



EEB Comments on
the Reuse Chapter of the
Draft Study on the Implementation of the Packaging Directive and
options to strengthen prevention and re-use

27 July 2004

Task 3: Packaging Reuse

General remarks

The EEB notes that there is a very strong negative undertone towards re-use systems throughout the whole chapter. The EEB therefore questions that an objective evaluation will take place and requires the Commission to ensure that the study is carried out in the light of the title in order to develop option “to strengthen prevention...”.

The structure of the draft chapter on re-use is as follows:

- 1.1. Introduction
- 1.2. The Parameters Defining Re-use
 - 1.2.1 A model reuse system
 - 1.2.2 Key parameters in existing LCA based studies
 - 1.2.2.1 Non-consumer reusable packaging
 - 1.2.2.2 Trip rates
 - 1.2.2.3 Float
 - 1.2.2.4 Capital Impact
 - 1.2.2.5 Other financial issues
 - 1.2.2.6 Other social issues
 - 1.2.2.7 Non-LCA environmental impacts
 - 1.2.3 What key parameters means

In the light of the working group and steering group meeting the EEB suggests changes regarding the structure. The major changes requested are :

Individual sections on re-use systems for drink beverages and transport packaging

The study should focus on reuse systems for drink beverages and transport packaging. The sections should give an overview on the systems within the Member States.

Separate section on social issues

Within the current draft social issues, for example the changes within society, are consistently mixed with other aspects and seem to over-rule the environmental dimension. The EEB suggests to exclude remarks on the social dimension within the given sections, and add a dedicated section on social dimensions only.

Suggested structure

- A. Introduction
- B. Re-use systems for transport packaging
 - B.1 Overview on re-use transport packaging systems in Europe (% of transport packaging within different MS, brief description of systems)
 - B.2 Environmental Benefits (if data is available)
 - B.3 Social aspects
 - B.4 Options to strengthen re-us systems for transport packaging
- C Re-use systems for drink beverages
 - C.1. Overview on re-use systems for drink beverages in the Member States
 - C.2 Environmental benefits (major objective and recent LCAs)???, inclusion of potential of packaging prevention
 - C.3 Social aspects
 - C.4 List of measures and instruments to support re-use at MS level
 - C.5 Options to strengthen re-use systems for drink beverages

Whilst most research for the study should be dedicated to the above it would also be useful to present any information – even if very summary on the existence of other non-beverage and non-transport re-use systems – eg a chapter D Other Re-use systems - re-usable bread bags (an initiative of some municipalities in Catalunya, Spain), refill systems for cosmetics (Body shop), detergents etc.

Focus on concrete measures

In the view of EEB the central part of the reuse chapter should be about the measures and instruments to support re-use systems and on the option to strengthen the options.

The EEB recommends that the study actively investigate the encouragement of re-use systems and prevention systems within Member States and

- identifies and lists suitable instruments to encourage re-use systems and other additional prevention measures (e.g. taxes, re-use targets, deposit schemes, packaging prevention and re-use action plans and distribution system changes/strategies adopted by authorities):
- evaluates existing EU-legislation and identifies regulations that hinder measures with regard to re-use.

(for more details see below under – *Concrete measures*).

The EEB would like to stress that the study's mandate as defined in Article 6.8 of the Packaging Directive is also to **investigate 'additional prevention measures'**. Here it is important to differentiate between prevention of packaging / generation of packaging waste and prevention of the impacts of packaging waste management options (recycling/disposal). Such '**additional prevention measures**' should be evaluated by the study (see comments in *EEB comments EC packaging prevention study June 2004 final*).

1.1 Introduction

Policy framework

As pointed out above the negative undertone of this section needs to be changed and the comments on the social dimension should be removed to a dedicated section. Emphasis should be given to the existing policy framework – namely the waste hierarchy where priority is given to prevention followed by recovery and disposal. This is a core concept of the European Waste Management policy and needs to be properly followed. The hierarchy is backed up by the decision No. 1600/2002/EC of the European Parliament and the Council laying down the Sixth Community Environment Action Programme and formulating the overall environmental policy goals. In Article 8.1 the objectives of the Programmes are specified, in particular “*achieving a significant overall reduction in the volumes of waste generated through waste prevention initiatives, better resource efficiency and a shift towards more sustainable production and consumption patterns*” and “*encouraging re-use*”.

