

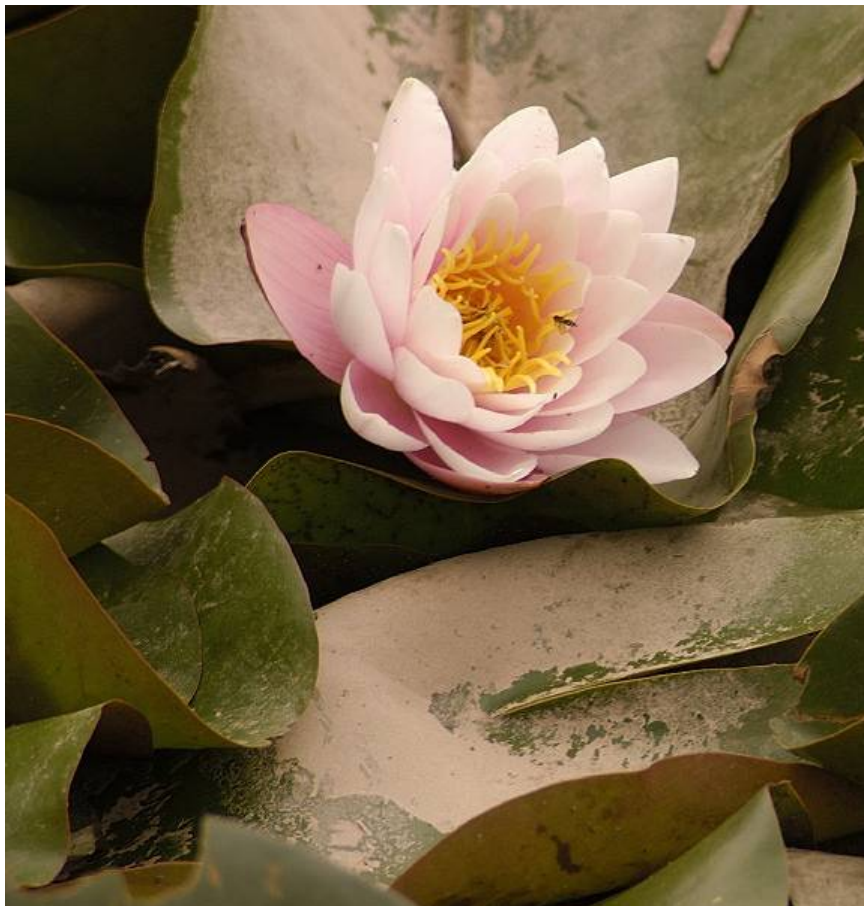
**A Survey on compliance with the Essential Requirements in the
Member States (ENV.G.4/ETU/2008/0088r)**

Final report

Authors: Arnoud Lust, Ilse Laureysens, Mike Van Acoleyen

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CLIENT

European Commission DG ENV
BU-5 05/120
1049 Brussel

Artemis Hatzi-Hull
Diana Oancea
+32 2 295.25.78
+32 2 296.39.80

PROJECTDESCRIPTION

A Survey on compliance with the Essential Requirements in the Member States and the accepted mechanisms followed by the economic operators to prove conformity, the use of the CEN Packaging and Environment Standards and the existing enforcement mechanisms.


STUDY

ARCADIS Belgium nv
Clara Snellingsstraat 27
2100 Deurne – Antwerp
VAT BE 0426.682.709
RPR ANTWERPEN
ING 320-0687053-72
IBAN BE 38 3200 6870 5372
BIC BBRUBEBB

Contact

Ilse Laureysens

Telephone

+32 3 328 62 81

Telefax

+32 3 328 62 87

E-mail

i.laureysens@arcadisbelgium.be

Website

www.arcadisbelgium.be

EXECUTIVE SUMMARY

General objective

The general objective of the contract was to assess available data and information on compliance with the Essential Requirements (Packaging Directive 94/62/EC) in the Member States, and to identify and address remaining needs with a view to assisting the Commission services and Member States authorities. The following tasks were performed:

- Collect data from national authorities on the compliance of the Essential Requirements on their territory
- Assess the accepted mechanisms followed by the economic operators to prove conformity.
- Assess the percentage of the economic operators using the CEN packaging and environmental standards
- Assess the existing enforcement mechanisms in place.

Data collection on compliance

The results of this study are based on three major sources of information and input:

- a questionnaire responded by 21 out of the 27 EU Member States
- a stakeholder meeting with mainly representatives from the packaging industry
- in-depth interviews with responsible people from mainly the competent authorities and some green dot organisations in six Member States (i.e. France, the UK, the Czech Republic, Belgium, Bulgaria and Cyprus)

Implementation and enforcement of the Essential Requirements

There is a large gap between the Member States and the industry with regard to implementation of and compliance with the Essential Requirements.

The industry is very much in favour of the Essential Requirements, which do not specify or predict the technical solutions for minimising the amount of packaging. They regret that so few Member States enforce implementation of the Essential Requirements.

The authorities, on the other hand, show little interest in enforcing the Essential Requirements. They leave it to the industry to comply. Arguments are other priorities (e.g. food safety), lack of staff and finances, and lack of understanding on how to assess compliance with the Essential Requirements.

Four Member States have implementation measures and an enforcement procedure for all three Essential Requirements, namely the UK, France, the Czech Republic and Bulgaria. However, none of these Member States has set up systems to assess the effectiveness of the enforcement mechanisms.

Except from occasional communication, company support and awareness rising, enforcement measures are mainly focussed on the heavy metals content of packaging. Nevertheless, even on this requirement, inspection efforts can be improved and augmented. Nearly all interviewed Member States expressed their desire to exchange knowledge on how to organise in-the-field-inspection on the heavy metals contents of

packaging. They would appreciate awareness raising programs where know-how and experience can be exchanged between competent authorities.

Enforcement on the Essential Requirements is made difficult by the general and vague way in which the requirements are formulated and the way in which the CEN standards are set up. However, this general approach is perceived as necessary to cover the complete and varied market of different packaging solutions.

Mechanisms to prove conformity, and the percentage of economic operators using the CEN standards

From the data collection on compliance we conclude that the CEN standards are the only formalised instrument that is used by industry to prove compliance with the Essential Requirements. The industry, however, incorporates the standards and the requirements into their day by day activities without following them literally, but as an element of their claimed environmental awareness and due diligence. Industry, in casu EUROPEN¹, claims that 65% of the industry is following the CEN standards, and 12% is following its own standards. However, throughout the communication with the Member States, the in-depth interviews with the six selected Member States and the stakeholder workshop, no indications have been found on independent standards to prove Essential Requirements compliance in another way than through the application of the CEN standards. Most of the companies that use the CEN standards have translated them in tailor made company standards. Only when companies are confronted with inspection, evidence is gathered in a structured way as proposed by the CEN standards to prove compliance. But inspection is scarce.

It can be concluded that many companies use the CEN standard philosophy, or more directly the Essential Requirements philosophy, in their decision taking processes, but they scarcely formulate this in documentation structured according to the literal CEN standard content, unless requested by competent authorities on occasion of an inspection.

Draft policy options

Based on the gathered information through the questionnaires, interviews and workshop, the consultant has prepared a set of fifteen draft policy options or suggestions, and has prepared building blocks for an impact assessment on these options. It should be noted that these policy options do not represent the vision of the Commission or engage the Commission in any way.

Set 1: Policy options for implementation and inspection measures with no impact on the legal or standardised provisions at EU level,

- Develop indicators to assess the success of national Essential Requirements implementation or enforcement measures. Proposals for top down and bottom up indicators are described for the requirement on prevention.
- Develop awareness raising and implementation support.

¹ European Organization for Packaging and the Environment, an industry and trade organization

- Work where needed at a European level, especially when negotiating with multinational companies or when setting up coordinated enforcement and inspection.
- Use labels wherever possible, e.g. similar to RoHS labels or Essential Requirements integrated in the eco-label or the New Approach CE mark.
- Promote the use of modern techniques, like the XRF-gun, to perform inspection the presence of hazardous substances.
- Make the distribution sector co-responsible on achieving the goals of the Essential Requirements, by obliging them to also offer an alternative with reusable packaging if they offer products in single-use packaging.
- Enhance frequent, independent and effective inspection

Set 2: Policy options with possible impact on the CEN standards

- Further develop and clarify the concept of “consumer acceptance”, with a focus on what is beneficial for the consumer.
- Clarify that the Essential Requirements should be complied with from the very start of the decision taking process, including strategic decisions.
- Review the CEN standards on a series of aspects, including the replacement of the concept ‘recyclable’ by ‘recycled’.
- Apply the Essential Requirements on individual products and their packaging

Set 3: Policy options with impact on the formulation of the Essential Requirements

- Change the legal statute of the Essential Requirements to make them voluntary in order to allow more detailed policy measures by Member States.
- Integrate the definitions and provisions of the Waste Framework Directive, with respect for the waste treatment hierarchy, in the Essential Requirements.
- Change the status of the CEN standards to give them a more obligatory nature.
- Introduce a provision in the Essential Requirements to ban hazardous substances in recycled materials

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1 Introduction

1.1 Background

On 31 December 1994, the Packaging and Packaging Waste Directive 94/62/EC (PPWD), encompassing all packaging placed on the market and all packaging becoming waste within the European Community, came into force. The PPWD aims at harmonising national packaging legislation with the twin objectives of preventing or reducing the environmental impact caused by packaging and packaging waste, and ensuring the functioning of the internal market so as to avoid obstacles to trade, as well as the distortion of or restrictions. To achieve these aims, PPWD promotes prevention of the production of packaging waste as a first priority along with the additional fundamental principles of reuse, recycling and other forms of recovery of packaging waste (such as energy recovery).

All packaging placed on the Community market needs to comply with the Essential Requirements as defined in Article 9 and Annex II to PPWD:

- Packaging weight and volume must be reduced to the minimum necessary for safety, hygiene and consumer acceptance of the packaged product;
- Hazardous substances and materials must be minimised as constituents of packaging with regard to emissions from incineration or landfill (Article 11 lays down specific limits on named heavy metals)
- If reuse is claimed, packaging must be suitable for that purpose as well as for at least one of the three recovery methods specified, i.e. material recycling, energy recovery or composting/biodegradation

Furthermore, the content of heavy metals lead, cadmium, mercury and hexavalent chromium may not exceed the concentration limits defined in Article 11.

Member States have the obligation to ensure that the Essential Requirements are fulfilled, but there is no requirement to do this in a particular way. Companies can prove compliance by using CEN standards, but are free to implement any other procedure to show compliance with the Essential Requirements.

All Member States have duly transposed the Essential Requirements to their national legislation and have notified these measures to the Commission. Previous studies have shown that only three Member States have set up a specific market surveillance system, i.e. France, the UK and the Czech Republic. No information is readily available on how the Essential Requirements are being implemented and enforced in the other Member States.

1.2 Objectives and structure of the study

The objective of this study is to assess available data and information, identify and address remaining needs with a view to assisting the Commission services and Member States authorities in evaluating the compliance to the Essential Requirements. More specifically, the following tasks were undertaken:

- Collect data from national authorities on the compliance of the Essential Requirements on their territory;
- Assess the accepted mechanisms followed by the economic operators to prove conformity;
- Assess the existing enforcement mechanisms in place;
- Assess the reasons for non compliance or for not introducing specific provisions to enhance compliance;
- Propose policy options and suggestions.

The report is structured as follows:

- Part 1 Assessment of compliance in EU-27: results of the literature review, the completed questionnaires from 21 Member States and the workshop with the packaging industry, and the development of a topdown indicator to assess compliance in the Member States.
- Part 2 Detailed assessment of compliance and enforcement procedures in 6 Member States: elaboration on the degree of compliance, and identification of bottlenecks for compliance through in-depth interviews with competent bodies in 6 selected Member States.
- Part 3 Draft policy options: SWOT analysis and building blocks for an impact assessment.

1.3 Conventions on naming the Essential Requirements

According to article 9 and annex II of the Packaging and Packaging Waste Directive, the Essential Requirements are described as follows:

1. Requirements specific to the manufacturing and composition of packaging

- Packaging shall be so manufactured that the packaging volume and weight be limited to the minimum adequate amount to maintain the necessary level of safety, hygiene and acceptance for the packed product and for the consumer. (*referred to as the “requirement on prevention” in this study*)
- Packaging shall be designed, produced and commercialized in such a way as to permit its reuse or recovery, including recycling, and to minimize its impact on the environment when packaging waste or residues from packaging waste management operations are disposed of. (*together with the second and third Essential Requirement referred to as the “requirements on reuse/recovery”*)
- Packaging shall be so manufactured that the presence of noxious and other hazardous substances and materials as constituents of the packaging material or of

any of the packaging components is minimized with regard to their presence in emissions, ash or leachate when packaging or residues from management operations or packaging waste are incinerated or landfilled. (*referred to as the "requirement on hazardous substances"*)

2. Requirements specific to the reusable nature of packaging

The following requirements must be simultaneously satisfied:

- the physical properties and characteristics of the packaging shall enable a number of trips or rotations in normally predictable conditions of use,
- possibility of processing the used packaging in order to meet health and safety requirements for the workforce,
- fulfil the requirements specific to recoverable packaging when the packaging is no longer reused and thus becomes waste.

3. Requirements specific to the recoverable nature of packaging

(a) *Packaging recoverable in the form of material recycling*

Packaging must be manufactured in such a way as to enable the recycling of a certain percentage by weight of the materials used into the manufacture of marketable products, in compliance with current standards in the Community. The establishment of this percentage may vary, depending on the type of material of which the packaging is composed.

(b) *Packaging recoverable in the form of energy recovery*

Packaging waste processed for the purpose of energy recovery shall have a minimum inferior calorific value to allow optimization of energy recovery.

(c) *Packaging recoverable in the form of composting*

Packaging waste processed for the purpose of composting shall be of such a biodegradable nature that it should not hinder the separate collection and the composting process or activity into which it is introduced.

(d) *Biodegradable packaging*

Biodegradable packaging waste shall be of such a nature that it is capable of undergoing physical, chemical, thermal or biological decomposition such that most of the finished compost ultimately decomposes into carbon dioxide, biomass and water.

In relation with the first Essential Requirement on the presence of hazardous substances as constituents of the packaging material, article 11 is taken into account as well:

Concentration levels of heavy metals present in packaging

1. Member States shall ensure that the sum of concentration levels of lead, cadmium, mercury and hexavalent chromium present in packaging or packaging components shall not exceed the following:

- 600 ppm by weight two years after the date referred to in Article 22 (i);
- 250 ppm by weight three years after the date referred to in Article 22 (i);
- 100 ppm by weight five years after the date referred to in Article 22 (i).

2. The concentration levels referred to in paragraph 1 shall not apply to packaging entirely made of lead crystal glass as defined in Directive 69/493/EEC.

2 Part 1: Assessment of compliance in EU-27

2.1 Data collection

2.1.1 Literature review

Existing information on implementation of the Essential Requirements in the Member States was collected mainly from the Member State reports on the implementation and application of Directive 94/62/EC, from the websites of the competent bodies in the Member States, and from earlier study on Directive 94/62/EC (e.g. EUROPEN survey of 2003, DTI survey of 2003, etc.).

The information that was collected from this existing literature was very limited. In the Member State reports only information on the existence of national standards could be found and information on alternative means that have been implemented to achieve prevention of packaging waste. On the websites of the competent bodies only general information on the Packaging Directive could be found. Earlier studies on the Essential Requirements and the Packaging Directive don't include information on the new Member States.

Therefore, additional information on the implementation of the Essential Requirements was retrieved directly from national authorities through means of a questionnaire.

2.1.2 Questionnaire

On 3 April 2009, all Member States received a questionnaire. On 4 April 2009, all addressees were called to make sure that the questionnaire was sent to the competent person. Member States who did not send the questionnaire by 17 April were reminded at least twice by phone and twice by mail.

Finland, Greece, Malta, Poland, Luxembourg and Slovak Republic did not respond after several reminders and telephone calls.

2.1.3 Comparative overview

Per Member State, a fact sheet was drawn up to summarize the collected information through the literature review and the questionnaires (see Annex 1). In addition, a summary table was drawn up (see Annex 2).

2.1.4 Workshop

The ToR did not require the organisation of a workshop. The industry, however, has valuable information on the practical implementation of the Essential Requirements in the different Member States.

Therefore, an informal workshop was organised with a limited number of (packaging) industry or stakeholder representatives/stakeholders to obtain information on the mechanisms to ensure compliance with the Essential Requirements in the different MS. The industry was asked to verify the information provided by the Member States. In addition, more information was requested on the use of company standards other than the CEN standards for complying with the Essential Requirements.

The workshop was held on 26 June 2009 in the premises of the Commission. In Annex 3, a list of invitees is presented as well as the minutes of the workshop.

2.1.5 Top down indicator development

Based on the results of the workshop and on the statement that it can be statistically proven that the amount of packaging is decreasing compared to the amount of packed product, it is attempted to develop a method to measure this relation between packed product and used packaging at the scale of the economy of the member States and the European Union. This indicator would help us to judge if the scope of the requirement on prevention is being reached.

2.2 Results from the questionnaires

In Annex 1 and Annex 2 an overview of the implementation of the Essential Requirements in 22 Member States is presented. For 6 Member States (i.e. Finland, Greece, Malta, Poland, Luxembourg and Slovak Republic), no information could be collected.

2.2.1 Implementation of the Essential Requirements

Most Member States don't have any rules or guidelines for companies to proof compliance with the Essential Requirements, other than compliance with the CEN standards. Exceptions are Bulgaria, Czech Republic, France and the UK.

In Bulgaria, producers and importers of packaging waste need to sign the 'Declaration for compliance with the requirements according to art. 4, paragraph 1, from the ordinance for the packaging and packaging waste'. In the case of compliance with heavy metal concentrations, the 'Declaration for compliance with the requirements according to art. 6, paragraph 1, from the ordinance for the packaging and packaging waste' needs to be signed by an accredited laboratory. Both declarations need to be presented upon request by the control bodies. The **declaration** on compliance with art. 9 of Directive 94/62/EC (Essential Requirements) needs to be kept for a term of 3 years; the declaration on compliance with art. 11 (heavy metal concentrations) for a term of 5 years. Guidelines on compliance with the Essential Requirements are available and they are spread by the recovery organizations through their web pages.

In the Czech Republic, producers and importers need to show compliance by submitting **technical documentation** to the control bodies, or they can show compliance by using Czech national standards. The Ministry of the Czech republic mentioned one additional standard to the CEN standards on packaging, namely Č ČSN ČR 770052-2 [477/2001 - section 6]] on the marking of packaging with regard to recovery. Methodical instructions on compliance with the Essential Requirements are available on the website of the Ministry of environment.

In France, packaging manufacturers need to ensure and declare, according to internal manufacturing control procedures, that the packaging placed on the market complies with the Essential Requirements. The outcome of the self-assessment should be available in a file comprising a **written declaration of conformity and technical documentation**.

Packaging in conformity with the CEN standards are considered to meet the requirements. Guidelines are available on the website of the French Packaging Council.

In the United Kingdom, use of the CEN standards to proof compliance is encouraged, because they offer a consistent framework by which companies can assess their packaging. If a company does not use the CEN standards, it will need to demonstrate and convince compliance officers that their chosen route still allows them to show that the Essential Requirements have been complied with. The compliance officer will assess compliance in this area in accordance with procedures set out in general guidance. It is not government policy to suggest alternative compliance routes as that would risk conferring status of particular route to compliance. Only the use of standards provide for a presumption of conformity; other compliance routes can only be determined to be valid from a legal perspective, based on the evidence submitted. A company must submit within twenty-eight days of the date of the request **technical documentation** or other information showing that the packaging complies with the Essential Requirements and the regulated metals concentration limits. The company must also ensure that it retains the technical documentation or other information for a period of four years from the date that he places the packaging on the market. For heavy metals, at the request of the enforcement authority, the company must submit within twenty-eight days of the date of the request the annual declaration of conformity and other information. It is an offence not to comply with the information requirements. Several guidelines and publications are available.

More information on how the regulations and procedures in these four countries are enforced in practice is presented in Chapter 3.

Some Member States have indicated why they don't have (yet) a compliance scheme or enforcement procedure:

- Lack of staff as the main bottleneck for compliance and enforcement
- Lack of finances as bottleneck for compliance and enforcement
- Provisions in article 9 of the directive require the authorities to be able to clearly determine whether or not a particular packaging item fulfils the requirements of the directive. Both the formulations in the directive and the standards do not contain precise requirements to make such an assessment in a sufficiently clear and indisputable way. The only requirement we can enforce is the concentration limits of heavy metal because we here can measure the content.
- As producers and packers are implicitly motivated to implement Essential Requirements in order to fulfil the recovery requirements set out for them in legislation, no additional compliance scheme is created
- There is less focus on prevention of packaging waste, because the environmental impact is mainly caused by production of the product; therefore it is important that the product is sufficiently protected by the packaging
- A lot of work has been put the past years in achieving collection and recycling targets.
- Authorities rely heavily on the use of the standards.

2.2.2 Enforcement of the Essential Requirements

Only four Member States have recently inspected companies on compliance with the Essential Requirements, namely Austria, the Czech Republic, the Netherlands and the United Kingdom. Remarkable is that Austria and the Netherlands don't have a formalised compliance scheme other than the CEN standards, but that they do inspect on compliance with the Essential Requirements.

Other Member States with a compliance scheme and enforcement mechanism in place, i.e. Bulgaria and France, have not performed inspections in the past three years. France has inspected companies when the packaging legislation came into force, but hasn't performed any inspections ever since.

In comparison, inspection on compliance with art. 11 of the Packaging directive, i.e. limits on heavy metal concentrations in packaging, are more common in the different Member States. The competent body for enforcement differs between Member States, ranging from the Ministry of environment to the Ministry of economy / trade and consumer protection, and ranging from national to local authority.

2.2.3 Alternative means of achieving prevention of packaging and packaging waste

In almost every Member State, the following two measures have been implemented to achieve prevention of packaging and packaging waste:

- Information and awareness through contests and awards, pilot projects, awareness raising campaigns etc.
- Fiscal measures: tax on products in function of the weight and recyclability of the packaging; for reusable packaging the tax has to be paid only once

Some countries have implemented specific regulations, such as:

- Prevention plans: in Belgium and Spain companies who put (import) large amounts of packaging on the market need to report their prevention efforts. A prevention plan comprises reduction objectives and the measures to achieve these objectives. They need to be approved by the authorities.
- Obligation to produce reusable packaging: in the Czech Republic, trading premises larger than 200 square metres are obliged to offer beverages in reusable packaging if they exist on the market. In Portugal, all distributors/retailers selling soft drinks, beer, natural mineral water, spring water or other bottled water and table wines (excluding wines classified as regional wine and VQPRD) in non-reusable packaging must also sell the same category of product in reusable packaging to provide consumer choice.

Other measures include:

- Deposit systems (e.g. Denmark, Germany, the Netherlands)
- Voluntary prevention plans (Hungary, Italy, UK)
- Formalised cooperation with the industry (e.g. Denmark)

Note: The list of prevention measures above is not exhaustive, but merely based on the implementation reports regarding Directive 94/62/EC of the Member States and on the completed questionnaires.

2.2.4 Administrative and financial costs

Most Member States do not report on the administrative and financial costs.

The following data are available:

- Austria: €1100 per company (including the inspection of amounts of packaging material put on the market and reporting obligations also)
- Ireland: Against the background of 26467 waste-related inspections being carried out by local authorities in 2008 within an allocated budget of circa €7,4 million, the average waste inspection would amount to approximately €280 in personnel, administrative and financial costs.

2.3 Industry performance

The main message of the industry, as captured in the stakeholder workshop, was that Member States take only limited steps to implement the Essential Requirements other than realising the legal transcription in national legislation. The industry itself, however, has incorporated the idea of the Essential Requirements and the methods of the CEN standards into its own working procedures.

The industry is very much in favour of the Essential Requirements, and is resistant to more technical requirements. Arguments for the use of the present Essential Requirements are:

- They are the best guarantee for safeguarding free movement of packaging. If Member States can implement their own requirements, this could severely restrict free movement.
- They are an instrument for the environmental department of a company to insist on minimising the amount of packaging. The marketing department, for example, prefers eye-catching packaging, sometimes implicating excessive packaging.
- The development of technical requirements for the minimisation of packaging is not feasible since they should be made product specific.

According to EUROPEN, 77% of companies has implemented the CEN standards. But most companies do not follow the standards to the letter, but have translated them to tailor made company standards. These standards have been fully incorporated in the company management system. Often companies do not even realise that they are complying with the Essential Requirements.

The Packaging Directive applies to the authorities of the Member States. In practice, however, the companies are implementing certain provisions of the Packaging Directive, while most Member States are not. Member States rely heavily on the CEN standards, and do not really know how to assess compliance with the Essential Requirements. EUROPEN has offered to organise workshops for officials to help them understand how

the Standards can be used to ensure compliance with the Essential Requirements. But there seems to be little interest in enforcement of the Essential Requirements. Most Member States have other priorities, such as food safety. Companies sometimes include audits on their global corporate governance or on their in-house working standards, in which they can pay attention to the Essential Requirements as well. But auditing merely on the Essential Requirements has not been observed.

The minutes of the stakeholder meeting are included in Annex 3.

2.4 Indicators for the effectiveness of compliance measures

The indicator developed below aims to measure compliance with the requirement on prevention by proving or contradicting the often used statement of the industry that the volume of packaging used is diminishing, related to the amount of packed goods that are being put on the market.

The first paragraphs elaborate on the assumptions and required data for use of the indicator. In paragraphs 2.4.6 and 2.4.6, the results on compliance with the requirement on prevention in EU-27 are presented.

2.4.1 Goal and basic assumption

Based on available official statistics, an indicator can be developed to evaluate if the ratio between the quantity of packed product and the quantity of used packaging is diminishing, in line with the provisions in the requirement on prevention to limit the packaging volume and weight to the necessary minimum.

The indicator can roughly be presented as follows:

$$d\left(\frac{\Sigma \text{packaging}}{\Sigma \text{packed product}}\right)/dt$$

equation 1 Indicator for the first Essential Requirement

The proposed indicator is monitoring the whole market of a Member States and has the ambition to assess if the ratio between packaging and packed products is diminishing over time. This could be indicative for positive evolutions in compliance with the requirement on prevention. It does not respond to the question if this is a spontaneous market evolution, the result of deliberate measures taken by industry, or the effect of successful policy and legal measures taken by government to implement the requirement on prevention.

However if we assume that some specific policy measures taken by Member States are effective, we should be able to observe a difference in the indicator between these Member States and other Member States.

The basic assumption is that compliance can be measured with the balance between the quantity of generated packaging waste and the amount of product put on the market in an individual Member State.

2.4.2

Data source for the numerator “packaging”

The quantity of packaging waste has a linear correlation with the amount of packaging used in a country. Every single-use packaging of a product that is put on the market ends up as packaging waste. There is a simple one-to-one relation. Reusable packaging at the end of its lifetime ends up once in the packaging waste fraction, even if it has been used several times to pack products that have been set on the market. This does not distort the indicator for the requirement on prevention. The use of reusable packaging will lower the ratio packaging/packed product but this is acceptable. The use of reusable packaging does not lower the amount of packaging used for a single product, often this is the opposite as reusable packaging ends to be more robust, but it does lower the total quantity of material used for packing a product at the scale of the total economy in a year. As the official indicator value for the quantity of packaging waste, the EUROSTAT Environmental data Centre on Waste is used as a data source.

European Commission > Eurostat > Environmental Data Centre on Waste

(http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/packaging_waste)

- Packaging waste, Data 2006 (update 18 December 2008)
- Packaging waste generation, recovery and incineration, Data 1997 – 2005 (DG environment website)

2.4.3

Data source for the denominator “quantity of products”

The quantity of products put on the market can be assessed either directly, from the PRODCOM and COMEXT databases of EUROSTAT, or indirectly using an indicator like the GDP.

The quantity of products put on the market in a Member State can be assessed as the total manufacture of goods plus the amount of good imported minus the amount of goods exported. PRODCOM is a system for the collection and dissemination of statistics on the production of manufactured goods. The title comes from the French "PRODUCTION COMMUNAUTAIRE" (Community Production) for mining, quarrying and manufacturing. It is based on a product classification called the PRODCOM List which consists of about 4500 headings relating to manufactured products. For the sake of the exercise only products that are usually marketed in a packed way needs to be counted for, excluding electricity, fuels and mining and quarrying output, that are distributed without needs for packaging.

The COMEXT external trade statistics cover all goods exchanged by the EU Member States, Candidates countries and EFTA countries with all partner countries (including EU Member States). The following information is available: goods presented according to several classifications, flow (import, export and balance), reporting country and partner country. Indicators are a.o. quantity in tonnes and for some products, quantity expressed in other units (items, pairs, hectolitres, etc.).

To retrieve data from the PRODCOM and COMEXT datasets the EUROSTAT tool at <http://epp.eurostat.ec.europa.eu/newxtweb/> is used.

The GDP (gross domestic product) is an indicator for a nation's economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly

different in absolute size. The EUROSTAT dataset is used where GDP is expressed in millions of Euro, at

http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/main_tables

2.4.4 Approach and limitations

Each Member State uses its own methodology and includes its own assumptions to calculate the amount of packaging waste. Therefore, comparison and benchmarking between countries is difficult. However, when a Member State uses the same methodology each years it can still serve as a basis to evaluate the changing balance between packaging and product. The change in this balance is an indicator for the compliance with the requirement on prevention. It can be compared between Member States and a benchmarking exercise can divide Member States between states with an increasing ratio, a diminishing ratio or a stabilised ratio.

The data from PRODCOM and COMEXT can contain some important gaps. Therefore, it needs to be examined if these data are usable, or if a more indirect indicator like the GDP could be used as a more stable and robust alternative. It can be assumed that GDP is linearly and strongly connected to the amount of product put on a national market.

2.4.5 Basic data

2.4.5.1 Packaging waste quantities

Data are as reported in the frame of the Packaging and Packaging Waste Directive. They are not fit for comparison between Member States. We assume that most Member States keep their method for data gathering and calculation rather stable over the years

Table 2.4.1 Reported packaging waste quantities in tonnes

tonnes	2000	2001	2002	2003	2004	2005	2006
Austria	1.170.000	1.096.650	1.059.000	1.159.972	1.101.839	1.111.400	1.166.352
Belgium	1.496.290	1.423.542	1.490.200	1.623.591	1.631.905	1.659.443	1.665.533
Bulgaria						520.192	430.480
Cyprus					145.056	123.066	63.065
Czech Rep				720.158	775.981	847.445	898.668
Denmark	852.258	864.616	856.716	956.774	948.870	983.011	970.890
Estonia					131.371	137.189	152.135
Finland	442.500	457.100	451.300	616.000	649.500	688.820	677.000
France	12.499.000	12.336.000	12.275.000	12.333.740	12.382.970	12.360.928	12.667.985
Germany	15.121.100	15.017.800	15.434.700	15.465.800	15.516.900	15.470.500	16.132.765
Greece	934.500	974.500	994.700	1.014.000	1.038.000	1.061.005	1.056.000
Hungary					815.000	853.044	884.957
Ireland	795.197	820.320	849.571	819.863	850.910	925.222	1.028.472
Italy	11.168.200	11.262.000	11.367.000	11.536.525	11.989.400	11.952.800	12.219.550
Latvia					236.600	263.833	306.838
Lithuania					233.950	264.016	283.672
Luxembourg	79.701	79.440	84.952	87.739	93.312	98.832	105.070
Malta							43.568
Netherlands	2.903.000	2.984.000	3.117.000	3.394.000	3.214.000	3.349.000	3.445.000
Poland					3.413.000	3.509.005	3.654.700
Portugal	1.248.259	1.285.418	1.298.269	1.406.267	1.430.266	1.498.121	1.732.815
Romania						1.140.844	1.309.381

Slovakia				413.253	370.387	346.700	300.515
Slovenia					161.507	168.630	204.182
Spain	6.628.035	5.950.509	6.374.074	7.375.134	7.443.710	7.798.421	8.006.787
Sweden	976.800	1.010.154	1.029.386	1.422.621	1.479.537	1.512.080	1.419.862
United Kingdom	9.179.981	9.313.900	9.897.255	10.059.371	10.230.001	10.280.196	10.471.264
European Union							
EU15	65.494.821	64.875.949	66.579.123	69.271.397	70.001.120	70.749.779	72.765.345
EU25					76.283.972	77.262.708	79.557.645
EU27						78.923.744	81.297.506

Reported data are rather consistent over the years. They show in general an augmenting trend:

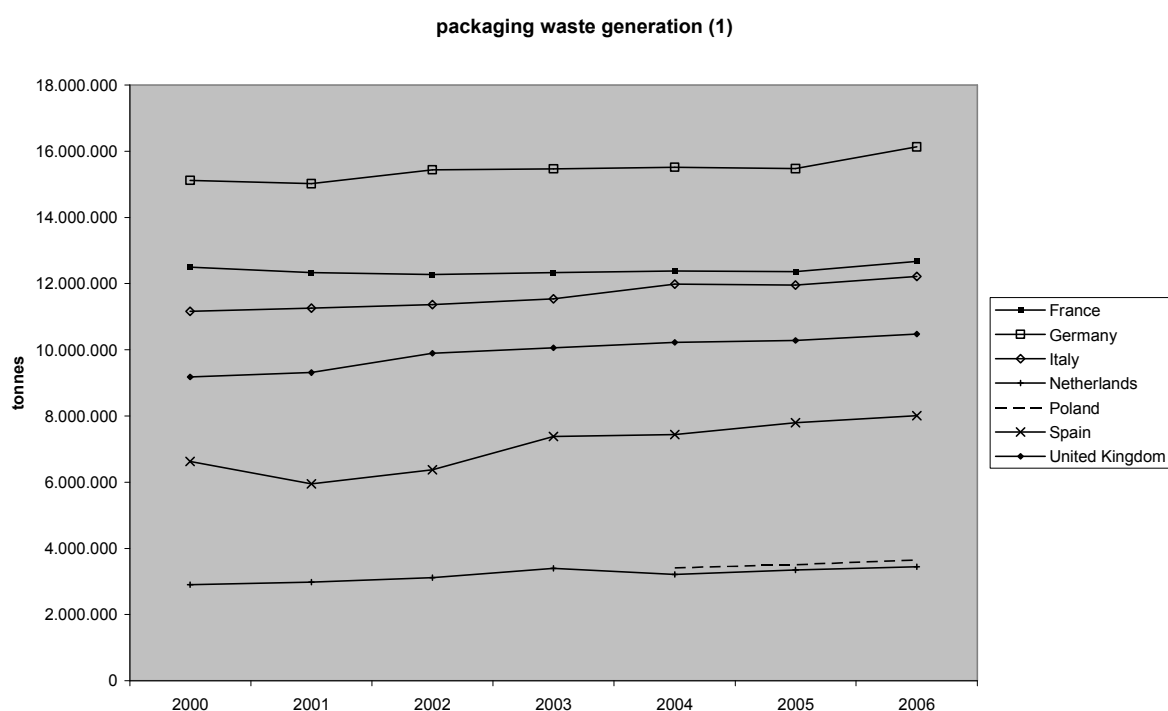


Figure 2.4.1 Generation of packaging waste, for Member States generating more than 2.000.000 tonnes annually

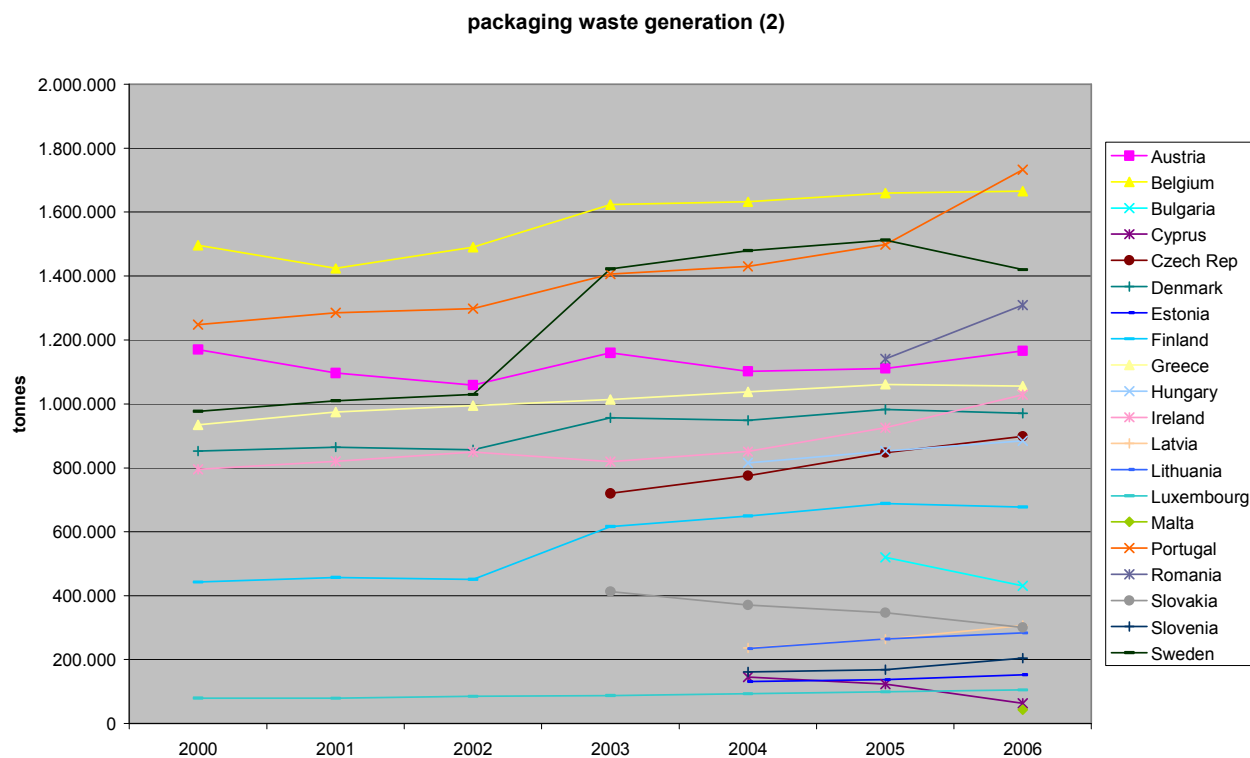


Figure 2.4.2 Generation of packaging waste, for Member States generating less than 2.000.000 tonnes annually

2.4.5.2

Data on production of manufactured goods

Data are sums from the quantities reported by each Member State in PRODCOM, as aggregated by EUROSTAT. They are not fit for comparison between Member States.

Table 2.4.2 Quantity of manufactured goods in tonnes, retrieved from the PRODCOM database

PRODCOM : manufactured (tonnes)

tonnes	2000	2001	2002	2003	2004	2005	2006
Austria	1.530.307	1.623.152	1.739.402	3.094.447	2.835.933	5.667.496	3.175.895
Belgium	11.815.307	18.835.805	18.665.167	19.928.652	22.682.711	19.840.428	19.992.293
Bulgaria		2.604.420	2.158.717	1.060.130	1.877.324	3.892.968	4.036.652
Cyprus							
Czech Rep		957.936	888.763	1.447.294	2.142.873	1.809.220	2.146.611
Denmark							
Estonia	141.973	160.032	268.346	383.885	401.414	538.732	390.853
Finland	22.798.549	20.689.357	24.652.972	22.173.268	22.755.037	21.853.376	21.100.977
France	36.870.322	38.090.206	34.586.324	102.387.772	107.038.457	104.384.976	105.465.561
Germany	103.904.946	105.538.107	108.889.449	199.975.230	73.417.410	241.702.299	129.144.798
Greece	1.499	2.366.424	2.308.412	2.131.972	1.836.702	1.497.499	1.199.018
Hungary		6.640.824	7.287.333	8.098.463	8.124.497	9.269.013	8.090.076
Ireland			307.982	624.538	290.142	283.870	300.707
Italy	50.401.569	51.762.394	55.073.379	102.748.139	110.349.327	102.159.706	110.996.154
Latvia		31.784	74.401	37.887	48.469	55.383	23.159
Lithuania	9.486	17.203	43.647	40.323	38.387	3.985.426	3.969.738
Luxembourg							
Malta							
Netherlands	14.377.001	11.391.816	11.378.848	8.997.559	9.611.363	11.123.431	15.790.114
Poland			20.810.903	25.060.509	38.668.713	40.184.017	49.647.164
Portugal	6.414.555	5.893.778	6.382.812	5.925.176	6.322.585	6.403.352	5.956.829
Romania	6.357.138	6.868.367	7.886.304	7.711.187	8.851.775	14.945.234	15.989.583
Slovakia	5.878.859	5.062.534	5.225.813	6.142.635	5.402.412	6.353.609	6.884.442
Slovenia		49.167	17.710	18.166	15.267	40.859	53.467
Spain	27.670.731	26.920.095	28.058.218	28.629.546	29.915.944	59.627.981	63.003.383
Sweden	23.730.269	25.003.300	24.404.105	9.087.211	9.367.006	9.489.724	115.314.792
United Kingdom	21.084.657	2.115.006	22.557.317	24.474.537	1.700.135	12.738.772	14.024.707
European Union							
EU15	823.888.127	718.363.961		858.748.193	924.935.558	963.644.039	
EU25				951.807.519	1.050.653.206	1.086.193.111	1.254.163.270
EU27				974.457.472	1.078.102.253	1.122.093.632	1.290.864.146

Data in PRODCOM are often inconsistent, mainly due to changing selection of products for which data are available or made public. For the scope of the indicator we need consistent time-series of at least three years. The latest consistent time series for every country, if occurring, are coloured green in the table above.

