Agricultural Economics, University of Kiel.
- von Alvensleben R., Bruhn M. *Verbrauchereinstellungen zu Bioprodukten-Ergebnisse einer neuen Langfriststudie*. Institute of Agricultural Economics, University of Kiel.
- Weber C.L., Matthews H.S. (2008). Food-Miles and the Relative Climate Impacts of Food Choices in the United States. *Environ. Sci. Technol.*, 42, pp. 3508–3513.
- Weidema B.P. et al. (2008). *Environmental Improvement Potentials of Meat and Dairy Products*. European Commission.
- Wessells C.R. et al. (1999). Assessing Consumer Preference for Ecolabeled Seafood: The Influence of Species, Certifier and Household Attributes. *American Agricultural Economics Association*.

Wessells C.R. et al. (2001). *Product certification and ecolabelling for fisheries sustainability*. FAO Fisheries Technical Papers.

which? (2010). *Making sustainable food choices easier*. which?

Wier M. et al. (2005). Perceptions, values and behaviour: The case of organic foods. *Agriculture and Human Values (unpublished)* .

Wier M. et al. (2008). The character of demand in mature organic food markets: Great Britain and Denmark compared. *Food Policy* , 33 (5), pp. 406-421.

Willer H. (2011). *Global Organic Area: Continued Growth*. FiBL.

Willer, H. (2011, May 30). Key results from the survey on organic agriculture worldwide 2011 Part 3: Organic agriculture in the regions 200, Presentation. FiBL.

Willer, H. and Kilcher, L. (Eds):. (2011). *The World of Organic Agriculture. Statistics and Emerging Trends*. IFOAM, Bonn, FiBL Frick.

Williams H., Wikstrom F. (2011). Environmental impact of packaging and food losses in a life cycle perspective: a comparative analysis of five food items. *Journal of Cleaner Production* , 19 (1), pp. 43-48.

Wirthgen A. (2005). Das Image Deutscher Öko-Zeichen: Unterscheiden Verbraucher zwischen Öko-Verbandszeichen, Öko-Herstellermarken, Öko-Handelsmarken und dem Biosiegel? *Ende der Nische, Beiträge zur 8. Wissenschaftstagung Ökologischer Landbau*. Kassel University Press GmbH.

Wolfenbarger L.L., Phifer P.R. (2000). The Ecological Risks and Benefits of Genetically Engineered Plants. *Science* , 290, pp. 2088-2093.

WWF, Konsumenten Schutz, Vier Pfoten. (2006). *Hintergrundbericht Labels für Lebensmittel*. Konsumenten Schutz.

Yan M-J, Humphreys J., Holden N.M. (2011). An evaluation of life cycle assessment of European milk production. *Journal of Environmental Management* , 92, pp. 372-379.

Zander K., Hamm U. (2010). Consumer preferences for additional ethical attributes of organic food. *Food Quality and Preference* , 21 (5), pp. 495-503.

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Oakdene Hollins is a research and consulting company working to support change toward more sustainable and less carbon-intensive products, processes, services and supply chains. The business sectors we work with include food and drink, textiles and clothing, metals and mining, wastes management, chemicals and materials, sustainable innovation and European and UK policy. We have built a strong reputation for integrity, reliability and excellence with public sector and private industry clients alike. We operate at a European scale and manage the Ecolabel scheme in the UK in collaboration with TUV/NEL.

Oakdene Hollins employs people with science, economics, business administration and manufacturing disciplines, so that within each industry sector we can offer the following core services: market and technology appraisal, protocol and standards development, economic modelling, lean manufacturing projects, financial impact assessment, management of research projects, ecolabelling advice, carbon footprinting and critical review of lifecycle assessments.

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FiBL is an independent, non-profit, research institute with the aim of advancing cutting-edge science in the field of organic agriculture. FiBL's research team works together with farmers to develop innovative and cost-effective solutions to boost agricultural productivity while never losing sight of environmental, health and socio-economic impacts. Alongside practical research, FiBL gives high priority to transferring knowledge into agricultural practice through advisory work, training and conferences. FiBL has offices in Switzerland, Germany and Austria and numerous projects and initiatives in Europe, Asia, Latin America and Africa.

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