The recent EEA report EEA Signals 2004 stressed that “*the generation of packaging waste is closely coupled to economic growth and consumption patterns. From 1997 to 2001 the amount of packaging waste increased in 10 of the 15 old EU Member States and by 7 % in the then European Union as a whole. Preliminary projections suggest that volumes of packaging waste are likely to continue rising substantially in the future.*” It concludes that “*...generating less waste in the first place must remain the foremost objective.*”

The current Packaging Directive itself recognises the importance of prevention in the preamble:

“*Whereas the best means of preventing the creation of packaging waste is to reduce the overall volume of packaging*”

“*Whereas the reduction of waste is essential for the sustainable growth specifically called for by the Treaty on European Union*”..

“*Whereas, in line with the Community strategy for waste management set out in Council Resolution of 7 May 1990 on waste policy and Council Directive 75/442/EEC of 15 July 1975 on waste, the management of packaging and packaging waste should include as a **first priority, prevention of packaging waste and, as additional fundamental principles, reuse of packaging, recycling and other forms of recovering packaging waste and, hence, reduction of the final disposal of such waste***”..

Potential for Prevention

In addition to a comprehensive description of the policy framework, the EEB is of the opinion that the potential of re-use for prevention should be illustrated within the introduction. Re-use systems have a high potential to prevent packaging waste and reduce impacts such as CO₂ emission, thereby adding to climate protection. For example, a reduction of established reuse beverage systems by 20% would lead to an increase of around 1.2 million tons of packaging waste¹. This example clearly illustrates the potential of reuse for saving resources. The

¹ See: Mitteilung der Regierung der Bundesrepublik Deutschland an die Kommission der Europäischen Gemeinschaften, 29.04.1996, data estimated by the German Environmental Agency

environmental benefits of re-use systems are also documented by many life cycle assessments which cover various environmental indicators. Recent studies on beverage systems assessing several relevant impact categories such as global warming, resource use and others demonstrate the environmental advantage of reuse systems².

EEB requests that a proper collection of the environmental benefits of re-use be undertaken drawing on data from Austria, The Netherlands and Finland. The Finnish situation is a useful benchmark – data on levels of packaging reuse are given at http://www.pyr.fi/en/hyoty_6_5.htm. Another example is - from 1997 to 2001 an extensive LCA process, commissioned by the *NFI* (Nederlands Frisdranken) and *CBL* (Central Bureau for Provision Trade), was organised and carried out by *TNO*. The results of this study should also be taken into consideration.

Figures

The figure given on page 2 about the EU-wide trends of re-use systems for drink beverages should be shifted to the chapter *C.1. Overview on re-use systems for drink beverages in the Member States* (see above suggested changes to the structure of the chapter). The proper data source identification should be given.

Re-use systems

Within the introduction a brief summary of possible re-use systems might be given:

- ⇒ Transport packaging
- ⇒ Drink beverages
- ⇒ Others such as refill systems for cosmetics, detergents etc.

In the following, a bigger focus should be given to re-use systems for drink beverages and transport packaging, as they present the strongest cases for existing systems.

1.2 The Parameters Defining Re-use

Structure

The chapter as well as the sub-section *1.2.1 A model reuse system* should be shifted to the chapter *C.1. Overview on re-use systems for drink beverages in the Member States* (see above suggested changes to the structure of the chapter). Since the chosen model re-use system is based on a study from 1990 and therefore a little outdated the EEB suggests to describe a modern successfully working re-use system. Preferably one where a standardised bottle and a pool system is in place like for example the re-use system of the *Genossenschaft Deutscher Brunnen* (German Mineral Spring Co-operative). A brief description of the system is given below. More detailed information can be obtained from the *Genossenschaft Deutscher Brunnen*.