2.4.5.3

Data on import or export of products

Table 2.4.3 Quantity of exported goods in tonnes, retrieved from the COMEXT database

comext quantities exported (tonnes)

tonnes	2000	2001	2002	2003	2004	2005	2006
Austria	39.663.280	42.195.337	45.092.795	47.061.836	50.238.455	51.971.071	54.885.945
Belgium	186.898.455	181.141.652	193.250.588	204.541.708	216.801.232	216.606.043	185.902.827
Bulgaria	16.364.144	19.026.988	18.948.516	13.091.895	15.415.052	16.336.585	17.423.894
Cyprus	1.286.050	1.205.529	1.293.153	1.257.622	1.052.882	1.358.870	1.429.411
Czech Rep	40.818.248	40.344.418	41.916.349	44.527.268	49.565.461	50.118.417	44.463.011
Denmark	43.804.649	41.317.137	43.234.828	43.669.911	43.616.248	44.758.670	44.121.303
Estonia	9.075.676	8.861.303	9.000.423	9.590.517	9.400.608	9.939.774	11.781.066
Finland	37.659.401	37.089.189	39.484.658	40.037.077	41.726.945	38.955.898	43.603.494
France	202.127.494	190.928.404	188.262.445	197.862.896	199.933.197	212.289.494	194.528.158
Germany	289.236.303	291.677.542	303.707.020	318.457.705	349.488.634	349.812.677	370.450.275
Greece	24.413.052	23.196.448	17.902.600	18.256.667	18.359.908	20.298.635	21.462.898
Hungary	18.789.071	20.423.917	21.454.730	20.903.820	21.895.053	25.846.458	28.899.934
Ireland	11.664.943	12.030.723	11.789.565	11.979.833	12.946.359	13.365.716	13.739.520
Italy	119.294.819	123.110.003	118.587.221	121.350.087	128.178.989	134.705.442	122.640.488
Latvia	9.254.666	9.187.448	9.951.213	11.030.914	11.494.505	12.828.051	8.082.584
Lithuania	9.568.749	11.919.770	12.839.649	14.513.713	16.531.856	18.943.176	18.425.193
Luxembourg	15.396.687	15.560.958	13.854.461	9.446.575	11.832.426	10.237.806	10.033.418
Malta	530.039	56.669	64.215	117.991	181.839	173.102	160.390
Netherlands	238.157.674	283.515.074	273.108.786	272.417.963	302.175.068	316.842.065	281.476.933
Poland					74.476.596	76.685.698	78.643.036
Portugal	16.127.935	15.844.727	17.661.674	19.431.966	19.965.475	24.803.390	26.850.578
Romania	19.161.068	18.631.338	21.600.844	22.397.667	24.643.238	26.546.928	26.375.122
Slovakia					22.597.858	23.397.845	27.045.691
Slovenia	7.608.770	7.628.938	7.943.137	8.509.805	9.104.489	10.616.957	12.927.498
Spain	94.869.130	94.399.289	96.354.227	103.412.585	108.939.512	108.293.345	101.727.989
Sweden	72.996.478	70.071.969	72.475.408	76.542.082	82.327.450	85.238.111	88.620.321
United Kingdom	197.174.977	193.650.514	196.778.807	188.409.372	184.910.164	177.074.226	174.310.655
European Union							
EU15	1.589.485.275	1.615.728.966	1.631.545.083	1.672.878.262	1.771.440.062	1.805.252.586	1.734.354.801
EU25	1.770.697.062	1.801.287.755	1.823.841.446	1.876.368.752	1.987.741.207	2.035.160.933	1.966.212.614
EU27	1.806.222.274	1.838.946.081	1.864.390.807	1.911.858.314	2.027.799.498	2.078.044.446	2.010.011.631

Table 2.4.4 Quantity of imported goods in tonnes, retrieved from the COMEXT database

comext quantities imported (tonnes)

tonnes	2000	2001	2002	2003	2004	2005	2006
Austria	66.853.384	69.184.697	71.952.641	75.215.214	78.682.602	82.932.431	88.471.072
Belgium	241.729.204	242.099.283	248.794.287	261.105.909	276.464.596	279.309.909	256.788.985
Bulgaria	18.896.450	19.595.913	19.420.198	22.564.299	21.003.082	16.867.447	25.903.831
Cyprus	4.028.158	4.233.952	4.164.084	3.464.272	4.612.962	5.405.426	5.300.095
Czech Rep	47.478.024	49.956.394	47.788.162	51.168.365	60.692.681	57.057.011	55.420.930
Denmark	44.978.729	45.658.898	46.547.251	49.684.057	46.479.591	44.914.282	49.964.669
Estonia	5.593.142	5.661.721	6.093.804	7.556.303	9.504.602	9.063.112	11.477.924
Finland	57.390.192	59.774.149	60.740.048	68.017.874	66.957.241	64.382.337	68.550.505
France	341.868.355	330.331.175	331.409.034	342.226.425	370.346.566	371.396.612	353.267.250
Germany	520.987.309	506.632.837	512.836.850	541.783.287	560.397.411	548.287.174	579.735.738
Greece	44.267.544	49.381.132	44.155.344	50.162.118	50.322.208	49.644.751	52.419.213
Hungary	31.286.686	31.499.611	34.320.930	37.019.567	38.182.153	40.450.660	41.643.470
Ireland	30.787.126	30.806.033	29.745.359	30.125.453	32.877.822	35.979.394	36.927.624
Italy	329.023.479	330.031.568	334.806.017	343.781.714	360.280.442	361.176.635	347.726.456
Latvia	4.827.349	4.914.370	5.421.594	6.223.823	8.693.822	11.157.561	10.752.140
Lithuania	12.766.986	14.391.953	16.233.535	18.273.288	21.008.989	23.718.618	24.094.986
Luxembourg	18.721.051	18.275.646	17.021.413	18.902.073	21.261.950	20.110.606	21.017.421
Malta	1.801.808	1.208.592	1.342.903	1.503.252	1.920.569	1.902.806	2.148.865
Netherlands	305.297.106	328.217.065	329.707.379	340.436.029	360.025.272	399.311.717	367.656.365
Poland					91.492.164	93.035.422	98.074.843
Portugal	52.160.649	53.537.656	54.411.269	51.389.248	51.921.415	55.621.670	53.771.215
Romania	23.229.650	28.267.864	31.305.178	36.798.997	40.948.161	42.898.556	44.461.777
Slovakia					39.135.107	37.676.777	41.663.284
Slovenia	11.787.851	13.305.923	13.549.765	14.916.470	16.120.868	15.962.157	18.764.266
Spain	221.005.189	222.978.555	240.120.178	242.002.078	257.056.522	273.812.371	269.986.579
Sweden	71.293.630	67.018.824	69.702.082	74.107.211	76.571.761	77.038.404	77.051.266
United Kingdom	209.035.978	233.215.348	228.380.860	240.528.760	273.174.987	278.824.096	291.875.821
European Union							
EU15	2.555.398.925	2.587.142.864	2.620.330.009	2.729.467.448	2.882.820.386	2.942.742.390	2.915.210.179
EU25	2.775.481.693	2.815.211.470	2.858.415.922	2.985.481.991	3.174.184.303	3.238.171.939	3.224.550.982
EU27	2.817.607.793	2.863.075.247	2.909.141.298	3.044.845.287	3.236.135.546	3.297.937.943	3.294.916.589

2.4.6

Results

2.4.6.1

Denominator

The quantity of goods put on the market is assessed of the quantity of goods manufactured plus the import minus the export, all expressed in tonnes. It can only be calculated for these quantities where good or fair or consistent PRODCOM figures are available:

Table 2.4.5 Assessed quantities of goods put on the market

	assessed tonnes of products on the market						
tonnes	2000	2001	2002	2003	2004	2005	2006
Austria	28.720.412	28.612.511	28.599.247	31.247.825	31.280.080	36.628.855	36.761.021
Belgium		79.793.437	74.208.865	76.492.853	82.346.075	82.544.294	90.878.452
Bulgaria		3.173.344	2.630.399	10.532.535	7.465.353	4.423.830	12.516.589
Cyprus	2.742.108	3.028.423	2.870.930	2.206.650	3.560.080	4.046.556	3.870.685
Czech Rep				8.088.390	13.270.093	8.747.815	13.104.530
Denmark	1.174.080	4.341.760	3.312.422	6.014.146	2.863.343	155.613	5.843.365
Estonia							
Finland	42.529.340	43.374.317	45.908.363	50.154.065	47.985.333	47.279.815	46.047.988
France				246.751.301	277.451.826	263.492.094	264.204.654
Germany	335.655.952	320.493.402	318.019.279	423.300.812	284.326.186	440.176.797	338.430.261
Greece		28.551.108	28.561.156	34.037.423	33.799.001	30.843.616	32.155.333
Hungary		17.716.518	20.153.533	24.214.210	24.411.597	23.873.215	20.833.612
Ireland	19.122.183				20.221.605	22.897.548	23.488.811
Italy				325.179.766	342.450.780	328.630.900	336.082.122
Latvia							
Lithuania						8.760.868	9.639.531
Luxembourg	3.324.365	2.714.688	3.166.952	9.455.498	9.429.524	9.872.801	10.984.004
Malta	1.271.769	1.151.923	1.278.688	1.385.261	1.738.730	1.729.705	1.988.475
Netherlands	81.516.433	56.093.806	67.977.441	77.015.625	67.461.566	93.593.083	101.969.546
Poland					55.684.281	56.533.741	69.078.971
Portugal	42.447.268	43.586.707	43.132.406	37.882.459	38.278.525	37.221.633	32.877.466
Romania	10.425.720	16.504.892	17.590.638	22.112.517	25.156.698		
Slovakia					21.939.661	20.632.541	21.502.035
Slovenia	4.179.081	5.726.151	5.624.338	6.424.831	7.031.646	5.386.059	5.890.235
Spain	153.806.790	155.499.360	171.824.169	167.219.039	178.032.954		
Sweden				6.652.340	3.611.317		
United Kingdom				76.593.925	89.964.958	114.488.642	131.589.872
European Union							
EU15	1.789.801.777	1.689.777.860	988.784.926	1.915.337.380	2.036.315.882	2.101.133.843	1.180.855.378
EU25	1.004.784.631	1.013.923.715	1.034.574.475	2.060.920.758	2.237.096.302	2.289.204.118	2.512.501.637
EU27	1.011.385.519	1.024.129.166	1.044.750.491	2.107.444.445	2.286.438.302	2.341.987.129	2.575.769.104

As an alternative denominator the GDB can be used, expressed in millions of euro

Table 2.4.6 GDP expressed in millions of euro

millions euro	2000	2001	2002	2003	2004	2005	2006
Austria	207.528,80	212.498,50	218.847,70	223.302,30	232.781,80	243.584,90	256.161,60
Belgium	251.741,00	258.883,00	267.652,00	274.726,00	289.629,00	302.112,00	318.223,00
Bulgaria	13.704,30	15.249,60	16.623,00	17.766,80	19.875,40	21.882,30	25.238,20
Cyprus	10.078,70	10.801,10	11.170,00	11.785,00	12.728,00	13.659,30	14.673,20
Czech Rep	61.495,20	69.044,70	80.003,60	80.924,10	88.262,00	100.190,10	113.695,90
Denmark	173.597,90	179.226,10	184.743,60	188.500,30	197.069,90	207.366,90	218.341,40
Estonia	6.103,00	6.916,40	7.757,10	8.692,60	9.651,40	11.090,60	13.104,30
Finland	132.198,00	139.789,00	143.808,00	145.795,00	152.151,00	157.070,00	167.009,00
France	1.441.373,00	1.497.187,00	1.548.559,00	1.594.814,00	1.660.189,00	1.726.068,00	1.806.429,40
Germany	2.062.500,00	2.113.160,00	2.143.180,00	2.163.800,00	2.210.900,00	2.243.200,00	2.321.500,00
Greece	137.929,50	146.427,80	156.614,80	171.409,80	185.851,40	197.645,00	213.206,70
Hungary	51.962,30	59.388,00	70.581,40	74.579,90	82.236,10	88.663,90	89.969,20
Ireland	104.844,60	116.990,10	130.190,00	139.441,90	148.974,80	162.168,00	177.286,40
Italy	1.191.057,30	1.248.648,10	1.295.225,70	1.335.353,70	1.391.530,20	1.429.479,30	1.485.377,30
Latvia	8.495,60	9.319,60	9.911,10	9.977,80	11.176,30	13.012,20	16.046,70
Lithuania	12.377,30	13.577,00	15.051,80	16.497,10	18.158,00	20.870,10	23.978,50
Luxembourg	22.000,60	22.572,30	23.992,30	25.834,30	27.520,10	30.237,10	33.921,10
Malta	4.221,10	4.300,50	4.488,90	4.421,40	4.517,60	4.799,40	5.117,90
Netherlands	417.960,00	447.731,00	465.214,00	476.945,00	491.184,00	513.407,00	539.929,00
Poland	185.713,80	212.293,80	209.617,40	191.643,80	204.236,50	244.420,10	272.088,90
Portugal	122.270,20	129.308,40	135.433,60	138.582,10	144.128,00	149.123,30	155.446,30
Romania	40.651,30	45.356,80	48.614,90	52.576,50	61.063,90	79.801,90	97.751,00
Slovakia	22.035,50	23.541,60	25.979,50	29.485,60	34.032,30	38.489,90	44.566,70
Slovenia	21.434,80	22.706,60	24.526,80	25.735,90	27.136,00	28.712,20	31.013,60
Spain	630.263,00	680.678,00	729.206,00	782.929,00	841.042,00	908.792,00	982.303,00
Sweden	266.422,00	251.339,90	264.243,50	275.657,00	287.689,40	294.673,50	313.449,80
United Kingdom	1.602.239,60	1.643.153,70	1.710.420,90	1.647.055,60	1.772.545,90	1.833.954,40	1.944.750,90
European Union							
EU15	8.763.925,50	9.087.593,00	9.417.331,10	9.584.146,10	10.033.186,40	10.399.749,60	10.934.467,80
EU25	9.147.842,90	9.519.482,20	9.876.418,70	10.037.889,20	10.525.320,60	10.963.657,30	11.558.485,40
EU27	9.202.198,40	9.580.088,60	9.941.656,60	10.108.232,50	10.606.260,00	11.065.341,50	11.681.474,70

2.4.6.2

Ratio, trend and indicator

Calculating the ratio of quantity or waste/quantity of product or quantity of waste/GDP gives a value for the need of packaging material to handle the marketed quantity of products. As described above, this value is no indicator that can be used to compare countries, but only to compare the results of one country in a time series. The real indicator is the trend of the line fitted through these values by linear regression. When this line goes up and the trend has a positive value, the quantity of packaging augments compared with the quantity of packed products. This can be interpreted as less compliance with the requirement on prevention over the years. We only calculate the trend if reliable data for more than three years are available. As the time series for the individual countries are not always equal in length and are not always covering the same years, comparison between Member States is possible but should be done with care. These differences in available time series occur more often when the quantity of products is used as a denominator. When the GDP is used more consistent time series are available.

As an indicator a semi quantitative mark is used as follows:

Table 2.4.7 Definition of the semi qualitative indicators for comparative compliance with the first Essential Requirement

++	Very positive	Trend value lower than the 20th percentile
+	Positive	Trend value between 20 th and 40 th percentile
o	Neutral	Trend value between 40 th and 60 th percentile
-	Negative	Trend value between 60 th and 80 th percentile
--	Very negative	Trend value above 80 th percentile

Table 2.4.8 Ratio, trend and indicator for the requirement on prevention, based on the quantity of packaging waste and the quantity of product put on the market

	2000	2001	2002	2003	2004	2005	2006		trend	indicator
Austria	4,07	3,83	3,70	3,71	3,52	3,03	3,17		-0,16	+
Belgium		1,78	2,01	2,12	1,98	2,01	1,83		0,00	-
Bulgaria						11,76	3,44			?
Cyprus					4,07	3,04	1,63		-1,22	++
Czech Rep				8,90	5,85	9,69	6,86		-0,23	+
Denmark										?
Estonia										?
Finland	1,04	1,05	0,98	1,23	1,35	1,46	1,47		0,09	--
France				5,00	4,46	4,69	4,79		-0,04	o
Germany	4,50	4,69	4,85	3,65	5,46	3,51	4,77		-0,03	o
Greece		3,41	3,48	2,98	3,07	3,44	3,28		-0,02	o
Hungary					3,34	3,57	4,25		0,45	--
Ireland					4,21	4,04	4,38		0,09	-
Italy				3,55	3,50	3,64	3,64		0,04	-
Latvia										?
Lithuania						3,01	2,94			?
Luxembourg	2,40	2,93	2,68	0,93	0,99	1,00	0,96		-0,35	++
Malta							2,19			?
Netherlands	3,56	5,32	4,59	4,41	4,76	3,58	3,38		-0,14	+
Poland					6,13	6,21	5,29		-0,42	++
Portugal	2,94	2,95	3,01	3,71	3,74	4,02	5,27		0,35	--
Romania										?
Slovakia					1,69	1,68	1,40		-0,15	+
Slovenia					2,30	3,13	3,47		0,58	--
Spain	4,31	3,83	3,71	4,41	4,18				0,03	-
Sweden				21,39	40,97					?
United Kingdom				13,13	11,37	8,98	7,96		-1,79	++
European Union										
EU15	3,66	3,84	6,73	3,62	3,44	3,37	6,16		0,12	--
EU25					3,41	3,38	3,17		-0,12	+
EU27						3,37	3,16			?

Table 2.4.9 Ratio, trend and indicator for the requirement on prevention, based on the quantity of packaging waste and the GDP

	2000	2001	2002	2003	2004	2005	2006		trend	indicator
Austria	5,64	5,16	4,84	5,19	4,73	4,56	4,55		-0,16	o
Belgium	5,94	5,50	5,57	5,91	5,63	5,49	5,23		-0,07	-
Bulgaria						23,77	17,06			?
Cyprus					11,40	9,01	4,30		-3,55	++
Czech Rep				8,90	8,79	8,46	7,90		-0,33	+
Denmark	4,91	4,82	4,64	5,08	4,81	4,74	4,45		-0,05	-
Estonia					13,61	12,37	11,61		-1,00	++
Finland	3,35	3,27	3,14	4,23	4,27	4,39	4,05		0,20	--
France	8,67	8,24	7,93	7,73	7,46	7,16	7,01		-0,27	+
Germany	7,33	7,11	7,20	7,15	7,02	6,90	6,95		-0,06	-
Greece	6,78	6,66	6,35	5,92	5,59	5,37	4,95		-0,31	+
Hungary					9,91	9,62	9,84		-0,04	--
Ireland	7,58	7,01	6,53	5,88	5,71	5,71	5,80		-0,31	+
Italy	9,38	9,02	8,78	8,64	8,62	8,36	8,23		-0,18	o
Latvia					21,17	20,28	19,12		-1,02	++
Lithuania					12,88	12,65	11,83		-0,53	+
Luxembourg	3,62	3,52	3,54	3,40	3,39	3,27	3,10		-0,08	o
Malta							8,51			?
Netherlands	6,95	6,66	6,70	7,12	6,54	6,52	6,38		-0,08	-
Poland					16,71	14,36	13,43		-1,64	++
Portugal	10,21	9,94	9,59	10,15	9,92	10,05	11,15		0,12	--
Romania						14,30	13,40			?
Slovakia				14,02	10,88	9,01	6,74		-2,37	++
Slovenia					5,95	5,87	6,58		0,32	--
Spain	10,52	8,74	8,74	9,42	8,85	8,58	8,15		-0,26	o
Sweden	3,67	4,02	3,90	5,16	5,14	5,13	4,53		0,22	--
United Kingdom	5,73	5,67	5,79	6,11	5,77	5,61	5,38		-0,04	-
European Union										
EU15	7,47	7,14	7,07	7,23	6,98	6,80	6,65		-0,12	o
EU25					7,25	7,05	6,88		-0,18	o
EU27						7,13	6,96			?

2.4.7

Benchmarking

Using the first indicator, Member States can be divided as follows when comparing compliance with the requirement on prevention. But, this is not an absolute indication on compliance, but a relative indication on compliance compared with other Member States.

Table 2.4.10 Benchmarking Member States on the the requirement on prevention, using assessed quantities of products placed on the market

Performing very well	Cyprus, Luxembourg, Poland, United Kingdom
Performing well	Austria, Czech Republic, Netherlands, Slovakia
Intermediate performing	France, Germany, Greece
Performing poor	Belgium, Ireland, Italy, Spain
Performing very poor	Finland, Hungary, Portugal, Slovenia
Unknown	Bulgaria, Denmark, Estonia, Latvia, Lithuania, Malta, Romania, Sweden

Table 2.4.11 Benchmarking Member States on the requirement on prevention, using GDP

Performing very well	Cyprus, Estonia, Latvia, Poland, Slovakia,
Performing well	Czech Republic, France, Greece, Ireland, Lithuania
Intermediate performing	Austria, Italy, Luxembourg, Spain
Performing poor	Belgium, Denmark, Germany, Netherlands, United Kingdom
Performing very poor	Finland, Hungary, Portugal, Slovenia, Sweden
Unknown	Bulgaria, Malta, Romania

2.4.8

European level

Only at EU15 level sufficient information is available to assess the compliance with the requirement on prevention.

The first approach presents a slightly negative evolution, where more packaging is needed compared to the amount of products. Insecurity exists on the amount of products generated.

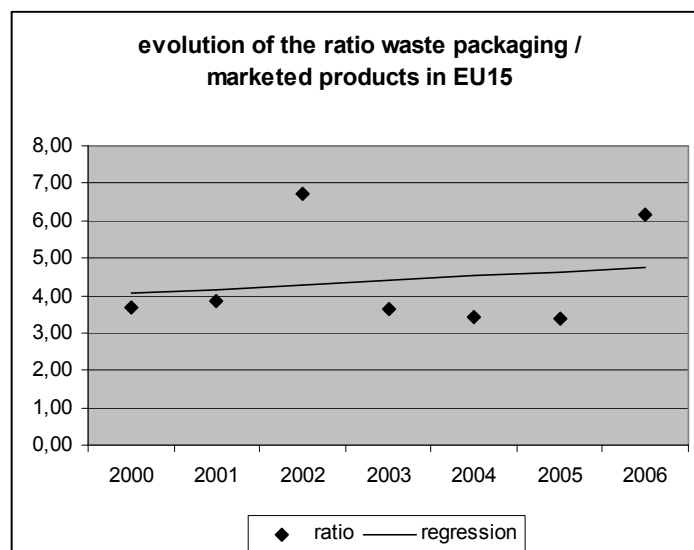


Figure 2.4.3 Compliance with the requirement on prevention at the level of EU-15, using PRODCOM and COMEXT data

The second approach presents a slightly positive evolution, where less packaging is used compared to the growth of the GDP. Uncertainty exists on the relation between GDP and the amount of products put on the market. GDP may rise for other reasons than the production and consumption of (packed) products.

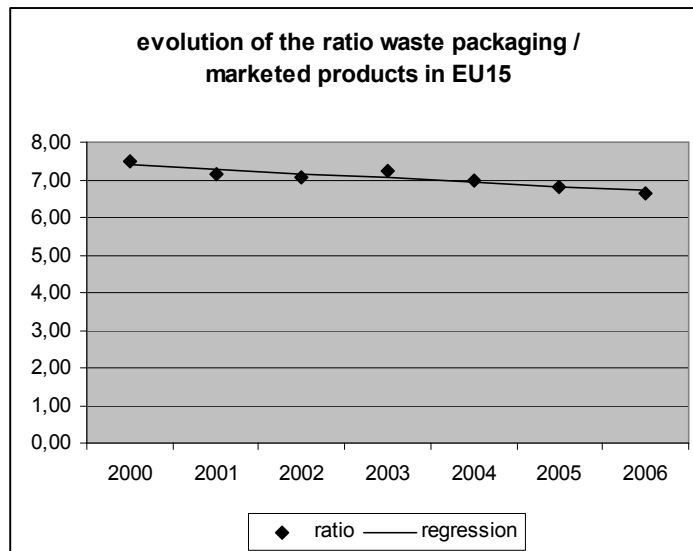


Figure 2.4.4 Compliance with the requirement on prevention at the level of EU-15, using GDP data

2.4.9 Methodological remarks from Member States

Both the packaging data and the PRODCOM-COMEXT data have structural differences between the Member States, because each Member State uses its own data gathering and data reporting strategy. Member States make different choices on how to gather, calculate or assess data on packaging quantities, and they make different choices on the products that are reported in PRODCOM or remain confidential. For this reason the ratios calculated can never be comparable between Member States. Cultural differences can play a role as well when benchmarking Member States, like beer versus wine countries, coffee versus thee...

It should be taken into account that packaging is not only related to products, but that some services require packaging as well, e.g. laundry services. However, most packaging is product related. In some case, the volume is the most interesting parameter, in other cases the weight or the composition of the packaging.

When using statistics on packaging volumes, possible double counting should be avoided. The Czech EKO-KOM presents the example of metal drums that are on a European wide level double counted: once when introduced on the market in a specific Member State and twice when imported and (re)used in other Member States.

The GDP is generally considered not to be a correct indicator, as it does not refer to the quantity of products being put on the market, but to the price of these products being put on the market. GDP also counts a product only once, when it is sold to the final consumer, and not when it is handled, imported, exported, repacked... A better alternative would be a monetary indicator showing how much both producers and consumers are spending on goods (not services) in real terms. This can be derived from the National Accounts but would require more work.

The PRODCOM data have the drawback that they count products on their weight and not on their size, which creates the bias that heavy weight materials (like packed construction materials) in the denominator become too important considering the packaging in the numerator. This could be solved by building up the indicator as a sum from individual product streams and aggregate it afterwards in a coherent fashion. Disaggregation of the

data e.g. the amounts of packaging or the definition of homogeneous groups, could be difficult.

2.5 Conclusions

There is a large gap between the Member States and the industry with regard to implementation of and compliance with the Essential Requirements.

The industry is very much in favour of the Essential Requirements, which do not specify or predict the technical solutions for minimising the amount of packaging. The industry claims that more than 75% of companies comply with the Essential Requirements. However, for the industry, the most important effect of the Essential Requirements is not the reduction of packaging (waste), but the free movement of packaging. They regret that so few Member States enforce implementation of the Essential Requirements.

The authorities, on the other hand, show little interest in enforcing the Essential Requirements. They leave it to the industry to comply. Arguments are other priorities (e.g. food safety), lack of staff and finances, and lack of understanding on how to assess compliance with the Essential Requirements. Exceptions are Member States Bulgaria, the Czech Republic, France and the UK, which have a compliance and enforcement procedure in place.

In part 2, a more detailed assessment is made of the compliance and enforcement procedures in six Member States, and the reasons why they are implemented in the way they are. In addition, the arguments and bottlenecks for not complying are assessed.

3

Part 2: Detailed assessment of compliance and enforcement procedures in 6 Member States

3.1

Selection of representative Member States

Six Member States have been selected for a more in depth interview.

Bulgaria has established a compliance and enforcement mechanism for the Essential Requirements. Bulgaria is one of the Member States that last joined the Union, it can be representative for new Member States that did an effort to cope with the EU Environmental Acquis and that only recently have adapted or replaced their own legislation and policy instruments to the European Directive. Waste and packaging waste was not considered a priority policy theme and waste treatment depended upon uncontrolled landfilling. Recently, new dynamics arose in developing source separated collection and treatment infrastructure. Furthermore, concepts of prevention and eco-design are recently being introduced to consumers and producers. The Bulgarian case can also be representative on how economies with a rather low GDP cope with the provisions of the Essential requirements.

The Czech Republic has a tradition in the implementation of packaging waste related standards, and has replaced its own standards with the CEN-standards. The Czech Republic is representative as one of the economically front-running EU-12 Member States. Although it shares some characteristics with other EU-12 Member States implementing at a high speed the European acquis, it has introduced some specific legal provisions to enhance the availability of packaging complying better with the Essential Requirements in the distribution, which are rather unique in Europe. Czech Republic also sets up inspection programmes.

Belgium is not identified as a Member States where specific implementation provisions have been set up. Nevertheless it includes the principles of the Essential Requirements in obligatory prevention programmes that have to be developed by companies putting packaging on the Belgian market above certain thresholds. The federal authority competent for product policy sets up inspection programmes on heavy metals in packaging throughout the whole distribution chain, and experiments with concrete inspection action on the other Essential Requirements. Belgian administration is explicitly critical on the content of the CEN standards implementing the Essential Requirements.

Cyprus develops its waste policy in line with the European acquis. It is a small country with no or limited home generation of packaging, and is therefore dependent on production and decision centres in other Member States or abroad. Because of its specific situation, an island independent of any continental homeland, it develops its own dynamics on coping with the Essential Requirements, and it is representative for other small countries or small economies dependent on foreign evolutions. Specific for Cyprus is the way in which the green-dot organisation is involved in the implementation of the Essential Requirements.

The United Kingdom has established a compliance and enforcement mechanism for the Essential Requirements. It has a rather strong opinion on the issue that the Essential Requirements can be effectively implemented in the way they are designed today, and likes to prove this theme with their inland experience on enforcing all three Essential Requirements. The UK has developed guidelines and works on implementation of the Essential Requirements in partnership and cooperation with the industrial actors.

France has been identified as a country where compliance and enforcement mechanisms are in force as well. AFNOR confirms in the stakeholder meeting that France had started with some checking round 2000, but that their inspection effort is much less now. The same administrative body that checks food contact, consumer safety... should check at the same time compliance with the Essential Requirements, and inspectors have been trained to do this.

3.2 Methodology for in-depth interviews

3.2.1 Concept

The assessment was realised through six in-depth interviews with different stakeholders in the selected Member States. The scope of the interview is

- To assess the mechanisms to ensure compliance (if any), regarding conformity assessment procedures or market surveillance systems.
- To assess which monitoring is in place to prove the effectiveness (= source reduction / prevention effect, heavy metals limitation) of the implemented mechanisms to ensure compliance: assess the effectiveness of them.
- To assess if, how and to what extent companies assess conformity with the Essential Requirements.
- To assess if national, CEN or international standards are being followed for conformity assessment.

Furthermore, specific topics discussed in the stakeholder meeting are checked with and commented by the interviewee, and visions from the different interviews are confronted with each other.

An interview structure has been set up and distributed beforehand to the interviewees in order to prepare for the discussion. The interviews themselves were a mixture of individual face-to-face interviews with a specific interviewee, or group discussion where several interviewees were interviewed together. The first method is useful to obtain detailed and sometimes confidential factual information, while the second method is useful to obtain information out of the clash of ideas.

3.2.2 Interviewees

Following bodies and contact persons have been interviewed

Bulgaria:

- Maria Ninova - Director of the Waste Management Directorate
- Slava Yordanova - expert from the Executive Environmental Agency
- Svetoslav Ilkov – Executive Manager, EcoResource Bulgaria JSC - Packaging Waste Recovery Organisation)

Belgium :

- Marc Adams for the interregional cell for packaging waste
- Denis Pohl for the federal Ministry of Environment competent for product policy

Czech Republic:

- Ladislav Trylc for the waste management department of the Ministry of Environment,

- Věra Macháčková for the Czech Trade Inspection Authority,
- Eva Kubešová for the EU department of the Ministry of Environment,
- Zbyněk Kolář of EKO-KOM the Czech green dot organisation.

Cyprus:

- Elena Christodoulidou, Demetris Demetriou and Eleni Stylianopoulou for the Ministry of Agriculture, Natural resources and Environment, environment service.
- Kyriakos Parpounas for Green-Dot Cyprus

France

- Régine Bloch, ministry of economics, industry and work, DG de la compétitivité, de l'industrie et des services, Chargée de mission industrie de l'emballage
- Julien Koesten, ministry of ecology, energy, sustainable development and the sea, DG de la prévention des risques, bureau de la qualité écologique des produits

United Kingdom

- Peter Askew as head of packaging for BIS department for Business Innovation & Skills
- Anne Turner as policy advisor packaging for BIS
- Judicaelle Hammond for the Packaging Policy and Recycling Markets unit in the Department for Environment, Food and Rural Affairs DEFRA
- David Hedger, Trading Standards Officer for the Local Authorities Coordinators of Regulatory Services LACORS
- Jane Bickerstaffe (comments exchanged on e-mail) for INCPEN Industry Council for Packaging & the Environment

3.2.3

Interview structure

The interviews were structured as follows, in three parts focussing on prevention of packaging, on reuse, recycling and recovery, and on presence of hazardous substances:

On prevention of packaging

1. Do you possess information on the balance between packaging volume and volume of packed product that is put on the local market?
2. How do you assess the preliminary estimations we have made on this issue using PRODCOM and waste statistics? Reliable, non reliable? Why?
3. What would be, in your eyes, a good and easy indicator to monitor prevention of packaging?
4. Do you see an evolution of the balance packaging/packed product. Do you see differences for specific products of market sectors?
5. How do national or regional competent authorities cope with this requirement? On which policy instruments the main focus is laid:
 - Communication, sensitisation
 - Legislation, legal provisions
 - National waste planning, national waste prevention planning
 - Green public procurement

Could you expand on the measures taken? Which measures are seen as efficient?

6. How do industrial sectors experience these policy measures? Impact on processes, administrative burden, costliness, beneficial effects of prevention?
7. How do industrial sectors and individual companies cope with this Essential Requirement?
 - Prevention measures on voluntary basis
 - Prevention measures driven by other incentives, like cost reduction, market trends...
 - Free or compelled/obliged application of standards
 - Individual prevention plansCould you expand on the measures taken? Which measures are seen as efficient?
8. How would you evaluate the wording of the first paragraph of the first Essential Requirement? Too vague, too detailed, degrees of freedom?
9. How to define “acceptance for the packed product and for the consumer”. Are marketing, competition and consumer behaviour acceptable drivers to mitigate prevention of packaging?
10. How would you evaluate the CEN standards?
11. How would the requirement on prevention be covered in the ideal world?

On reuse, recycling and recovery of packaging

12. Do you possess information on the balance between single use packaging and reusable packaging?
13. Do you possess information on the recyclability of single use packaging or end-of-life reusable packaging?
14. What would be, in your eyes, a good and easy indicator to assess compliance with the requirements on reuse and recovery?
15. Do you see an evolution of the balance single use/reusable packaging. Do you see differences for specific products of market sectors?
16. How do national or regional competent authorities cope with the requirements on reuse and recovery? On which policy instruments the main focus is laid:
 - Communication, sensitisation
 - Legislation, legal provisions
 - National waste planning, national waste prevention or recycling planning
 - Extended producer responsibility schemes and take-back obligations
 - Green public procurementCould you expand on the measures taken? Which measures are seen as efficient?

17. How do industrial sectors experience these policy measures? Impact on processes, administrative burden, costliness, beneficial effects of prevention?
18. How do industrial sectors and individual companies cope with the requirements on reuse and recovery?
 - Design for environment measures on voluntary basis
 - Changing packaging company policies driven by other incentives, like cost reduction, market trends...
 - Free or compelled/obliged application of standards

- Individual waste management plans

Could you expand on the measures taken? Which measures are seen as efficient?

19. How would you evaluate the wording of the requirements on reuse and recovery? Too vague, too detailed, degrees of freedom?
20. How to define “reuse”? How to define “minimisation of environmental impact”?
21. Are marketing, competition and consumer behaviour acceptable drivers to mitigate application of the requirements on reuse and recovery?
22. How would you evaluate the CEN standard in view of application of the requirements on reuse and recovery?
23. How would the requirements on reuse and recovery be covered in the ideal world?

On hazardous substances in packaging

24. Do you possess information on the quantities of noxious or hazardous substances in packaging?
25. Do you possess information on the quantities of noxious or hazardous substances in emissions, ash or leachate of waste packaging treatment operations. Could you make a link between the packaging and the substances in waste treatment residues? (especially when packaging waste is treated together with other waste fractions)
26. What would be, in your eyes, a good and easy indicator to assess compliance with the requirement on hazardous substances? For different substances?
27. Do you see an evolution in the composition of packaging material? Do you see differences for specific products of market sectors?
28. How do national or regional competent authorities cope with this requirement on hazardous substances? On which policy instruments the main focus is laid:
 - Communication, sensitisation
 - Legislation, legal provisions
 - Use of compulsory standards
 - National waste planning, national waste prevention planning (qualitative prevention)
 - Extended producer responsibility schemes and take-back obligations
 - Green public procurement

Could you expand on the measures taken? Which measures are seen as efficient?

29. Do, next to incineration and landfill, other treatment operations (e.g. new techniques for energy recovery) need to be included in the requirement on hazardous substances?
30. Does the requirement on hazardous substances need to be applied as well on recycling activities of packaging waste? Does the content of hazardous substances influence the (legal) possibilities for recycling? Does the content of hazardous substances influence the (legal) possibilities of export of the waste for recycling?
31. How do industrial sectors experience these policy measures? Impact on processes, administrative burden, costliness, beneficial effects of prevention?
32. How do industrial sectors and individual companies cope with this requirement on hazardous substances?

- Design for environment measures on voluntary basis
- Changing packaging company policies driven by other incentives, like cost reduction, market trends...
- Free or compelled/obliged application of standards
- Individual waste management plans

Could you expand on the measures taken? Which measures are seen as efficient?

33. How would you evaluate the wording of the third paragraph of the first Essential Requirement? Too vague, too detailed, degrees of freedom?
34. How to define “minimisation of environmental impact” for treatment residues?
35. Are marketing, competition and consumer behaviour acceptable drivers to mitigate application of the requirement on hazardous substances?
36. How would you evaluate the CEN standard in view of application of the requirement on hazardous substances.
37. How would the requirement on hazardous substances be covered in the ideal world?

General issues

38. Do the Essential Requirements as defined suffice to obtain a good environmental policy specific to the manufacturing and composition of packaging.
39. Would you suggest supplementary requirements? Why?
40. Would you prefer to stick with the existing requirements? Why?
41. Would realisation of the Essential Requirements be a task for a national economy as a whole, for specific homogeneous industrial sectors, for individual companies, or for individual products and packaging strategies?
42. How do you see the relation between the Essential Requirements of the packaging directive and the provisions on waste prevention in the new Waste Framework Directive?
43. Do you see a discrepancy in the application of the CEN norms, between larger companies and SMEs. Are SMEs suffering from a competition disadvantage?
44. When studying the implementation of the Essential Requirements, which elements should we take into consideration in any case?

3.3 Results of the interviews

3.3.1 Organisational issues on following up the Essential Requirements

The responsibility for following up the Essential Requirements is typically dispersed over different administrative bodies. It is certainly not a competence which is automatically attributed to the Ministry of Environment or its equivalents in a Member State. Sometimes it is completely or partially attributed to the bodies involved in the extended producer responsibility, often connected to the ministry of Economics or the trade inspectorates. Sometimes it is partially attributed to the body involved in product policy. Special cases are the UK, where the follow up is largely decentralised to the local authorities, using the home office act, and Cyprus where it is partially attributed to the green-dot organisation using its licence agreement. A general observation is that most of the responsible bodies suffer from shortage in manpower to follow up the Essential Requirements or to give it a high priority.

3.3.2 Enforcement of compliance

Most Member States claim that the Essential Requirements can not be legally enforced, except for the requirement on hazardous substances in packaging. The UK aims at achieving compliance through going into discussion with the producers and creating due diligence. The local authorities supported by LACORS enforce compliance, but LACORS states that contacts with companies on the Essential Requirements are not taking place on a daily base. Often the Essential Requirements are not the highest priority for municipalities confronted with limited inspection budgets. If controlled, the focus is put on the requirements on prevention and on the presence of hazardous substances.

Belgium has set up a pilot project on checking randomly selected products from super markets, but concluded that the collected evidence was too weak and too easy to refute to stand before court. Although warnings have been given, no summons haven been served on a company.

Several bodies set up inspection actions by requesting from the involved companies to hand over technical documentation proving compliance. Often this technical documentation is no third party proof, except for the heavy metals content for which laboratories with appropriate technical equipment has to be engaged.

The requirement on hazardous substances, more in particular the provisions on heavy metals in art. 11 of the Directive, are inspected by most of the visited Member States. Belgium uses an X-ray fluorescence gun for a first check in the field before analysing packaging in a laboratory. This technique is considered useful by several bodies that are interested in taking over a similar technique. The main problem is the identification of Chromium VI.

Cyprus has a specific approach where the inspection on heavy metals is a duty attributed to the green dot organisation through its licence. Unlike the Belgian inspection, no infringements have been found until now.

3.3.3 Evolution in compliance with the Essential Requirements

A diversified image is given on the evolution of primary packaging. Most Member States report that the reusable packaging is losing ground to the single use packaging. This trend is reversed for secondary and especially tertiary packaging where reusable

packaging is becoming more popular. For certain products a clear trend in reduction of packaging can be found, e.g. canned food, PET bottles...

An important trend is the evolution from bulk distribution to packed goods, and from packaging-free household activities to value added external services that use packaging (pre-cooked meals, laundry services...).

The way the distribution sector is organised and the central or dispersed location of the production centres is determining whether reusable packaging is applied or single use packaging. Reuse systems are only set up when the physical distance between producer and consumer is not too far.

The Essential Requirements on reuse and recovery are complied with very well, because packaging is theoretically recyclable. However, it does not entail that packaging is really recycled. This depends on the collection schemes set up and the available recycling capacity.

A general observation is that packaging imported from the far-east, mainly China, is less compliant to all three Essential Requirements than EU-made packaging.

In Belgium, results from inspection show a rather frequent violation of the requirement on hazardous substances, i.e. excession of heavy metal limits in packaging (art. 11 of the Packaging Directive). Even EU-made packaging from large brands often contains too much heavy metals. A particular concern exists on cadmium in crates and pallets, for which the closed loop system is difficult to control, and in which metal concentrations are frequently higher than allowed.

Some experiments on more compliant packaging are going on, of which some are still in an embryonic phase while others do have acquired a certain market share: self-dispensing systems are being developed in niche markets, and refill products are to a certain degree accepted. Super-concentrated products, on the other hand, are not a success mainly through psychological aspects in consumer behaviour.

3.3.4

Policy instruments for implementing the Essential Requirements

All interviewees state that the translation of the Essential Requirements in their national legislation and the existence of the CEN standards are the main policy instruments that are used. The "presumption of compliance" when a company complies with the standards is said to prevent other policy instruments to be used.

Green public procurement and waste planning are not considered important instruments, except in Cyprus where both bodies stress the importance of green public procurement by public and semi-public bodies. Awareness raising and communication are supporting instruments, but no driving forces. The green dot organisations are often involved in the communication initiatives.

Extended producer responsibility schemes, combined with a general waste management policy aiming at recycling, can be very successful in augmenting recyclability and effective recycling, but not at the level of individual products.

In general however, the bodies signal that the policy instruments are not really the reason for shifting trends but that the general evolution is more driven by external factors like cost awareness or changing consumer attitudes. Packaging is considered not to be the priority topic for policy makers any more.

For small countries with a market based on import, the compliance with the Essential Requirements depends on the degree of compliance in the countries of production. When the requirements are complied with in France or Germany, the situation in Cyprus will

ameliorate. Policy instruments in Cyprus are often not able to change strategic decisions made in international companies for which the Cypriot market is only of secondary importance.

Following policy instruments are additionally suggested:

- The integration of the CEN standards in ISO certification systems.
- The integration of the Essential Requirements into the eco-label.
- Large scale seminars (after the Czech example) or distribution of examples of good practice (after Belgian, Dutch, UK example).
- A standard balance between weight product / weight product+packaging of e.g. 90/100, with SMART objective to make the Essential Requirements enforceable.
- Voluntary agreements with specific economic sectors, and support and dialogue with the industry, with legislation only as backstop.
- Best-in-class benchmarking
- Introduction of a label, comparable with a RoHS-compliance label, to indicate in the production and distribution chain that packaging does not contain too much heavy metals.

3.3.5

Indicators for assessing compliance with the Essential Requirements

The indicator as developed in paragraph 2.4 is partially based on a preliminary analysis of ARCADIS, and upon remarks and suggestions from IVC. Additional methodological remarks from the other bodies are included in paragraph 2.4.9. General remarks and suggestions for alternative indicators are discussed below.

Belgian legislation has introduced the stand still principle for packaging, stating that the amount of packaging per product may not increase over time. However this is not easy to enforce as both products and individual doses/quantities frequently shift. Most of the interviewees signal that an indicator at product level is needed, because the Essential Requirements are focussing at the individual products and their packaging. However, it is hard to achieve because time series cannot be measured due to the ever shifting product definitions and doses.

A structural issue when measuring the shift in the use of primary packaging is its relation with secondary and tertiary packaging. Less primary packaging could be connected to more secondary or tertiary packaging. The requirements on prevention and on reuse might even be contradictory, because reusable packaging needs to be more robust and might require more material than single use packaging. Packaging that is well recyclable like glass can be replaced by packaging that is less recyclable like e.g. some plastics with lesser weight.

An indication of the balance between single use and reuse packaging is difficult to make. The European method counts the reusable packaging once, when it is put on the market, and compares this with the amount of single use packaging being put on the market. An alternative could be that reuse packaging is counted each time it is used, and subsequently compared to the amount of single use packaging being put on the market. The Belgian IVC suggests using both parameters, and from this retrieving insight on the number of rotations of reuse packaging.

In order to develop good indicators, the PARETO principle² can be used: the key companies that cause the most of the environmental impact should be the ones monitored.

The UK identified an alternative indicator, which is appreciated by several other bodies. The indicator consists of the percentage of compliant products in a sample of products which are investigated by the competent authorities. The choice of the sample should be made with much consideration. This indicator is not looking at a final quantitative result (i.e. packaging reduction or a change in the packaging strategies), but it is instrumentally looking at the way in which the CEN standards are used. It applies the assumption of compliance with the Essential Requirements and expects that the CEN standards are able to change the amount and the nature of the packaging waste.

3.3.6 Impact on the industry

All interviewees do agree on the major driving force for industry to comply with the Essential requirements (especially regarding prevention), namely cost reduction. Often this is realised by companies with a clear view on their cost structures like the retail industry. It can be argued that packaging prevention is not a merit of the Essential Requirements, but of a changing agenda on resource efficiency.

Depending on the consumer attitude, the green image of complying with the standards or using more environmentally acceptable packaging, can be an important element as well. This is the case in countries like Belgium and the UK, but is not the case in Cyprus or the Czech Republic.

The Belgian Ministry states that this can even work counter-productive. As the standards are considered green, the company can position their products as green although they are merely complying with a standard that is weak and easy to comply with. The attribution of the label 'recyclable' is given as an example: the label does not guarantee that the packaging will really be recycled. Nevertheless, the existence of this requirement and the awareness of it have lead to a situation where no producer will introduce for example a PVC-bottle on the market any more.

The requirements itself, when accompanied with implementation measures, are often considered by industry as an administrative burden with little beneficial effects. EKO-KOM proposes therefore to apply the Essential Requirements only on products which are still in the phase of design, where different choices still can be made and where the standards can initiate a thinking process, and not on products which are already a long time on the market, where it would merely be a non effective but burdensome paper exercise.

3.3.7 Evaluation of the wording of the Essential Requirements

Requirement on prevention

All interlocutors agreed that the wording of the requirement on prevention is vague. However, the appreciation that is given to this vagueness is different. The two Belgian authorities state that this vagueness is a problem and interferes with the applicability of the requirements. Also the Cypriot bodies state that it should be more technically detailed

² The Pareto principle or 80-20 rule states that, for many events, roughly 80% of the effects come from 20% of the causes. Business management thinker Joseph M. Juran suggested the principle and named it after the Italian economist Vilfredo Pareto, who observed that 80% of the land in Italy was owned by 20% of the population.

and made fit for effective communication. Other bodies state that the requirements need to be vague in order to cover the whole and diversified population of products and their packaging strategies. The UK states that the vagueness of the requirement is not an obstruction to implement it, if this implementation is organised as a way to support the companies, and not as a tool to be enforced by legal actions.

The goal of the requirement is appreciated at a more philosophical level, and the fact that the requirement exists is considered a way to raise awareness in the Member States and with the industrial stakeholders on the issue of eco-design for packaging.

Some new Member States mention that they only just started with considering implementation of the requirement and therefore cannot judge if its wording can be ameliorated. Different bodies state that the requirement on prevention should not be obligatory but merely indicative.

Belgian bodies argue that the vague wording of the Essential Requirement at a European level has a perverse effect. Because it exists it obstructs the development of more applicable or detailed provisions in individual Member States. Several bodies report that the main objective of the Essential Requirements is to protect free movements of goods from provisions at the level of Member States.

The most discussed aspect is the meaning of the concept 'consumer acceptance'. See paragraph 3.3.8.

Requirements on reuse and recovery

The requirements on reuse and recovery are often considered outdated or overruled by the provisions in the new Waste Framework Directive. The waste treatment hierarchy is not included in the Essential Requirements because it dates from 1994 when the concept was not yet being introduced in different legal provisions. Depending on the attitude of different Member States towards applying the waste treatment hierarchy, this is considered a drawback or an advantage of the formulation of the Essential Requirements. Member States like the UK and the Czech Republic favour to apply other measures for environmental impact like greenhouse gas emissions to choose the optimal waste treatment method, instead of the hierarchy. Other bodies insist on the introduction of the hierarchy into the wordings of the Essential Requirements because it is the base for their waste policy schemes that implement the Waste Framework Directive.

The third Essential Requirement provides for recyclability. This is either contested by Member State bodies or seen as a reason not to put much emphasis on implementation efforts for this requirement. From a technical point of view, nearly every packaging material is recyclable, except for waxed paper or for ceramics to pack certain schnapps. It has been suggested to use the concept of 'recycled' packaging instead of 'recyclable' packaging.

It is however problematic to use figures for recycling performances to prove compliance with the Essential Requirements. Recycling performances are different in each Member State, while products and packaging are freely marketed in the European unified market. A packaging put on the market in France, where it would be sufficiently recycled, could travel to Romania, where it would not be recycled. Belgium adds that the same discussion can occur on reusable packaging or reused packaging, because sometimes single-use packaging is reused without being reusable.

Requirement on hazardous substances

The requirement on hazardous substances is considered to be formulated in a more clear and testable way than the other requirements, as limit values are connected with it. Packaging either complies or does not comply without much discussion. This is especially the case with the mentioned heavy metals. Bodies disagree if supplementary hazardous substances should be added to them. Objections have mainly a practical nature. Heavy metals are easy to measure, while the list of possible hazardous substances in packaging can become very long and often not easy to test. To achieve clean packaging, end-of-waste criteria within the frame of the Waste Framework Directive can be more useful than additions to the Essential requirements.

3.3.8

Consumer acceptance

If a company does not consider consumer acceptance, it will lose its market share to the competition. Therefore, consumer acceptance is an important aspect that is considered when compliance with the Essential Requirements is aimed at. The wording 'consumer acceptance' as formulated in the first Essential Requirement (i.e. in the requirement on prevention) rises a lot of discussion in the bodies of the competent authorities and with the stakeholders because it is difficult to define or to evaluate.

Some interviewees think that companies need to take consumer acceptance into account when designing packaging, next to taking into account the Essential Requirements. Another position is that the Essential Requirements could play a role in the definition of which products and doses will be made in the first place. The UK stated that France does not take 'consumer acceptance' into consideration when applying the requirement on prevention. This is however denied by the French competent authority. The Belgian Ministry states that first a frame compliant with the Essential Requirements has to be set, and next the designer and marketer can develop its packaging within this frame. Marketing arguments should not be on the same level as safety or hygiene. The UK takes an intermediary position in which consumer acceptance should be redefined as 'consumes use', i.e. what is useful to the consumer itself. It should serve a purpose requested by the consumer. The packaging should be in a reasonable relation to the practical function it needs to fulfil.

Analysis of consumer acceptance through a conventional consumer panel is insufficient, because such panel is not informed on e.g. carbon footprint or price. The reverse side of the consumer acceptance, which should also be taken into consideration, is consumers requesting less packaging.

An important aspect in consumer acceptance is misleading packaging, suggesting more content than it contains. The Czech bodies do accept half filled packaging as long as the content is mentioned on the packaging. Other bodies take active steps against what is considered misleading packaging if the packaging suggests more content by its mere size.

Regarding anti-pilfering packaging, some interviewees state that it is up to the producer to choose the optimal strategy e.g. large packaging, even if alternative systems like delivery at the cash desk are feasible.

Different interlocutors point out that consumer acceptance should always be looked at in a cultural context, and that cultural differences over Europe can play a large role in what can or cannot be accepted by consumers. In some Member States, convenience is more important than ecology in the eyes of the consumer.

3.3.9 Evaluation of the CEN standards

The evaluation of the CEN standards and of the wording of the Essential Requirements itself is often intertwined. This is because none of the interviewees mentions the use of other standards or other methods to prove compliance with the Essential Requirements, if compliance is proved at all. No use is made in practice of the possibility in New Approach legislation to use other standards or other methods to prove compliance when requested.

Most bodies agree that the CEN standards are formulated in a negative way, meaning that they help stakeholders to prove that they do not have to fulfil the Essential Requirement any further. This is considered inevitable by many of the interviewed bodies, as a more positive formulation with e.g. quantitative target values or percentages is considered to be too prescriptive. Some bodies appreciate the CEN standards, like in the UK, Bulgaria and in the Czech republic, while others consider them too vague. Belgium considers that they have not generated any effect on the reduction of packaging or the promotion of recyclability at all. As they are formulated vague, any company can argue that its packaging strategy is compliant with the standards while the tools to legally contradict this are too weak.

The CEN standards are considered by some as outdated, or not entirely in line with the legislation. E.g. the definition of reuse in the standards does not conform to the definition of reuse in the Waste Framework Directive.

The standards on biodegradability, energy recovery and on heavy metals are generally appreciated as the best formulated standards. A practical problem occurs when measuring Chromium, because of the difficulty to discern Chromium IV from other oxidation numbers. Green-dot Cyprus suggests including a standardised way to measure carbon footprint impacts of packaging.

The CEN standards date from 2004. Some interlocutors argue that they should not yet be revised because too little practical experience with them has been build up.

3.3.10 General conclusions

Central messages given by the different bodies in the visited Member States are quoted below. They are represented in a random way, and they should not be read as a unified policy advice, because several of these general remarks from the interviewees are contradictory:

- The Essential Requirements should not be obligatory but voluntary standards.
- The Essential Requirements and the standards are developed to enhance the free movement of goods, but they are used in a perverse manner because they are developed for large companies and as such keep SME's out of the international market.
- The Essential Requirements are easy to abuse for protectionist reasons.
- The obligatory Essential Requirements at EU-level hinder national but more effective or enforceable legislation to be set up.
- The Essential Requirements are strictly linked to the concept of 'putting on the market' and can therefore only be applied on individual products and not on product groups, companies or industrial sectors OR
- The Essential Requirements need to be complied with at the level of a product range, eventually as a transitory measure to start up implementation.

- The concept of 'consumer acceptance' is the flaw of the system and should be clarified and exemplified.
- There is need for a new, broader policy framework which combines packaging and packaging waste, WEEE and RoHS, ecodesign for energy using products, ELV-vehicles... in a frame that goes beyond waste policy, in stead of reviewing merely the Essential Requirements.
- When reviewing the Essential Requirements and their implementation methods, industry should be included in the working committees.
- As some Essential Requirements are contra-productive, it may be envisaged to abolish them and to leave it up to subsidiarity and the Member States to make better provisions, or to replace them by enforceable provisions.
- Individual prevention plans, which are prevention plans designed by and at the scale of an individual company, can be a part of the solution.
- SME's too have to comply with the Essential Requirements, but administrative burden must be avoided.
- Both the Essential Requirements and the CEN standards are too new in several Member States. Before looking at a revision, they should first prove their usefulness.
- Take into consideration that the decisions to apply the Essential Requirements need to be taken in the whole of the production and distribution chain.
- Education through seminars and through presenting best practices is an important instrument.
- Good indicators are yet to be developed, but double counting should be avoided.
- The market actors need to make free strategic choices on the products and their packaging, based on market demand and consumer acceptance. Next, this choice needs to be realised with respect to the Essential Requirements, OR
- The aspects of consumer acceptance and market demand should not be at the same level as safety and hygiene. The strategic choices of product development and marketing should above all comply with the Essential Requirements.
- Checking compliance with the Essential Requirements should focus on new products and packaging being put on the market and avoid paperwork for products already present on the market.
- Discussions with producers should take place at a European level, certainly for small markets and Member States which on their own cannot generate enough weight.
- There is no need for further Essential Requirements above the three existing, as they cover prevention, recycling, recovery and disposal.
- There is a need for clarification on oxobiodegradable, biodegradable, degradable and compostable packaging.
- There is need for differentiation between the EU-Member States which all have their own economic, cultural and geographical context.

4 Part 3: Draft policy options

4.1 Disclaimer

Based on the information gathered above and on the position statements of the respondents on the questionnaire and of the interviewees in the visited Member States, the consultant ARCADIS drew up a set of draft policy options that are formulated below. It needs to be stressed that these options are neither the result of a consensus between the different stakeholders, nor represent the official position of the Commission services.

4.2 Introduction

The Commission considers that a proper enforcement of the Essential Requirements will contribute to creating a level playing field in the internal market. Lack of progress on compliance with the Essential Requirements represents a major problem in the implementation process of the Directive with respect to the internal market.

The enforcement of the Essential Requirements will bring additional benefits in terms of prevention, recycling and reduction of hazardous substances in packaging. For these reasons, the Commission has reiterated its commitment to promote a proper implementation of the Essential Requirements in relation to both Article 9 and 18 of the directive.

In the light of this commitment and based on the information collected through the project, we will formulate draft policy options.

4.3 Overview of draft policy options

The option or suggestions can be divided in

- a set on implementation measures and inspection with no impact on the legal or standardised provisions at EU level,
- a set on solving interpretation issues with possible impact on the CEN standards
- and a set with impact on the way the Essential Requirements are formulated in the Packaging Directive.

4.3.1 SET 1: Policy options for implementation and inspection measures with no impact on the legal or standardised provisions at EU level

4.3.1.1 Develop indicators to assess the success of national Essential Requirements implementation or enforcement measures

It is important to develop indicators at a macro scale, to evaluate policy instruments or policy distance to target. It should be visible to which degree Member States are able to cope with the Essential Requirements, as these provisions in the Packaging Directive addresses member States and not industrial actors. Three types of indicators can be developed. A top down indicator, a bottom up instrumental indicator and a bottom up result driven indicator.

Top down indicator

The indicator is described in 2.4. In order to develop a usable and comparable indicator the following elements need to be realised:

- The indication of the total amount of packaging should be comparable between all Member States. Either the data gathering methodology for packaging waste should be harmonised in the Waste Statistics Regulation 2150/2005/EC, or the data gathering method for packaging being put on the market for the reporting obligation under the Packaging Directive should be harmonised. The relation between collected packaging waste and packaging being put on the market has to be established.
- The indicator for the amount of packed products being put on the market should be harmonised. A double strategy needs to be investigated and compared. Either the use of a monetary indicator showing how much both producers and consumers are spending on goods (not services) in real terms. This can be derived from the National Accounts. Or an indicator retrieved from the PRODCOM and COMEXT database can be used. In the latter case a basket of packed products has to be defined, and provisions have to be made in order to oblige Member States to fill in the requested data in a harmonised way.
- The indicator itself should be a sum from sub-indicators from individual product streams that is aggregated afterwards in a coherent way.

Bottom up instrumental indicator

In this indicator a basket of representative products is selected. These products are collected from the market, at different stages of the production or distribution chain. The competent authority itself examines the compliance with the Essential Requirements, using the CEN standards. The indicator would then be the percentage of compliant products in the sample. The choice of the sample should be made with much consideration. In contrast to the top down indicator above, the bottom up indicator is not looking at a final quantitative result (a reduction of packaging) but it is instrumentally looking at the degree in which the CEN standards have been used. This instrumental indicator only makes sense if the New Approach assumption of compliance with the Essential Requirements is applied, and if it is expected that the CEN standards are able to change the amount and the nature of the packaging waste.

Bottom up result driven indicator

If it is not feasible to follow up all products that are being put on the market and to evaluate case-by-case if they are compliant with the Essential Requirements. Because of the ever changing nature of the product and of its packaging it is administratively impossible to set out timelines and see if e.g. the stand still principle is being respected. However if we apply the Pareto principle and assume that roughly 80% of the packaging and packaging waste comes from 20% of the producers, a selection of key producers and key product lines can be made to assess the overall evaluation of compliance with the Essential Requirements.

4.3.1.2

Develop awareness raising and implementation support

As the first Essential Requirement and its translation in the CEN standards focusses on the analysis in the decision taking process, and not on yes/no or quantitative targets to be reached, it would be efficient for enforcement if the competent authorities participate in

this thinking process at the level of individual decisions in companies on their packaging strategy for individual products. Companies could for example check beforehand and on their initiative with the authorities if their ideas are compliant with the Essential Requirements. Authorities can take their responsibility in supporting companies to catch the Essential Requirements in letter and spirit and to incorporate them in their due diligence. Especially the SME's could benefit from a cooperative approach. Large experience with this approach is being build up in the UK and the Czech Republic.

Next to day-to-day support, companies need factual information on how the Essential Requirements are to be read and how they could affect their actual processes, products and packaging. A database of good examples is frequently requested, as well as a list of best-in-class. This list can serve a double goal. To identify the best examples and present them as a model that could be followed, and also to identify the product lines with the largest spread or the largest distance between best and worst performance, as priority topic to better implement and enforce the Essential Requirements.

International federations like EUROPEN, or green dot associations like EKO-KOM in Czech Republic, can play a positive role in spreading information on how to cope technically with the Essential Requirements, in cooperation with the competent authorities. However, the proposal of EUROPEN to set up information and awareness raising sessions for the authorities themselves, is declined by competent authorities.

The major aspect of the awareness raising and implementation support could be the cost reduction that can be realised through applying the Essential Requirements. This has been identified as the most important driving force for companies to comply with the requirements. Another aspect could be the possible waste-less or waste reduced distribution options.

4.3.1.3 [Work where needed at a European level](#)

Support and communication or negotiation with the larger, multinational operating companies, as described in paragraph 4.3.1.2, happens best at the level of the European Union. Local markets are often too small and thus have too little impact to influence decision taking processes of large companies serving the whole of the European or the worldwide market. This would also prevent the risk that multinational companies select the EU Member State with the smallest control on market entry and from there spread their products over the whole of the EU free market.

A European enforcement and inspection body would be welcomed by several Member States, for this reason of possible unfair competition on their home-markets. This could be set up following the example of the IMPEL-TFS inspection network on transboundary movements of waste, focussing on the development of tools, coordination of inspection efforts and exchange of experience between competent inspection services.

4.3.1.4 [Use labels wherever possible](#)

Two types of labelling strategy can be proposed.

[Compliance with the requirement on hazardous substances](#)

Compliance with the requirement on the presence of hazardous substances, especially on the content of heavy metals, could be confirmed by a RoHS-like label. Experience with heavy metals content has been build up in the market, regarding electrical and electronic equipment. The equipment has to comply with Directive 2002/95/EC on the restriction of

hazardous substances in electrical and electronics equipment. Lead, mercury, cadmium, chromium VI and two brominated flame retardants have to be avoided.



Figure 4.3.1 examples of RoHS compliance labelling in the UK

This experience could be expanded to the packaging manufacturers or importers, and the label of compliance could be standardised. The use of a label on the packaging facilitates the choice of the packer and gives him the information needed to comply with the requirement on hazardous substances, at least for the heavy metals content. It could also help to incite non-EU providers of packaging to comply with this Essential Requirement.

Compliance with the requirements on prevention and on reuse/recovery

Proven compliance with the Essential Requirements is not easy to show, and often depends upon interpretation of the producer in the way he will use the CEN standards. A third party certification could create a more objective approach. In order to enhance public procurement on highly compliant packaging, the eco-label could play a role, in the sense that the Essential Requirements could be integrated in the criteria for awarding the eco-label. A standard prerequisite to obtain the eco-label for a product could be proven compliance with the Essential Requirements of the packaging, certified by a third party. This does not mean that each product packed in compliance with the Essential Requirements deserves an eco-label, but it does mean that at least the eco-labelled products are fully and to a qualitatively high degree compliant with all three Essential Requirements.



Figure 4.3.2 European Ecolabel

Every packaging has to be compliant before it can enter the market. The choice not to apply for a voluntary eco-label does not mean that compliance with the Essential Requirements should not or in a lesser degree be fulfilled. But a fortiori an eco-labelled product cannot be in breach with the Essential Requirements. The eco-label creates an extra level of certainty. In Member States with less performing enforcement, the eco-label can help in setting up a public procurement strategy focussed on compliance with the Essential Requirements.

As the Packaging and Packaging waste Directive is presented as a New Approach directive, the CE label could be a mark on packaging to prove its compliance with, among other, the Essential Requirements.



Figure 4.3.3 CE marking

In general, the proposal for a directive on marking of packaging and on the establishment of a conformity assessment procedure for packaging (published in 1996) could be reconsidered.

4.3.1.5

Promote the use of modern techniques to perform inspection on the presence of hazardous substances

The approach of the federal Belgian environmental inspection was praised by most of the interviewees in the different bodies. The usual way to inspect the heavy metal content of packaging is to collect packaging samples and to send them to a specialised laboratory that can perform atomic absorption spectroscopy or other analytical techniques. The analyses are often rather expensive and time consuming and only a limited set of samples is examined. The Belgian authority uses an X-ray fluorescence gun, which is less reliable but which can serve for a first selection of samples that need to be examined more in detail in the laboratory. The advantage is that a larger quantity of packaging can be examined, in the field (e.g. in the super market) and with immediate result. General trends can be discovered and a better selection of samples leads to a higher efficiency compared with examining a random sample in the laboratory.



Figure 4.3.4 Example of an XRF-gun

Handheld analysing equipment can also be beneficial for RoHS compliance inspection on electrical and electronic equipment. An awareness raising initiative from the Commission could demonstrate techniques that can be applied by national inspection services to enhance their effectivity in inspecting compliance. A problem of technical nature of this technique is that no distinction can be made between chromium VI from chromium with other oxidation numbers.

4.3.1.6

Request from the distribution sector to provide along with products in single use packaging the same range of products in reusable packaging, if existing

This draft policy option aims to make the distribution sector co-responsible on achieving the goals of the Essential Requirements.

The Czech and Portuguese approach to promote reusable packaging is worthy of imitation. When a distributor offers e.g. beverages in a single use packaging he is obliged to offer comparable products in the same range in a reusable packaging. In this way the consumer is given the freedom of choice between reusable and non reusable alternatives, and a market can be created or maintained for the reusable alternative.

The measure would even be more effective if it could be applied on individual products. The case of the distribution of cola in Cyprus, as mentioned in the interviews, can be exemplary. If both Coca Cola and Pepsi Cola would have been obliged to include in their offer cola in reusable packaging, then the effects of competition would not lead to one of them shifting to a less sustainable packaging strategy to reduce costs.

4.3.1.7 Enhance frequent, independent and effective inspection

Two elements for an effective inspection have already been mentioned in previous draft policy advices. In paragraph 4.3.1.3 it is suggested to set up structures for European wide coordination and support to inspection bodies, and in paragraph 4.3.1.5 the use of handheld analysis equipment is suggested. Following element could as well lead to a more effective inspection:

- Focus on packaging that is imported from non OECD-countries, and especially from the Far East: the interviewees suggest that anecdotal evidence shows a lower degree of compliance for packaging imported from these countries.
- Organise the inspection within a governmental body or an independent certification office. It can be assumed that attributing inspection competences to e.g. the green dot organisation carries a risk. The interests of their members, the packaging industry, are not always in line with the interests of an effective inspection.

4.3.2 SET 2: Policy options with possible impact on the CEN standards

4.3.2.1 Further develop and clarify the concept of “consumer acceptance”

As this concept is considered the central obstacle for a proper implementation and enforcement of the Essential Requirements, a more detailed and exemplified guideline on the use of the concept could be developed. Consumer acceptance could be defined as an intermediary position between the freedom of the designer of packaging to develop a strategy for optimal penetration in the market, and the restriction to consider only aspects of safety, protection and hygiene in the development of the packaging.

Consumer acceptance could be translated into a concept of “consumer use”. All aspects that can be classified on consumer acceptance should serve the well-being of the final consumer:

- Marketing aspects that only serve the visibility of the product or that have as their only function to persuade the consumer to buy a certain product without any benefit for the consumer itself, should not be considered under the label consumer acceptance. E.g. larger packaging to create shelf visibility, packaging adopted merely for commercial reasons...
- Packaging aspects that make it easier for a consumer to handle the product, like handles, carrying straps on sixpacks... are useful for the consumer and can be classified under consumer acceptance.

- Anti-pilfering measures with larger or not easy to hide packaging can be considered as consumer acceptance (although it is in the first place the retailer who benefits from it) if they cannot be replaced by other anti-pilfering systems that not require packaging, like handing over at the cash desk.
- Non standardised packaging, that requests more material or complicates reuse, is no part of consumer acceptance if standardised packaging material is or can be applied in the same product range.

Use of a traditional consumer panel is not sufficient to demonstrate or define consumer acceptance, because consumer acceptance does not equal consumer preference, and because a panel usually lacks information on price, recyclability, carbon footprint, sustainability aspects...

4.3.2.2

Clarify that the Essential Requirements should be complied with from the very start of the decision taking process, including strategic decisions

In order to achieve the goals of the Essential Requirements (i.e. more packaging waste prevention, recycling, less hazardous substances, etc) it is useful to consider the Essential Requirements even from the very start of the decision taking process. This means that the Essential Requirements should play a role in the choices on distribution doses (1l, 750 ml, ...), packaging strategies (reuse, single use, materials used...), distribution strategies (bulk sale, packed sale). We suggest as a policy option not to endorse the concept that the market actors can make strategic choices on the products and their packaging freely, based on market demand and consumer acceptance, and secondly this choice needs to be realised with respect to the Essential Requirements. We suggest endorsing the principle that the strategic choices of product development and marketing should comply with the Essential Requirements from the early strategy and development phases. Enforcement on the Essential Requirements should therefore be able to prevent market entry of products or packaging for which more compliant solutions are possible that guarantee the same level of protection, safety and hygiene. This policy line can be compared with the IPPC policy line where industrial plants should use BAT or (well documented) best available techniques, even if their primary choice would be another technique that complies as well with e.g. emission limiting values but which is not BAT.

Some examples:

- A company would like to introduce a high performant memory stick on the market, which is sensitive for pilfering. In a first scenario, the company decides to avoid pilfering by packing the stick in a rather large packaging. The packaging itself is realised in accordance with the Requirement on prevention with as few material as technically possible. In a second scenario, the company considers the Essential Requirements even before it has taken a decision on the packaging strategy and opts to distribute the stick at the cash desk. The stick is protected against pilfering and no packaging at all is required for this goal. This is a best available technique which is currently used for cigarettes, jewellery and other pilfer sensitive goods.
- A company likes to introduce a new and unknown product on the market and needs visible shelf presence. In a first scenario, the company decides to use large and eye-catching packaging, and in accordance with the Essential Requirements uses no more materials than needed for the scope of packaging and marketing. In a second scenario, the company considers the requirement on prevention beforehand and chooses a package independent strategy for its marketing goals by using other and

more creative marketing techniques, e.g. position at eye height at the head of the rank or at the cash desk, or by making publicity with posters, reductions, vouchers, broadcasting over the supermarkets intercom etc...The goal, namely visibility, is reached without the need for large packaging.

The bottom line of this suggestion is that the Essential Requirements not only apply on packaging itself, but also on decisions taken from the very start of the design of a product, its packaging and its marketing strategy. Its application is somehow related to the ecodesign Directive.

It should be taken into account that this draft policy option can better be realised if policy option 4.3.2.1 (i.e. clarification of the concept 'consumer acceptance') is considered as well.

4.3.2.3

Review the CEN standards on a series of aspects

It is out of the scope of the study to evaluate all CEN standards giving implementation to the Essential Requirements or to propose concrete text amendments. Following high level draft policy options need to be mentioned:

- Screen all standards on consistency with the new Waste Framework Directive. The definition of reuse in the standards does not correspond with the definition of reuse in the Waste Framework Directive.
- The concept of 'recyclability' could be replaced by the concept of 'operational recyclability' or otherwise the term recyclability should be clearly defined. The composing elements of a packaging should not only possess the right properties on nature and composition to make recycling possible, but this recycling should to a certain degree take place in reality. The fact that a paper label on a plastic bottle is perfectly recyclable does not mean that the recycling process for the bottle is able to separate and duly recycle the paper label. Aspects like the quantity of the waste being released and both the infrastructure to perform recycling and the market demand for the recycled product should be taken into account when judging the eco-design and the application of the second Essential Requirement.

We therefore suggest the following definition of '(operational) recyclability': *the material does not only possesses the physical or chemical characteristics which make recycling possible (it is recyclable), but it can be assured that it will be used in a context where it is highly probable that this recycling will take place. This means essentially that a collection and recycling infrastructure is present in the market where the packaging will be used. This means also that a material is technically used as a single packaging material or in combination with other packaging materials from which it will be effectively be separated and recycled in the recycling process without ending up in the recycling residue. Finally, this means that it will be recycled in a quantity that ensures a market for the recycled product.*

- The new concepts of oxobiodegradability, biodegradability, compostability and degradability, and their possible adverse effects on the recycling chain for specific packaging materials, could be included in the standards.
- Include a standardised way to measure carbon footprint, as a supplementary aspect to choose the best way to eco-design packaging.

4.3.2.4

Apply the Essential Requirements on individual products and their packaging

Today the Essential Requirements are already to be applied on individual products and their packaging. However, a frequently heard suggestion from the industry is that the Essential Requirements should be complied with at the level of a product range. Not every individual packaging of shampoo should be compliant with the requirement on prevention, as long as for the range of shampoos produced by the same producer the ratio between packaging and packed product is going down. This could even be extended to other producers to prove compliance at the level of an industrial sector or at the level of a national market. Except for the requirement on hazardous substances, where heavy metals are concerned and where every product should be beneath the maximum concentration levels, this could be applied on the other Essential Requirements as well. Some Member States suggest that applying the Essential Requirements on a range of products could be a transitory step towards compliance at individual product level. Conceptually, it is however not correct that an individual product could benefit from the fact that another product in the same range is performing better than necessary. The performance of another product cannot be considered a valid reason for not applying the Essential Requirements on an individual new product. Especially because it cannot always be estimated a priori what would be the market share of the new product and of the better performing existing product. Therefore, they cannot be balanced against each other, except after being present on the market for a while. This would mean that checking its compliance with the Essential Requirements would only be possible post factum, when the product has already penetrated the market, and thus making preventive actions impossible.

As a draft policy advice we would suggest not to follow the suggested line of thinking for practical reasons and to stay with the actual provisions. The Essential Requirements are strictly linked to the concept of 'putting on the market'. Therefore they can only be evaluated at the level of an individual product, as knowledge on compliance of all other products in the same product range is not easily available. Focussing on compliance at a grouped level would entail that all enforcement actions have to be organised at the level of this group. This would lead to an administrative burden for both the industry and the competent bodies when an individual product is being put on the market.

4.3.3

SET 3: Policy options with impact on the formulation of the Essential Requirements

4.3.3.1

Change the legal statute of the Essential Requirements to make them voluntary in order to allow more detailed policy measures by Member States.

At the present, the Essential Requirements are obligatory provisions in the Packaging and Packaging Waste Directive. Member States can comply with these provisions by taking over the provisions, rather literally, into their national legislation. It would enhance the effectiveness of the provisions if they would be considered as guidelines that request a more detailed national implementation.

Subsidiarity is seemingly respected under the current conditions. The Essential Requirements fix general objectives at an European level and leave the freedom to Member States to adopt provisions according to their local conditions to meet the objectives. However, the Essential Requirements are an element related to the New

Approach. This means that when the CEN standards are respected an “assumption of compliance” is reached. This limits the possibility of Member States to impose implementation measures differing from the CEN standards. Companies always have the legal possibility to merely follow the CEN standards to prove compliance.

In this sense the Essential Requirements can be today counter-productive to a certain degree, and have some perverse effects. Because they are included in the Directive, and because the Directive refers to the Treaty and specifically to its provisions on harmonising the internal market, it becomes difficult for Member States to establish more stringent national legislation regarding both objectives and implementation measures.

The Essential Requirements do have to cover a large range of products and packaging, and therefore they are formulated in a vague way from sheer necessity. The value of the requirements lies in its guiding philosophy, but not in its direct, enforceable applicability. They could therefore be accompanied by provisions to oblige the Union or its Member States to develop more concrete, more applicable legislation which can be focussed on specific packaging types or industrial sectors. The subsidiarity principle could be applied to develop provisions at Member State level that are adapted to the local economic, cultural or geographic diversity of the Member State, but that still aim at the same goals as described in the Essential Requirements. Concrete implementation measures could become an obligatory and priority part of waste management or waste prevention plans. Standardised balances for the ratio between packaging and packaging+packed products could be developed at a national level for products or sectors where this is appropriate.

It could be useful to make reference to the Treaty article 192 on environment in stead of article 114³ on harmonising legislation to enable a free market.

4.3.3.2 [Integrate the definitions and provisions of the Waste Framework Directive with the Essential Requirements](#)

The waste treatment hierarchy is not integrated into the wording of the Essential Requirements. The requirements on reuse and recovery state that packaging should be eco-designed in a way to make it fit for reuse, recovery or recycling or safe disposal, but it does not incorporate a hierarchy between these treatment possibilities. The Essential Requirements do not interfere with the Waste Framework Directive. All waste, including the packaging waste, should be treated in accordance with article 4 of the WFD, thus using the hierarchy or deviating from it for well defined and motivated reasons. However, if the hierarchy was included in the Essential Requirements, it would provide for a larger amount of waste that is fit for treatment types that are classified higher on the hierarchy and would therefore promote the scope of the WFD. The Essential Requirements could help in creating the technical conditions to make this possible, if the waste treatment hierarchy would be included in them. Several Member States have made the waste treatment hierarchy one of the backbones of their waste management policy, while others prefer an approach focussed on carbon footprint or on energy recovery through incineration or digestion. The Waste Framework Directive sets out the legal frame for all, with a focus on the hierarchy from which a Member State can only deviate in cases where life cycle thinking on generation and treatment may justify this deviation in order to deliver the best overall environmental outcome. The Essential Requirements should be consistent with this approach to avoid that strategic decisions can be made in Member

³ The packaging and Packaging Waste directive refers to article 100A, which has through consecutive adaptations of the treaty been renumbered to article 95 and finally article 114

States that are in line with the requirement but that would hamper the full application of the philosophy of the Waste Framework Directive.

4.3.3.3 Change the status of the CEN standards

The CEN standards play their role in the frame of the New Approach, as the Packaging Directive is said to be a New Approach Directive. The most important consequence of this approach is that the presumption of compliance with the Essential Requirements is achieved when a company can prove it has applied the CEN standards. It does also mean that besides the CEN standards other methods can be used to comply with the requirements or to demonstrate compliance.

The stakeholder meeting (see Annex 3) has shown that many companies apply the CEN standards in an 'informal' or 'spontaneous' way, namely that companies respect the idea or philosophy of the standards but do not implement them to the letter. The philosophy of the standards is said to be included in the company processes and quality systems and in its due diligence, even without referring to them. The standards are not followed literally, In accordance with the concept of New Approach, this can be seen as a so called "alternative way" to prove compliance with the Essential Requirements, next to the CEN standards.

Structural or organised alternative systems such as an alternative national or international set of standards to prove compliance with the Essential Requirements has not been discovered through the questionnaire, the stakeholder meeting or the interviews with the involved bodies. As these alternative systems do not exist, the CEN standards remain the only standing tool to prove compliance either applied formally or informally. To guarantee an equal treatment of all companies, and to increase the effectivity of the standards, it can therefore be proposed to make the CEN standards obligatory, by leaving the concept of New Approach and by including the standards or their methodology in annex to the Packaging and Packaging Waste Directive.

4.3.3.4 Introduce a provision in the Essential Requirements to ban hazardous substances in recycled materials

The first Essential Requirement stipulates that noxious or hazardous substances have to be minimised in packaging, in order to avoid their presence in emissions, ash or leachate from incineration or landfilling. This provision was designed in 1994 and remained unchanged until now. In 1994, final disposal through incineration and landfill were by far the most important waste treatment operations on packaging waste. However, meanwhile the recycling industry has taken over a large quantity of packaging waste to be treated, enhanced by source separated collection or better sorting techniques. It could be advised to adapt the first Essential Requirement to this new reality and include that the products should be designed in such a way that no hazardous substances are included in recycled products or in pretreated waste ready for recycling. Based on COMEXT statistics it can be proved that a large and increasing amount of plastic is exported to China for recycling.

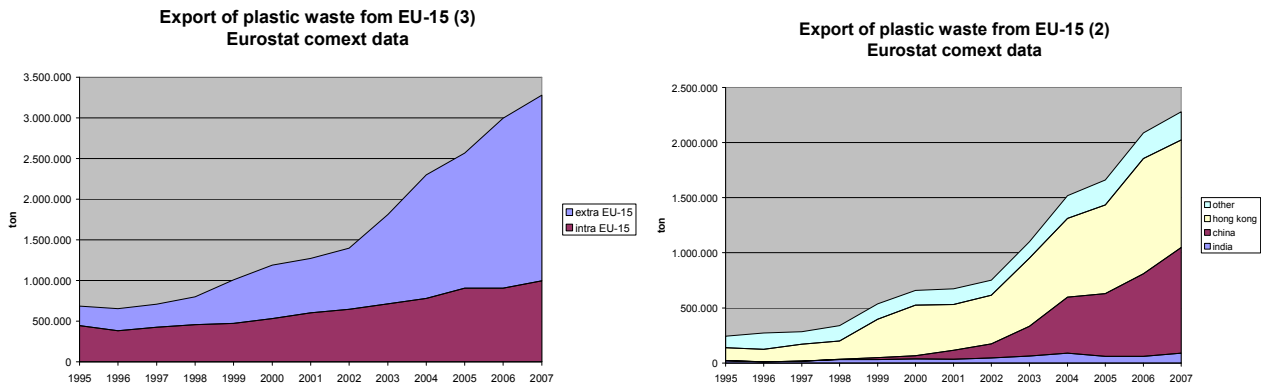


Figure 4.3.5 Export of plastic waste outside EU-15 (blue), split up over India (blue), China (fuchsia), Hong Kong China (yellow) and other (turquoise)

It should be avoided that packaging waste containing hazardous substances is exported for recycling under conditions which are more difficult to monitor, or even that it is recycled in European installations. This can be done by preventing the input of these substances in the packaging at source through the first Essential Requirement, even if they would not be landfilled or incinerated when they enter the waste phase. Several interlocutors mention that the use of recycled materials has an influence on the presence of hazardous substances in packaging.

4.4

Elements of a SWOT analysis on four policy options

The strengths, weaknesses, opportunities and threats of four policy options are assessed in relation to the “do nothing” option. A SWOT analysis assesses helpful and harmful aspects of a strategy, from internal or external origin.



Figure 4.4.1 diagramme of a SWOT analysis (source wikipedia)

4.4.1 SWOT on further clarifying the concept of “consumer acceptance”

Strengths: - enhances the enforceability of the requirement on prevention - enhances the effectivity of the requirement on prevention - puts marketing not on the same level as safety and health - promotes reuse by focussing on more standardised packaging	Weaknesses: - depends on examples and not on a clear definition - cannot be checked with a traditional consumer panel - is focussed on consumers but includes as well acceptance by the distributor (anti pilfering measures)
Opportunities: - protects and enhances the usefulness of the packaging for the consumer - avoids supplementary waste related burden or costs for the consumer. - SME's which cannot fund expensive packaging based marketing could experience a more equal playing field	Threats: - expansion of the examples, risk of erosion - resistance from the industry which looses a degree of freedom on marketing

4.4.2 SWOT on the requirement that the Essential Requirements should be complied with from the very start of the decision taking process, including strategic decisions

Strengths: - promotes eco-design from the designer table and even before at the management desk - benefits from the experience with a comparable policy instrument; the application of BAT best available techniques - enhances enforcement if BAT documents can be used to compare with	Weaknesses: - requests a definition on what best available packaging techniques are for each product - should include regional differences
Opportunities: - promotes alternative distribution methods like bulk sale or other low packaging distribution techniques - works cost-reducing	Threats: resistance from the industry which looses a degree of freedom in its strategic market approach

4.4.3 SWOT on the introduction of a top down indicator for the requirement on prevention

Strengths: - allows benchmarking between implementation efforts in the requirement on prevention at the level of a Member State - gives a high level indicator fit for policy development	Weaknesses: - requests a more or less complicated calculation method using the national accounts - can be biased by the quality of the data on packaging and on products - can be sensitive to double counting of packaging - requests further statistical research - lacks detailed information on specific products or sub-streams
Opportunities: - can be calculated using existing data sources - does not impose administrative burden on companies	Threats: - lacking manpower in Member States - the basket of products to be included in the denominator can be contested

4.4.4 SWOT on replacing the concept of recyclability by the concept of 'able to be recycled'

Strengths: - enhances largely the effectiveness of the requirements on reuse and recovery - avoids merely theoretical recyclability	Weaknesses: - does not focus exclusively on measurable product characteristics but also on the context of use and treatment - request defining the context in which a specific product will be recycled - combines local treatment conditions with the principle of EU-wide free movement of goods
Opportunities: - enhances the recycling markets and the establishment of a recycling society - prevents waste being released in Member States that have no capacity for treating it; prevents export costs	Threats: - could be contested by producers that have less impact on the way the packaging is used or recycled/disposed - could be contested by producers in Member States with weak collection and recycling infrastructure

4.5 Building blocks for an impact assessment

4.5.1 Introduction

The likely environmental, economic as well as social consequences need to be assessed for the selected policy options relative to the status quo situation, before they can fully be evaluated or appreciated.

The scope of this study is limited to identifying the building blocks that are to be the prominent composing elements of an impact assessment on the above mentioned draft policy options, without already performing a full scale impact assessment. A more comprehensive impact assessment on the actual Essential Requirements, as a part of the Packaging Directive, is made in Ecolas (2005), where has been looked into the economic, environmental and social impacts of the Packaging Directive, and Perchards (2005) in which the impacts of the internal market has been assessed. Both assessments have been combined by the Commission services in the last Commission report on the implementation of the Packaging Directive in 2006. The Commission staff can base its Impact Assessment on future policy options for the implementation of the Essential Requirements on the extrapolation of the results of the above studies and on the building blocks identified below.

The Commission requests that the depth and quality of the analysis meets the standards of the EC Guidelines for Impact Assessment, as updated.

4.5.2 Building blocks

4.5.2.1 Definition of the scenarios

The impact assessment should start with defining the different scenarios that will be examined. The impact of the draft policy proposals on itself is not measurable, but the impact of the proposals compared with a baseline should be assessed. The baseline can be considered as the actual Packaging and Packaging Waste Directive, with the actual Essential Requirements and the actual degree of compliance with these requirements in the European market, as documented in the questionnaire and the interviews. The policy proposals itself cannot be considered as stand alone scenario's because they interact with each other. Scenarios can be defined as combinations of the above drafted proposals.

The proposals are numbered as follows:

Table 4.5.1 Overview table of draft policy advises

1	Develop indicators to assess the success of national Essential Requirements implementation or enforcement measures
2	Develop awareness raising and implementation support
3	Work where needed at a European level
4	Use labels wherever possible
5	Promote the use of modern techniques to perform inspection on the presence of

	hazardous substances
6	Request from the distribution sector to provide along with products in single use packaging the same range of products in reusable packaging, if existing
7	Enhance frequent, independent and effective inspection
8	Further develop and clarify the concept of “consumer acceptance”
9	Clarify that the Essential Requirements should be complied with from the very start of the decision taking process, including strategic decisions
10	Review the CEN standards on a series of aspects
11	Apply the Essential Requirements on individual products and their packaging
12	Change the legal statute of the Essential Requirements
13	Integrate the definitions and provisions of the Waste Framework Directive with the Essential Requirements
14	Change the status of the CEN standards
15	Introduce a provision in the Essential Requirements to ban hazardous substances in recycled materials

A progressive scenario would include proposal 1 to 15, with an implementation of all three indicator systems in proposal 1 and an implementation of all three labelling systems in proposal 4.

An intermediate scenario would focus on the implementation of the existing requirements without changing them in the Directive or without changing the standards. It would include proposals 1, 2, 3, 5, 6, 7, 8, 9, 11.

An instrumental scenario would look on enhancing the systems to enforce and follow up the requirements, without changing them or interpreting them in another way as it is done today. It would include proposals 1, 2, 3, 5, 7, 11.

Other combinations are possible in line with the final choices of the policy makers.

4.5.2.2

Consultation on possible impacts

Consultation with stakeholders is a central part of any impact assessment on the scenarios. Stakeholders have to be selected, they have to be informed on the selected scenarios and they have to be given the possibility to reflect on them and to exchange views on possible impacts on economic, social and environmental aspects. Crucial elements are:

- A representative choice of stakeholders with an equilibrium of interests; MS officials, industry groups, SME representatives, NGO's, consumer organisations, an equal geographical spread, an equal spread over product and packaging types...
- Involvement of the stakeholders from the beginning of the project. For this reason the preliminary stakeholder meeting on 26 June is important (see Annex 3) although the composition of the group was not balanced.
- Willingness of stakeholders to share factual information which they possess.
- Openness towards the positions taken by the different stakeholders, and the willingness of the policy makers to retrieve from it the information needed to propose high quality policy instruments.

4.5.2.3 Identification of likely economic impacts

The EC Guidelines for Impact Assessments identifies following economic impacts that are relevant to this study:

- Competition in the internal market:
 - Relevant for proposals 10, 14 because they harmonise the market and help creating a level playing field.
 - Relevant for proposal 12 that could create variation on the internal market.
 - Relevant for proposal 3, 5 and 7 because they challenge unfair competition through effective enforcement.
 - Relevant for proposals 8 and 9 because they limit the way in which competition can be realised.
- Operating costs and costs of business:
 - Relevant for proposals 2, 8, 9 that could diminish costs for business.
 - Relevant for proposal 6 that could augment costs for business.
- Administrative burden to companies/SME's:
 - Relevant for proposals 1, 4, 14 that could augment administrative burden.
 - Relevant for proposal 4 that could ease information flow for the benefit of other market actors.
- Impact on public authorities, including administrative costs:
 - Relevant for proposals 1, 6, 8, 12, 13, 10 in a developing phase.
 - Relevant for proposals 1, 2, 4, 5, 6, 7, 9, 10, 12, 14, 15 in an implementation phase.
 - Relevant for proposal 1, 4, 8, 10, 12, 14, 15 for European authorities in a developing phase.
 - Relevant for proposal 3 for European authorities in an implementation phase.
- Innovation and research:
 - Relevant for proposal 8 and 9.
- Consumers and households
 - Relevant for proposal 2, 8, 4 generating beneficial effects for consumers and households.
- Specific regions or sectors:

- Relevant for proposal 6 focussing the distribution sector.
- Relevant for proposal 5, 13, 15 having impact on the waste collection and treatment sector.
- Third countries and international relations:
 - Relevant for proposal 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15 having impact on companies in external countries importing packaging or packaged goods.
 - Relevant for proposal 15 for external countries accepting EU packaging waste for recycling.

Impact on property rights and the macroeconomic environment is not expected.

4.5.2.4 Identification of likely social impacts

The EC Guidelines for Impact Assessments identifies following social impacts that are relevant to this study:

- Employment and labour markets:
 - All above mentioned economic impacts may have an indirect effect, either beneficial or adverse, on employment.
- Governance, participation, good administration, access to justice, media and ethics:
 - Relevant for proposal 15 that could have impact on non ethical export of EU plastic waste to some non OECD countries where it is treated below EU standards.
- Public health and safety:
 - Some below mentioned environmental impacts may as well have impact on public health.

Other social impacts are not expected.

4.5.2.5 Identification of likely environmental impacts

The EC Guidelines for Impact Assessments identifies following environmental impacts that are relevant to this study:

- Climate:
 - Relevant for proposal 13 envisaging the waste treatment hierarchy and its aspects related to carbon footprint.
 - Relevant for proposal 8 including knowledge on carbon footprint as an aspect in testing consumer acceptance.
- Transport and the use of energy:
 - Relevant for proposal 13 where the obligations for the waste treatment hierarchy may have impact on transport needs for member States without sufficient treatment capacity.
- Air quality:
 - Relevant for proposal 13, 5, 7 regarding emissions.
- Water quality and resources:
 - Relevant for proposal 5, 7, 13 regarding emissions.
- Soil quality or resources:

- Relevant for proposal 5, 7, 13 regarding emissions.
- Renewable or non-renewable resources:
 - All waste related issues are directly linked to resource use as well.
- The environmental consequences of firms and consumers:
 - Relevant for proposals 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15 promoting more sustainable production and consumption.
- Waste production / generation / recycling:
 - Relevant for all proposals, because they are all enhancing the application and the effectiveness of the waste and waste prevention related Essential Requirements. This can be identified as one of the major building blocks.
- The likelihood or scale of environmental risks:
 - Relevant for proposal 15 on the presence of hazardous substances.
- International environmental impacts:
 - Relevant for proposal 15 regarding transfrontier movement of packaging waste for recycling.

Apparent impact on biodiversity, flora, fauna and landscapes, land use and animal welfare is not expected.

4.5.2.6

Comparison of options

The likely environmental, economic as well as social consequences are to be assessed for the selected policy options relative to the baseline. As the robustness, transparency and clarity of the analysis is an ongoing preoccupation, the impacts identified could be mapped in a causal model. This exercise will not only facilitate the communication about effects, but also help to identify the most relevant effects (both direct and indirect) as well as possible unintended impacts that may arise.

Regarding environmental impact a distinction can be made between the at source prevention of the amount of packaging and the requirements on reuse and recovery.

For the requirement on prevention (packaging volume and weight minimisation) it is accepted that when applied it has an environmental interest since they are aimed at decreasing the pressure on the environment. It is less evident whether the other Essential Requirements, i.e. packaging should be re-usable, recyclable or recoverable in the form of energy recovery, has any meaning for the environmental performance of packaging. This question deserves examination, because it is unclear which packaging would not fulfil either of these requirements or whether such packaging would be necessarily worse for the environment in a life cycle perspective.

To assess whether the present Essential Requirements are sufficient to protect the environmental interest, a complete environmental analysis of the packaging industry should be performed (from cradle to grave or even from cradle to cradle – which is not feasible within the scope of this project). The tendency is to assess packaging more and more through life cycle analysis to assess the real environmental and economic impacts (or benefit) of the different Essential Requirements on different packaging and in different regional settings.

At present, the environmental NGO's and several interlocutors claim that the actual Essential Requirements are not sufficient to protect environmental interest. However, to

be able to make a conclusion on this point, it is necessary to perform a correct calculation of the environmental impact of different kinds of packaging including differentiation between packaging materials, transport distances, etc..

5

General conclusions

Enforcement of the Essential Requirements in EU-27

There is a large gap between the Member States and the industry with regard to implementation of and compliance with the Essential Requirements.

The industry is very much in favour of the Essential Requirements, which do not specify or predict the technical solutions for minimising the amount of packaging. They regret that so few Member States enforce implementation of the Essential Requirements.

The authorities, on the other hand, show little interest in enforcing the Essential Requirements. They leave it to the industry to comply. Therefore, implementation measures on the Essential Requirements are scarce. Except from occasional communication, company support and awareness rising, most enforcement efforts are focussed on the heavy metals content of packaging.

Four Member States have implementation measures and an enforcement procedure for all three Essential Requirements, namely the UK, France, the Czech Republic and Bulgaria. However, none of these Member States has set up systems to assess the effectiveness of the enforcement mechanisms. Moreover, recent inspection on inspection only took place in the Czech Republic and the UK. In France, inspection took place about 10 years ago; in Bulgaria inspection has not yet taken place.

Constraints with regard to enforcement

Enforcement on the Essential Requirements is difficult due to the general and vague way in which the requirements are formulated and the way in which the CEN standards are set up. Authorities do not know how they can assess compliance. Nevertheless, the general approach of the Essential Requirements is perceived as necessary to cover the complete and varied market of different packaging solutions. Other constraints for enforcement are lack of staff and finances, and other priorities (e.g. food safety).

With regard to the heavy metal inspection, efforts can still be improved and increased. Nearly all interviewed Member States expressed their desire to exchange knowledge on how to organise in-the-field-inspection on the heavy metals. They would appreciate awareness raising programs where know-how and experience can be exchanged between competent authorities.

Mechanisms to prove conformity and the percentage of economic operators using the CEN standards

From the data collection on compliance we conclude that the CEN standards are the only formalised instrument that is used by industry to prove compliance with the Essential Requirements. According to EUROOPEN⁴, 65% of the industry is following the CEN standards, and 12% is following its own standards. However, throughout the communication with the Member States, the in-depth interviews with the six selected Member States and the stakeholder workshop, no indications have been found on independent standards to prove Essential Requirements compliance in another way than through the application of the CEN standards.

⁴ European Organization for Packaging and the Environment, -an industry and trade organization

Most of the companies that use the CEN standards have translated them in tailor made company standards. Only when companies are confronted with inspection, evidence is gathered in a structured way as proposed by the CEN standards to prove compliance. But inspection is scarce.

We therefore conclude that the CEN standards are the only formalised instrument that is used by industry to prove compliance with the Essential Requirements. The industry, however, incorporates the standards and the requirements into their day by day activities without following them literally, but as an element of their claimed environmental awareness and due diligence.

Problems with interpretation

The workshop and in-depth interviews revealed a point of discussion with regard to the timing of consideration of the Essential Requirements. Should they be considered during the designing stage of the packaging, or even earlier before strategic decisions regarding the product and its packaging are taken (e.g. decision on the volume of the product, or type of product (e.g. compact powders)?

Next, interpretation problems arise with the definition of consumer acceptance and with the concept of recyclability.

Other issues of concern are: the applicability of the requirements on individual products versus on groups of products (the industry would prefer the latter, although this is not in accordance with the philosophy of the Essential Requirements), the impact on the Essential Requirements of import from Asia, and the impact of cultural and geographic differences between EU-Member States.

Draft policy options

Based on the gathered information through the questionnaires, interviews and workshop, the consultant has prepared a set of fifteen draft policy options or suggestions, and has prepared building blocks for an impact assessment on these options. It should be noted that these policy options do not represent the vision of the Commission or engage the Commission in any way.

The policy options are structured as follows:

Set 1: Policy options for implementation and inspection measures with no impact on the legal or standardised provisions at EU level

- Develop indicators to assess the success of national Essential Requirements implementation or enforcement measures. Proposals for top down and bottom up indicators are described for the requirement on prevention.
- Develop awareness raising and implementation support.
- Work where needed at a European level, especially when negotiating with multinational companies or when setting up coordinated enforcement and inspection.
- Use labels wherever possible, e.g. similar to RoHS labels or Essential Requirements integrated in the eco-label or the New Approach CE mark.
- Promote the use of modern techniques, like the XRF-gun, to perform inspection the presence of hazardous substances.

- Make the distribution sector co-responsible on achieving the goals of the second Essential Requirement, by obliging them to also offer an alternative with reusable packaging if they offer products in single-use packaging.
- Enhance frequent, independent and effective inspection

Set 2: Policy options with possible impact on the CEN standards

- Further develop and clarify the concept of “consumer acceptance”, with a focus on what is beneficial for the consumer.
- Clarify that the Essential Requirements should be complied with from the very start of the decision taking process, including strategic decisions.
- Review the CEN standards on a series of aspects, including the replacement of the concept ‘recyclable’ by ‘recycled’.
- Apply the Essential Requirements on individual products and their packaging

Set 3: Policy options with impact on the formulation of the Essential Requirements

- Change the legal statute of the Essential Requirements to make them voluntary in order to allow more detailed policy measures by Member States.
- Integrate the definitions and provisions of the Waste Framework Directive, with respect for the waste treatment hierarchy, in the Essential Requirements.
- Change the status of the CEN standards to give them a more obligatory nature.
- Introduce a provision in the Essential Requirements to ban hazardous substances in recycled materials

ANNEX 1: FACT SHEETS PER MEMBER STATE



ARCADIS Belgium N.V.

Veldekens, Roderveldlaan 3

2600 Antwerpen

Belgium

Tel: +32 3 3286 286

Fax: +32 3 3286 287

URL: www.arcadisecolas.be

IMPLEMENTATION ESSENTIAL REQUIREMENTS DIRECTIVE 94/62/EC

Results of the questionnaires

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Legislation	
Essential Requirements	<i>Verordnung über die Vermeidung und Verwertung von Verpackungsabfällen und bestimmten Warenresten und die Einrichtung von Sammel- und Verwertungssystemen (VerpackVO 1996) BGBl. Nr. 648/1996 (geändert durch BGBl. II Nr. 232/1997, BGBl. II Nr. 440/2001 und BGBl. II Nr. 364/2006) - Ordinance on the Prevention and Recovery of Packaging Waste and Specific Waste Products, and for the Establishment of Collection and Recovery Systems. Federal Law Gazette No. 648/1996 (latest amended by 364/2006)</i> This ordinance transposes the Essential Requirements (article §1.2 and annex I), but makes no reference to implementation or enforcement means.
CEN standards	<i>Bekanntmachung des Bundesministers für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft über die Veröffentlichung der Bezugsnummern der Normen EN 13428:2000 und EN 13432:2000 im Rahmen der Umsetzung der Richtlinie 94/62/EG über Verpackungen und Verpackungsabfälle BGBl. für die Republik Österreich n° 327 du 31/08/2001 p. 1877 (SG(2003)A/1934 du 19/02/2003) - Announcement of the Federal Minister for Agriculture, Forestry, Environment and Water on the publication of references for standards EN 13428:2000 and EN 13432:2000 as part of the implementation of Directive 94/62/EC on packaging and packaging waste</i>
Compliance procedure	
	If a company is asked to show compliance, they have to give the information. This can be made by using the CEN standard – documents The existing European standards have been made binding in Austria. No additional national standards have been implemented.
Enforcement means	
Competent bodies	Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Abteilung VI/6
Procedure	The standard assessment is checked by experts. The companies chosen for inspection depends on the estimated market input and covers certain branches in different years No samples for chemical analyses are taken so far
Number and type of companies asked for proof of compliance	52 importers of products (textiles, construction material, food and EEE), who all showed compliance with CEN standards EN 13427 und EN 13428
Number of infringement cases in past 3 years	0

Penalties	€ 360,-- to 7.270,-- (§ 79 Abs. 2 AWG 2002) € 360,-- to 7.270,-- (§ 79 Abs. 2 AWG 2002)
Administrative & financial costs	
	€ 1100/ company (including the inspection of amounts of packaging material put on the market and reporting obligations also)
Information available for companies (website, helpdesk, guidelines,...)	
	None
Alternative means of achieving prevention	
	Packaging companies or packers/fillers don't have to report their efforts for reducing packaging. But there are a few other initiatives, such as: • ARA System's "minimise waste" promotion initiative (<i>Förderungsinitiative Abfallvermeidung</i>) has been well established: In cooperation with the City of Vienna, the provincial government of Lower Austria and the Austrian Federal Economic Chamber, ARA System supported 21 projects targeting waste minimisation in SMEs, government enterprises, educational and health institutions. In 2007, funding totalled around 303,000 €. That same year, the assessment of waste minimisation measures was for the first time based on a quantitative evaluation model developed for ARA System in the framework of the QUEVEP project by the Vienna University of Technology. The promotion initiative will be continued. • Companies that implement resource management and waste minimisation initiatives in the field of package waste can compete for an annual award (<i>Staatspreis Vorbildliche Verpackungen</i>) that is co-sponsored by ARA System and the Austrian Federal Ministry of Economics and Labour as well as the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. In 2007, the award went to Teich AG for its Low Seal Lidding, an innovative solution for sealing PP and PS cups that helps save considerable amounts of energy and raw material. • ARA also continued its sponsorship of the Emballissimo jury award for innovative packaging solutions with a special focus on resource management. In 2007, Sojarei received this prize for its Feel Good corrugated board packaging. • In addition, ARA System co-sponsored the annual innovation prize "PHÖNIX – Einfall statt Abfall", which is awarded to excellent material recycling and resource management projects.
Comments	

Legislation (federal legislation)	
Essential Requirements	<i>Wet van 21 december 1998 betreffende de productnormen ter bevordering van duurzame productie- en consumptiepatronen en ter bescherming van het leefmilieu en de volksgezondheid – Loi du 21 décembre 1998 relative aux normes de produits ayant pour but la promotion de modes de production et de consommation durables et la protection de l'environnement et de la santé</i> Chapter V of this law transposes articles 9 and 11 of Directive 94/62/EC. No specific means of implementation and enforcement are described. <i>Koninklijk besluit van 25 maart 1999 houdende bepaling van productnormen voor verpakkingen – Arrêté royal portant fixation de normes de produits pour les emballages</i> The Royal Decree on product standards for packaging only implemented the concentration of heavy metals in packaging following article 11 of Directive 94/62/EC. The Essential Requirements in article 9 were never implemented through a Royal Decree (see regional legislation).
CEN standards	<i>Registratie van Belgische Normen (publicatie Belgisch staatsblad: 09/11/2004) – Enregistrement de normes belges (Moniteur Belge: 09/11/2004) /</i>
Compliance procedure	
	Heavy metals are assessed in the field with a mobile XRF-gun (X-Ray Fluorescence). When the permitted concentration levels of heavy metals are exceeded, samples are taken for laboratory analysis. No inspection of other essential requirements
Enforcement means	
Competent bodies	Federal public service, DG Environment, Federal inspection service
Procedure	No enforcement (except for heavy metals)
Number and type of companies asked for proof of compliance	No enforcement (except for heavy metals)
Number of infringement cases in past 3 years	0

Penalties	No enforcement (except for heavy metals)
Administrative & financial costs	
	No enforcement (except for heavy metals)
Information available for companies (website, helpdesk, guidelines,...)	
	No information or guidelines are available for compliance with the essential requirements. But a website on reduction of packaging is available with many examples, legislation, tips, etc.: www.preventpack.be
Alternative means of achieving prevention	
	Companies who are responsible for more than 100 ton of packaging of Belgian products (namely packaged in Belgium) per year or 300 ton of packaging (including imported packaging) are obligated to make up a prevention plan every 3 year. A prevention plan includes measures that are taken to increase the amount of recyclable and re-usable packaging, and to reduce the weight and/or hazardousness of some packing materials. Companies need to evaluate their prevention plan after the second and third year. Industrial federations can report on behalf of their members: they report on the prevention efforts of the sector as a whole.
Comments	

Legislation	
Essential Requirements	<i>Закон за управление на отпадъците – Waste management act</i> <i>Наредба за опаковките и отпадъците от опаковките - Ordinance on packaging and packaging waste</i> The packaging ordinance states the following: “Art. 4 (4) Producers and importers of packed goods shall be obliged to use only packaging, which meets the requirements of paragraph 1, as they require a copy of the declaration for compliance according to paragraph 3, issued by the producer of the importer of the packaging or the packaging material.”
CEN standards	<i>Наредба за опаковките и отпадъците от опаковките - Ordinance on packaging and packaging waste</i> The packaging ordinance states the following: “Art.4 (6) The packaging, produced according to the requirements of the Bulgarian standards, with which the harmonised European standards are introduced, shall be considered compliant with the requirements of paragraph 1.” “Art.4 (7): The Bulgarian institute for standardisation shall publish in its official bulletin a list with the standards of paragraph 6.”
Compliance procedure	
	The packaging ordinance states the following: “Art. 4 (4) Producers and importers of packed goods shall be obliged to use only packaging, which meets the requirements of paragraph 1, as they require a copy of the declaration for compliance according to paragraph 3, issued by the producer of the importer of the packaging or the packaging material.” “Art. 4 (5) The declaration for compliance according to paragraph 3 or the copy of it shall be preserved by the persons in Art. 4 for a term of 3 years, assumed from the date of issuing and it shall be presented upon request by the control bodies.” With regard to maximum concentration levels of heavy metals, “the declaration for compliance shall be compiled on the basis of examination record, issued by an accredited laboratory. The declaration should be kept for a term of 5 years. Annex 1 and 4 of the packaging ordinance hold the format of the declaration form.
Enforcement means	
Competent bodies	The chairman of the Commission for Trade and Protection of the Consumers or an official, authorised by him, shall control the observing of the requirements according to Art. 4, 5 and 6 for the packaging of the products of industrial goods, which are within the scope of the Act for protection of the consumers and of the trade rules. The control over the packaging, designated for contact with foods, shall be

	implemented by the bodies of the state sanitary control under the Food Act.
Procedure	Compliance with the essential requirements is checked together with inspection on heavy metals and in some cases on other environmental issues related to packaging.
Number and type of companies asked for proof of compliance	0
Number of infringement cases in past 3 years	0
Penalties	According to the Waste Management Act, a pecuniary penalty amounting to 30 per cent of the market price of the aggregate amount of products imported and/or manufactured and placed on the market shall be imposed on any juristic person or sole trader which or who places on the market and distributes any packaging which does not bear a marking for identification of the packaging materials or which contains heavy metals: lead, cadmium, mercury and hexavalent chromium in excess of the regulated limits and/or is not responsive to the other requirements established by the relevant ordinance referred to in Article 24 (2) herein
Administrative & financial costs	
	The costs for performing the inspections are set for each year by the Government and are approved by the National Assembly
Information available for companies (website, helpdesk, guidelines,...)	
	Guidelines are available on compliance with the essential requirements and they are spread through the manufacturers by the recovery organizations through their web pages: http://www.ecopack.bg/bg/index.php , http://www.ecobulpack.com/ , http://www.bulecopack.com/ , http://www.recopak.com/ , http://www.repack.bg/ , http://www.impact-corporation.com/
Alternative means of achieving prevention	
Comments	

Legislation	
Essential Requirements	Ο περί Συσκευασιών και Αποβλήτων Συσκευασιών Νόμος Ν.32(Ι) /2002 - <i>The Packaging and Packaging Waste Law N.32(I) /2002</i> Heavy metal concentration limits: Οι Περί Συσκευασιών και Αποβλήτων Συσκευασιών (Παρεκκλίσεις από Επίπεδα Συγκέντρωσης Βαρέων Μετάλλων στις Συσκευασίες) Κανονισμοί 188 (Ι)/2003 - <i>The Packaging and Packaging Waste (derogation for packaging in relation to the heavy metal concentration levels) Regulations 188(I)/2003</i>
CEN standards	
Compliance procedure	
	- Companies follow the CEN Standards voluntary. - The only obligation for the companies is through the collective management system for packaging i.e. Green Dot Cyprus which is responsible, according to its permit, to take samples randomly, including the requirements especially for plastic crates and pallets, from 20 companies that are members of Green Dot each year and analyse the packaging composition in concentration in heavy metals and in particular Pb, Cd, Cr and Hg. The results reported for years 2006-2008 are available at the Environment Service.
Enforcement means	
Competent bodies	Ministry of Agriculture, Natural Resources and Environment, Environment Service Mr. Costas Papastavros, Tel 0035722408949, Ms Elena Christodoulidou, Tel: 0035722408951, Fax: 0035722774945
Procedure	An inspection document has been prepared concerning all the relative articles of the law that the companies have to comply to, including the essential requirements. The Environment Service is planning to have regular inspections using this document.
Number and type of companies asked for proof of compliance	20 companies have been inspected on the concentrations of Cr, Cd, Hg and Pb in the packaging (mostly food industry) in 2008
Number of infringement cases in past 3 years	0

Penalties	The penalty as described in the basic Law 32(I)/2002 reaches the highest amount of €85.430. An amendment of the law concerning the penalties has been prepared recently, that includes an extrajudicial settlement of the highest amount of €3400 in order to settle the non compliance easily and quick.
Administrative & financial costs	
	Only one person is responsible for the packaging directive now, due to lack of staff, so it is very difficult to estimate correctly the costs for all the inspections needed
Information available for companies (website, helpdesk, guidelines,...)	
	No guidelines are available on compliance with the essential requirements
Alternative means of achieving prevention	
	In the next contest for Environmental Prizes, the Environment Service is planning to include criteria about the category «product» concerning the weight /volume/ concentration of heavy metals of packaging.
Comments	Lack of staff is the main bottleneck for further enforcement regarding the essential requirements.

Legislation	
Essential Requirements	Zákon č. 477/2001 Sb., o obalech - Act No. 477/2001 Coll. on packaging
CEN standards	Numbers of Czech national standards (ČSN): ČSN EN 13427; ČSN EN 13428 (477/2001 - section 3); ČSN ČR 13695-1 [477/2001 - section 4 part. 1, b)]; ČSN EN 13429 [477/2001 - section 4 part 1, c)]; ČSN EN 13430 [477/2001 - section 4 part 1, c) point 1]; ČSN EN 13431 [477/2001 - section 4 part 1, c) point 2]; ČSN EN 13432 [477/2001 - section 4 part. 1, c) point 3], <u>One extra standard:</u> ČSN ČR 77052-2 [477/2001 - section 6)] : Packaging - Packaging waste - Part 2: Identify marking of packaging for recovery, based on Directive 97/129/EC
Compliance procedure	
	Companies have to be able to prove the conformity with the law 477/2001. (e. g. certificate from laboratory or proclamation.) Sometimes, there is a problem for controllers, to prove the compliance with the Essential Requirements <i>Section 5 of 477/2001:</i> <i>“(1) A person who places packaging on the market shall be obliged</i> <i>a) at request, to submit to the control bodies the technical documentation required for demonstrating the fulfilment of the duties stipulated in Sections 3 and 4, where information pursuant to paragraph 2 (b) above shall replace, for the purposes of control, the documentation required for demonstrating compliance with the duties stipulated in Section 4,</i> <i>b) to demonstrably inform his/her clients of the fact that the packaging meets the requirements stipulated in Sections 3 and 4.</i> <i>(2) A person who places packaging means on the market shall be obliged</i> <i>a) at request, to submit to the control bodies the technical documentation required for demonstrating the fulfilment of the duties stipulated in Section 4,</i> <i>b) to demonstrably inform his/her clients of the fact that the packaging means meets the requirements stipulated in Section 4.”</i> - there is a methodical instruction to carry out Section 5 of 477/2001. (Only in Czech): http://www.mzp.cz/cz/metodicky_pokyn
Enforcement means	
Competent bodies	The Czech Trade Inspectorate: http://www.coi.cz, Mrs. Machackova – tel: + 420 296 366 189; (477/2001 - section 36) The Czech Agricultural And Food Inspection Authority: http://www.szpi.gov.cz/, Mr. Kavka – tel: 542 426 644; (477/2001 - section 37) The State Institute for Drug Control: http://www.sukl.cz/, Mrs Hanzlickova – tel. 272 185 833, olga.hanzlickova@sukl.cz, Mrs Jírova - tel: 2 67 082 439, jirova@szu.cz;

	(477/2001 - section 38) The Institute for the State Control of Veterinary Biologicals and Medicaments: http://www.uskvbl.cz/ ; (477/2001 - section 39)
Procedure	There are several random checks per year in the Czech Republic + checks on the base of complaints from other organizations or people
Number and type of companies asked for proof of compliance	During 2008 the Czech Trade Inspectorate checked 19 companies who have placed packaging on the market (16 were producers and 3 were importers).
Number of infringement cases in past 3 years	There were 3 breaches of the Packaging Act No. 477/2001, respectively of section 5 (companies who placed packaging on the market, but not being able to submit the control bodies the technical documentation required for demonstrating the fulfilment of the duties stipulated in Sections 3 and 4 of 477/2001).
Penalties	By the law 477/2001 there is a possibility of penalty 10 millions CZK, but the range of real penalties are 10 – 50 thousand CZK
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	
	There is information on the web site of the Ministry of the environment. Here is also the special instruction to compliance to conformity assessment (section 5 - 477/2001), but only in Czech (http://www.mzp.cz/cz/metodicky_pokyn)
Alternative means of achieving prevention	
	- In October 2003 the Czech Republic adopted a Waste Management Plan of the Czech Republic (hereinafter "WMP"). Within the binding part of this plan measures and rules were adopted supporting Article 4 of the Directive on packaging. The Commission has been informed about the WMP. An Implementation programme of the Czech Republic for packaging and packaging waste, also dealing with the prevention of packaging waste formation, has been established. The implementation programme has been set up by a working group which consisted, among others, of representatives of the economic operators concerned, in particular of waste management companies, companies producing packaging and packaging materials, companies using packaging in their own manufacture and distribution as well as of an authorised packaging company - Under the Act on packaging, trading premises larger than 200 square metres are obliged to offer beverages in reusable packaging if they exist on the market. Decree No 116/2002 harmonises the amount of the deposit on certain

	types of returnable packaging. Under the Act when reusable packaging which is reused through a closed or an open system is placed on the market or put into circulation, its return and recovery has been ensured if at least 55% by weight of the packaging placed on the market or put into circulation anew is reused.
Comments	

Legislation	
Essential Requirements	<i>Bekendtgørelse nr. 477 af 28. maj 2006 om visse krav til emballager - Statutory order no. 477 of 28 May 2006 on certain requirements for packaging</i>
CEN standards	The European CEN standard EN 13427-13432 were in autumn 2006 translated into Danish. <i>No other standards are adopted</i>
Compliance procedure	
	Denmark has not laid down any requirements in proof of compliance if a company wants to implement another procedure. Such production of evidence would probably have to find expression in binding national regulations (which have to be notified). Instead, in cooperation with Danish Industry, the Danish EPA has completed a project with the purpose to give both the authorities (The Danish Environmental Protection Agency) and packaging producers/packer-fillers a common understanding of the requirements in the EU Packaging Directive regarding minimisation of packaging, including the level of detail of the documentation that companies may be requested to present. As a flexible and operational approach it is suggested that companies establish and maintain a documentation system which picks up knowledge about good and bad properties of a given packaging and describes the consequences this knowledge has had for its final design. The system outlined in the project includes a number of elements which are judged to be generally important, but there are no formal requirements to the system established by a company. The report contains checklists which can be used to focus on packaging minimisation in the development process. The checklists are on the one hand derived from the standard DS/EN 13428 and on the other compiled from English and French tools for packaging development. An overview is also provided of the ten performance criteria in DS/EN 13428, listing for each a number of properties which are relevant under the given heading. The report presents an outline of a system which a company can establish with the aim of being able to provide documentation upon request. The system can function on its own, but many companies will probably find it suitable to integrate relevant elements in an existing quality or environmental management system such as EMAS, ISO 14001 and ISO 9001. In essence, the basic function of the system is to pick up information about good and "not-so-good" properties of a given packaging and store this knowledge

	together with information on the corrective actions taken. The following elements are seen as important in a documentation system: • Knowledge from the primary development process. During the process a number of tests are often conducted, and the results of these are often suited as documentation. However, many companies do not store this information in a structured way, e.g. as an integral part of a design review or design brief together with drawings and other technical specifications. • Experience from packaging production. As an example, the failure rate may become unacceptable when large-scale production is commenced, e.g. because a different machinery is used. In such cases the packaging will often need to be re-designed, addressing the critical element in a development process. • Experience from filling processes. When production (the filling process) is started at the packer/filler, unexpected problems may occur, e.g. in the form of torn or toppled packaging. The cause of such problems can often be characterised as the critical area and corrective actions are an important element in the dialogue with customers and authorities. • Experience from distribution. If a product is damaged when arriving at the customer this is a clear indication that the full packaging solution does not give the desired protection. A description of the problem and it has been corrected is an important element in the documentation of a packaging solution. • Dialogue with sales points. Many packaging solutions are developed in dialogue with future point of sales, and the wishes of customers cannot be neglected if a company wants to remain in the market. It is generally accepted that wishes from retail stores may lead to larger packaging solutions, e.g. providing pilfer resistance, but a formal documentation of this requires a written request from the customer. • Dialogue with end-users and consumers. Only one in fifty consumers reports if the packaging does not function properly from his point of view, e.g. the packaging is difficult to open, the product is damaged, etc. Such complaints must of course be taken seriously and corrective actions taken if possible. In order to ensure a good documentation, the complaints should be stored with the possibility of re-finding it when necessary. Not all of the above elements are relevant for a given company, and other elements may also be equally important. The report contains a simple checklist describing central issues and elements of the documentation system, relevant actors and possible types of documentation. With this list, most companies should be able to describe the basic elements in its documentation system.
Enforcement means	
Competent bodies	Danish EPA, Soil and Waste Strandgade 29, DK 1401 Copenhagen K

	Tel number +45 72 54 43 12 Contact person: Anne-Mette Lysemose Bendsen – mail: amble@mst.dk
Procedure	Not applicable for article 9 With regards to inspection on heavy metals concentration, Danish EPA selects samples in stores who market packaging and measure the samples by Rontgen fluorescent. Samples that show excess of heavy metal limits, are sent to an accredited laboratory for more reliable analysis.
Number and type of companies asked for proof of compliance	The Danish EPA has not done any inspections concerning the essential requirements. Instead, the Danish EPA works very dialogue-based with the companies. The EPA has together with relevant organizations completed a study to encourage companies to proof compliance But in 2006, Danish EPA did inspections on heavy metals in packaging.
Number of infringement cases in past 3 years	In connection to the above mentioned inspections on heavy metal in 2006, two procedures were initialised because of too large a content of cadmium in the packaging.
Penalties	The statutory mentioned in question 1 gives the opportunity to penalize with fine the one who does not fulfil the Essential Requirements
Administrative & financial costs	
	?
Information available for companies (website, helpdesk, guidelines,...)	
	See report mentioned at paragraph "compliance procedure"
Alternative means of achieving prevention	
	• Since 1970s there has been a deposit system for beers and carbonated soft drinks in refillable containers. • Since 1998, there has been a tax on certain types of packaging to encourage reuse and the substitution of more environmentally harmful materials with less harmful. • Since 2007 there has been a formalised cooperation between the Danish EPA and Danish Industry and trade on packaging minimization. One of the projects is to develop a guideline for packaging producers, packer/fillers and market to use to ensure they fulfil the essential requirements on minimization.
Comments	The provisions in article 9 of the directive require the Member States authorities to be able to clearly determine whether or not a particular packaging item fulfils the requirements of the directive. Both the formulations in the directive and the standards

	do not contain precise requirements to make such an assessment in a sufficiently clear and indisputable way. In Denmark we therefore try to ensure compliance through dialogue and cooperation with the packaging producers/-fillers. The only requirement we can enforce is the concentration limits of heavy metal because we here can measure the content.
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Legislation	
Essential Requirements	<i>Pakendiseadus - Packaging Act</i>
CEN standards	Packaging Act paragraph 13 ¹ gives the reference to harmonised standards. Above mentioned standards are transposed to national standards by the Estonian Centre for Standardisation
Compliance procedure	
	We do not ask any information when the product is put on the market, because it has to meet the requirements anyway. The company has to provide information about the product when the supervision is made by the Environmental Inspectorate or the Consumer Protection Board. They can ask for production information and heavy metal content.
Enforcement means	
Competent bodies	The Environmental Inspectorate (Kopli 76 Tallinn 10416; valve@kki.ee) The Consumer Protection Board (Kiriku 4 Tallinn 15071; info@consumer.ee)
Procedure	
Number and type of companies asked for proof of compliance	
Number of infringement cases in past 3 years	0
Penalties	Packaging Act § 26¹. Precepts (1) Supervision entities shall have the right to issue precepts in order to ensure compliance with this Act. In the case of failure to comply with a precept, coercive measures may be taken in compliance with the Substitutive Enforcement and Penalty Payment Act. (2) In the case of failure to comply with a precept specified in Subsection 1 hereof, supervision entities shall have the right to require penalty payment in compliance with the Substitutive Enforcement and Penalty Payment Act. The maximum amount of the penalty shall be 500,000 Estonian kroons. Packaging Act § 27. Failure to comply with requirements for manufacture and use of packaging

	(1) Failure to comply with the requirements for the manufacture or use of packaging shall be punishable by a fine of up to 300 fine units. (2) The same act, if committed by a legal entity, shall be punishable by a fine of up to 50,000 kroons. § 28. Violation of restrictions on heavy metal content of packaging (1) Violation of restrictions established on the heavy metal content of packaging shall be punishable by a fine of up to 300 fine units. (2) The same act, if committed by a legal entity, shall be punishable by a fine of up to 50,000 kroons
Administrative & financial costs	
	Difficult to assess
Information available for companies (website, helpdesk, guidelines,...)	
	No
Alternative means of achieving prevention	
	Fiscal measures: the packaging excise duty that support the reuse of beverage glass packaging (Packaging Excise Duty Act §2 (3) and §8 (1)1 and (1)3)
Comments	Since Estonia is a small and developing country, it has to calculate finances very carefully and set up the priorities. The compliance scheme or enforcement mechanism has not been the first priority because of lack of finances and manpower.

No results available.

No response to mails nor telephone calls.

Legislation	
Essential Requirements	<i>Décret N° 98-638 du 20 juillet 1998 relatif à la prise en compte des exigences liées à l'environnement dans la conception et la fabrication des emballages (codifié par les articles R 543-44 ...52 et 73 du code de l'environnement)</i> <i>Circulaire du 16 février 1999 relative à l'application du décret n° 98-638 du 20 juillet 1998</i> <i>Heavy metals: Decret 98-638 article 4 ou article R 543-45 du code de l'environnement</i>
CEN standards	<i>Avis d'homologation des normes publié au JORF du 10 octobre 2004</i>
Compliance procedure	
	• The packaging manufacturer shall ensure and declare, according to internal manufacturing control procedures, that the packaging that he places on the market complies with the provisions of the Decree (Art. 8) • Packaging in conformity with the harmonised European standards that will be published in the Official Journal of the French Republic shall be considered to meet the requirements of the Decree (Art. 7). • Rather than wait for all the standards to be published in the Official Journal of the European Union, which will precede their publication in the Official Journal of the French Republic, the [French] authorities have proposed using the standards adopted by CEN, which now form part of national standards for the self-assessment of conformity by the manufacturer. • The outcome of the self-assessment should be available in a file comprising a written declaration of conformity and technical documentation: • the written declaration certifies that the packaging conforms.¹ It may be passed to the packaging user. • the technical documentation contains the information necessary to assess that the packaging meets the various requirements, such as: a description of the packaging and of its composition, statements on the concentration levels of heavy metals, results of self-assessment, statements on the minimisation of substances dangerous to the environment, etc. • The technical documentation is intended for enforcement officers as set out in paragraph 4.3. • To reduce the cost of compiling the technical documentation, the packaging manufacturer may make reference to a type or a category of packaging. • It is up to the manufacturer to select the relevant ² criteria (for example: type of material, form, volume and/or weight of packaging, etc.)

¹ See the proposed standardised format annexed.

Enforcement means	
Competent bodies	No centralised competence : environmental inspection, customs, health inspection, inspectorate waterways, etc.
Procedure	
Number and type of companies asked for proof of compliance	Companies have been checked in the first year of implementation, and the year after. No inspection has taken place since then.
Number of infringement cases in past 3 years	
Penalties	Infraction of third class: penalty of 450 euro
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	
	The French Packaging Council has compiled guidelines for compliance, publications on prevention, a website (http://www.conseil-emballage.org)
Alternative means of achieving prevention	
	Tax in function of the weight and recyclability
Comments	

² The relevance of pooling criteria should be analysed for each of the Essential Requirements.

Legislation	
Essential Requirements	<i>Verordnung über die Vermeidung und Verwertung von Verpackungsabfällen (Verpackungsverordnung – VerpackV) vom 21. August 1998 (BGBl. I S. 2379), zuletzt geändert durch Artikel 1 und Artikel 2 der Verordnung vom 2. April 2008 (BGBl. I S. 531), §§ 12 und 13 - Ordinance on the Avoidance and Recovery of Packaging Wastes (Packaging Ordinance) of 21 August 1998 as last amended by Article 1 and Article 2 of the Act of 2 April 2008 (Federal Law Gazette I p. 531); art. 12 and 13</i> English version, including the fourth amendment (but not the fifth amendment): http://www.bmu.de/files/pdfs/allgemein/application/pdf/verpackv_4aenderung_en.pdf
CEN standards	European CEN standards were transposed to national standards (www.din.de) and Normenausschuss Verpackungswesen (www.navp.din.de), also available in English.
Compliance procedure	
	Companies can proof compliance by means of written statements in accordance with Annex 2 Nr. 5 and Annex 3 Nr. 3 or by means of a certificate of an accredited expert. With regard to heavy metals, companies need to perform continuous quality control and measurements. The results should be kept for at least 4 years in case of pallets and 3 years for glass packaging. When the cumulative heavy metal content exceeds 200 mg/kg in 12 months, this should be reported to the authorities.
Enforcement means	
Competent bodies	The competent body differs between States. Some examples: ▪ Schleswig-Holstein: Ministry of Social Affairs, Health, Family, Youth and Seniors ▪ Berlin: Department for Health, Environment and Consumer Protection ▪ Saarland: State Agency for Environmental and Safety ▪ Hamburg: seven district offices; co-ordination by the Authority Urban Development and Environment, Department of Environmental Protection, Waste Management Division ▪ Rheinland-Pfalz: local counties and cities ▪ Baden-Württemberg: local waste authorities
Procedure	The competent authorities monitor compliance with the provisions of the Packaging Ordinance, mainly when required by the circumstances (for example receipt of relevant evidence regarding non-compliance) and under control after the Food and Consumer Protection Law (inspection on heavy metals).

Number and type of companies asked for proof of compliance	No information available
Number of infringement cases in past 3 years	None
Penalties	Violations of the heavy metal limits of § 13 are infractions (see § 15 No. 31) and may be punishable by fines up to € 50,000. Additional individual arrangements are possible on the basis of § 21 KrW-/AbfG. Deviations from the general requirements of § 12 are not VerpackV finable. But manufacturers and distributors who put excessive packaging or poorly recyclable materials on the market are financially punished because of higher charges due to the Dual Pay systems.
Administrative & financial costs	
	No information available
Information available for companies (website, helpdesk, guidelines,...)	
	Information (e.g. prevention examples) is available on the following websites: ▪ NA Verpackungswesen: http://www.navp.din.de ▪ Grüne Punkt - Duales System: http://www.gruener-punkt.de (also available in English)
Alternative means of achieving prevention	
	• Tax in function of the weight and recyclability (Dual Pay system) • Voluntary prevention plans
Comments	The implementation of producer responsibility in Germany with economic incentives (Dual Pay system) ensures enough incentive to comply with the Essential Requirements, namely to refrain from unnecessary packaging and to use re-use systems for transport packaging.

No results available.

No response to mails nor telephone calls.

Legislation	
Essential Requirements	A csomagolásról és csomagolási hulladék kezelésének részletes szabályairól” szóló 94/2002. (V. 5.) Korm. Rendelet (módosítva 2006-ban) - Governmental Decree No. 94/2002. (V. 5) “on packaging and on the detailed rules of handling packaging waste” (amended in 2006) A csomagolás környezetvédelmi követelményeknek való megfelelése igazolásának részletes szabályairól” szóló 91/2006. (XII. 26.) GKM rendelet - On detailed rules of conformity certification of packaging to environmental requirements”, 91/2006. (XII. 26.) Decree of Minister for Economy and Traffic
CEN standards	All these standards were officially issued by the “Hungarian Institute of Standards”, as “MSZ-EN” ones, under the same number
Compliance procedure	
	The application of the standards is voluntary, so the companies have the freedom to approve this compliance by equivalent methods, too. (However it is necessary to show for the authority the scientific proof of these by the company). Details are included in the Ministerial Decree
Enforcement means	
Competent bodies	Authority of Consumer Protection
Procedure	Details are included in the Ministerial Decree. The inspection of heavy metal content is part of the procedure
Number and type of companies asked for proof of compliance	According to the Ministerial Decree [see Art 2. (1) and Art 7. (3)] this official procedure of “ER” control started on 1 st of January 2009.
Number of infringement cases in past 3 years	0
Penalties	Penalty and withdrawal of the packaged goods from the market (or not allowed to put on the market)
Administrative & financial costs	
	?

Information available for companies (website, helpdesk, guidelines,...)	
	Guidelines are available in printed form made by the coordinating and packaging organizations.
Alternative means of achieving prevention	
	• Large companies are obliged to make individual plans in connection with their waste management, involving a packaging chapter and taking into account the possibilities of prevention too. • Tax: companies where reusable packaging is used, pay the product tax only once, when the product is put on the market for the first time.
Comments	

Legislation	
Essential Requirements	Enabling provisions are provided in the <i>Waste Management Act 1996</i> (No. 10 of 1996). Transposition was completed by the <i>Waste Management (Packaging) (Amendment) Regulations 1998</i> (S.I. No. 382 of 1998) which amended the original <i>Waste Management (Packaging) Regulations 1997</i> (S.I. No. 242 of 1997). These regulations have been revoked and are replaced by the current <i>Waste Management (Packaging) Regulations 2007</i> (S.I. No. 798 of 2007)
CEN standards	I.S. EN 13427, I.S. EN 13428, I.S. EN 13429, I.S. EN 13430, I.S. EN 13431 and I.S. EN 13432 are available to packaging producers through the National Standards Authority of Ireland, established under the National Standards Authority of Ireland Act 1996 (No. 28 of 1996), to proof compliance with the essential requirements of packaging.
Compliance procedure	
	A packaging producer within the meaning of the <i>Waste Management (Packaging) Regulations 2007</i> should be in a position to demonstrate compliance with the essential requirements by providing the relevant local authority (i.e. the enforcement authority) with sufficient technical documentation upon request. While neither the format of such documentation nor the time in which it must be returned is specified within the statutory instrument, it is considered advisable for a packaging producer to have regard to the likely documentation that will be required by the enforcement authorities when designing new packaging. It may also be appropriate for a packaging producer to refer to existing suppliers for the relevant information, or to request specific technical information requirements as part of the supply arrangements. In addition, trade associations and materials organisations are encouraged to organise conformity testing or other supporting information covering their members in assessing compliance. Packaging designers and specifiers are also being strongly encouraged to adopt a management system approach aimed at ensuring a continuous effort to improve the environmental profile of packaging placed on the market. <u>Heavy metals</u> In broad terms, by placing a product on the Irish market, a producer is declaring that it is in conformity with the requirements of the regulations relating to the prohibition of specified heavy metals in packaging. At any time, the appropriate competent enforcement authority may require the submission of specified technical data demonstrating measurements taken, timeframe of measurements, description of measurement methods etc. within a deadline prescribed by formal notice.
Enforcement means	

Competent bodies	Under the <i>Waste Management (Packaging) Regulations 2007</i>, local authorities are responsible for the enforcement of the essential requirements of packaging <u>Heavy metals</u> Under the <i>Waste Management (Packaging) Regulations 2007</i>, in relation to the operation of glass furnaces and the limits in respect of lead in glass products, Ireland's Environmental Protection Agency is the relevant competent enforcement authority and may by notice in writing request a manufacturer, the manufacturer's authorised representative or the producer who places the glass product/packaging concerned on the Irish market to provide specified period measurement results from such production sites and the measurement methods employed for the glass product/packaging in question. Notwithstanding the position specifically in relation to glass furnaces, similar to the implementation of the more general essential requirements of packaging, enforcement is a matter for individual local authorities in respect of companies operating within their functional areas.
Procedure	Under the <i>Waste Management (Packaging) Regulations 2007</i>, all producers placing packaging on the Irish market are required to segregate specified packaging waste arising on their premises and arrange to have it recovered by authorised recovery operators for the purposes of recovery, provide data on the weight of packaging supplied to other producers (where so requested) and ensure that only authorised recovery operators are utilised for the collection and environmentally sound management of waste arising on their premises. Additional obligations are imposed on producers who exceed specific <i>de minimis</i> criteria (i.e. exceed on an annual basis both a turnover threshold of €1 million and a weight-based threshold of 10 tonnes) and whom are subsequently referred to as "major producers". Major producers have additional obligations with regard to the recovery of packaging waste from their customers, take-back of similar types of packaging waste from the general public, provision of segregated receptacles for packaging waste on their premises, achievement of quarterly targets, preparation of implementation plans and annual reports, placement of signage on their premises, advertising of take-back and registration with local authorities. Major producers have the option of either complying directly with their producer responsibility obligations (i.e. self-compliance), or alternatively, getting an exemption from those requirements by becoming a member of a packaging waste compliance scheme. As matters stand, Repak Limited is the sole body granted a Ministerial approval under article 19 of the <i>Waste Management (Packaging) Regulations 2007</i> to operate a compliance scheme for the recovery of packaging waste in Ireland. As indicated earlier in paragraph 2.5(a), enforcement of the regulations is a matter for each local authority within its functional area. Typically, enforcement activities are co-ordinated via local and national inspection plans. These inspection plans provide the platform for a national systematic approach to inspection and enforcement and are

	based on the European Union's <i>Recommendation for Minimum Criteria for Environmental Inspections</i> (RMCEI). Ireland's Environmental Protection Agency through its Environmental Enforcement Network has guided the development and implementation of local authority inspection plans under RMCEI since 2006. The inspection and enforcement plans provide a basis for assigning priorities based on risk and allocating available resources accordingly while feedback on the implementation of these plans allows statistics to be obtained regarding local authorities activities. While a total of 2,034 inspections were carried out in 2008 in relation to compliance with the entire range of obligations under the <i>Waste Management (Packaging) Regulations 2007</i>, it is considered that the primary focus of these inspections was to target producers / major producers suspected of 'free riding' rather than an explicit focus on the essential requirements. To optimize the enforcement resource within local authorities, many inspections in relation to packaging would also encompass similar environmental inspections on other producer responsibility initiatives (where applicable), such as batteries, end-of-life vehicles, farm plastics, waste electrical and electronic equipment, waste tyres etc.
Number and type of companies asked for proof of compliance	Competence local authorities
Number of infringement cases in past 3 years	0
Penalties	Section 10 of the Waste Management Act 1996 (as amended) provides that a person guilty of an offence under the Act shall be liable – (a) on summary conviction, to a fine not exceeding €3,000 or to imprisonment for a term not exceeding 12 months, or to both such fine and such imprisonment, or (b) on conviction on indictment, to a fine not exceeding €15,000,000 or to imprisonment for a term not exceeding 10 years, or to both such fine and such imprisonment.
Administrative & financial costs	
	Against the background of 26,467 waste-related inspections being carried out by local authorities in 2008 within an allocated budget of circa €7.4 million, the average waste inspection would amount to approximately €280 in personnel, administrative and financial costs.
Information available for companies (website, helpdesk, guidelines,...)	
	As an integral part of its packaging prevention programme entitled <i>Prevent & Save</i> , Repak Limited, the sole national compliance scheme for the recovery of packaging

	waste in Ireland, have made guidelines publicly available on the essential requirements of packaging. These guidelines together with other associated information in relation to the prevention and minimisation of packaging waste may be accessed on the Repak website at http://www.repak.ie/Prevent_and_Save.html.
Alternative means of achieving prevention	
	Major producers who opt to self-comply with the <i>Waste Management (Packaging) Regulations 2007</i> are required to prepare a rolling three-year implementation plan as a part of their registration process together with an annual report outlining the progress achieved in respect of the preceding calendar year. The plan must set out the steps the major producer intends to take to prevent and/or minimise packaging waste while the annual report must provide details on the results of their overall across the board activities. As matters stand, there were 214 premises registered across the thirty four local authorities as self-compliant with the <i>Waste Management (Packaging) Regulations 2007</i> in 2008. In the context of the national compliance scheme, there are, in broad terms, types of membership vis-à-vis: • A <i>producer member</i> is a company which has proven and auditable data that it is either below the 10 tonnes and/or €1m turnover threshold but wishes to become a Repak member. It may wish to become a member to use the 'green dot' or wish to have the company name on the registered list of members to demonstrate its commitment to good corporate social responsibility; • A <i>scheduled member</i> is a major producer who uses a pre-agreed schedule of fees to evaluate its obligation and who does not have to furnish packaging data. Examples of such are; independent grocery retailers, hardware retailers, pharmacies, licensed premises, hotels, restaurants and off-licenses; and • A <i>regular member</i> is a major producer (primarily brandholders / importers) who supplies packaging data on a six-monthly basis and who adheres to specified operational controls as outlined by the Repak scheme. These major producers are also required to furnish a waste management plan to Repak to outline current and future strategies of handling and reducing packaging waste on an annual basis. In 2008, Repak reported a total of 2,285 members of which 922 were regular members. Repak is the sole approved compliance scheme for the recovery of packaging waste in Ireland. The fee structure applicable to Repak members reflects the polluter pays principle and directly incentivises the minimisation and reuse of packaging. Major producers who opt for self-compliance are required to pay registration fees to local authorities which are related to weight of packaging placed on the Irish market.
Comments	

Legislation	
Essential Requirements	Directive 94/62/EC was originally transposed by the <i>Decreto legislativo 5 febbraio 1997, n. 22, in the Annex F</i>; this decree has been repealed and replaced by <i>Decreto legislativo 3 aprile 2006, n.152, "Norme in materia ambientale"</i>. The essential requirements of Annex II are transposed in the <i>Annex F of the Parte Quarta of decree 152/06</i> and the concentration limits for heavy metals in packaging are transposed in <i>art. 226 paragraph 4 of decree 152/06</i>
CEN standards	European standards are officially published in Italy as UNI (Italian Organization for Standardization) standards
Compliance procedure	
	Companies can only sell packaging in compliance with the Essential Requirements, but do not have to show and prove compliance. So UNI CEN standards on Essential Requirement are voluntary and Companies are free to implement another self procedure
Enforcement means	
Competent bodies	
Procedure	
Number and type of companies asked for proof of compliance	
Number of infringement cases in past 3 years	0
Penalties	Decree 152/06, art. 261 (4), establishes penalties ranging from 2.600 to 15.500 Euros
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	
	UNI, Italian Organization for Standardization, and the Italian Institute of packaging have published in 2001 a guideline on Prevention essential requirement: "Imballaggi e

	Prevenzione – Guida alla valutazione di conformità al requisito ambientale della prevenzione”. Now UNI, the CONAI (the National Compliance Scheme for the packaging recovery) and the Italian Institute of Packaging, are developing a new guideline on packaging essential requirements by the technical working group of packaging stakeholders
Alternative means of achieving prevention	
	• Companies are invited to participate on the packaging prevention activity of CONAI (the National Compliance Scheme for the packaging recovery) by developing the “Prevention Report with each case study” • As part of the activities under the “General prevention and management programme for packaging and packaging waste”, many studies and operational initiatives have been organised. By involving producers and users of packaging, these have been aimed at the development of various projects. With a view to limiting, over time, the quantities of packaging placed on the market and reducing the use of raw materials and, thereby, the amount of packaging waste downstream, studies and research have been carried out concerning technological innovation in the production of goods and packaging, the optimisation of transport logistics, etc.
Comments	

Legislation	
Essential Requirements	<i>Iepakojuma likums – Packaging law</i> Implementation of the essential requirements. <i>Ministru kabineta 2007.gada 16.janvāra noteikumi Nr.65 “Noteikumi par visa izlietotā iepakojuma reģenerācijas procentuālo apjomu (īpatsvaru) un termiņiem, reģistrēšanas un ziņojumu sniegšanas kārtību un veidlapu paraugiem, prasībām, kas komercsabiedrībai jāizpilda, lai tā tiktu reģistrēta kā iepakojuma apsaimniekotājs, iepakojuma definīcijas kritēriju piemērošanas piemēriem un izņēmumiem attiecībā uz smago metālu saturu iepakojumā” – Cabinet Regulation No.65 adopted 16 January, 2007 ‘Regulations Regarding Recovery Percentage Volume (Proportion) and Time Periods of All Packaging Waste, Procedures for the Registration and Submission of Reports and Model Forms Thereof, Requirements Which a Commercial Company Must Fulfil in Order for It to Be Registered as a Packaging Manager, Examples of the Application of the Packaging Definition Criteria and Exceptions in Relation to the Heavy Metal Content in Packaging’</i> Details on reporting of produced packaging; packaging waste; recovered, recycled and reused packaging
CEN standards	<i>Iepakojuma likums – Packaging law</i>
Compliance procedure	
	Standards are voluntary, but companies have to submit reports on recovered, recycled packaging. Recycling and recovery can be performed only in compliance with essential requirements. Glass processing companies are obliged to measure the heavy metal concentration in glass production and notify State Environmental Service in writing if the concentration level has exceeded the norm. Together with the notification, companies submit information on the content of heavy metals; a description of the measuring methods utilised; the possible reasons for exceeding the heavy metals content norm; and the measures performed in order to reduce the content of heavy metals. Companies have to show the results of analyses to Environmental State Service inspectors
Enforcement means	
Competent bodies	State Environmental Service is responsible for all kind of control, including control of packaging put on the market Also Consumer Rights Protection Centre is indirectly involved in compliance scheme – consumers can turn to it with complaints about non-quality packaging

Procedure	
Number and type of companies asked for proof of compliance	
Number of infringement cases in past 3 years	
Penalties	
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	
	Information about standards is available on web site of the national standardisation body of Latvia "Latvian Standard" Ltd. Laws and regulations are available on web site of Ministry of the Environment. Consultations about implementing essential requirements are available from "Latvian packaging certification centre" Ltd
Alternative means of achieving prevention	
	• Natural resources tax on packaging of goods and products, disposable tableware and cutlery, and packaging which the provider of a service attaches to a product and which, after provision of the services, ends up with the service recipient. Since rates of the natural resources tax are determined for each unit of weight (kilogram) of packaging material, this affects the use of packaging and encourages a reduction in the amount of packaging waste. • A person liable to pay the natural resources on that packaging if he can adduce documentary evidence of the type and volume of recycled packaging within the territory of Latvia or uses such goods to carry out his economic activity shall not be liable to pay the natural resources on that packaging if he can adduce documentary evidence of the type and volume of recycled packaging.
Comments	As producers and packers are implicitly motivated to implement essential requirements in order to fulfil the recovery, including recycling, requirements set out for them in legislation, no additional compliance scheme is created

Legislation	
Essential Requirements	<i>Lietuvos Respublikos pakuočių ir pakuočių atliekų tvarkymo įstatymas (Žin., 2001, Nr. 85-2968; 2005, Nr. 86-3206) – Law No IX-517 on the Management of Packaging and Packaging Waste</i> <i>Lietuvos Respublikos aplinkos ministro 2002 m. birželio 27 d. įsakymas Nr. 348 “Dėl Pakuočių ir pakuočių atliekų tvarkymo taisyklių patvirtinimo” (Žin., 2002, Nr. 81-3503; 2004, Nr. 78-2761) – Regulation of the Minister of Environment No 348 on the Management of Packaging and Packaging Waste</i> <i>Lietuvos Respublikos ūkio ministro 2002 m. birželio 27 d. įsakymas Nr. 227 „Dėl Kenksmingų medžiagų kiekių pakuotėse kontrolės tvarkos patvirtinimo“ (Žin., 2002, Nr. 70-2951) – Order of the Minister of Economy No 227 on the Approval of Noxious Substances in Packaging Control Procedures</i>
CEN standards	Lithuanian Standards Board under the Ministry of Environment has released mentioned standards taken over Lithuanian standards in national language: LST EN 13427:2004, LST EN 13428:2004, LST EN 13429:2004, LST EN 13430:2004, LST EN 13431:2004 and LST EN 13432:2004
Compliance procedure	
Enforcement means	
Competent bodies	State non food products inspectorate under the Ministry of Economy of the Republic of Lithuania (www.inspekcija.lt)
Procedure	The strategic goal of State non food products inspectorate is to ensure an effective market surveillance of non food products in compliance with the EU law. Main activities of this inspectorate: 1) control of non food products supplied to the market to consumer purposes and their compliance with the obligatory safety and marking requirements set in legal acts; 2) prohibit the supply of dangerous non food products to the market and perform the control of their withdrawal and destruction; provide information to consumers on dangerous products placed to the market; 3) consult producers, importers, sellers on issues concerning the safety of non food products. According to the requirements set in the Order of the Minister of Economy No 227 on the Approval of Noxious Substances in Packaging Control Procedures producers and importers are obliged to produce documents which show compliance with this specific requirement (that packaging don't exceed permissible levels of noxious substances). It is advisable to rely on standards preparing such proof documents. State non food products inspectorate carries out preventive checks of business entities.

Number and type of companies asked for proof of compliance	2006: 45 2007: 45 2008: 42
Number of infringement cases in past 3 years	2006: 29 2007: 37 2008: 37
Penalties	According to the Code of Administrative Transgressions of Law in case of non compliance leads to warning or penalty (fine) for natural person who is engaged in individual activity from 20 to 100 Litas, for companies from 150 to 300 Litas and to officials from 500 to 1000 Litas. Repeated violation leads to fine for natural person who is engaged in individual activity from 50 to 200 Litas, for companies from 200 to 1000 Litas and for officials from 1000 to 2000.
Administrative & financial costs	
	State non food products inspectorate has only 2 state inspectors who are responsible for execution of the market surveillance.
Information available for companies (website, helpdesk, guidelines,...)	
	www.inspekcia.lt
Alternative means of achieving prevention	
Comments	

The competent body had no time to fill in the questionnaire, and only referred to information available on the website.

Legislation	
Essential Requirements	<i>Règlement grand-ducal modifié du 31 octobre 1998 portant application de la directive 94/62/CE du Parlement Européen et du Conseil du 20 décembre 1994 relative aux emballages et aux déchets d'emballages</i> <i>Règlement grand-ducal du 22 février 2006 modifiant le règlement grand-ducal modifié du 31 octobre 1998 portant application de la directive 94/62/CE du Parlement Européen et du Conseil du 20 décembre 1994 relative aux emballages et aux déchets d'emballages</i>
CEN standards	
Compliance procedure	
Enforcement means	
Competent bodies	Customs officers Environmental inspection
Procedure	
Number and type of companies asked for proof of compliance	
Number of infringement cases in past 3 years	
Penalties	Infraction of the waste management and prevention act can lead to imprisonment of 8 days to 6 months and/or a penalty of 2500 to 6 mio franc.
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	

Alternative means of achieving prevention	
	•
Comments	

No information available

No response to mails nor phone calls

Legislation	
Essential Requirements	<i>Besluit beheer verpakkingen en papier en karton - Packagings, Paper and Card (Management) Decree</i> The Packagings, Paper and Card (Management) decree is based on the Environmental Management Act (Wet milieubeheer). Enforcement is possible under both administrative and criminal law. In the case of administrative enforcement, use can be made of the instruments referred to in Section 18 of the Environmental Management Act, such as administrative coercion or the imposition of a penalty. Breaches of this decree are punishable under the Economic Offences Act (Wet op de economische delicten). By virtue of this act, financial penalties can be imposed, for example, or a business can be closed down
CEN standards	The standards have been transposed in the Netherlands into NEN-EN 13427:2004, 13428:2004, 13429:2004, 13430:2004, 13431:2004
Compliance procedure	
	There is no additional national system to show compliance next to the standards
Enforcement means	
Competent bodies	Ministry of Housing, Spatial Planning and Environment/ VROM-inspectorate. The VROM-inspectorate working programme is based on a combination of a yearly working programme and enforcement based on complaints of citizens or other organisations. These general approach also applies to enforcement and surveillance of packaging (waste)..(See 2.5b and 3.4).
Procedure	Compliance with the essential requirements is checked in combination with inspection on prevention and heavy metals.
Number and type of companies asked for proof of compliance	In 2008 three appealing, big companies received a letter asking for clarification on specific matters related to prevention. • 3 product categories were compared (milk, batteries, plug-sockets). • The companies were selected based on experience-based of differences in packaging and existing information. • Companies which used more packaging material or packaging which is more difficult to recycle received a request for explanation. • Companies recently replied to this letter. New actions are considered for 2010.

Number of infringement cases in past 3 years	0
Penalties	See Economic Offences Act (Wet op de economische delicten)
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	
	The Netherlands Packaging Centre (non-governmental) provides its members with information.
Alternative means of achieving prevention	
	All companies need to report yearly on their prevention actions
Comments	In 2002 the existence of heavy metals in packings waste has been researched (VROM-Inspectorate contracted RIVM for this report) which showed especially higher concentrations of lead and hexavalent chromium (to a lesser degree cadmium) in packaging. A quarter of the packaging analysed didn't comply. Especially in plastic packaging higher concentrations of heavy metals were found. In 2007, after implementing directive 94/62/EC another analysis has been carried out (a cooperation between VROM-Inspectorate and the Food and Consumer Product Safety Authority), which indicated an improved compliance. New actions for enforcement and surveillance on prevention including the concentrations of heavy metals are considered. Which will be executed in cooperation with the Customs Administration.

No information available
No response to mails nor phone calls

Legislation	
Essential Requirements	<i>Decreto-Lei n.º407/98 de 21/12/19987. Regulamenta os requisitos essenciais relativos à composição de embalagens - Law-Decree n.º407/98 of the 21st December, that establishes the rules related to essential requirements associated to packaging composition</i>
CEN standards	Considering the European CEN standards, five of them were adopted as Portuguese standards, as follows: NP EN 13427:2005 (Ed. 2), NP EN 13428:2005 (Ed. 2), NP EN 13429:2005 (Ed. 1), NP EN 13430:2005 (Ed. 1) and NP EN 13431:2005 (Ed. 1) Law Decree nº 366-A/97 of 20th December, as amended by Law Decree nº 92/2006 of 25th May, introduces in its article 3º-A dedicated to “Prevention”, an obligation to packer/fillers as well as to packaging manufacturers, to ensure the compliance with essential requirements on packaging production and their composition (although giving a particular emphasis to the ones related to source prevention, meaning to EN 13428:2005 “Packaging – Specific requirements for production and composition and EN 13429:2004 -“Packaging – Reuse”)
Compliance procedure	
	Law Decree nº 366-A/97 of 20th December, establishes in its article 11, administrative penalties and fines, including the ones related to obligations established in articles 8 and 9 of this piece of legislation, which are associated to packaging placed on the market that are not compliant with Essential Requirements. Accordingly these issues are monitored by the fiscalization bodies responsible for the correct application of this legislation
Enforcement means	
Competent bodies	The competent bodies which are responsible for performing inspections, enforcement and monitoring the compliance of packaging put on the market are the following: - General-Inspection for Environment and Spatial Planning (IGAOT) from Ministry for Environment, Spatial Planning and Regional Development (link: http://igaot.pt and http://www.maotdr.gov.pt). - The Food Safety and Economic Authority (ASAE) from Ministry of Economy and Innovation; (link: http://www.asae.pt and http://www.min-economia.pt).
Procedure	According to available information, compliance with essential requirements is assessed by inspection procedures, together with other environmental issues related to packaging and packaging put on the market

Number and type of companies asked for proof of compliance	?
Number of infringement cases in past 3 years	?
Penalties	Law Decree-Law n° 366-A/97, of 20th December, establishes on article 11° the administrative penalty related to non-compliance with essential requirements concerning packaging put on the market, with the following fines: 1) between € 50 - € 3.750 in case of individual persons and 2) between € 500 - € 45.000 for collective persons.
Administrative & financial costs	
	?
Information available for companies (website, helpdesk, guidelines,...)	
	The guidelines available concerning the essential requirements are the CEN standards and the organisation responsible is the IPQ – Instituto Português da Qualidade (Portuguese Institute of Quality)
Alternative means of achieving prevention	
	• One of the main instruments is awareness-raising. A website has been set up to provide information on all aspects of waste management where information can be exchanged with the public on packaging and packaging waste. • Art. 2(8) of the Order provides that "... all distributors/retailers selling soft drinks, beer, natural mineral water, spring water or other bottled water and table wines (excluding wines classified as regional wine and VQPRD) in non-reusable packaging must also sell the same category of product in reusable packaging' to provide consumer choice. Art. 5(3) lays down that "soft drinks, beer, natural mineral water, spring water or other bottled water intended for consumption on the premises, in hotels, restaurants and similar establishments must be sold in reusable packaging" However non-recyclable packaging may be used where special selective collection and transport systems are provided for packaging waste.
Comments	

Legislation	
Essential Requirements	<i>Hotărârea Guvernului nr. 621/2005 privind gestionarea ambalajelor și deșeurilor de ambalaje, modificată și completată prin HG 1872/2006 - Governmental Decision nr. 621/2005 concerning the management of packaging and packaging waste, amended by GD no. 1872/2006</i> <i>Legea nr. 608/2001 privind evaluarea conformității produselor – Republicare – Law no. 608/2001 on conformity assessment of products – republished</i>
CEN standards	Ministerial Order 128/2004 – Ministerial Order for approving the list of Romanian standards which adopt EU harmonized standards (Of. J. no 244/19.03.2004)
Compliance procedure	
	It is up to the company to adopt a procedure to show the compliance. Presently, there are no other requirements on the information that a company needs to provide besides the compliance with the standards. With regard to heavy metals, companies can show compliance with the concentration limits for heavy metals in packaging through the documents which are coming with the raw materials, analysis bulletin taken on the final product or other relevant documents.
Enforcement means	
Competent bodies	The National Environmental Guard under coordination of the Ministry of Environment. Contact data: 78 Unirii Blv, Bl. J2, district 3, Bucharest, ROMANIA Phone: +4 (021) 326.89.70, +4 (021) 326.89.82 Fax: +4 (021) 326.89.71 e-mail: gardamediu@gnm.ro Web: www.gnm.ro
Procedure	The National Environmental Guard is entitled to ask the responsible person from the company for documents/information that prove that the content of heavy metal in packaging is below the limits set by law and in case of doubt, the commissars may send the product to an accredited laboratory for testing. The Romanian laboratories have the capability to test heavy metals and currently are in the process of acquiring the necessary equipments for conducting the relevant tests regarding compliance with the European standards regarding the essential requirements for packaging
Number and type of companies asked for proof of compliance	0

Number of infringement cases in past 3 years	0
Penalties	Penalties for no compliance with the provisions of Art.5 ⁵ from GD 621/2005 are in the art. 26 letter f) between 10000 lei and 20000 lei (2500 -5000 euro).
Administrative & financial costs	
	Presently there are no estimations to perform inspection on essential requirements.
Information available for companies (website, helpdesk, guidelines,...)	
	Romania doesn't have specific guidelines on compliance with the essential requirements, but the Ministry of Environment has organised TAIEX events which had debates on the mentioned subject.
Alternative means of achieving prevention	
	No
Comments	

⁵ Art. 5. – (1) It is allowed to place on the market only the packaging that meets the essential requirements stipulated in annex 2 of this decision.

(2) It is forbidden to block the placing on the market of packaging that meets the essential requirements stipulated in Annex no. 2 of this Decision.

No information available

No response to mails nor phone calls

Legislation	
Essential Requirements	<i>Uredba o ravnanju z embalažo in odpadno embalažo (Uradni list RS, št. 84/2006, 106/06, 110/07) - Decree on the Management of Packaging and Packaging Waste (OG No. 84/2006, 106/06, 110/07)</i>
CEN standards	<i>Decree on the Management of Packaging and Packaging Waste: Article 7, SOST EN 13427</i>
Compliance procedure	
	Producers, acquirers and importers must submit the packaging's declaration of conformity with the requirements of the SIST EN 13427 standard to the relevant ministry at the request thereof
Enforcement means	
Competent bodies	Inspectorate responsible for environmental protection
Procedure	
Number and type of companies asked for proof of compliance	No data
Number of infringement cases in past 3 years	0
Penalties	Penalty from 4,000 EUR to 40,000 EUR
Administrative & financial costs	
	No data
Information available for companies (website, helpdesk, guidelines,...)	
	None
Alternative means of achieving prevention	
	Environmental tax on the generation of packaging waste. Packaging made from vinyl chloride or other halogenated olefins is taxed at a higher rate than

	other types of packaging.
Comments	

Legislation	
Essential Requirements	<i>Ley 11/1997, de 24 de abril, de envases y residuos de envases - Law 11/1997 about packaging and packaging waste</i> <i>Real Decreto 782/1998, de 30 de abril, por el que se aprueba el Reglamento para el desarrollo y la ejecución de la Ley 11/1997, de 24 de abril, de envases y residuos de envases - Royal Decree 782/1998 about the regulation to implement the law 11/1997 about packaging and packaging waste</i>
CEN standards	AENOR (Spanish association of Standardization and certification) has published a book with all the European standards related to packaging and packaging waste
Compliance procedure	
	The companies must have the documents that demonstrate the fulfillment of the basic requirements for if the competent authority requests them, for example the report of results of analysis of a laboratory, etc.
Enforcement means	
Competent bodies	The administration responsible for monitoring of packaging put on the market is the administration of the regional authorities.
Procedure	Some of the regions demand the fulfillment of the essential requirements across the Preventions Plans that the companies must present to the regional authorities according to the Seventh Additional Disposition of the Law 11/1997
Number and type of companies asked for proof of compliance	0
Number of infringement cases in past 3 years	0
Penalties	The penalties are established in the articles 19 and 20 of the Law 11/1997
Administrative & financial costs	
Information available for companies (website, helpdesk, guidelines,...)	

	None
Alternative means of achieving prevention	
	- Prevention plans: the “prevention plans” (in Spanish “planes empresariales de prevención”) must be approved by the authorities of the regions and their period life is three years. But the companies or the integrated system of management have to inform about the degree of fulfilment yearly (Article 3 of the Royal Decree 782/1998) Only the companies who put more than the following amounts of packaging on the market, need to make up a prevention plan: - 250 ton /year, if it is exclusively glass - 50 ton /year, if it is exclusively steel - 30 ton /year, if it is exclusively aluminium - 21 ton /year, if it is exclusively plastic - 16 ton /year, if it is exclusively wood - 14 ton /year, if it is exclusively paper or compound materials - 350 ton /year The article 3 of the Real Decreto 782/1998 describes the content of the prevention plans: objectives, measures to reach the objectives and a mechanism to verify the fulfilment in relation to different indicators mentioned in these article When companies put in the market their products across the integrated system of management, these organisations can elaborate the prevention plans and they communicate the degree of fulfilment to the regional authorities yearly
Comments	

Legislation	
Essential Requirements	<i>Förordning (2006:1273) om producentansvar för förpackningar - Ordinance on producer responsibility for packaging</i>
CEN standards	No additional standards
Compliance procedure	
	The Packaging Ordinance states that you can comply through the standards or in another way (not defined)
Enforcement means	
Competent bodies	Local authority is competent for enforcement
Procedure	It could be assessed together with inspection of recycling targets, but there probably is not a lot of inspection. In the past, local authorities have worked together for inspection of the recycling targets
Number and type of companies asked for proof of compliance	No data, probably none
Number of infringement cases in past 3 years	No data, probably none
Penalties	Competence of local authority, so it could differ between municipalities. If a company doesn't comply, a certain period is given to the company to make it comply with the ER. When it still doesn't comply, it has to pay a fee of, for example, 2000 to 5000 euro
Administrative & financial costs	
	No data
Information available for companies (website, helpdesk, guidelines,...)	
	Guidelines are available (2005) with information on the collection, recycling targets, etc and also a part on the essential requirements. It is both used by local authorities as by companies
Alternative means of achieving prevention	

Comments	• There is less focus on prevention of packaging waste in Sweden, because the environmental impact is mainly caused by production of the product; therefore it is important that the product is sufficiently protected by the packaging • A lot of work has been put in achieving collection and recycling targets • Local authorities / EPA rely heavily on the use of the standards

Legislation	
Essential Requirements	<i>The Packaging (Essential Requirements) Regulations 2003 (Statutory Instrument No. 1941/2003)</i> Sets out essential requirements for packaging which apply to packaging producers, sellers and distributors, including enforcement, offences and penalties. <i>Packaging (Essential Requirements) (Amendment) Regulations 2004 (SI 2004/1188)</i> Amends 2003/1941 to update the definition of packaging <i>Packaging (Essential Requirements) (Amendment) Regulations 2006 (SI 2006/1492)</i> Amends 2003/1941 by substituting a new definition of 'packaging' and making indefinite the conditions for a derogation for glass packaging in relation to heavy metal concentration levels In draft: 'Proposed Amendment to Packaging (Essential Requirements) Regulations 2003'. Proposed amendment to 2003/1941 to remove the end date for a derogation for heavy metals in plastic crates and pallets in line with Commission Decision 2009/292/EC. Awaiting UK Parliamentary approval.
CEN standards	The entire suite of packaging and environment CEN Standards have been transposed into British Standards as follows Reference may also be made to PD CEN/TR 13688:2008. Packaging. Material recycling. Report on requirements for substances and materials to prevent a sustained impediment to recycling
Compliance procedure	
	The UK favours use of the CEN Standards as that offers a consistent framework by which companies can assess their packaging. It also enables compliance and enforcement to take place on a more even footing through recognised processes. The use of the CEN Standards methodology carries with it the presumption of conformity of the packaging with the essential requirements in all Member States. In other words, if the Standards are used, the product will be considered to meet the essential requirements unless there are grounds for suspecting otherwise. The umbrella standard (EN13427:2004) recommends the level in the supply chain at which the various assessments for conformity should be carried out. Trade associations and materials organisations are encouraged to organise conformity testing or other supporting information covering their sectors to aid their members in assessing compliance. Where it is considered desirable to have an enforcement input into this, an approach can be made to the Local Authorities Coordinators of Regulatory Services (LACORS) – see enforcement section below.

	However a company may use any means it feels appropriate to demonstrate compliance, but they will need to demonstrate and convince compliance officers that their chosen route still allows them to show that the Regulations have been complied with. The compliance officer will assess compliance in this area in accordance with procedures set out in general guidance. The Business Department's (BERR) Government Guidance Notes 2008 (http://www.berr.gov.uk/files/file49463.PDF) set out details of compliance as well as an illustrative compliance procedure (Annex II) so that companies know what they need to provide. It is not government policy to suggest alternative compliance routes as that would risk conferring status of particular route to compliance. Only the use of Standards provide for a presumption of conformity, other compliance routes can only be determined to be valid from a legal perspective, based on the evidence submitted. However, companies may decide to use private consultancy companies or the services of the government's Envirowise service (www.envirowise.gov.uk) – a 'free' advice consultancy available to UK companies for guidance on compliance. They offer discussions with the companies on steps to take and provide an on-line tool (www.envirowise.gov.uk/pack-in) for companies to measure their packaging against key environmental criteria. The government's arms-length body, the Waste Resources Action Programme (WRAP), work with major retailers and brands, often offering opportunities to participate in joint funded packaging reduction projects. Recent projects have included working with beer companies to redesign beer bottles, leading to a reduction in packaging weight. Whilst this does not necessarily result in compliance evidence, engaging with such organisations in a proactive manner might go some way towards demonstrating a defence of due diligence. The Regulations provide that it shall be a defence for that person to show that he took all reasonable steps and exercised all due diligence to avoid committing the offence. Enforcement officers have the right to require the company to provide information. Namely, the company must submit within twenty-eight days of the date of the request technical documentation or other information showing that the packaging complies with the essential requirements and the regulated metals concentration limits. The company must also ensure that it retains the technical documentation or other information (referred to in sub-paragraph 1a) for a period of four years from the date that he places the packaging on the market. For heavy metals, at the request of the enforcement authority, the company must submit within twenty-eight days of the date of the request the annual declaration of conformity and other information set out in Schedule II of the Regulation. It is an offence not to comply with the information requirements.
Enforcement means	
Competent bodies	For packaging, the UK operates a decentralised compliance and enforcement mechanism. It is the statutory duty of the following organisations to enforce the Regulations within their area: a) In England and Wales, weights and measures authorities (the trading standards departments of local authorities); and b) In Northern Ireland, the Department of Enterprise, Trade and Investment. c) In Scotland, weights and measures authorities (the trading standards departments of local authorities); prosecutions against infringement of the Regulations are brought by

the Procurator Fiscal.

At the broad policy level, the Legislative and Regulatory Reform Act 2006 provides for a “code of practice in relation to the exercise of regulatory functions” to which any person exercising a regulatory function must have regard in the exercise of the function. The Regulators’ Compliance Code took effect in April 2008 (“Regulators’ Compliance Code – a statutory code of practice for Regulators” <http://www.berr.gov.uk/files/file45019.pdf>). Its purpose is to promote efficient and effective approaches to regulatory inspection and enforcement which improve regulatory outcomes without imposing unnecessary burdens on business and other regulated entities. Market surveillance in the UK is carried out either in response to complaints about unsafe or non-compliant products or proactively using a targeted risk-based approach.

In accordance with the principles of the New Approach and the UK’s Regulatory framework, enforcement bodies take the view that that most businesses wish to comply with the law and that the few businesses that persistently break regulations should be identified quickly and face proportionate and meaningful sanctions. By facilitating compliance through a positive and proactive approach, enforcement officers can achieve higher compliance rates and reduce the need for reactive enforcement actions. Businesses that have consistently achieved good levels of compliance are rewarded through positive incentives, such as lighter inspections and reporting requirements where risk assessment justifies this. Enforcement also takes account of the circumstances of small businesses, including any difficulties they may have in achieving compliance.

Specifically in this area The Local Better Regulation Office (LBRO), a non-departmental public body accountable to BERR, has a role to improve local authority enforcement of environmental health, trading standards and licensing – reducing burdens on businesses that comply with the law while targeting those who breach them. Its overall aim is to secure the effective performance of local authority regulatory services in accordance with the principles of better regulation and the Government is legislating to give it powers to deliver that purpose. Its focus is on ensuring that inspection and enforcement are based on an assessment of risk, so that businesses are supported and regulatory resources are focused on those areas that most deserve tougher scrutiny.

Enforcement must be risk based so as to effectively target priority areas. This is to ensure that resources are used as efficiently as possible whilst having the maximum impact against deliberate non-compliance (i.e. those suspected of deliberately taking commercial advantage from non-compliance). Action is therefore proportionate to the perceived risks, with a lot of emphasis on information provision to business to help them comply or to bring their products (packaging) into compliance.

The Local Authorities Coordinators of Regulatory Services (LACORS), a the local government central body responsible for overseeing local authority regulatory and related services in the UK, leads on the promotion of quality regulation, development of policy and dissemination of comprehensive advice, guidance and good practice for local authority regulatory services. This is distributed through this website and via e-

mail bulletins to heads of service and also specialist officers. LACORS is assisted in its work by a network of local authority advisers and recognised experts.

The Home Authority Principle (HAP) allows local authorities to work with a business to provide consistent and coordinated trading standards and food enforcement services across the UK. It assists those businesses that have outlets in more than one local authority and distribute goods and/or services beyond the boundaries of one local authority. The Principle provides a single point of contact for businesses to access local authority experience and advice and creates a more coordinated approach to business locally and nationally. The application of HAP encourages good enforcement practices and is also effective in minimising duplication and reducing public expenditure.

More detail is given on the LACORS website (<http://www.lacors.gov.uk>), on the LBRO website www.lbro.org.uk and in the BERR Government Guidance Notes 2008 (<http://www.berr.gov.uk/files/file49463.PDF>)

Contact details:

LACORS

Local Government House

Smith Square

LONDON

SW1P 3HZ

Tel: 020 7665 3888

Fax: 020 7665 3887

Email: info@lacors.gov.uk

<http://www.lacors.gov.uk/>

Northern Ireland Trading Standards Service

Department for Enterprise, Trade and Investment (DETI)

176 Newtownbreda Road

BELFAST

BT8 6QS

Tel: 0845 600 6262

Fax: 02890 253 953

Email: tss@detini.gov.uk

<http://www.detini.gov.uk/>

The UK has made one brief survey on the Essential Requirements. The report of that work ("The Impacts of the Essential Requirements – a brief survey" (DETI, 2003, <http://www.berr.gov.uk/files/file36318.pdf>), suggested that the UK had established an effective and robust enforcement regime for the Directive's requirements. It found that most companies' packaging policies are driven by cost considerations, and that the Essential Requirements provide those responsible for legal compliance or environment

	policy with a concrete obligation which can be and is used to improve their negotiating position with their colleagues in sales or marketing.
Procedure	Compliance is assessed on a case by case basis. It will depend on how cooperative the company being investigated are and on the evidence presented by the company as to how or what assessment approach can be taken. The enforcement authorities have available to them various powers based on the Consumer Protection Act 1987, including: - Issuing suspension notices prohibiting the supply of packaging which is considered to breach the Regulations. - Making test purchases - Entering premises at any reasonable time - Requesting compliance documentation, inspecting processes and performing tests Often it is clear that the company need help to reduce their packaging or advice on compliance. Wherever possible help is given or the company referred to government guidance organisations on Environmental legislation (NetRegs http://www.netregs.gov.uk/netregs/63268.aspx and Envirowise http://www.envirowise.gov.uk/uk/Topics-and-Issues/Packaging.html), and officers work to resolve issues of non-compliance with the companies without the need for prosecution. In rare cases of non-cooperation a legal case has to be put together to prosecute the company concerned. This will include gathering evidence of non-compliant products, frequency of which non-compliant goods have been placed on the market, if the product is still available, if other legislation has been breached and any technical work that demonstrates the company's evidence is flawed or unacceptable as evidence for compliance purposes in Law. There is more detail on compliance in the Government Guidance Notes 2008 (http://www.berr.gov.uk/files/file49463.PDF).
Number and type of companies asked for proof of compliance	Because of the decentralised nature of the UK enforcement system, there is no central database of cases or complaints collated. Each local authority will have details of its own work and will report on its work at the end of the year, but the detail of this does not extend to the packaging legislation alone.
Number of infringement cases in past 3 years	The UK does not record the number of infringement procedures initialised, as this work takes place locally and there is no central collation of data. We do know that of the many cases investigated, most are resolved without the need for legal action. There have been a number of successful prosecutions (details attached) but this is a small fraction of the cases investigated and otherwise successfully resolved. The UK can only take enforcement action for packaging products placed on the Community market for the first time where that takes place in the UK. For other product Directive's the UK engages with the ADCOs (Administrative Cooperation groups), sharing best practice and looking at issues across these Community harmonisation Directives.

Penalties	The penalties are written warnings, simple (formal) cautions and prosecution currently – the relevant penalties are set out in the Essential Requirements Regulations. The Regulations set down the finable offences for prosecutions for non-compliance. In order for a case to reach this level however, normally Trading Standards would have exhausted all possibility of resolving the case through correspondence or face-to-face meetings. To reach the stage of taking legal action, a considerable weight of evidence will have been gathered and there is high confidence by the enforcement authority that the case can be won. However as one of the measures in the essential requirements is proving two measures of acceptance this is less easy to prove legally and this must be proved beyond reasonable doubt. The two main offences are: 1. Contravening or failing to comply with the essential requirements and heavy metal limits [fine up to level 5 on the standard scale (currently £5000) on summary conviction or an unlimited fine on conviction on indictment.] 2. Failing to submit compliance documentation at the request of the enforcement Authorities [fine up to level 5 on the standard scale]. There are also penalties for the specific offences of: 1. Contravening a suspension notice [3 months imprisonment or a fine up to level 5]. 2. Intentionally obstructing the enforcement authorities [a fine up to level 5]. 3. Knowingly or recklessly making a false statement of compliance [a fine up to the statutory maximum on summary conviction (currently £5000) or an unlimited fine on conviction on indictment.] The defence of 'due diligence' applies to offences 1, 4 and 5 (i.e. a claim that a person took all reasonable steps to avoid committing the offence). Where an offence by a corporate body is shown to have been committed with the consent, connivance or through neglect of any director, manager or similar officer of the corporate body, they shall be regarded as having committed the offence as well as the corporate body. Data on successful prosecutions is collected and to date the UK has had 4 prosecutions and 2 Home Office Cautions under the Regulations. In 3 of the prosecutions, a further offence under Trade Descriptions for misleading the consumer was proved.
Administrative & financial costs	
	Local authorities are funded to enforce a range of legislation under a financial settlement from central Government which encompasses enforcement of all these regulations and requirements, including those on packaging. Furthermore, each local authority has power to determine how it will focus its proactive enforcement work based on local need which leads to some authorities being more proactive than others on the issue of packaging. Additional funding for specific market surveillance projects for New Approach Directives is available from central government.

Information available for companies (website, helpdesk, guidelines,...)	
	The UK offers a range of guidance for the Essential Requirements BERR http://www.berr.gov.uk/whatwedo/sectors/sustainability/packaging/page29072.html – Government Guidance Notes on the Packaging Essential Requirements Regulations (http://www.berr.gov.uk/files/file49463.PDF) Envirowise http://www.envirowise.gov.uk/uk/Topics-and-Issues/Packaging.html is a free government advice service for UK businesses offering consultation on packaging design and reduction, design web-based seminars and an provides an Eco-design Guide for Packaging (http://www.envirowise.gov.uk/uk/Our-Services/Publications/GG908-PackGuide-a-guide-to-packaging-eco-design.html) based on the principles of the essential requirements. The British Standards Institute (BSI) helps guide business on the use of Standards in packaging design, not only for compliance with the essential requirements but with technical standards for packaging designs (http://www.bsi-global.com/en/Standards-and-Publications/Industry-Sectors/Manufacturing/Packaging/). Waste Resources Action Programme (WRAP) www.wrap.org.uk – The work of this body is to oversee Envirowise, but also to lead on specific opportunities such as voluntary agreements and running design workshops which helps companies meet the essential requirements for packaging reduction and recovery. All the above government funded organisations also participate in public and private sector conferences to highlight the benefits of packaging reduction, environment and good design. Trading Standards – Local Authorities work with companies to ensure compliance with the Regulations. This may be as a result of a compliant, enquiry by the company or proactive project by the local authority. NetRegs http://www.netregs.gov.uk/netregs/63268.aspx – A service by the UK Environment Agency to promote awareness of the Environmental Regulations (including the Essential Requirements Regulations) affecting business. Private sector bodies – There are a range of private sector bodies, producer responsibility compliance schemes and industry federations which provide specific guidance on the essential requirements and packaging design to their sector or member interests. BERR and Defra provide comments on draft guides produced when asked. Finally, the UK Environment and Business Departments is considering the development of a 'Packaging Hub' which would be a central point of advice on packaging for

	business and consumers, which would signpost the advice and work of the various organisations. The scope of this work has yet to be defined, but could potentially be far reaching and connect into higher education, design and research.
Alternative means of achieving prevention	
	There is no formal requirement for prevention plans in the UK, but many industry sectors and companies choose to publish their achievements in reductions through press releases, product launches, annual reports and participation in voluntary agreements with Government, through WRAP. Through the UK's Courtauld agreement (http://www.wrap.org.uk/retail/courtauld_commitment/index.html) with 37 retailers and brands, these companies have already designed out packaging waste growth by 2008 and have pledged to deliver absolute reductions in packaging waste by 2010. A parallel voluntary agreement is also being developed within the Home Improvement and DIY sector. The UK has a similar agreement with major retailers for plastic bags reduction (http://www.defra.gov.uk/ENVIRONMENT/localenv/litter/bags/). Companies may choose to participate in publicity campaigns by their industry federation, but as the UK has no requirements for prevention plans there is no requirement for them to take part. However, most will as it will be beneficial in demonstrating an area of their corporate social responsibility and many will join the voluntary agreements for similar reasons. Of course those taking part in the voluntary agreements will have their contribution reported as part of the overall result.
Comments	•

ANNEX 2: SUMMARY TABLE ON COMPLIANCE

	AT	BE	BG	CY	CZ	DK	EE	FI	FR	DE
Are formal guidelines for showing compliance (next to EN standards) available?	No	No	Yes	No	No	No	No	No info available	Yes	No
Are informal guidelines for showing compliance (next to EN standards) available? (brochure, website,...)	No	No	Yes	No (inspection document is being prepared)	Instructions available	Checklist	No		Yes	No
Has inspection on the ER (art. 9) taken place in the past 3 years?	Yes	No	No	No	?	No	No		No (10 y ago)	?
Has inspection on heavy metal concentrations taken place in the past 3 years?	Yes	Yes	No	Yes	?	Yes	No		No (10 y ago)	Yes (in light of food safety)
What alternative means are implemented for achieving packaging reduction / prevention*										
- prevention plan		3-yearly/ large amounts of packaging								Voluntarily for large companies
- deposit system				X		Beers & soft drinks				X
- economic incentive (e.g. tax)						X	X		X	X (Green dot dual system)
- awareness raising (website, brochure with examples and tips,...)	X	X		Contest		Formalised cooperation EPA & industry				E.g. Blauer Engel

	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL
Are formal guidelines for showing compliance (next to EN standards) available?	No info available	?	No	No	No	?	No info available yet	No info available	No	No info available
Are informal guidelines for showing compliance (next to EN standards) available? (brochure, website,...)		Through industry	Yes	No	No	Yes			Through Netherlands Packaging Centre	
Has inspection on the ER (art. 9) taken place in the past 3 years?		Legislation only recently implemented	?	No	No	?			Yes	
Has inspection on heavy metal concentrations taken place in the past 3 years?		Legislation only recently implemented	?	No	?	Yes			Yes	
What alternative means are implemented for achieving packaging reduction / prevention*						None				
- prevention plan		Waste mgt plans	Voluntary						Yearly/ all companies	
- deposit system										
- economic incentive (e.g. tax)		X	X		X					
- awareness raising (website, brochure with examples and tips,...)				Dialogue with industry						

	PT	RO	SI	SK	ES	SE	UK
Are formal guidelines for showing compliance (next to EN standards) available?	No	No	No	No info available yet	No	No	Yes
Are informal guidelines for showing compliance (next to EN standards) available? (brochure, website,...)	No	No	No		No	Yes	Yes
Has inspection on the ER (art. 9) taken place in the past 3 years?	?	No	No		No	?	Yes
Has inspection on heavy metal concentrations taken place in the past 3 years?	?	No	No		No	?	Yes
What alternative means are implemented for achieving packaging reduction / prevention*		None					
- prevention plan					3-yearly/ large amounts of packaging		Voluntary
- deposit system							
- economic incentive (e.g. tax)			X				
- awareness raising (website, brochure with examples and tips,...)	Website						E.g. logo and labels

ANNEX 3: LIST OF INVITEES AND MINUTES OF THE EXPERT WORKSHOP 26 JUNE 2009

List of invited participants

Packaging manufacturers:

- ACE (Alliance for Beverage Cartons and the Environment): Erika Mink
- APEAL (Association of European Producers of Steel for Packaging): Philippe Wolper
- EuPC (European Plastic Converters): Jürgen Bruder
- FEVE (European Container Glass Federation): Adeline Farrelly
- CEPI (Confederation of European Paper Industries): Maria Casado
- ELIPSO (French Plastic and Flexible Packaging Association): Maarten Labberton

Packers/fillers:

- CIAA (Confederation of the food and drink industries of the EU): Christoph Tamandl
- EFBW (European Federation of Bottled Waters): Patricia Fosselard
- Unilever: Steve Anderson
- Nestlé: Claude Thevenot

Specialised packaging associations

- EUROOPEN (European Organisation for Packaging and the Environment): Julian Carroll
- INCPEN (Industry Council for Packaging and the Environment): Jane Bickerstaffe

Experts

- ACR+ (J.P. Hannequart)
- PIRA

NGO

- EEB : Nathalie Cliquot

Organisations for standardisation

- CEN - European Committee for Standardization: Thierry Legrand
- AFNOR Normalisation : Annick Galpin

Minutes

PARTICIPANTS

Tony Taylor, INCPEN, Thierry Legrand, CEN European Committee for Standardization, Alexander Mohr, FEVE, Martin Reynolds, EUROOPEN, Fiona Durie, EUROOPEN, Albane Siramy, Tetrapack ACE, Maria Casado, FEFCO, Elisabeth Comere, Tetrapack ACE, David Perchard, Perchards inc, Francoise Gerardi, Elipso, Annick Galpin, AFNOR, Maarten Labberton, EAA Packaging Group, Joris Nachtergaele, APEAL, Karolina Fras, EC DG-ENV, Artemis Hatzi-Hull, EC DG-ENV, Ilse Laureysens, ARCADIS Belgium, Arnoud Lust, ARCADIS Belgium, Mike Van Acoleyen, ARCADIS Belgium

AGENDA

- 10.30 h Registration
- 11.00 – 11.15 h Welcome by the Commission (Karolina Fras)
- 11.15 – 12.00 h: Presentation by the consultant:
 - Scope and objectives of the study
 - Methodology
 - Results questionnaire
- 12.00 – 12.30 h: Questions and reactions from participating experts
- 12.30 – 14.00 h: Lunch break
- 14.00 – 15.00 h: Questions and reactions from participating experts (continued)

PRESENTATIONS



**Survey on compliance with the
Essential Requirements in the
Member States**

European Commission – DG ENV

Expert workshop 20 June 2009

Arnoud Lust
Mike Van Acoleyen
Ilse Laureysens



**Welcome by the
Commission**

2

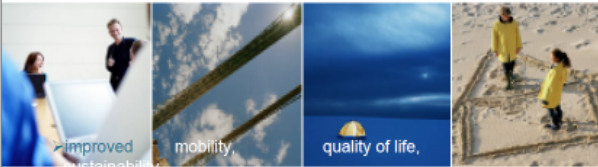
Ms Artemis Hatzi-Hull
(Contract manager)

Ms Karolina Fras



Four fields of activity distinct segments, but also integrated

- Infrastructure, space & traffic
- Environment
- Buildings & installations
- Project sourcing



improved mobility
mobility
quality of life,
ARCADIS

A worldwide network..... ... based on strong local positions



13.000 people strong and € 1,5 billion in annual revenues
A solid presence in Europe, North and South America
Top 3 in Europe and top 10 worldwide
Quoted on Euronext

4

ARCADIS

Study

A survey on compliance with the Essential Requirements in the Member States and the accepted mechanisms followed by the economic operators to prove conformity, the use of the CEN Packaging and Environment Standards and the existing enforcement mechanisms

ENV.G.4/ETU/2008/0088r

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Scope

Essential Requirements:

Article 9 and Annex II to the Packaging Directive:

- Packaging weight and volume must be reduced to the minimum necessary for safety, hygiene and consumer acceptance of the packaged product;
- Hazardous substances and materials must be minimised as constituents of packaging with regard to emissions from incineration or landfill (Article 11 lays down specific limits on named heavy metals)
- If reuse is claimed, packaging must be suitable for that purpose as well as for at least one of the three recovery methods specified, i.e. material recycling, energy recovery or composting/biodegradation

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CEN standards

- EN 13427 Packaging – “umbrella standard”
- EN 13428 Packaging –Manufacturing and composition –source reduction
- EN 13429 Packaging – Reuse
- EN 13430 Packaging –Material recycling
- EN 13431 Packaging –Energy recovery,
- EN 13432 Packaging –Composting and biodegradation – Test scheme and evaluation criteria

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Objectives

Identification of remaining needs with a view to assisting the Commission services in evaluating the compliance to the Essential Requirements:

- Collect data from national authorities on the compliance of the Essential Requirements on their territory
- Assess the accepted mechanisms followed by the economic operators to prove conformity
- Assess the existing enforcement mechanisms in place

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Methodology	Task 1: Literature review - Literature review - Questionnaire to 27 Member States - Workshop Task 2: Assessment and evaluation of the compliance with the ER - Detailed assessment in 6 Member States: - Belgium - Bulgaria - Cyprus - Czech Republic - France - UK
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Methodology	Task 2: Assessment and evaluation of the compliance with the ER - Detailed assessment of: - compliance and enforcement mechanisms <u>effectiveness</u> of the implemented mechanisms (~ prevention of packaging (waste)) <u>costs</u> of the implemented mechanisms (for authorities and companies) - if, how and to what extent companies assess conformity with the ER (~ contact local federation)
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Methodology	Task 2: Assessment and evaluation of the compliance with the ER - Detailed assessment of: - policy options and recommendations - building blocks for impact assessment Task 3: Progress reports and final report - Final report in October
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Results Task 1	Compliance scheme: Only in: - Bulgaria: written declaration - Czech Republic: technical documentation - France: written declaration and technical documentation - UK: technical documentation But only inspection in: - Czech Republic - UK
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Results Task 1	Compliance scheme: Reasons for not implementing a compliance scheme: - Lack of staff - Lack of finances - Lack of time (EU-12) - No sufficiently clear requirements - Producers and packers are implicitly motivated to implement the ER - Authorities rely heavily on the standards
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Results Task 1	Alternative means of achieving packaging prevention (examples): - Information & awareness: contests and awards, pilot projects, campaigns - Tax in function of weight and recyclability of the packaging - Prevention plans: - obligatory (BE, ES) - voluntary (HU, IT, UK) - Obligation to produce reusable packaging (CZ, PT) - Deposit systems (DE, NL, HU) - Formalized cooperation with the industry (DK)
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Your expertise

What input would we like from you?

- Can you confirm the information provided by the Member States?
- What 'systems' or 'company standards' are used? Do you have documentation on this?
- Are these systems as stringent as the CEN standards? How are they audited?
- Can you provide contacts for the local federations in BG, CY, CZ, FR and UK

SCOPE AND OBJECTIVES OF THE STUDY

The scope of the study is a survey on compliance with the Essential Requirements (ER) in the Member States and the accepted mechanisms followed by the economic operators to prove conformity, the use of the CEN Packaging and Environment Standards and the existing enforcement mechanisms.

The objective is to identify remaining needs with a view to assisting the Commission services in evaluating the compliance to the Essential Requirements:

- Collect data from national authorities on the compliance of the Essential Requirements on their territory
- Assess the accepted mechanisms followed by the economic operators to prove conformity
- Assess the existing enforcement mechanisms in place

METHODOLOGY

Task 1:

- Literature review
- Questionnaire to 27 Member States: 20 out of 27 questionnaires were returned, but some of them were only partially completed
- Expert workshop

Task 2: Assessment and evaluation of the compliance with the Essential Requirements (ER) in 6 Member States: Belgium, Bulgaria, Cyprus, Czech Republic, France, the UK

Detailed assessment of:

- compliance and enforcement mechanisms
- effectiveness of the implemented mechanisms (~ prevention of packaging (waste))
- costs of the implemented mechanisms (for authorities and companies)
- if, how and to what extent companies assess conformity with the ER (~ contact local federation)

This should result in:

- policy options and recommendations
- building blocks for impact assessment

The 6 member States were selected as follows:

- Bulgaria, France, Czech Republic and the UK because they have a compliance and enforcement mechanism
- Belgium because it is performing well even without implementing the ER
- Cyprus because it is performing well, and on request of the Commission.

Both authorities and industry will be visited in these Member States.

Task 3: Progress reports, final report in October 2009

RESULTS TASK 1

Compliance scheme only in:

- Bulgaria: written declarations (separate declarations for compliance with the Essential Requirements and with heavy metals concentration limits; the declaration on heavy metals needs to be signed by an accredited laboratory)
- Czech Republic: technical documentation + inspection
- France: written declaration and technical documentation
- UK: technical documentation + inspection

Reasons for not implementing a compliance scheme:

- Lack of staff
- Lack of finances
- Lack of time (EU-12)
- No sufficiently clear requirements
- Producers and packers are implicitly motivated to implement the ER
- Authorities rely heavily on the standards, often due to lack of knowledge.

Alternative means of achieving packaging prevention (examples):

- Information & awareness: contests and awards, pilot projects, campaigns
- Tax in function of weight and recyclability of the packaging
- Prevention plans: obligatory (Belgium, Spain), voluntary (Hungary, Italy, the UK)
- Obligation to produce reusable packaging (Czech Republic, Portugal)
- Deposit systems (Germany, the Netherlands, Hungary)
- Formalized cooperation with the industry (Denmark)

DISCUSSION

On the scope of the study:

- EUROPEN remarks that some 'alternative means of achieving packaging prevention' reported by the Member States (as mentioned above) have nothing to do with the ER. Percharde adds that a number of Member States had nothing to report and therefore reported anything: deposits, reuse, packaging tax...
- INCPEN clarifies that ER are focussing on ecodesign and on the whole life cycle of the packaging and the packaging waste.
- EUROPEN adds that it is better to talk about packaging, not about packaging waste, when focussing on ER. The given examples do not prove compliance with the ER, but these policy measures try to aim at the same or a comparable environmental outcome using other instruments. Although they are not the scope of the study, they are given as a background frame to clarify the priorities chosen by the Member States.

On the usability of the standards:

- CEN states that they do not receive many questions on how to apply the standards, except from Asian countries who want to implement the standards to enter the European market.
- In line with the 'New Approach', the standards give the possibility to be used, but they are not mandatory. CEN states that the standards do not lead to enforcement methods.
- Industry contributed very much to the development of the CEN standards and therefore apply these standards. Denmark is cited as a Member State where guidelines were developed in close cooperation with industry.
- INCPEN and Perchards state that standards and legislation can be useful because they bring clarity and objectivity to internal debates within a company on the differing functionalities of packaging. For example, the marketing department may focus on the aesthetic aspects of the packaging whilst other departments may be more concerned with technical and environmental aspects. The ER and the supporting CEN standard helps all internal stakeholders understand the different functionalities, priorities and what information is needed to support legal compliance.

On the spontaneous use of the CEN standards and the ER

- AFNOR states that large companies have integrated the standards in their company management system.
- INCPEN confirms that within the last 3 to 5 years companies have established different types of Environment/Sustainability Management systems for product lifecycles often using carbon, water and waste among the metrics ... Looking at packaging as part of a product's life cycle is an integral part of the management systems. In other words, there is a societal / corporate agenda that incorporates the Essential Requirements objectives. ER has been around 10 to 15 years and is integrated in management systems. Although the CEN standards may not always be literally incorporated, the principles behind CEN standards are.
- Perchards adds that people who are now in charge don't often realise that they are following CEN standards.
- The Commission remarks that although a Directive is addressing the competent authorities, the provisions on ER are used and implemented by industry directly. There is a gap between authorities in the industry.
- The Commission states that market conditions and market requirements (e.g. the need to increase efficiency or to minimise raw material costs) define the use of Essential Requirements. Is it still useful to include ER in the legislation, or would it happen anyway?
- Perchards replies that administrators and NGO's are not comfortable with the ER as they are formulated now. They prefer clear rules: something is legal or not. However, in countries where the ER have 'worked', the implementation has been based on dialogue between companies and the authorities.

On driving forces to use ER

- A study by Perchards shows that most packaging in Ireland complies with the ER, although Ireland has no enforcement mechanism in place. Perchards analysed five packaging chains and learned that Irish packaging / packaged good manufactures export a large part of their production to the UK (where an enforcement mechanism is

in place). Small companies just follow the large ones. Many companies weren't even aware that they are compliant with the ER.

On the inspection on the Essential Requirements

- AFNOR confirms that France had started with some checking round 2000, but that their inspection effort is much less now. The same administrative body that checks food contact, consumer safety... should check at the same time compliance with the Essential Requirements. Inspectors have been trained to do this. Perchards observes that enforcement agencies don't see the ER as very important: there are other priorities, like enforcement on dangerous goods.
- The UK Government has asked for the Directive to be amended to make it easier to prosecute for breaches of the Essential Requirements. It is often claimed that the 'consumer acceptance' defence makes it impossible for a prosecution to succeed, but in the UK the defendants have pleaded guilty in all court proceedings. For this reason, the 'consumer acceptance' defence has never been tested in the court. For example, defendants could be asked to prove by means of sales figures or market shares the impact on 'consumer acceptance' of changes to their own or their competitors' packaging.
- Perchards states that companies are aware of the possibility to be prosecuted. There have been several prosecutions in the UK. However, "packaging being misleading" (suggesting more content than they actually contain) is the most prosecuted infringement.
- Perchards explains the UK "Home authority principle": the local authority who knows the company best is systematically consulted to evaluate the infringement.

On conformity assessment of an individual product or of a line or category of products

- INCPEN states that it is a different approach to request conformity assessment with the Essential Requirements for each individual product or for a line or category of products (e.g. all shampoos). If necessary, a company would rather provide a conformity assessment document once, for a group of products rather than several times for single products since it reduces bureaucracy INCPEN states that it would be a different approach to prove compliance with the ER for each individual product or for a line of products (e.g. all shampoos). A company will rather reduce material use in a line of products than in a single product. It should be possible to vary in applying the ER on individual products if the whole line scores globally better (e.g. not every individual packaging of shampoo should be compliant with the ER on prevention as long as for the range of shampoos produced by the same producer the ratio between packaging and packed product is going down).

On impact reduction

- Companies would rather be measured on a line or category of products rather than individual products since it allows flexibility.

On the definition of 'minimum necessary for safety, hygiene and consumer acceptance of the packaged product'

- EUROOPEN remarks that if you take the requirement to use the minimum amount of material, you are supposed to evolve to the point of zero material. EUROOPEN suggests working the other way around. Just check how much packaging is needed to make the project work.
- ARCADIS makes the link with marketing. In the proposed approach the first step defines the function the packaging should fulfil. In a second step, the practical requirements are defined in order to make a packaging work. And in a third step, a minimum amount of material needs to realise these practical requirements. Do the minimal functions of a packaging also include marketing requirements? Could marketing requirements conflict with the first Essential Requirement and which choices are made in these cases?
- EUROOPEN confirms that marketing requirements make part of consumer acceptance. The requirement is to have a product on the market, and marketing is an essential element in this.
- EUROOPEN adds that consumer trends might not pick up on ideas concerning Essential Requirements, e.g. compact washing-powders instead of bulky powders.
- Perchards states the dependency on marketability factors. If the consumer likes fresh products to be packed in a packaging that is able to be used in an oven, it would entail more use of packaging material. The Essential Requirements will then request not to avoid this new market, but to minimise the extra amount of packaging used.
- Perchards gives an example of a company that needed to change the packaging on a personal care product packaging because its competitors' packaging was easier to use. The company's redesigned packaging used almost 40% more material, and the person responsible for compliance caused the relaunch to be stopped because this did not seem to be in line with the Essential Requirements. A further redesign resulted in packaging about 20% heavier than that previously on the market. In Perchards' view, this extra weight would only be justified if there was a permanent increase in sales, which would indicate better 'consumer acceptance' of the new packaging. (In fact there was a permanent gain in sales, so use of the extra material was justified.)

On the efficiency of the ER: is there still too much packaging?

- ARCADIS quotes a study by FOST-Plus (Belgian body for packaging EPR, founded by the packaging industry) which showed that 80% of Belgian consumers believes there is too much packaging.
- Elipso states that we have not come to an objective perception of packaging yet. Consumers have "a feeling" that there is too much packaging. An experiment in France, however, has shown that in practice consumers consider most packaging as necessary. During the experiment, consumers were asked to leave unnecessary or surplus packaging in the supermarket. At the end of the day, only a limited amount of packaging was collected.
- EUROOPEN expands on how consumers perceive packaging. Consumers have two brains: as a user (when they buy the product) and as a citizen (when they are left with the packaging).
- The suggestion of ARCADIS to use the PRODCOM statistics to assess a decrease of packaging versus packed products over time is welcomed. It is stated by the

participants that a decrease will be the expected outcome. INCPEN suggests taking demographics into account.

- EAA observes that a decrease can be seen in e.g. the weight of beverage cans (reduction of 25% or more). Large amounts of raw material have been saved.
- EUROPEN has documentation that shows that the use of packaging is decoupled from the GDP. The OECD methodology for measuring decoupling has not been used. In general, it is frequently assumed that packaging placed on the market increases at 50 % of economic growth.
- Elipso states that quantification of what is recycled is relatively easy. Prevention however is not yet quantified, but we see a reduction in used packaging. Ellipse also states that green dot companies are providing data on packaging prevention; industry figures will more and more pop up.

On the quality of good packaging

- INCPEN states that packaging has a clear and crucial function, namely to protect and deliver a product. Furthermore, packaging of good quality can be environmentally beneficial. For example: the cap used in liquid detergent packaging has been designed in order to prevent spillage and deliver the correct dose of product thus preventing waste and overdosing .
- EAA adds that good quality packaging can avoid food spoilage.

On compliance with the ER by SME's

- The Commission is interested to learn how much of the packaging market is covered by SME's?
- Perchards guesses that SME's cover about 10% of the EU-15 market. SME's producing for private labels of supermarkets are not included in this 10%: they have no impact on the packaging strategy, since they follow the guidelines of the supermarkets.
- EUROPEN clarifies the case of contract fillers, where decisions are taken by the supermarket. EUROPEN also observes that industry standards are set by the high volume. The small companies are following the large ones. Suppliers supply everybody with the same product. There are no small brands in supermarkets nowadays.

On the application of ER on secondary and tertiary packaging.

- ARCADIS informs whether the impact of SME's on packaging is comparable regarding secondary and tertiary packaging.
- Perchards answers that most problems on non compliant secondary and tertiary packaging occur with import from the Far East. But as clients don't want to be stuck with this transport packaging, the tertiary packaging will be minimised.
- INCPEN observes a new trend to shelf-ready packaging, which avoids unpacking of secondary packaging.
- TETRAPACK/ACE remarks that it is clear that consumer acceptance plays a role, and logistics play a different role.

On differences between Member States

- ARCADIS informs on possible differences between Member States with regard to the type and size of packaging: for example 200 ml bottles of shampoo are sold in most Member States, while 2 l bottles of shampoo are sold in Spain. Is a 2 l bottle more compliant with the ER?
- INCPEN reacts by stating that the ER requires that the material use is optimised for the used packaging. If a product is packed in 200 ml bottles, the material use in these 200 ml bottles needs to be optimised. Differences between 200 ml or 2 l packaging are imposed by external factors like different markets, different specifications by retailers, different demographics...
- EFCO explains that the preference of Spanish consumers for large bottles of shampoo, unlike consumers in other Member States, is a cultural aspect driven by a tradition of larger families, and not by different ER implementation.
- The average can size is bigger in the UK than in France or Mediterranean countries, especially for beer.

On the effect of ER on the single market

- EUROPEN is interested in applying the ER, and does not understand why there is so little interest in a number of Member States. If the ER were not there, it would not make a large difference from environmental point of view, but it would on the internal market. Member States should be motivated to first look at ER and not come with introducing additional burdensome and costly measures. If the Member States judge that application of the ER is important, it is their job to organise enforcement.
- Perchards adds that ER are the guarantee of free movement of packaging.
- EAA refers to the possibility that Member States impose other restrictions that are not related to ER. These could severely restrict free movement.

On awareness raising and training

- EUROPEN has run a workshop on Essential Requirements in 2004, without much success. They still are prepared to participate in information distribution on the ER.

On verification systems

- TETRAPACK/ACE states that they would not oppose to the setting up of a third party verification system about compliance with the ER. EUROPEN needs to consult its members on this issue. INCPEN states that much would depend on how verification would be implemented.

On differences between CEN standards and company standards or manuals

- INCPEN states that for some companies the CEN standards have been translated into internal guidelines on the ER. These internal documents often have language compatible with internal process and include practical examples to make them easier to understand.
- Perchards confirms that CEN standards are difficult to read. More accessible and easier to use standards are developed within companies. CEN standards lay down which questions need to be asked to comply with the ER, the company standards give

the individual, tailor made answers on these questions. Company manuals focus on all the things that one group of employees has to do, and may not see the ERs as a completely separate issue.

- ARCADIS asks if all elements of the CEN standards can be found in the company standards, which is confirmed by the participants.
- Following a EUROPEN study, 65% of the industry is following the CEN standards, and 12% is following its own standards. Because companies are not always aware what the difference is between CEN and company standards, we can state that 77% uses the CEN standards. But most of them have translated these CEN standards in tailor made company standards.

MAIN CONCLUSIONS:

- ER are useful
- Most participants are in favour of ER
- Most regret that the implementation is not more systematic across countries.
- ER are preferred over more specific legislation.

POSSIBLE FUTURE EVOLUTIONS

- Spontaneous use of the ER and the standards in non-European legislation: Perchards cites the Australian code of packaging. Tetrapack/ACE states that the CEN standards are applied across the world. EUROPEN mentions the principle of 'assumption of compliance' from the New Approach, if the standards are applied.
- The Commission suggests a supplementary provision in the legislation to set up such a system for conformity assessment. An obligation not only to follow the ER, but also to monitor the application of the ER.
- The Commission has not decided yet on the possibility to alter the provisions on the ER.

FOLLOW UP

- Participants ask if the Commission has the intention to meet the Member States on the issue of Essential Requirements. The Commission answers that it is first their intention to await the results of the ARCADIS study, and then consider further steps.
- The Commission reiterates its commitment to ensure the compliance with art. 9 and 11.
- The Commission refers to a running study on prevention, and calls on the participants to register in the website and introduce examples of prevention.

ARRANGEMENTS

- The participants will provide useful contacts for the interviews with the industry in the 6 selected countries

ANNEX 4 REPORT OF THE INTERVIEWS IN THE VISITED MEMBER STATES

Bulgaria

Sofia, 15 October 2009

Svetoslav Ilkov – Executive Manager, EcoResource Bulgaria JSC - Packaging Waste Recovery Organisation

1. Enforcement of compliance

In practice, no enforcement/inspection is in place.

2. Policy instruments for implementing the Essential Requirements

The prevention issues are addressed through national legislation. Authorities are trying to involve the producer responsibility organizations such as EcoResource Bulgaria by placing special conditions in their permits. For example EcoResource Bulgaria is obliged to provide information and organize trainings in packaging prevention to its clients.

Nevertheless the efficiency of such measures is questionable as they do not address directly the packaging producers, packers and fillers.

The communication and companies education can be extended and improved. Different economic instruments can be more efficient – for example differentiation of product tax.

Implementation of different tariff structure for the licensing fees charged by the producer responsibility organizations can also be an economic incentive for prevention.

With regard to the requirements on reuse/recovery, there is an important link with recovery of the packaging. The efficient recycling and recovery of packaging waste depends on many factors besides packaging design, production and commercialisation. The packaging itself can comply with the Essential Requirements but its recycling requires also appropriate collection system in place, available recycling capacities, consumer efforts, acceptable collection and processing costs, etc.

The measures to promote and enforce packaging recycling are more complex and not only linked to the Essential Requirements.

Life cycle analysis of different types of packaging can be a useful tool to evaluate compliance with the Essential Requirements and shall be the basis to decide future actions.

3. Impact on the industry

In general, the industrial sector is interested in the reduction of packaging weight as it is directly related to the costs of the product.

However, the industrial sector does not support any administrative prescriptions for reducing packaging. In his opinion, the decisions regarding packaging are a sole

responsibility of the producer and all the prevention measures shall be organized on voluntary basis.

Voluntary measures seem to be more efficient from a company perspective. But, what means 'efficient' from a company perspective...

More communication and education of companies and consumers is necessary. Additional administrative burden should be avoided.

Regarding the requirements on reuse/recovery, companies are trying to reduce the amount of product taxes/licensing fees paid for packaging placed on the market. The issues related to the Essential Requirements are not the leading ones when companies decide about the type of packaging to be used for their products. The acceptance of products by the customer, reduction of costs for packaging, optimisation of transport, storage and sales costs prevail then environmental issues. For example, beverage cartons are more difficult to recycle than glass or PET bottles, but they prevail as packaging of juices.

4. Evolution in compliance with the Essential Requirements

Mr Ilkov states that is difficult to judge whether there is evolution or not in compliance with the requirement on prevention. From discussions of EcoResource with packaging companies it seems that most companies are making efforts to reduce the weight of packaging. However, it is mainly the result of cost saving/optimisation.

It also needs to be pointed out that Bulgaria is a relatively small market with a significant share of imported products and the local distributors do not influence the decision regarding packaging design.

Packaging weight reduction seems to be achieved in the soft drinks sector and dairies. Some reductions seem to appear in the unit weight of glass packaging for food, beer and alcohol products.

With regard to the requirements on reuse/recovery, there is no evolution in the balance single use/reusable packaging. On the contrary, there is a tendency for increasing the share of single use packaging.

The reusable packaging is limited to transport packaging (wooden pallets and plastic crates) and returnable glass (soft drinks and beer producers). The share of reusable glass is higher in the catering sector than in household consumption.

With regard to the presence of hazardous substances, there seems to be an evolution in some sectors, mainly regarding content of heavy metals as a result of efforts done by the producers of additives and inks (for example plastic packaging).

5. Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

At national level this shall be the packaging consumption per capita. It can also be the weight of packaging per unit packed product.

Nevertheless such indicator can be applied only per group of products with similar type of packaging in order to provide a ground for comparison.

Reuse/recovery of packaging

Useful indicators can be:

- percentage of packaging placed on the market versus reused/recovered/recycled packaging;
- costs for recycling/recovery per ton of material, including collection, sorting and treatment costs and taking into account the revenues from sold materials.

Regarding minimization of the impact on the environment, useful indicators can be:

- the percentage of packaging waste disposed of versus packaging waste generated;
- the amount of recycled material in the final product versus the amount of packaging waste delivered for recycling.

6 Evaluation of the wording of the Essential Requirements

Prevention of packaging

The purpose of the requirement is clear but seems to be too vague for a legal formulation. For example different companies/authorities can have different understanding of 'adequate amount' and 'acceptance for the consumer'.

Reuse/recovery of packaging

The requirements are clear, but seem to be vague for a legal formulation. For example, different companies/authorities can have different understanding of 'permit reuse and recovery'. Materials and packaging with quite different characteristics formally comply with the requirement.

Hazardous substances

Same remark like previous Essential Requirements: it sounds more like an objective but not like a legal requirement. Compliance is difficult to be judged and measured. Recycling and recovery operations shall also be involved.

Supplementary requirements are possible, but they need to take into account the different nature of different packaging materials and production processes. The benefits for the environment and society to be achieved as a result of these requirements need to be at reasonable costs. Furthermore, the requirements need to be introduced after consultation with the concerned industrial sectors.

But supplementary requirements usually need additional investments and efforts to achieve compliance and presently it is not the right moment to be established taking into account the economic situation.

7. Evaluation of the CEN standards

Mr Ilkov is not familiar with the CEN standards.

8. Consumer acceptance

According to Mr Ilkov, consumer behaviour can never be a driver to mitigate application of the Essential Requirements.

9. General conclusions

The requirements sound more like policy objectives rather than measurable requirements that can be monitored and enforced. Mr Ilkov does not know how many positive examples can be given with a specific packaging and materials for the period before and after adoption of the directive. There does not seem to be a lot of action taken at company level with regard to the Essential Requirements. Moreover, infringements of the Essential Requirements are increasing (e.g. reduced amounts of returnable packaging, appearance of materials difficult to recycle, combinations of materials that makes packaging difficult for recycling).

The requirements do not take into account the different packaging waste generation in different EU countries. Prevention efforts need be mainly oriented towards countries with high packaging waste generation.

Bulgaria – MOEW and EEA

Separate interviews with:

- Maria Ninova - Director of the Waste Management Directorate (16/09/09)
- Slava Yordanova - expert from the Executive Environmental Agency (11/09/09)

The results of both interviews were combined in the following report.

1 Enforcement of compliance

No active enforcement takes place in Bulgaria. Companies provide the authorities with declarations on compliance with art. 9 of Directive 94/62/EC (cfr. heavy metal limits)

2 Policy instruments for implementing the Essential Requirements

MOEW prefers voluntary initiatives of the industry, although legal provisions are the main instrument. Local/regional authorities can even enforce packaging prevention through the conditions in permits. These conditions can be constituted of quantitative and/or qualitative provisions (e.g. incentivise training).

With regard to the requirements on reuse/recovery, EEA is in favour of the establishment of targets.

In general, both MOEW and EEA would like to establish incentives for the industry to comply with the Essential Requirements. But so far, this has not yet been put into practice.

3 Impact on the industry

Most important incentives for packaging reduction are cost reduction and market trends. Some sectors even organize yearly awards for the best packaging and for the best costs optimization for packaging.

The biggest burden is the costliness of compliance. Therefore, it are mainly the larger companies who show the most improvement and are more cooperative.

4 Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

A possible indicator could be the balance between packaging volume and volume of packed product put on the market. However, in Bulgaria, this information is available for only a limited number of companies.

Reuse/recovery of packaging

There is no precise and detailed information available on the balance between single use packaging and reusable packaging; only some general information from the National Statistical Institute is available.

Possible indicators could be:

- single use versus reusable materials

- % packaging waste deviated from landfills
- biodegradability of the waste disposed by landfilling

5 Evolution in compliance with the Essential Requirements

It is difficult to assess, but both MOEW and EEA see a slight improvement in compliance with the requirement on prevention, although especially in the glass packaging industry. Another sector that improves is the pharmaceutical sector. The plastic and paper packaging sector has problems with shape stability when reducing material. Further improvement is necessary.

With regard to the requirements on reuse/recovery, no evolution is seen. In the future, it is expected that only for transport packaging (pallettes etc) the balance will be improved.

With regard to the presence of hazardous substances, a slight evolution is seen. But there is still room for further improvement. Information on the concentration of heavy metals in packaging is available, because producers provide declarations from accredited laboratories and the results are summarised.

6 Evaluation of the wording of the Essential Requirements

Prevention of packaging

The requirement on prevention is well defined. The phrase “acceptance for the packed product and for the consumer” could be considered vague, but it is difficult for such regulation to be more precise. The definition could differ between countries and sectors.

This requirement implicates an optimised balance of packaging amounts and quality or the least packaging material which is sufficient for acceptable quality of the packed product. This balance is dynamic and can differ between sectors and materials. Moreover, it can evolve with the technical development.

Probably, studies are needed to define it in a universal way.

Reuse/recovery of packaging

The wording of the requirements on reuse/recovery are acceptable. Other documents could specify details based on expert studies.

Hazardous substances

The wording of the requirement on hazardous substances is acceptable.

Both MOEW and EEA consider the Essential Requirements as acceptable and “detailed in a good sense”. Although they prefer to stick to the existing Essential Requirements “for the time being, even though they are hardly achievable”.

But, additional documents should be prepared that give a clear interpretation of these requirements. Moreover, additional requirements could be established, because the Existing Requirements only give general directions. The requirements could be more quantified. The possible supplementary requirements should be studied carefully in co-operation with the producers. They should be applicable and should not entail significant extra costs.

7 Evaluation of the CEN standards

MOEW has no remarks on the CEN standards. Both MOEW and EEA consider the standards useful, well illustrated and without ambiguous texts.

8 Consumer acceptance

Consumer acceptance is considered to be a justified driver to mitigate application of the requirement on prevention, but only to a reasonable extent.

Regarding the other requirements, it is absolutely not a justified driver.

9 General conclusions

For now, the Essential Requirements and CEN standards are considered to be useful instruments. But they could be further detailed by supplementary/complementary documents.

The financial and administrative burden for companies, however, makes it more difficult for smaller companies to comply. Next, 97% of the packaging is put on the market by a few large companies that comprise only 5% of the total number of packaging countries. Therefore, both MOEW and EEA suggest to establish stricter standards for these larger companies, similar to IPPC.

Belgium – Interregional Commission for Packaging

Brussels, 3 August 2009

Marc Adams, Interregional Packaging Commission

Ilse Laureysens, ARCADIS

Mike Van Acoleyen, ARCADIS

Reviewed by Marc Adams, by mail on 2 Oktober

1 Organisational issues on following up the Essential Requirements

The Interregional Commission for Packaging (IVC) implements a cooperation agreement that groups all three regional competent authorities (the Flemish Region, the Walloon Region and the Brussels Capital Region). As in Belgium the competence on packaging is entirely attributed to the regions, an interregional instead of a federal structure has been set up to coordinate the implementation of the Packaging Directive. The IVC implements the packaging waste provisions from the Packaging Directive, sets up the take-back system and issues the permits for the green-dot and EPR-bodies. It also manages the packaging waste prevention plans from industry.

2 Enforcement of compliance

Not applicable

3 Policy instruments for implementing the Essential Requirements

Green public procurement and waste management planning are no important instruments with regard to stimulating compliance with the Essential Requirements. Communication and awareness raising can support other instruments, but are no driving forces.

In Belgium, extended producer responsibility has proven to be very successful, but only because it is combined with extensive separate collection as a general waste management policy. And this instrument can not be used for achieving compliance with the Essential Requirements for a single product.

Legislation and compulsory standards are the main driving forces for achieving compliance.

4 Impact on the industry

Compliance with the Essential Requirements will primarily be driven by stringent implementation measures of the Essential Requirements in front-running countries, which will make international companies comply with the Essential Requirements in other countries too.

The Essential Requirements on prevention and reuse/recovery are generally perceived as a burden with excessive administrative burden and little beneficial effects. The requirements on hazardous substances, on the other hand, might be perceived as a beneficial requirement for the industrial users of packaging. The latter would not like to risk emissions of e.g. heavy metals unintentionally or adverse or costly effects on the treatment of the packaging in the waste phase.

5 Evolution in compliance with the Essential Requirements

In order to assess the balance single use/reusable packaging, it is necessary to follow-up in detail the larger packaging companies. In Belgium, a few multinational companies who together have a market share of 80% are followed up closely. A clear trend towards more reusable packaging is noticeable on the Belgian market.

The requirement on hazardous substances also needs to be applied on recycling measures. Only by imposing closed loop recycling systems, the hazardousness of used heavy metals can be controlled. Export is only avoidable if it is known that e.g. plastics contain heavy metals, knowledge which is in practice often lacking. If a packaging contains heavy metals, it should not leave the European Union.

6 Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

For the requirement on prevention, a possible indicator could be the balance between packaging volume and volume of packed product put on the market. However, in Belgium, no such information is available. IVC has tried to get this information in the past for discerned packed products, but very few companies could provide this information. It is a complex matter, since the question is what packaging should be included: only primary packaging or also secondary and tertiary packaging? The federal Law on Product Standards states that the amount of packaging per product must not increase over time. But the term 'packaging' has not been defined. By Royal Decree, the term 'packaging' could easily be defined.

On the level of a national economy, the PRODCOM data could be used to assess the amount of packaging per product, but especially the packaging data are not reliable. The Member States use different methodologies to estimate the amount of packaging waste, but many of these estimations are under- or overestimations. So, it would have little value to compare this indicator between Member States. A more reliable option would be to compare the data over time for each Member State. Member States normally do not change their calculation method, unless they get remarks on it from the Commission. If they change their methodology, they need to notify this to the Commission. If data on the quantity of product put on the market are not available or reliable, GDP could be an alternative, indirect indicator.

Reuse/recovery of packaging

Information on the balance between single use and reusable packaging is only available in Belgium. In Belgium, two calculation methods are used. The 'former Belgian' calculation method considers every time a reusable packaging is put on the market, while the European method only considers a reusable packaging when it is put on the market for the first time. The combination of both methodologies, gives Belgium insight on the number of rotations of reusable packaging.

IVC recommends the Commission to ask Member States to use both calculation methods.

Nevertheless, the balance between single use and reusable packaging is not a good indicator unless you can calculate it on a European scale, and based on reliable data. A practical way of assessing compliance is to follow up closely the key packaging companies on the market that cause the largest impact, using the Pareto principle.

7 Evaluation of the wording of the Essential Requirements

Prevention of packaging

The wording of the requirement is too vague. In addition, it is defined in a negative manner. Companies need to argue why they – for example – can not produce larger bottles or use a lighter material. But they do not need to indicate which measures they can implement for complying with the Essential Requirements.

Reuse/recovery of packaging

The wording of the requirements on reuse/recovery is acceptable: not too vague nor too detailed. But it are useless Essential Requirements because they are overruled by the provisions in the Waste Framework Directive.

However, a better definition of reuse should be established. In Belgium, only the term 're-usable packaging' is used, because the packaging should be used for the same purpose within a number of cycles. For example, the glass packaging for mustard is not reusable packaging, even if the packaging is used afterwards as a drinking glass.

Hazardous substances

The wording of this requirement is acceptable, but it could be integrated in the requirements on reuse/recovery.

The Essential Requirements aim at free movement of packaging. However, they currently lead to distortion of the free market. For SMEs, demonstrating compliance with the Essential Requirements is difficult and expensive (i.c. to make up the technical documents). So, Belgian SMEs for instance, have no access to the UK market.

8 Evaluation of the CEN standards

The CEN standards have been developed by and for the large, international companies, because only large companies can afford membership of the normalisation institutes.

Moreover, they are so flexible, that every company complies with the CEN standard:

- Prevention: e.g. companies can decide themselves what *consumer acceptance* is for their packaging; no authority can contest these declarations
- Reuse: no minimum number of rotations has been established
- Recycle: the only use of this standard is that companies can indicate the recyclability of a packaging. But stating that a steel aerosol with plastic cap, or a bottle with a paper label is 100% recyclable might be true in theory, but in practice it will not be recycled completely. So this is misleading the consumers.

The standard on recyclability is useless because it does not lead to better or more recycling, and the one on recovery is useless because of the adoption of the Waste Framework Directive. The standard on reuse applies another definition of reuse than the Waste Framework Directive, which is confusing.

The standard on biodegradability is acceptable, but there should be a better distinction between the different types of biodegradability. In Belgium, this standard has been used for a new Royal Decree on biodegradable packaging. But the Royal Decree has better definitions and goes further in its requirements than the CEN standard.

The standard on heavy metals is acceptable, but the Packaging Directive is already very clear on this matter, which means that the added value of the standard is rather limited.

It is unpractical that the division into three Essential Requirements does not correspond to the division into different CEN standards.

8 Consumer acceptance

Consumer acceptance is considered by Marc Adams as a justified driver to mitigate application of the Essential Requirements. If a company does not consider consumer acceptance, it will lose its market share to the competition. First evaluate what the market asks, and secondly produce this, while applying the Essential Requirements. But do not try to implement the Essential Requirements by changing the desires of the market or consumer behaviour.

9 General conclusions

The implementation of the Essential Requirements in France and the Czech Republic resulted in the protection of the home market, so as to limit the free movement of packaging. This is possible because the Essential Requirements and the CEN standards are so vague that authorities are perfectly able to impose difficult compliance proofing on foreign undesired products and easy acceptance for homeland desired products.

In the UK, the Essential Requirements were implemented as to be in conformity with European legislation. But it is questionable whether companies are really assisted on compliance with the Essential Requirements. The official Essential Requirements guidelines of the Department for Business Enterprise & Regulatory Form are vague, and do not tell companies how and when they need to show compliance with the Essential Requirements. The CEN standards have not been made concrete in the guidelines. The guidelines only make references to other resources for information, although they state that the "BERR Guidance Notes represent the official government source of advice on Regulations". Infringements against Essential Requirements have to be remediated within 28 days, which is an unrealistic timeframe to change a packaging strategy in practice, especially as beforehand no or very vague methods are given on how to implement the Essential Requirements.

Marc Adams states that the Essential Requirements should not be obligatory, but voluntary standards. The Essential Requirements aim at guaranteeing free movement, but they are used in a perverse manner. They are developed for and by large international companies which can keep SME out of the (international) market. Because they are so vague, they are easy to abuse for protective reasons by national authorities. And because they are formulated in a negative way they only help companies to prove that they do not have to comply with the requirements. Marc has not observed positive effects of the Essential Requirements yet. By making the Essential Requirements voluntary, the negative or perverse effects could be avoided.

If the Essential Requirements are to be kept obligatory, they should be implemented at product level and not on a company level, because they are strictly linked to the fact of 'putting on the market'.

Belgium - Ministry of Environment

Brussels, 25 August 2009

Denis Pohl, Belgian Federal service public health, food safety and environment, department product policy, head of service

Ilse Laureysens, ARCADIS

Mike Van Acoleyen, ARCADIS

Reviewed by Denis Pohl, by mail on 7 October 2009

1 Organisational issues on following up the Essential Requirements

The federal Ministry of Environment in Belgium is competent for the implementation of product standards. So, it is the Belgian authority that should implement and inspect on the Essential Requirements.

The implementation of producer responsibility of packaging and of the waste issues is the responsibility of the regional authorities.

2 Enforcement of compliance

The Belgian competent authority has the experience that enforcing the Essential Requirements does not work at all. Experiments have been conducted on enforcing these requirements on a random sample of products in super markets, as a part of an admission test for civil servants, but the outcome was that the vagueness of the requirements and the CEN standards prevent inspection to make up a file that could be standing in court.

Because of the weakness of the European provision, Belgian provisions or inspection efforts cannot make up for it.

Hazardous substances

Belgium sets up a yearly campaign to measure heavy metals in packaging. Since 2005, this enforcement exercise uses a X-ray fluorescence gun to get a first indication on the quantities of heavy metals on the field, to select the suspected packaging which are analysed in a laboratory. Presence of lead and cadmium remains problematic, also for packaging of large brands produced in the EU. Enforcement gives rise to blocking market entrance, withdrawal from the market and treatment as a waste.

Packaging is not selected at random, but the inspection knows by experience which type of packaging has a high risk of containing heavy metals (e.g. colour, softness etc). An administrative fine is preferred above a *pro justitia* and a treatment by Court, for reasons of efficiency and to avoid dismissal.

3 Policy instruments for implementing the Essential Requirements

Prevention of packaging

The Belgian Royal Decree on product standards imposes a stand-still with regard to the amount of packaging of an individual product. But producers can change the volume, the weight, the type of material etc of the packaging, so it is difficult for inspection services to assess a stand-still.

The suggestion of EUROOPEN to organise workshops for authorities to assist them in implementing the Essential Requirements is not appreciated. The industry should not tell authorities how to enforce legislation.

Green public procurement could be an instrument, but packaging is not a priority topic any more.

Legislation of trade practices is a good legal basis to tackle deceptive packaging which suggests more product being contained than is actually the case. A standard balance of the ratio weight product / weight product+packaging should be feasible and easily measurable e.g. 90/100. SMART objectives are needed to make the Essential Requirements enforceable.

Belgium invests in 'prevent-pack' as a communication tool with flyers, publications and online tools, to support prevention of packaging and packaging waste.

Reuse/recovery of packaging

There is no real Belgian policy focussing on these requirements, due to lacking political focus on the issue.

4 Impact on the industry

The major driving force for industry to comply with the Essential Requirements, especially regarding prevention, is cost reduction, namely create the optimal packaging while using the least possible costs for raw materials.

Because the Essential Requirements and the CEN standards are formulated in a vague way without objective criteria, industry can easily cope with them and does not experience much supplementary burden. The CEN standards that are considered 'green' standards could lead to a counter-productive effect. Because companies do comply with the standards they can position their products as 'green' products and thus recuperate on their image although they are merely following a weak legal provision.

Industry could follow market trends towards a better packaging strategy. Organisations like EUROOPEN play a positive role in promoting this. In Belgium, there are not yet training sessions for companies on the Essential Requirements organised from industry. In any case, no actor will today introduce for instance a PVC bottle on the market any more.

5 Evolution in compliance with the Essential Requirements

Prevention of packaging

There is a clear trend towards more single use packaging for beverages. In Belgium, the extended producer responsibility has led to successful recycling of packaging, but at the same time to a downwards trend of re-use. Producers prefer light weight materials such

as plastics over the heavier glass bottles. An important argument, especially used by retail, is the lack of space for stocking returned empty bottles.

An important trend is the economic growth driven by a search for added value. Lots of formerly household activities are being turned into profitable, marketable activities (washing, cleaning, cooking, ...). Often these conversions of household tasks into marketable services or goods creates supplementary packaging.

A problem in assessing the relation between packaging and packed good is that not only the primary packaging of the consumer good has to be investigated, but also the secondary and tertiary packaging.

However, good examples of products for which the packaging has diminished are also perceivable in the Belgian market.

Reuse/recovery of packaging

Despite the changing awareness ('état d'esprit') of European producers towards more recyclable and effective recycled packaging, problems still persist with imported packaging or imported goods.

Hazardous substances

There is no evolution in compliance: infringements of heavy metal concentrations are still found.

6 Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

For the requirement on prevention, a possible indicator could be the balance between packaging volume and volume of packed product put on the market. However, packaging is not merely related to a product, but also to services. For instance, every time you bring a shirt for dry-cleaning, it gets packaged. We have an economy of services, which also generates packaging waste.

A change in the product can also result in packaging reduction. For instance, compact washing-powders will result in less packaging as less powder is being used. An indirect indicator can be found in the degree of market penetration of these kinds of products with less packaging.

How could one assess the reduction of packaging waste: the replacement of heavier packaging (e.g. glass) by lighter materials such as plastic does not necessarily have a positive environmental impact. Glass and metals are for almost 100% recycled, while plastic at a rate of maximum 40%. There is a big difference between the theoretical recyclability of plastic and the real recycling rate.

It is impossible to assess the implementation of the Essential Requirements on the level of individual packaging. In order to achieve this, a database with the packaging history of each individual product would be necessary. Furthermore, there is the above mentioned difficulty in defining what is 'an individual product'. There is no good solution to assess the compliance on the requirement on prevention for individual products.

Reuse/recovery of packaging

Data on the balance between single use and reuse packaging are available at the Belgian interregional packaging commission IVC.

7 Evaluation of the wording of the Essential Requirements

Prevention of packaging

The wording of the requirement on prevention is too vague, and is therefore not enforceable. Even if the inspection concludes that a product has too much packaging, it has no clear juridical basis to act.

However, the idea or goal of the requirement is good. It was the first eco-design legislation, which is a very powerful instrument. But currently, due to the vague wording of the requirement, it has more of a philosophical impact.

Contrary to countries like the UK, Belgian authorities do not like to assess compliance on reports and written declarations, but only through quantitative assessments.

Reuse/recovery of packaging

The definition of re-use is not strict enough. Metal boxes with cookies, for example, are in theory reusable, but you cannot just bring them back and have them refilled. This illustrates the problems in definitions that can occur if packaging is not designed for reuse serve a second goal after its original use, and could by some be considered reusable.

Also the number of rotations is missing in the definition.

This means that if a company chooses to motivate its compliance to the Essential Requirements without referring to the CEN-standards (which is possible under application of the New Approach) it could use its own definitions on 'reuse' or 'reusable'.

Belgium considers it important to add the concept of the Waste Treatment Hierarchy to the Essential Requirements, and to replace the concept of 'recyclable' by the concept of 'recycled'.

Third Essential Requirement

The wording of the requirement on hazardous substances is acceptable. But other hazardous substances should not be added. Heavy metals are easy to inspect, but when other substances are put on the list, it might get difficult to assess compliance. Heavy metals are easy to check.

The exemption provisions for pallets and crates are not watertight, as the authorities have no view on stocks, terms, cycles... companies do not take the provisions seriously. Imposing a deposit could create the necessary economic incentive.

The Essential Requirements could be added with provisions to avoid that packaging generates bio-gas at landfills, but that packaging for anaerobic digestion of pyrolysis does not end up at a landfill. End-of-waste criteria in accordance to the Waste Framework Directive are needed to guard the quality of recycled packaging, more than an addition to the Essential Requirements.

3 Evaluation of the CEN standards

- From the start of the development of the CEN standards, Belgium has stated that they were too vague, making them difficult to implement and to enforce. They even give arguments (because they are so vague, every company can comply with them) to make no effort at all to reduce packaging waste or to invest in recyclability.
- According to the CEN standards, almost every material is recyclable (only ceramics used as a packaging for some schnapps, and waxed paper are considered non recyclable). However, there is a big gap between theory and practice for certain materials like plastics. Even PET plastic is not always recycled. For instance, the red plastic bottles of a certain water bottler are not recycled in reality, because (unlike white, blue or green) red plastic is collected in too few amounts to make recycling economically feasible. Only one bottler uses red coloured PET.
- It would be fairer to mention actual recycling rates on the packaging, instead of the message 'recyclable'. This has been done by a supermarket chain in France, based on the figures of Eco-emballage. But this could cause difficulties when considering different recycling rates between countries and an open market structure. The figures of Eco-emballage in France could be different from the figures of FOST Plus in Belgium.
- The CEN standard EN13429 in reuse lacks a criterion on the number of rotations of the packaging before it can be considered as reusable and reused.
- The CEN standards on biological treatment and on energetic valorisation are of better quality, than the other standards, because these two are concrete, objective and easily to check.
- CEN standardisation is needed for a method to assess Chromium IV, and to assess the content of composite materials.

8 Consumer acceptance

The Belgian federal state interprets the concept of consumer acceptance in another chronology than other interlocutors. Compliance with the requirement on prevention comes first and should influence the choices on the product being put on the market and on its packaging means. First, a frame compliant with the requirement has to be set, and then the designer and marketer can develop its packaging within this frame.

Marketing arguments are not considered to be an aspect of consumer acceptance. This is not at the same level as safety or hygiene.

9 General conclusions

- For the moment, there is no political interest regarding packaging. Ten years ago, packaging prevention was an important topic. Since a few years (cfr. dioxine crisis in Belgium) food safety is the main policy priority.
- The Essential Requirements are a useful instrument, but they are too vague, making them unenforceable.
- As some Essential Requirements can be counter-productive, abolishing them and leaving it open to subsidiarity, or replacing them by enforceable provisions might be envisaged. The Belgian federal authority agrees in this with the statements of the Interregional Packaging Commission IVC.

- Individual prevention plans at the scale of an individual company can be a part of the solution.
- The CEN standards are designed by large companies, but do not have a direct discriminating impact on SME's; they too have to cope with the Essential Requirements. Implementation measures entailing administrative burden could negatively influence SME's.

United Kingdom - BIS, DEFRA and LACORS

London, 28 August 2009

Peter Askew, Head of Packaging, BIS department for Business Innovation & Skills

Anne Turner, Policy advisor packaging and RoHS, BIS

Judicaelle Hammond, Head of Unit, Packaging Policy and Recycling Markets, Department for Environment, Food and Rural Affairs DEFRA

David Hedger, Trading Standards Officer, Local Authorities Coordinators of Regulatory Services LACORS

Mike Van Acoleyen, ARCADIS

Commented by Jane Bickerstaffe, INCPEN Industry Council for Packaging & the Environment, by mail on 7 September 2009

Reviewed by Peter Askew, by mail on 18 September 2009

1. Organisational issues on following up the Essential Requirements

BIS is responsible for a large number of extended producer responsibility (EPR) schemes and take back obligations. It is also responsible for the follow up of the Essential Requirements on packaging and has written the "Government Guidance Notes on the Packaging (Essential Requirements) regulations".

DEFRA is responsible for the extended producer responsibility on packaging and for the more general packaging waste policy. Both are responsible for packaging prevention in a shared way.

Inspection in the UK is largely decentralised to the local authorities, although LACORS has a working group which coordinates and supports the local authorities.

2. Enforcement of compliance

The enforcement structure in the UK is characterised by the following aspects:

- Enforcement is a competence for the local authorities, which are supported by LACORS. This institution however has to cope with a very broad scope of tasks. The budgets for the local authorities are not earmarked for specific tasks. This means that they can decide locally on priorities and how to use their attributed working means. Enforcing packaging minimisation is often balanced against other issues (food safety, product safety...).
- The home authority principle means that companies can have a single point of contact with local authorities (namely the authority of the community of their administrative seat) even if they are active in multiple municipalities. In this way the benefits of a decentralised approach is combined with a unified approach; the latter being the major advantage of a centralised approach. The key issue in a decentralised approach is the low distance between company and government and the possibility for the government to understand and appreciate the ethos of a company.
- LACORS confirms that contact with companies on the Essential Requirements is not a daily issue. Focus on packaging is often based on risk assessment and/or the priorities of a local council. Inspection is often combined with other inspection tasks,

which makes it difficult to assess how much FTE is used for enforcement of the Essential requirements.

- Due diligence is a key issue in UK enforcement policy. A company has to prove that it took reasonable steps to comply regarding the Essential Requirements. An important aspect is the 'due diligence defence principle': due diligence obligations depend on the size of a company, they are more demanding for larger companies and more indulgent to SMEs.

Enforcement is focussed on prevention of packaging and at the easier to measure provisions (e.g. heavy metals). The concepts of the requirements on reuse/recovery fulfilled their duty in the mid nineties, when they were developed, but now the UK prefers to acknowledge the wider policy landscape where ecodesign and resource use are the key concepts, and where waste policy is more integrated with general policy concepts including carbon.

When event-driven inspection on leachate or ashes takes place, it is difficult to trace this back to the hazardous substance content of a specific packaging waste, because packaging waste is often treated as a composing fraction of mixed waste.

A major problem exists when products are put on the market in a Member State where no enforcement actions are taken. Due to the assumption of compliance and the free movement of goods it becomes difficult for UK inspection to take the necessary steps. The UK lacks an approachable competent enforcement body in several countries of origin of imported packed goods. An EU-level agreement for enforcement might be a solution, allowing a system of administrative cooperation to be established similar to other product Directives. UK states that this would allow for compliance issues to be addressed on packaging minimisation and heavy metals, facilitating exchange of information between Member States, and would help realising the single market in packaging and packaging waste.

3. Policy instruments for implementing the Essential Requirements

- The UK administration focuses on talking with the industry on individual cases of complaints in order to drive compliance. Because of the formulation and the language used by the requirement on prevention, its interpretation and evaluation, this approach is perceived to be the more effective in achieving compliance. Only for the heavy metals content a strict yes-no distinction can be made based on limit values.
- The administration has focussed its work through WRAP on subgroups or on cases, e.g. product ranges such as boxed chocolate Easter eggs where a reduction of packaging of up to 30% is obtained in 2009.
- WRAP also works on more general voluntary agreements with specific economic sectors. One agreement with grocery (covering food production and distribution) is already near completion. Plans are in place for further agreements with the home improvement and do-it-yourself sector, for the online retailing sector (but not before 2010) and for the hospitality and catering sector.
- Policy aims at creating awareness on the costs that a company can avoid by avoiding superfluous packaging (materials and transport costs, working hours...) or avoidable producer responsibility compliance costs. Different actors are involved in the awareness raising. The work of WRAP on voluntary agreements is a key element in this. The British standards institute BSI promotes the use of relevant CEN-standards,

technical standards for best practice packaging (e.g. can ends, pallets, drums, adhesives etc), as well as Environmental Management Standards. The Envirowise service supports UK based companies with free advice and with web tools on packaging design and resource use.

- The major regulatory policy instrument with impact on the realisation of the Essential Requirements is the implementation of the extended producer responsibility for packaging waste.
- Green public procurement is not used to enhance compliance with the requirements on prevention and hazardous substances; for the requirements on reuse/recovery, green public procurement still is in its infancy.
- WRAP has developed a best-in-class benchmarking database, together with DHL (in the UK a major provider of logistics for supermarkets) and Packaging Datastore Ltd. The scope is to find the range of weight of packaging for identical products, like a certain weight of cereals in paper/card packaging, baked beans in steel cans, beer of wine in glass bottles... The database helps identifying products with a large or small range of weights – thus highlighting items with poor product to packaging ratios and championing the lightest packaging. Sometimes large ranges can be discovered e.g. for 75 cl glass bottles for wine; between 350g and 900g. These data will be used to prioritise future actions, but they are limited to primary packaging. They encourage benchmarking.
- Examples of good practice are collected on the WRAP website. See http://www.wrap.org.uk/retail/tools_for_change/index.html and http://www.wrap.org.uk/retail/case_studies_research/index.html
- The PRAG Packaging Recycling Action Group brings together officials from the competent authorities with actors from industry or from compliance schemes. Their goal is to work with relevant stakeholders to minimise the amount of packaging used on products and to improve on the collection and recycling or recovery infrastructure for packaging from the consumer. A PRAG design guide for recyclability is being developed, taking account of the CEN report CEN/TR 13688:2008⁵ The draft design guide is still in development and therefore confidential.

More generally the UK policy focuses on the waste treatment hierarchy, which was implemented in the waste planning well before the Waste Framework Directive. This results in more emphasis on initiatives on prevention. The initiatives are not limited to awareness rising, but are extended towards concrete company related assistance on how prevention can be realised. Communication and planning are considered as the central policy instruments, while other legislative measures are used as backstop

4. Impact on the industry

The types of companies that often take the greatest account of the requirements, and that communicate their efforts are:

- Companies with a clear view on their cost structures (e.g. retail)
- Companies who trade on their environmental credentials, as a part of their image building.

⁵ Packaging - Material recycling - Report on requirements for substances and materials to prevent a sustained impediment to recycling.

The UK public can be considered as much sensitised; public appetite is a non negligible driving force towards Essential Requirements. The most important driving element for industry to comply with the Essential Requirements is the aspect of cost reduction.

The Envirowise practical experience proves that SMEs do not realise the impact in cost reduction that could be obtained by implementing the requirement on prevention.

More generally, UK states that after cost, the industry behaviour is not driven by the Essential Requirements but by a changing agenda regarding resource efficiency, the environment and carbon footprint, other environmental management standards and more generally their environmental credentials.

The provisions on heavy metals are frequently taken over in the specifications used by companies or retailers towards their supply chain.

7. Evolution in compliance with the Essential Requirements

The UK has seen a trend towards centralisation of the distribution networks. Goods are transported and distributed more often nation-wide. Palletisation and international trade has led to increasing imports of goods on pallets from China, Hong Kong and more largely Asia. This has an impact on the primary packaging, which becomes more single-use, as low distance is considered a key factor for successful reuse systems. For secondary and tertiary packaging however a clear trend towards reusable packaging can be seen as is suited to such systems.

An interesting but still embryonic technique is self dispensing. Goods are taken to stores in bulk packaging and sold without primary consumer packaging, and a dispenser is used for whatever packaging or container is provided for by the clients. Self dispensing systems are being developed in niche markets for specific dry products, such as rice or nuts. It is mentioned that this system is extended in the US to dry goods, detergents... and that in Cornwall remains of an older system of self dispensing in shops can still be found.

Another technique re-designs the product and its packaging, for example superconcentrated products that have less water and can be packaged in smaller containers. This has failed due to lacking consumer acceptance.

The main driver for the Essential Requirements on reuse/recovery is the extended producer responsibility. Industry initiatives, as taken by the drinks carton manufacturers that have set up a network of collection of their packaging through bring-banks, add to the success of separate collection and thus recycling. EPR however has a large impact on recycling but not yet enough impact on eco-design.⁶ The ongoing shifts in packaging have not been caused by the Essential Requirements but by the consumer pressure, the EPR-targets and the sorting obligations.

The Essential Requirements can be contradictory in some cases, especially regarding the recycled materials content. Using recycled fibres can require heavier and thicker packaging as the recycled fibres are less strong than new fibres. The increasing content of recycled material might also request monitoring to ensure no increase in the presence of hazardous substances.

A recent evolution towards oxodegradable, degradable, compostable... packaging does not necessarily influence compliance with the requirements on hazardous substances,

⁶ INCPEN made the statement that *it would be bad for the environment if EPR became so expensive that it outweighed all other design considerations such as energy consumption, vehicles requirements, consumer needs and functionality.*

but could cause problems if they are mingled in the recycling circuit. However some new types (e.g. oxo-biodegradable) are not covered by the compostability standard.

Asian goods tend to be less compliant. An increased failure rate on product safety can be observed on Asian products. This could be an indication that compliance with the requirement on hazardous substances might be diminishing as well.

INCPEN would welcome the enforcement agency doing more to control the packaging of non-food imports.

6. Indicators for assessing compliance with the Essential Requirements

The UK possesses limited information that could indicate quantitatively if the Essential Requirements are complied with.

Data availability

WRAP has established a voluntary agreement with key retailers, groceries, brands and actors within the food and food distribution sector, the so called Courtauld Commitment. Two central commitments have been agreed upon:

- The growth of packaging will be stopped
- The amount of packaging will be reduced by 2010

In order to follow up these commitments, aggregated (non confidential) data on packaging quantities are being reported. Data on quantities of packed products are not made available.

Prevention of packaging

UK however does not believe it is possible to prove minimisation using quantitative data at a country level. The UK prefers bottom up approach. They suggest examining data from key economic sectors and combining the data obtained to give an overall picture.⁷

A possible and at first sight logical and interesting indicator was suggested to BIS and DEFRA: To assess compliance with the requirement on prevention and to assess the degree of application of EN 13428:2004 it could be envisaged to select a number of products in different product categories and packaging formats, and perform the procedure as described in the standard by the competent authority themselves. This would demonstrate if the approach of minimisation was being demonstrably applied or not, as well as tackle sectors often criticised for packaging to see if such claims could be substantiated. The number of compliant cases could be an indicator for the overall compliance with the Essential Requirements. If an assessment by the administration does not confirm with the views of the producer/packer on e.g. consumer acceptance of marketing goals, a further discussion with the involved market actor can be established.

Evaluation of the preliminary attempt to calculate an indicator on prevention of packaging

ARCADIS proposed a topdown method, with the packaging quantities in the numerator and PRODCOM and COMEXT derived figures for the quantity of products set on the market in the denominator, and considering the evolution of this ratio over time as a discerning indicator. As an alternative for PRODCOM the GDP could be used.

⁷ This could necessitate to expand the number of voluntary agreements with several industrial sectors

The UK shares the concern of ARCADIS on the quality of the PRODCOM data. Comparable data would need to separate out inconsistencies in reporting, and require a central and reliable data source that could separate out product quantity, population change and other factors against the level of packaging.

The proposed method was analysed by the statistical department of DEFRA⁸;

The use of PRODCOM combined with trade data allows for packaging leaving the country through exports or coming in to the country through imports, and also allows for flows of packaging within the economy (GDP in effect only counts a product once, when it is sold to the final consumer). It does suffer from the weakness that production is counted in terms of weight rather than size – hence (for example), a shift to more packaged building materials will be much more important in terms of the denominator than any corresponding increase in packaging is for the numerator. The data sets are also, as they suggest, rather weak, though a number of researchers are working on this to improve the coverage and consistency. Finally, it does not allow for the production of packaging waste from services, though this will be fairly small.

One way round the weighting and data gap problems is to build the indicator up from the relevant product streams. Hence you compile an indicator for waste packaging for construction materials separately to one for food and drink products, and then separately establish some research to work out how to aggregate them together in a coherent fashion. This approach will also come closer to providing benchmark data.

We do not favour use of GDP in this context. First, because the flows of money associated with GDP are not directly related to the flows of packaging. For example, our GDP has been increasing through a booming service sector, whilst the production of the goods we consume has shifted abroad. Hence to some extent packaging waste associated with production (deliveries of goods used within the economy) has decreased because it now occurs overseas, even though GDP has increased. Second, the use of PPS (Purchasing Power Standards) to convert everything to euros is misguided in this context.

The 'real' increase in GDP – or household consumption, which might be a more suitable indicator in this context – is better expressed in terms of local price changes. Essentially we are looking for a monetary indicator which expresses how much we (both producers and consumers) spend on goods (not services) in real terms. This can be derived from the National Accounts although it would probably require a bit of work to compile suitable monetary deflators.

INCPEN give following remarks on the proposed indicator⁹:

It's easy to get a generic indication by comparing packaging placed on the market with GDP and (if you wish) other economic indicators but any attempt to disaggregate into product groupings runs into all sorts of difficulty. Not only the unreliability of the data, which becomes more severe the more you disaggregate, but also changes in the market due to changes in demand (whether through demographics or changes in consumer tastes/fashion or technology). For example, with all the technological convergence, how do you sensibly the amount of packaging used per camera, or hi-fi, or phone – and if you aggregate them all into a

⁸ Personal communication on 28 august 2009

⁹ Personal communication on 07/09/2009

consumer electronics category, the advent of the mobile phone and its high replacement rate is still going to skew the data.

The flows of money associated with GDP are not directly related to packaging flow eg if your salary doubles you're unlikely to buy twice as many cans of baked beans or bottles of wine. However, the long-term trend is for packaging growth to be about half the growth in GDP, and if you plot packaging tonnage and GDP year by year you can see whether packaging growth is rising above or going below that trend-line. You still have to interpret the results.

DEFRA's point about the use of GDP being skewed by the production waste from packaging arising abroad rather than in the UK seems irrelevant. Our data measure packaging placed on the market and packaging disposed of after use; residues from the production process are irrelevant.

Comparisons between Member States are very problematic because of differences in geography, infrastructure, level of economic development, how the economy is currently performing and of course differences in data collection methodology. It also seems unlikely that a figure for expenditure on goods alone could be generated from the expenditure on goods and service combined.

More generally the UK states that the requirement on prevention in the context of the Directive is not focussing on a total market result. No global (nor quantitative) minimisation targets are included in the Directive – the requirement is absolute. Equally there is no requirement for packaging to be minimised over time, so compliance cannot be demonstrated by the value of an indicator improving over time. The Essential Requirement would seem to be designed to be used at individual product level (responsible person), rather than on Member State level, so perhaps the indicator needs to reflect this. An indicator to measure compliance ought therefore to address both volume and weight – as these are the two relevant factors - therefore two indicators would be needed e.g. volumetric efficiency – packed product volume / packaging external volume, and packaging weight per unit volume – packaging mass/packaging external volume.

However, it is the goal of the proposed indicator to assess the way Member States develop performing policy instruments to implement the Essential Requirement, to see if there occur differences between UK, France, Czech republic and others with implementation measures, and others without these measures, to see if the Essential Requirements need supporting by policy measures or if they are self-policing, as stated by Perchards¹⁰. From this point of view, the indicator preferred by the UK would be a sample based, bottom up indicator as described above.

[Reuse/recovery of packaging](#)

UK possesses no structured information that can be used as an indicator on compliance in an economy-wide scale. However, it possesses a large collection of case studies on how in practice packaging is optimised. Chapter five of the UK's Packaging Strategy 'Making the most of Packaging, a Strategy for a Low-Carbon Economy' focuses on 'optimising packaging' and exemplifies how packaging can be made more easily recyclable at the design stage.

¹⁰ Perchards, Impacts of the packaging (Essential Requirements) Regulations, October 2003, page 5.

Hazardous substances

No generalised inspection campaigns have been set up. The presumption of conformity from the New Approach is applied widely. Data need to be provided for by the producer if requested. Inspection is usually event-driven. No XRF measurements of heavy metals have been applied, but the competent bodies for inspection are interested in applying it and are keen to exchange information and work with other countries like Belgium to aid enforcement.

General remarks

Comparison of individual data for a single year between Member States to evaluate policy performances remains problematic. Sometimes differences are caused by the way the market is structured. E.g. Germany knows many local breweries that produce and sell beer in a narrower geographic region, while in the UK beer is generally brewed centrally and water bottled by a number of key brands and distributed through a nation wide network of supermarkets. When the geographical distance between production and consumption becomes too large the benefits of the use of reusable packaging diminishes. There can also be large market changes due to developments, or changing consumer habits e.g. the increase of steel packaging in central European markets where the market is orienting in a quick way towards canned food products.

For Member States having established a system for enforcement, the number of requests for enforcement could be an indicator. This is feasible for easy to enforce provisions like on heavy metals. In the UK however, as enforcement is decentralised towards local authorities, event driven, and no centralised dataset on enforcement is available. INCPEN adds that it would be sensible to collate data also on the instances where the enforcement agency has challenged a pack and the company has improved it as a result of the challenge, without a prosecution being brought.

7. Evaluation of the wording of the Essential Requirements

The Essential Requirements were first formulated in 1994, based on discussions in the early nineties. A compromise was needed between the then twelve Member States. The wording has the merit to succeed in finding this compromise. Experience has shown that whilst this wording offers a flexible framework that recognises the variety of packaging, it is not perfect. INCPEN agrees that the vague wording is needed to establish general principles that would apply to all packaging from a bottle top to a pallet. The UK does not agree however with the frequently heard criticism that they are too vague to be enforced. The UK states that it has proved from its own practice that they can be enforceable. The way the Essential Requirements are formulated is deliberately vague, in order to create sufficient flexibility. It is questioned whether legislation is therefore the right way to implement these requirements. In addition to this legal framework, the UK promotes a system of 'better regulation', where more emphasis is laid on voluntarism and support to achieve compliance.

As worked out beneath in chapter 9, the wording 'consumer acceptance' is the major issue in the formulation of the Essential Requirements. To find a better wording, the UK would propose to include the industry in the discussion and to get business input into proposals.

The Essential Requirements are not necessary in step with the waste treatment hierarchy included in the revised Waste Framework Directive. INCPEN argues that a reference to the waste treatment hierarchy is not needed because the Essential Requirements give guidance on how to design packaging, while the hierarchy provides guidance on how to deal with waste once it becomes waste. The UK states that according to the Waste Framework Directive when applying the waste treatment hierarchy environmental impacts still need to be monitored: For example, the environmental benefits of reuse of packaging could for instance be linked to transport distances. At the moment, the key indicator for this measure is the greenhouse gas emissions caused. The UK is currently considering whether producer responsibility for packaging should evolve away from a weight based target to a carbon based target, and puts waste in the larger perspective of resource.

From a technical point of view today, everything is technically recoverable and therefore compliant with the Essential Requirements. For this reason no emphasis is put on inspection on the Essential Requirements.

Unlike other countries, the UK does not insist on defining the wording 'reuse' in a more clear way. Except for occasional VAT-rating discussions, no industry actors claim reusability (as stated in the Essential Requirements) to be a specific market barrier or problem.

The first Essential Requirement refers to avoiding the presence of hazardous or noxious substances in emissions, ashes or leachate. UK noted that the content of hazardous substances in packaging could change due to a larger use of recycled materials. Only if it could be proved that there is a problem. If it is soundly evidence based, it could be envisaged to refer to the presence of hazardous substances in recycled materials in the wording of the Essential Requirements. Until now UK has no information on this kind of evidence base.

For heavy metals, a clear indicator that is distinct and measurable is available (cfr. maximum concentrations according to Art. 11 of the Directive). For the other hazardous substances the presumption of conformity can be applied and the possible incentives to introduce hazardous substances have to be assessed. A list of supplementary substances to be banned would be too prescriptive and represent a large burden for industry, in addition to REACH and RoHS requirements. A balance needs to be found between the general concept of "hazardous substances to be minimised", as actually stated in the first Essential Requirement, and a limitative list on which substances may be missed, or for which there is no evidence based suspicion that there is a problem. INCPEN adds that when CEN looked at this issue they could not identify any other noxious or hazardous materials that might be present in packaging.

8. Evaluation of the CEN standards

The Government Guidance Notes developed by BIS¹¹ give support and guidance to companies on understanding the UK's Regulations and include advice on compliance, including how a company might apply the relevant CEN standards. These standards in their turn give support and guidance in how to implement the Essential Requirements. As the Essential Requirements should be read in the context of New Approach, following the standards implies a presumption of compliance with the Essential Requirements.

¹¹ last version December 2008

However both the Essential Requirements, the CEN standards and the Guidance notes need to be considered as deliberately vague and therefore flexible. It is difficult to formulate them more specific and at the same time keep them relevant for all types of packaging. Like the Essential Requirements itself, the CEN standards can be considered as somehow outdated.

The standard EN 13428:2004 on prevention has a process based approach, which is approved of by the UK authority although it noted that presentation and marketing criteria presented difficulty in trying to determine what was an acceptable amount of packaging for that purpose. It could be made more accessible for business as demonstrated by the Scandinavian industry initiative Opti-pack. The formal language necessary for defining standards is translated in a more accessible style for guidance notes.

The standard EN 13430:2004 depends upon the concept of recyclability. The UK considers two main drivers for recyclability: (1) the extent to which a material or packaging format is collected separately for recycling, and (2) the extent of the technical recyclability of the item to be recycled. In this way a distinction can be made between recyclable and recycled. INCPEN nuances that recycling performance primarily depends on the collection infrastructure because the pack designer has no way of knowing where a pack will end up. Also according to INCPEN eco-design is a secondary consideration in promoting recycling performances.

The CEN standard may be regarded as slightly outdated, although they provide a useful tool for assessing packaging. Recycling should be considered in the view of its environmental impact regarding other waste treatment methods and material policy.

The repeated critics that the CEN standards are formulated in a negative way, which means that they are standardising the way in which companies can prove that they do not have to fulfil the Essential Requirements any further, is not endorsed by the UK administration. A more positive formulation of the Essential Requirements or of the standards, with e.g. target values or percentages, risks being too prescriptive and destroy the flexibility of the Essential Requirements. Enforcement however may be aided by reversing this approach to identify where packaging could be further minimised.

INCPEN adds that the whole philosophy behind the standards is that a methodology is described that facilitates doing the best under the existing situation (filling equipment, product range, distribution system etc.) and keeping the packaging under review so it can be continuously improved. CEN experts rejected the idea of a static target that should be reached because this would result in companies going only that far and not trying to go further.

9. Consumer acceptance

BIS confirms that the most pressing problem in the wording is the phrase 'consumer acceptance'. This concept is not easy to catch in legal terms. It is especially difficult to use in a criminal prosecution in which the utmost accuracy is requested. The wording 'consumer acceptance' could be revised by other wording. However, balance is important, and as reports of recent changes to French legislation has suggested that removing the term altogether could cause unintended consequences such as banning multipacks, handles to help consumers to carry the packaging, special textures and markings for those with disabilities and other essential parts of pack design. A concept of 'consumer use' could be introduced, i.e. something is acceptable if it serves a function requested by the consumer. DEFRA agrees with BIS on the problematic nature of consumer acceptance, but takes a slightly bolder position in evaluating the claims of

consumer acceptability. Some exaggerated pilfer resistance measures like difficult to open packaging even for cheap products should not be considered as compliant with consumer acceptance. The packaging should be in a reasonable relation towards the function it should fulfil. E.g. for USB-sticks a pilfer resistance system is established using tokens and delivery at the cash desk, just like cigarettes, which creates pilfer resistance without the need for more and larger packaging. Also shelf presence can be realised in other ways than through using more packaging. It is an issue how to objectivise consumer acceptance. It is the burden of the producer to prove the real need for packaging as a consequence of consumer acceptance e.g. on thicker glass packaging for cosmetics. The usual consumer panel research can often not be used for this goal because the panel is asked which packaging is most liked, without mentioning to the test persons the issues of CO₂ footprint, environmental impact or supplementary cost for the consumers. However, consumer acceptance testing cannot be described in workable legislative wordings. Consumers are demanding less packaging waste, which creates a driver to change the purchase market. This is also to be considered as the other side of the consumer acceptance coin.

INCPEN states that until the consumer acceptance defence is tested in the courts they can't say if there is a problem or not.

10. General conclusions

- For the UK, the biggest issue regarding the Essential Requirements is the interpretation of the term 'consumer acceptance', and the need for enforcement of the requirements in all Member States to drive up their effectiveness.
- The UK has made a considerable commitment regarding CO₂-emissions. The principle of 'act and act now' is dominating environmental policy development. UK follows with interest the expansion of the Energy using Products Directive into a full scale ecodesign directive. Waste recycling Directives on Batteries, WEEE and RoHS, End-of-Life Vehicles and the Packaging and Packaging Waste Directive may need to be harmonised and revised within the frame of a bigger policy debate beyond the waste agenda. A CO₂ based target setting and a focus on the whole material flow chain would be the cornerstones of such an approach. Therefore the UK would prefer a Directive revision which acknowledged the new, broader policy framework, rather than a specific revision of the Essential Requirements and their implementation in isolation.
- When reviewing the Essential Requirements and their implementation measures, industry should be included in the working committees, to get a more balanced and practical outcome thus ensuring any measures are relevant and deliverable.

Czech Republic - Ministry of the Environment and EKO-KOM

Prague, 10 September 2009

Ladislav Trylc, waste management department, Ministry of the Environment
Gabriela Machakova, Czech trade inspectorate
Eva Kubesova, EU department, Ministry of the Environment
Zbynec Kolar, EKO-KOM, green dot organisation
Mike Van Acoleyen, ARCADIS

Reviewed by Věra Macháčková, by mail on 30/09/09

Reviewed by Zbynec Kolar, by mail on 30/09/09 and 02/10/09

1. Organisational issues on following up the Essential Requirements

Policy lines on packaging and packaging waste are set out by the Ministry of Environment. Inspection on the Essential Requirements is distributed, according to the nature of the packed product, over different competent authorities. Central players are the Czech Trade Inspectorate and the Czech Agricultural and Food Inspection Agency. EKO-KOM is the accredited green-dot organisation with an important role in communication and awareness rising. The market is open for packaging recovery services, but EKO-KOM is the dominant one.

2. Enforcement of compliance

Compliance with the Essential Requirements can be proved by companies, on demand, by handing over technical documentation. There is no third party certification on this documentation, the enforcement is based on auto certification. Regarding the presence of hazardous substances, companies do not possess the equipment (e.g. spectrometers) to perform tests, and third laboratories are engaged for this testing.

Second line control is performed either in-house at the Czech Trade Inspectorate (document based), or outsourced to service providers (laboratory research).

Technical documentation has not to be provided to the administration for each market introduction, but only when the authority competent for inspection asks for it. The competence to test packaging is distributed over different Czech authorities, on food, on non food, on drugs, on veterinary drugs. The Czech trade inspectorate is competent on non food, and has performed 18 controls during 2008.

Problems do occur with Chinese suppliers. It occurs that the composition of the packaging material changes after it has been tested and introduced on the Czech market, sometimes even without notifying the Czech distributor. Sometimes communication problems occur with Chinese suppliers.

3. Policy instruments for implementing the Essential Requirements

The general policy instrument applied is the legal adoption of the Essential Requirements and of the CEN-standards into Czech legislation. Consistent with the New Approach, the presumption of compliance is used when companies follow these standards. No further policy instruments are used focussing directly on the Essential Requirements.

EKO-KOM organises about ten seminars yearly on Essential Requirements, ecodesign and related packaging waste issues, for the last five years. About 50 managers for each seminar are welcomed. This means that all 20.000 relevant companies (producers and importers) in the Czech Republic have had a chance to be informed on the Essential Requirements. This is an initiative for which solely EKO-KOM takes the credentials; it is not an initiative from the competent authorities. Companies are more aware on recyclability of products, and this can be observed by e.g. the use of PP labels in stead of PVC labels.

Following Dutch and Belgian examples, EKO-KOM and the Ministry want to issue a leaflet with good examples on prevention, based on real cases. This is not yet achieved because of discussions on the confidentiality of the data.

The provisions on extended producer responsibility are implemented by the green-dot organisation EKO-KOM and by the admission fees that their members have to pay for the service. Fees reflect actual costs of recovery or recycling.

Export of plastics or other packaging waste for recycling in non-OECD countries is not considered to be a problem. If problems do occur, measures can be taken but there is not yet evidence that problems would occur.

4. Impact on the industry

The companies placing packaging on the market are largely dependent from their supply chain. The decision power on the applied packaging strategy is scattered over the whole distribution chain. Therefore, it is sometime difficult for the end-producer to influence the choice on the applied packaging, especially when he is not in a strong negotiating position.

Environmental image building is not an issue for companies in the Czech Republic, because the general public does not use the environment argument in its consumer behaviour. Only 20% is assessed to be really interested in recyclability, therefore consumer preferences are no driving force towards recyclability in the Czech Republic.

When companies comply spontaneously with the Essential Requirements, cost reduction is the major driving force. The compliance with the requirement on hazardous substances is both legal driven and client driven.

Mr Kolar from EKO-KOM states that the Essential Requirements should be applied and evaluated at the level of the whole economy or at the level of industrial sectors, and not at the level of the performances of individual products. As both these products and their packaging are continuously changing in their nature it is not possible to make significant time series.

5. Evolution in compliance with the Essential Requirements

EKO-KOM has documentary evidence that e.g. for PET packaging the average weight or a single type of packaging has gone down from 48 grams in 2000 to 35 grams in 2007.

The UK has referred in its interview to a quick and large shift in tinned packaging for middle European markets. This needs to be put in perspective. As tinned packaging is not yet fully penetrated in the markets a shift from 10 to 11 million units, this is in terms of percentage a large increase, while in absolute quantities it remains limited. Tinned packaging is increasing for beer and softdrinks. However, a long-standing tradition determines a consumer preference for beer in glass. Cultural aspects can be important in setting a packaging technique.

Like in Germany, the Czech Republic knows local breweries serving nearby consumers. The limited transport distances benefit the application of reuse bottles. 50% of beer is sold in reuse bottles, and 50% in barrels for catering industry, and a minor fraction in single use packaging. A recent trend consists of selling beer (Heineken) in 1,5 litre PET bottles for use at garden parties.

Following trends can be observed:

- An evolution from bulk distribution, e.g. at markets, to distribution of packed goods.
- A strong evolution towards single-use packaging for consumer goods, driven by consumer requests.
- Glass is replaced by single use plastics, except for beer or for luxury packaging or small sized glass bottles in hotels.
- A rise in the fraction of reusable packaging for secondary or tertiary packaging.
- A shift, although moderate, from glass packaging to tin packaging, depending on the market segment.
- Refills are successful, and the use of super-concentrated products has been introduced with large communication campaigns. The Czech consumer is used to smaller packaging.

Mr Kolar from EKO-KOM states that the present system of separate collection of single use packaging is preferred by the consumer above the former system of returning reusable bottles to the distributor, because in an urban context a container for separate collection is available within 200 m.

The Czech Republic agrees that in the wording of the Essential Requirements 'recyclable' does not equal 'recycled'. Much depends upon the available treatment technology and investments in a Member State. Waste beverage cartons cannot be recycled within the Czech Republic, disregarding some lower quality downcycling to insulation material in Moravia. They need to be exported to Hungary because there repulping technology is present. Investments are needed at the entry of the paper mill (preparatory activities) instead of at the end of the process.

Until now, and in spite of the existence of the Essential Requirements, recyclability is considered of less importance than marketing at the designer tables.

Mr Kolar from EKO-KOM states that the application of the Essential Requirements should start at the designer table and throughout the whole chain. This means that it can only be requested for new products being put on the market and not for products that are already present on the market from before. Post factum proving compliance for products for which the thinking process has already been completed would end up in a senseless administrative measure.

Problems could occur with the composition of packaging material generated in Asia.

6. Indicators for assessing compliance with the Essential Requirements

Data availability

No structured data are available within the ministry or within EKO-KOM on the balance between packaging volume and volume of the packed product. No statistics are available, and it will be difficult to obtain product related statistics because of the ever changing packaging methods and the ever changing nature of the products. However,

documentary evidence on compliance and evolutions in the use of packaging can be observed. See paragraph 5.

Data on the amount of reused or recycled packaging is available both at the databases of EKO-KOM (on 20.000 companies) and of the Ministry (on 1000 companies which are no member of EKO-KOM). Reuse is reported to EKO-KOM although there is no fee linked to this packaging.

Prevention of packaging

When developing a top down indicator to assess and benchmark compliance with the Essential Requirements at the scale of Member State wide economies, it is important to take into account the cultural differences and consumption patterns in these states. E.g. coffee versus thee, beer versus wine...

At first sight, the Czech Republic approved the proposed indicator. The method is good, but the quality of the used data is low.

Mr Kolar from EKO-KOM argues: It is difficult to assess compliance with the requirement on prevention at an economy wide scale. The first assessment is focussing at an individual application. Tertiary packaging in the form of plastic foil-wrap can be fully compliant with the requirement, when the lowest quantity is used to ensure the safety and the protection of the packed goods. However, an older machine or technique may request a thicker foil than a new machine. The requirement is complied with 'in the condition given' for both machines, but on a marked wide scale it would seem as if changing towards a new machine or technique would enhance the application of the requirement.

Other changes are also difficult to consider when using a market wide indicator. The market for ready made food is growing, but how to compare the waste from ready made food with the waste generated when buying and preparing fresh ingredients yourself? Changes in the distribution can have an important impact.

Reuse / recovery of packaging

An indicator should give answer to two questions:

- What is the amount of packaging waste that can be reused or recycled/recovered?
- What are the barriers for achieving recyclability and how are they to be assessed?

When packaging, e.g. drums designed for single use, are imported, used and subsequently reconditioned and sold between companies to use again for the same or another purpose, they might turn up twice in the statistics on packaging. As there is physically only one drum and as the collection targets in an EPR-system are based on the statistics in which the drum is mentioned twice, this double counting in the statistics will render the collection task for EKO-KOM more difficult. Reuse of packaging not destined for reuse should be considered with care when developing statistics, in order to avoid double counting.

A comparable double counting can be observed when packaging is reported by the producer (e.g. a factory in Germany to DSD) and by the wholesaler or retailer in another country (e.g. in Belgium to FOST-plus or in Czech Republic to EKO-KOM). The European statistics and recycling targets can be based on a sum of the figures from DSD, FOST+, EKO-KOM and can therefore include double counting as well. Every indicator or target based upon packaging waste statistics should consider this possible double counting and its consequences.

7. Evaluation of the wording of the Essential Requirements

In the Essential Requirements the waste treatment hierarchy is not included. This is not considered a drawback by the Czech Republic, as energy recovery is considered a better solution when waste recycling capacity is not available nearby and waste would be shipped around to be recycled. The Czech Republic agrees with the UK to use GHG emissions as a standard to measure environmental impact¹². The Ministry confirms the importance of LCA studies in this regard, and refers to a running LCA study on beverage packaging.

The Czech Republic does not think it is necessary to amend the Essential Requirements and to add conditions on the content of hazardous substances in recycled material. It is now only focussing on disposal products like ashes or leachate. The provisions on recycled glass and plastic crates and pallets are sufficient; they do not need to be extended to other recycled products.

The use of limit values on heavy metals is appreciated. No extra hazardous substances need to be added to the list of four heavy metals.

8. Evaluation of the CEN standards

The CEN standards are translated into Czech legislation, without changing its wordings. No¹³ additional Czech Standards are elaborated on the issue of packaging and the Essential Requirements.

The CEN standards are appreciated by the Czech Republic. An interesting evolution is the request of ISO to CEN to work together at a worldwide level on packaging and the environment. The CEN standards are considered a good example for the world, to be picked up by e.g. Chinese importers. Mr Kolar from EKO-KOM adds that the CEN standards will be slightly revised next year (except the standard on biodegradability). It would be a good idea to wait for the outcome of this exercise, although the changes might be on details of minor importance.

Technical documentation on the concept of 'consumer acceptance' is not needed because it cannot be standardised. Only the market can give an a-posteriori proof on consumer acceptance.

The CEN standards do not have to be reviewed because the Czech Republic states that they are at the beginning of the implementation of the Essential Requirements and the standards, and that they need first to be given a chance to prove their usefulness. CEN standards were made mandatory in the Czech Republic since 2002. Recommendations on comparability of statistics would be welcomed.

The CEN standards have the advantage that they uniform the thinking process that has to be followed by the people technologically responsible. The CEN standards are practical, both for the producers and for the inspectorates.

This statement is presented by Mr Kolar from EKO-KOM and both the Ministry and the Inspectorate agree on it.

¹² Not an official Czech Republic position

¹³ The response on the initial questionnaire is revised on this issue.

CEN standards have been developed by the large companies and are therefore not always easy to comply with by smaller SME's. They can have difficulties in collecting the required technical documentation. No solution for this problem is yet known, but the Czech Republic would welcome suggestions for a solution.

9. Consumer acceptance

Consumer acceptance is a concept that is hard to define, and that is continuously changing. According to the Czech Republic, marketing is included in the concept.

When a packaging technique is used for the whole of the European Union, it can be accepted that a packaging is less filled in one Member State if the consumers request smaller quantities and the packaging is optimised for larger quantities in a large neighbouring market. A theoretical example is drafted with packaging that is sold completely filled in France, for 2 euro, but the same packaging is sold in the Czech Republic, only half filled, for one euro. If Czech market and consumer acceptance request that the good is sold in smaller fractions but for a lower price, and if packaging technique is optimised for the whole of the Union on a standardised size, the use of the larger packaging can be accepted and be considered in line with the requirement on prevention in Czech Republic.

Even when at first sight compliance can be at stake, it needs to be investigated if the used packaging is not applied for justifiable technical reasons. The trade inspectorate admits that the concept of consumer acceptance is not easy to catch in practice. When the label of the packaging is giving the right amount, the packaging will not be considered as misleading the consumer, and it will be accepted.

The UK case of USB sticks is discussed. Is large packaging as an anti pilfering measure acceptable under the nominator 'consumer acceptance' if alternative systems with tokens and delivery at the cash desk are feasible? The Czech Republic judges that it is up to the producer or up to the market to choose the acceptable anti-pilfering measure which then should be designed in line with the Essential Requirements. More general, first make a choice in line with consumer acceptance and market conditions, and next realise this choice in line with the Essential Requirements. The standards are written for the moment after the choice has been made to develop a product or a packaging and before it is put on the market. It is a snapshot in time within a whole chain of decisions.

10. General conclusions

- The Essential Requirements and the CEN standards first have to be given time to prove their usefulness, before changes or amendments can be considered.
- An important aspect on applying the Essential Requirements is that the decision taking process on packaging is distributed over the whole supply chain, and is not a snapshot in time.
- Education through seminars and through the presentation of good examples is considered a major policy instrument to enhance the application of the Essential Requirements
- Financial stimuli can be created through differentiated green dot fees, based on good recyclability. But Green Dot fees should only reflect actual costs. These fees cannot constitute an ecotax, because this is not the role of the Green Dot scheme. In addition, exaggerated administrative follow up should be avoided.

- Double counting in statistics and indicators should be avoided as they make it difficult to reach recycling targets.
- First the market actors need to make freely strategic choices on the products and their packaging they want to put on the market (based on e.g. the market demands and consumer acceptance). Secondly the choice made must be realised with respect to the Essential Requirements.
- Checking compliance with the Essential Requirements should focus on new products being put on the market, for which applying the Essential Requirements can yet make a difference, in stead of generating an administrative burden to prove compliance for existing products.

Cyprus - Ministry of the Environment and Green-Dot Cyprus

Nicosia, 18 September 2009

1st interview

Elena Christodoulidou, Ministry of Agriculture, Natural resources and Environment, environment service

Demetris Demetriou, Ministry of Agriculture, Natural resources and Environment, environment service

Eleni Stylianopoulou, Ministry of Agriculture, Natural resources and Environment, environment service

Mike Van Acoleyen, ARCADIS

2nd interview

Kyriakos Parpounas, general manager Green-Dot Cyprus

Mike Van Acoleyen, ARCADIS

Reviewed by Kyriakos Parpounas, by mail on 25/09/09

1. Organisational issues on following up the Essential Requirements

The Ministry is responsible for the implementation and the policy measures regarding the Essential Requirements. An extended producer responsibility scheme has been introduced, which is managed by Green-Dot Cyprus. This organization unites packaging responsables such as importers, manufactures, raw material and packaging manufacturers as well as the Cyprus Chamber of Commerce and Industry. Green-Dot Cyprus was licensed in Cyprus on the 1st of August 2006, for a six year period. In its licence agreement an obligation was included to set up inspection on the presence of hazardous substances in packaging.

Cyprus is in this way different from most other member states that it is an island economy that depends largely on import from other countries, because it has not much local packaging industry. Wherever manufacturing activities take place, they are often performed by multinational companies that follow the same standardised procedures and processes as elsewhere (e.g. the Coca Cola Company)

2. Enforcement of compliance

Only the maximum concentrations of heavy metals in packaging are actively enforced. The unique characteristic in the Cypriot approach is that the responsibility to perform the inspections is attributed to Green-Dot in its license. In 2006, 15 analyses were performed, in 2007 51 analyses and in 2008 73 analyses. The packaging is selected randomly from the whole distribution chain for about 20 companies/year. None of these samples showed values above the thresholds for heavy metals. If some degree of contamination (but still below the thresholds) occurs, it is likely caused by contamination during handling the packed product. The test are performed in an accredited laboratory, no XRF-tests have been performed in the field. The results are remarkably different from the analyses by the

Belgian competent authority. Until now the results do not show a distinguishable different result for EU-based or for Chinese packaging.

Next to this structured inspection, supplementary inspection on the Essential Requirements can occur as a side activity at other inspection, e.g. on food safety and packaging in contact with food.

Green-Dot states that setting up control systems is easier for Member States with one single EPR-body, and is more complicated in Member States like Poland with 35 accredited EPR-bodies. There is a larger danger for free-riding because companies can say they are registered, tested or they have reported to another body, and the client-lists of these bodies are confidential commercial information.

3. Policy instruments for implementing the Essential Requirements

It is unlikely that the industry is very well acquainted with the provisions of the non obligatory CEN standards. Seminars and awareness rising could be a worthwhile policy instrument. Organising such a seminar will request a level of expertise within the Ministry.

The legal instrument, the translation of the Essential Requirements into Cypriot law, is the main instrument. However this will not be sufficient if it is not combined with e.g. communication efforts.

More horizontal or more broadly oriented policy measures are supporting compliance with the Essential Requirements, like IPPC permits for recyclers, environmental management systems, environmental impact assessments ...

The green public procurement plan of Cyprus focuses on the use of eco-labelled products. It would be a good idea, and easy for the consumers to assess and include compliance with the Essential Requirements into the eco-label. Green-Dot makes the suggestion to use carbon-footprint related labelling on packaging.

The green public procurement strategy of Cyprus includes concrete focussed measures to avoid packaging, like not purchasing CD-ROMs in an individual box, but in a tray of 50. Green-Dot identifies green public procurement as by far the most important policy instrument until now, including not only government but all semi-public institutions like electricity, telecom, water, sewerage...

An important policy element is the licence of Green-Dot. Next to the traditional obligations on setting up the take back system and the reporting, it includes also obligations on control. See paragraph 2.

Bio-degradability becomes an increasingly important topic in the discussion on appropriate legislation and policy instruments. Green-Dot suggests that there is need for a European study to clear out the pros and cons of oxo-biodegradability, biodegradability, degradability, compostability etc... as actual studies are largely contradicting each other. Take into account as well perverse effects, like the fact that biodegradable PET could jeopardise traditional PET recycling.

Another issue that should be concerned in policy making is the emerging intelligent packaging e.g. announcing by a colour when the packed products are expired, or with anti fraud measures. This introduction should happen in a planned and regulated way.

4. Impact on the industry

Although no data are available, it can be likely presumed that industry sees the Essential Requirements as a burden.

Compliance with the Essential Requirements could be introduced in ISO quality systems. As the Packaging Directive is a New Approach Directive a CE marking could be envisaged for compliant packaging.

When not dictated through the import (see next paragraph) or through the requests of green public procurement, the most effective driving force for industry to comply with the Essential Requirements is cost reduction.

5. Evolution in compliance with the Essential Requirements

Implementing the Essential Requirements is confronted with cultural differences between the Member States. Consumer awareness on environmental topics is not very widespread in Cyprus. Therefore decisions of consumers are no driving force towards a larger compliance with the requirements.

The main driving force is the dependency on import. When initiatives are taken in importing countries, like the introduction of the eco-label or other measures, Cyprus will benefit from it. The fact that Cyprus has a small home market has both advantages and disadvantages. The market is often too small to design a specific strategy, which means that homeland or European-wide measures on complying with the Essential Requirements taken by the exporting companies will be imported in Cyprus. Otherwise, because the market is so small consumers and importers cannot weigh on the decisions taken elsewhere. If the Cypriot requests are too ambitious or not in line with the policy of the exporting company, the Cypriot market can easily be left aside. This effect is especially important for the retail markets.

The trends caused by growing environmental awareness in Germany, France... have impact in the Cypriot market. E.g. refills for cleaning products have entered the market, there is a shift from plastic to paper packaging for certain products...

The extended producer responsibility scheme has caused an increasing degree of recycling. It creates moreover awareness on the topic, because it foresees a financial incentive. Green-Dot adds that the contribution of their members is dependent on the weight of packaging being put on the market. There is no direct incentive for eco-design but as eco-design leads to lesser packaging an effect from the extended producer responsibility scheme can be expected. Moreover, on a market that has never known take-back obligations before, the fact that companies have to report and to pay creates a strong awareness. Packaging has never been an issue but now it is.

Some traditional compliant packaging strategies persist, such as the use of reusable glass bottles by the two local breweries. However, in general the use of single-use packaging is growing and the use of reusable packaging is declining. This is often driven by market mechanisms. Pepsi Cola has stopped the use of reusable packaging in Cyprus and creates thus a market pressure on Coca-Cola to do the same to reduce its costs (single use is cheaper) or to ease the consumers in the same way (single use is easier). Green-Dot adds that the evolution from reuse to single use is going on for a while, but especially during the last five years e.g. for soft drinks. Wine bottles are quickly evolving from reuse to single use, among other reasons because of the direct costs of the reuse schemes and the differentiation of the bottles (each producer has its own bottles) that lead to problems of scale for a reuse scheme.

The Ministry states that the use of reusable secondary and tertiary packaging is going up. Green-Dot puts a nuance that the situation is rather stable, but that due to the economic crisis secondary packaging designed for single use (like cardboard boxes) are reused to press the costs for packaging. Tertiary packaging like palettes is traded between

companies and reused. For primary packaging or packaging in contact with food reusing single use packaging is not desired, for secondary packaging it can be environmentally beneficial. It can be included in the statistics, but with caution.

Green-Dot adds the observation that a clear distinction in approach can be observed between Chinese import products and their packaging and products and packaging from within the European Union.

Recyclability of packaging imported from Member States is going up, so quality is enhanced: sorting instructions are added, paper labels are replaced by PET labels, glues, staples etc. are avoided. However, Green-Dot agrees that recyclable does not equal recycled. This depends upon country specific aspects as treatment infrastructure, legislation, collection ... Whether packaging waste is recycled depends on policy preferences e.g. on beverage packaging (Belgium, FOST Plus), energy recovery ... In Cyprus there is no waste incineration infrastructure, but there is a cement kiln that can play a role in energy recovery of waste.

6. Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

Cyprus has statistics on the amount of packaging, based on yearly reports collected in the frame of the Packaging Directive. Green-Dot adds that they can easily extrapolate their collected data to the whole of the Cypriot market. No structured data are available on the general balance between packaging and packed product. As most packed products that are set on the Cypriot market are imported, data on the quantity of these products can rather easily be found from the customs, but this is limited to products from third countries non EU Member States. For products from EU Member States this data source is unavailable as no specific control and registration regime exists, but the COMEXT data on import are rather consistent for Cyprus.

It is questioned if an integrated indicator on compliance on a market-wide scale is necessary, especially when the calculation and data gathering for it would be time-consuming. The Ministry is limited in its human resources that can be mobilised for this exercise.

The use of the GDP as a denominator in the proposed calculation method for an indicator is questioned, because it is not linearly connected to the amount of products being put on the market, but more with the price of these products being put on the market.

It should also be evaluated if weight is always the best indicator to describe the impact of packaging.

The UK idea to apply the CEN standards of a sample of products to have a bottom up indicator on compliance is appreciated by the Ministry. Green-Dot adds that it will be difficult to define a representative sample of products. This could be based on a selection of products essential in any household. But the hazard of a selection of products is that industry will focus its efforts on these products only instead of looking at the whole market.

Data on heavy metal content are available from the tests performed by Green-Dot, and by the state laboratory checking food packaging.

7. Evaluation of the wording of the Essential Requirements

Prevention of packaging

The requirement on prevention needs to be more specific, which means that it should be both more technical and fit for communication. This problem is not completely solved by the CEN standards. Quantitative targets should not be introduced for this Essential Requirement, because of lacking human resources to follow them up.

This requirement should not be obligatory. It is difficult to formulate an ideal Essential Requirement as it cannot cover the wide variety of products into one provision or one guideline.

Green-Dot adds that this requirement is indeed vague, but that it is not possible to be more specific and meanwhile maintaining the large range. At the level of the Directory, it is a necessity to be more generalising or vague.

Reuse / recovery of packaging

The Ministry would prefer the wording 'recycled' instead of 'recyclable' to be introduced in the Essential Requirements. The concept of the Waste Treatment Hierarchy needs to be introduced as well. It is promoted through other Cypriot legislation as well and it is an important basic concept for the Cypriot environmental permitting. It is a good idea that the Essential Requirements impose an obligation on producers to perform eco-design.

Green-Dot refers to local conditions that could influence recycling and proposes to introduce the concept of 'efficient recycling' taking into account local conditions on capacity and policy goals, and evaluating the effectiveness of recycling. The original EU-9 ≠ EU-15 ≠ EU-25 ≠ EU-27.

Presence of hazardous substances in packaging

The Ministry thinks it is a good idea to add extra substances on the list of four heavy metals that are now included in the Directive, but it depends upon the supplementary costs that this would entail for the companies and for the inspection. It is not a good idea to wait until something is perceived as a problem before starting measuring it (as suggested by UK); measurement is needed to see if there is a problem. Flame retardants could be an interesting additive to examine, but first the policy discussion on flame retardants needs to be settled.

A conformity declaration, comparable to a RoHS conformity declaration, can be useful to apply on packaging.

It would be good to introduce general rules on export of green listed waste to all countries, in function of its possible content of hazardous or unwanted substances. Now this is differentiated for individual non OECD-countries in accordance with Regulation 1418/2008/EC. Control on the quality of the waste exported and of the export ban has to be augmented.

Green-Dot adds that the standards for new products have to be followed by recycled products, which could have an effect on the amount of recycled material that can be allowed. However, environmental problems are borderless, and the effect of packaging waste being sent to third countries has to be considered. It is important to trace the real fate of the waste being exported for recycling. More than looking into the quality of

recycled waste, it should be tracked what is happening with the waste and in the recycling or disposal process.

As developing countries enter on a competing world wide market, Green-Dot is optimistic to apply the European standards. Like it is the case for RoHS, European standards will be followed worldwide to get access to the European markets. This process is market driven, for economic reasons.

8. Evaluation of the CEN standards

Both in the wording of the Essential Requirements, the definition in the waste Framework Directive and the specifications in the CEN standard on reuse, the definition of reuse is not specifying the number of cycles. This is a drawback.

Furthermore, it needs to be more detailed what is meant with “minimising environmental impact”. Without specification or without numbers or goals this provision is rather subjective. It should include some priorities like climate change, soil protection, LCA... Green-Dot suggests standardised measuring methods for carbon-footprint impact.

There is a need for harmonisation which goes further than the actual statements in the CEN standards.

Green-Dot adds that the CEN standards are deliberately formulated vague and flexible, but that this is done for the same reasons why the Essential Requirements itself are formulated in a vague way, namely to cover the whole and diverse market.

9. Consumer acceptance

The Ministry makes the reflection that is it necessary to hear the opinion of the consumer. This could be realised through a questionnaire. Consumer acceptance is interpreted as the acceptance of the policy imposed by the Essential Requirements. Do the consumers agree with the fact that packaging is being limited? This should be combined with awareness rising, as not all consumers are aware of the negative effects of packaging and packaging waste. A central message could be that less packaging makes products cheaper.

Consumer acceptance in a more traditional reading (when will a consumer accept or buy a specific product) should start from the principle ‘what you need is what you get’. Cultural or even gender differences can play a role. Men are more easily ready to accept super concentrated washing powders than women. Green-Dot adds that the level of awareness on e.g. carbon footprint or recycling is low in the Mediterranean population, and that environmental performance is until now not a selling argument. Convenience is more important than environment.

Green-Dot states that compliance or non compliance with the Essential Requirements is often driven by socio-cultural changes. The fact that shampoo is sold in smaller doses is not caused by a deliberate intervention of the industry, but because families tend to become smaller. Complying with the Essential Requirements, including its reference to consumer acceptance, does not mean that larger portions have to be put on the market, but that the packaging for the smaller portions is optimised.

Green-Dot states that it is up to the producing or importing companies to define consumer acceptance, related to the product, the specific market, and the specific circumstances. Consumers expect a different packaging for milk, juice... in a Cypriot summer with temperatures at 45°C.

10. General conclusions

- Implementing the Essential Requirements requests good cooperation and communication with the producers. As these producers are often active on a European wide market, Cyprus would prefer that these discussions take place at a European level. The EU is the best level to harmonise the implementation of the Essential Requirements. The harmonisation needs to go further than what is included in the CEN standards.
- It would be interesting to investigate if international brands comply in a different way than local brands.
- Differentiation can be made between what is locally produced and what is sold on an international market, between the characteristics of the product packaged, etc. ... Therefore, an approach per product group is more effective than a general approach.
- No further Essential Requirements need to be added to the three existing ones. Before discussing new requirements, the existing ones should be evaluated. When requirements are discussed, industry should be included in the debate.
- The best level to realise compliance would be at the level of the individual product. However, as the requirements are just starting up they could gradually start with compliance at product group level in order to identify priorities.
- Cyprus, as an SME-country, is concerned at the impact of the Essential Requirements on SME's especially if compliance would entail extra costs. However no data on this aspect are available.
- Cyprus pleads to differentiate between the different EU-Member States, to offer guidance on enforcement, to implement the requirements in a cooperative approach with industry and to take account of cultural differences and habits.

Green-Dot adds

- Differentiation must indeed be made, e.g. between continental Member States and islands, between the situation on islands with a continental mainland, or independent islands etc... A LIFE+ project on packaging waste on islands has started up with Cyprus, Malta, France. A one-size-fits-all approach is not desired in a differentiated Europe.
- The best level to realise compliance should be, according to Green-Dot, at the level of the products range, as it is the goal of the Essential Requirements to obtain an overall improvement of packaging properties. However, for packaging being in contact with food, the individual packaging should be envisaged as it should not be accepted that e.g. heavy metals contaminate any single food product.
- Green-Dot does not agree with the position of Belgian IVC, that the Essential Requirements may be deleted from the Directive, because they are obsolete and prevent subsidiarity and national measures. It should be guarded that no trade barriers occur. Moreover, what is obsolete for Belgium does not need to be obsolete for Cyprus. The mere fact that legislation on the Essential Requirements exists, is raising awareness.
- The impact of the CEN standards on the SME's is likely. This is the case for all European legislation, because SME's cannot have impact on the comitology discussions or develop the lobbying strength to influence decision making processes. This is not limited to the standards. However, when the standards are designed to improve the environment, they should not be objected because we want to protect the

SME's. If the standards do not improve the environment or help companies to avoid taking environmental measures, then there is an issue.

France

Direction générale de la compétitivité de l'industrie et des services, Direction générale de la prévention des risques, bureau de la qualité écologique des produits

Paris, 2 November 2009

Régine Bloch, DG compétitivité, chargée de mission sidérurgie et industries de l'emballage

Julien Koesten, DG prévention, chargé de mission emballages

Mike Van Acoleyen, ARCADIS

1. Organisational issues on following up the Essential Requirements

Next to the above mentioned general offices on competition and on risk prevention, competent bodies for the Essential Requirements are ADEME, involved in the general follow up of the Packaging and Packaging Waste Directive and its reporting to the Commission, and Eco-Emballages, recognised body for the extended producer responsibility schemes. The CNE (conseil national de l'emballage) reunites all major industrial actors and competent bodies and is systematically included as a forum to discuss and develop the major policy lines on packaging.

2. Enforcement of compliance

The enforcement is event driven, with a major focus on food security. Starting from a threat of intervention or enforcement, negotiations with the industrial actors is set up. Unlike the approach in the UK, these discussions are not set up on individual packaging strategies, but on the global waste policy aspects. Wherever possible, consensus is searched on the objectives that have to be reached, and it is left to the industry to choose how, by which measures, the objectives will be reached.

An important aspect of enforcement is the attention for food safety and the alimentary chain. This is a large market for packed goods in France. Cosmetics is considered as a large market as well.

Inspection on Chromium VI is difficult because of the actual measuring techniques. The CEN standards do not provide sufficient solution for this problem.

The requirement on hazardous substances refers to leachate and ashes. This should not be expanded to hazardous substances in recycled materials, because this is covered by the acceptance criteria for recycling plants, and the quality provisions for packaging in contact with foodstuff. However, recycling in non OECD countries should fulfil the requirements of regulation 1013/2006/EC but it should be avoided if possible that packaging waste is exported for recycling outside the European Union.

3. Policy instruments for implementing the Essential Requirements

Since 2004, prevention is an important topic in French waste policy development. Measures against exaggerated consumerism include packaging and packaging waste.

The environmental planning initiative 'Grenelle de l'Environnement' which is in a stage of implementation pays detailed attention to waste prevention.

The major instrument used to enhance compliance with the Essential Requirements is the extended producer responsibility scheme for household packaging waste. Differentiation in tariffs to access the green dot system considers the degree of compliance with the Essential Requirements. The indicators used are the weight and the volume of the packaging and its ratio on the packed product.

The used policy instruments include extensive communication campaigns (on the general theme of packaging and waste), legal provisions translating the Essential Requirements literally into French legislation, and national waste planning e.g. through the *plan de prevention* and the *Grenelle de l'environnement*.

ADEME is examining for which products and packaging strategies single use packaging can be replaced by reusable packaging.

Green public procurement is not used as a policy instrument for this specific topic.

4. Impact on the industry

The industry has implemented the Essential Requirements into its decision taking processes, partly because they support the philosophy of the requirements, partly because the authorities succeed in enforcing them. They are aware of the possibility of penalties if they do not comply. This is enhanced by control activities that have been set up early 2000.

Next to this main driving force, another motivation is the pressure by the general public who becomes increasingly aware of environmental concerns. Compliance with the Essential Requirements becomes an aspect of the image of a product. For business-to-business trade, compliance with the Essential Requirements is often in some way or another included in the contractual provisions that are made up.

When the Essential Requirements allow that costs for packaging can be saved, cost reduction is an important driving force as well.

It is difficult to assess in how far the compliance with the Essential Requirements by the industry is instigated by activities from the authorities or by internal driving forces within industry. Especially in times of crisis, where markets do not react as usual, this becomes difficult. It should be taken into account that France is a large producer of luxury goods that are hit hard by the current economic crisis.

Compliance and a green image is considered interesting for marketing reasons, but industry is also aware of the beneficial competitive effects that packaging can have on individual consumers when choosing which product they will buy. It is seen as a task for the suppliers to inform and advise the consumers on the packaging and the packaging waste and to demonstrate the feasibility of the Essential Requirements.

A major concern of industry is to create and enhance a fair and free market for packaging, in consensus. This can be realised through the Essential Requirements.

Structured individual prevention plans at the level of the individual company do not exist in France, but prevention frames in national and regional/local prevention plans e.g. by the Ville de Paris.

The CEN standards are considered hard to comply with by SME's as they are developed by large industry. Even larger companies need support to prepare proof of compliance or to engage in the evaluation process as described in the standards.

5. Evolution in compliance with the Essential Requirements

Single use packaging is still growing in importance regarding reusable packaging. Systems of deposits for packaging have almost disappeared, which makes that the presence of reusable packaging on the consumer market has become rather limited. For beverages, reuse systems are applied in the hotel, restaurant and catering industry, but not for individual consumers. The system of EPR somehow interferes with the possibility to reintroduce reusable packaging.

Reusable packaging is well established in the context of industrial packaging and business-to-business trade. The wholesale business and large distribution needs to make a shift towards more reusable secondary and tertiary packaging.

More concentrated products are appearing on the market, generating a reduction in the amount of packaging needed.

The arising of new technologies and materials, like the biodegradable packaging materials, can cause problems in the more traditional recycling chains. These materials should be tackled with care, taking into account their complete life cycle, including impacts on water, agriculture, pesticides and difficulties in sorting out the waste.

COTREP, *Comité Technique de Recyclage des Emballages Plastique*, or the technical committee for recycling of plastic packaging, is a union of *Eco-Emballages* (the green dot organisation), *Valorplast* (the producers of plastics) and *Elipso* (the producers of plastic packaging). They support designers of plastic packaging on the recyclability of the packaging, in order to enhance compliance with the Essential Requirements.

Inspired by COTREP, COREC has also been founded as *Comité d'évaluation de recyclabilité des emballages en carton*, or the committee for the evaluation of the recyclability of cardboard packaging. COREC has been set up by the paper and cardboard members of Eco-Emballages. Its goal is to enhance the recyclability of cardboard packaging.

The presence of heavy metals in packaging is dropping, mainly due to the shift to organic inks. This is partially due to the inspection efforts made in the early years 2000. However, detailed information on the actual situation is not available. It is not clear how the implementation of REACH will influence the composition of packaging and the presence or absence of hazardous substances in packaging. Import of packaging from China and Asian countries is looked upon with concern as a possible source of increasing presence of heavy metals in packaging.

6. Indicators for assessing compliance with the Essential Requirements

Prevention of packaging

ADEME has calculated an indicator for the decoupling between the quantity of packaging being put on the market and the gross national product. Since 2004, a decoupling can be observed. The data on packaging are reliable and well documented, as well as the data on the GDP. This is unlike the data in PRODCOM and COMEXT. The French competent authorities recognise the problems with the use of GDP as an indicator for the amount of products being put on the market, but state that there is little to no valid alternative for this indicator.

The ratio between the quantity of products and the quantity of packaging has been calculated for a collection of individual products by the *Conseil national de l'emballage*. A catalogue has been composed of products for which progress has been booked on compliance with the requirement on prevention. See www.conseil-emballage.org for exemplary products in the categories fresh products, beverages, groceries, perfumes and beauty articles, home equipment and wellness. Information on the volume and the characteristics of the packaging that have been modified in accordance with the Essential Requirements is presented in a clear and concise way in. In addition, percentages of the amount of packaging by weight that has been prevented are given as well as documentation on how and why the reduction has been achieved.

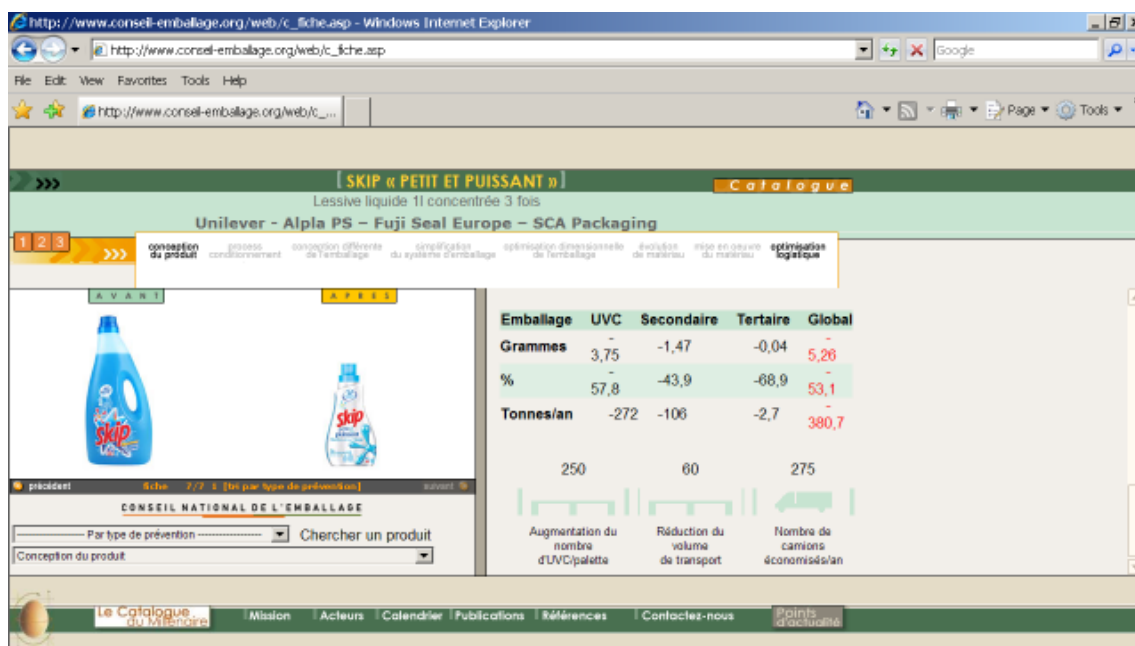


Figure: Exemplary screenshot from the CNE catalogue with examples for reduction of packaging

The preliminary exercise to calculate an economy wide indicator for the requirement on prevention has not been studied in detail, but the alternative with the use of the GDP seems to resemble the method actually used in France.

Reuse / recovery of packaging

ADEME has shown in its statistics that the amount of packaging going to recycling or to energy recovery is increasing. This could be seen as an indirect indicator that the recyclability is increasing as well, and that eco-design to enhance recycling or energy recovery is successful.

Presence of hazardous substances in packaging

The only feasible indicator would be a permanent sampling and analysis. The development of a single indicator would not be realistic.

7. Evaluation of the wording of the Essential Requirements and of the CEN standards

Both the wording of the Essential Requirements and the CEN standards are appreciated by the French competent authorities. They are not always formulated in a simple way, but it is considered impossible to tackle the complex and diverse problems in a simple way. The existing compromise text does cover the requested aspects sufficiently.

The Essential Requirements and the CEN standards are corresponding to the maximum feasible. France appreciates that ISO intends to take over the standards, and considers this as a proof of their quality.

France approves that the waste treatment hierarchy is not included in the Essential Requirements. Life cycle analyses on the packaging through its whole design, development, use and waste period is considered more important. Eco-Emballages is performing LCA analyses for specific packaging waste streams. However, the idea of the UK to use the CO2 footprint as a universal measuring method for environmental impact of the packaging wastes is not endorsed. France expresses the need for subsidiarity to develop the preferred optimal treatment type, as too many differences between Member states and local market conditions exist.

The wording 'recyclability' can remain in the CEN standards. France does agree that 'recyclable' does not equal 'being recycled' because actual costs for recycling do interfere. However, as the actors designing the packaging are different from the actors that organise the collection and recycling, it is not possible to guarantee effective recycling from the phase of ecodesign. Recyclability can only be guaranteed through ecodesign and by the producers of packaging. Initiatives like COTREP therefore focus on recyclability.

A CEN standard on oxo-biodegradability would be welcomed in France.

8. Consumer acceptance

The concept of consumer acceptance is included in the way requirement on prevention is implemented in national French legislation. Unlike the examples given by the UK, aspects of usability and marketing are included in the French approach of the concept of consumer acceptance. France aims at equilibrium between aspects of marketing, usability and final waste treatment.

Both the Essential Requirements and the CEN standards have been implemented and are used literally as foreseen at the European level.

9. General conclusions

It is considered important to start implementation efforts on those product groups where the most impact or the largest environmental benefit can be expected.

Differences between Member States and local market conditions can be rather large, which means that subsidiarity is needed for the Member States to implement the Essential Requirements.

The French interlocutors plead for only small to no changes to the actual wording of the Essential Requirements and the CEN standards.



Offices ARCADIS Belgium Offices ARCADIS Engineering & Consulting		www.arcadisbelgium.be
Deurne-Antwerp Clara Snellingsstraat 27 B-2100 Deurne-Antwerp T +32 3 360 83 00 F +32 3 360 83 01	Berchem-Antwerp Roderveldlaan 3 B-2600 Berchem T +32 3 328 62 86 F +32 3 328 62 87	Kortrijk Sint-Jorisstraat 21 B-8500 Kortrijk T +32 56 24 99 20 F +32 56 24 99 21
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Liège Rue des Guillemins 26, 2 ^e verd. B-4000 Luik T +32 4 349 56 00 F +32 4 349 56 10	Charleroi 119, Avenue de Philippeville B_6001 CHARLEROI T.. +32 71 298 900 F. +32 71 298 901	Bastogne Rue Thier De Luzéry 6 B-6600 Bastogne T +32 61 21 38 85 F +32 61 21 52 28