A Model re-use system

The success of the system in the mineral springs sector, organised by the *Genossenschaft Deutscher Brunnen* (German Mineral Springs Co-operative), can be attributed to consumer acceptance on the one hand and the decentralised structure and small-to-medium-sized

² Ökobilanz für Getränkeverpackungen II, Umweltbundesamt, 2000

companies which operate in this sector on the other. There are more than 230 mineral springs in Germany and only a few sell their products nation-wide. Even fewer springs export mineral water – just about 79.5 million litres, out of a total of around 8.4 billion, left the country in 2002. Most enterprises are small-to-medium sized with an average of 50 employees. Only 8.7 per cent of Germany's mineral springs bottle more than 200 million litres per year. A third of them bottle less than 20 million litres per year, and for over half of the springs annual capacity lies below 50 million litres.

The idea of interchangeable packaging is an old one. The standard mineral water bottle started to appear in shops in the 1950s. The success story took off in 1969 with the launch of the "*Perlenflasche*", or pearl bottle. For German consumers this is still the best-known symbol of mineral water. According to market research, 98 per cent of consumers immediately associate the shape with mineral water.

The Mineral Springs Co-operative is the driving force behind collection and reuse. The cycle absorbs over two billion bottles and more than 175 million crates, making it one of the largest returnable systems in the world. The Co-operative manages and organises the pool of reusable bottles and plays a crucial role as a service provider by buying and selling on behalf of the sector. During the past few years, the Co-operative has worked with the springs to design enhancements. One major milestone was the introduction, in the late 1990s, of polyethylene terephthalate (PET) and the PET re-use system. Over 700 million bottles in the returns pool are now made from PET.

While disposable bottles end up in the bin, reusable bottles are used up to 50 times. Only then is the material reprocessed. The eco-accounts, factored in data on the transport of packaging, showing that the environmental advantages of reuse correlate closely with the structure of the business sector. The mineral springs are numerous and comparatively small, so they supply customers in their region. This means that water is only transported a few miles. It is rare for this valuable natural product to be sent on long journeys. If a crate does travel further, it can rejoin the system anywhere in the country and need not be returned to its original spring.

In microeconomic terms, the reuse system pays off. Research conducted in 2001 by the Fraunhofer Institute of Materials Research and Logistics showed that the collection systems examined provided better value for money than other storage and transportation systems used for beverages. The study was founded on total cost. It included outlay for inventory and materials as well as the costs incurred in the actual bottling and transport of the product.

Between the springs and the retailers there is the wholesale business. Almost all the jobs here depend on the practice of reuse. In Germany the wholesale trade in beverages, like the mineral springs sector, is dominated by small and medium-sized companies. The wholesaler is the interface between bottler and retailer and therefore responsible for the good functioning of the system. Crates must be collected from the bottler and delivered to the retailer, and then the empties have to be collected from the retailer and returned to the manufacturer.

Because wholesalers are in contact with various bottlers, they can influence the flow of empty bottles to ensure they end up where they are needed for refilling. The German springs are giving a clear signal this year that they intend to continue to fostering and expanding their system. They are all set to achieve an investment record this year, with orders worth more than 350 million euros for new bottling equipment and delivery formats. This follows on from over 1 billion euros invested in recent years in systems for reusable PET.

Social dimensions

The social dimension of current re-use systems should be dealt with in separate section. It has to be pointed out that contrary to the current draft where the assumption is made that due to changes of the social dimension re-use is declining there are other observations to be made. In Germany for example the concept of taking back refillable bottles is well established and widely accepted.

1.2.2. Key parameters in existing LCA-based studies

Structure

The EEB suggests to shift the information given in this chapter to: *C. Environmental benefits.*

LCAs

It is recommended to only include the data of relatively recent LCAs that meet the ISO EN 14040 –43. In doing so the coverage of key issues like data quality, transparency, discussion of robustness of results, sensitivity analysis, dominance analysis and critical review are ensured. The following LCA studies are proposed:

- ⇒ UBA I and UBA II (1996, 2001, 2002)(, commissioned by the German Environment Agency
- ⇒ TNO study 2001, commissioned by Nederlands Frisdranken
- ⇒ Danish LCA study 1998, commissioned by Danish Environment Agency

The prevention of packaging by re-use system should be quantified where possible. To the knowledge of the EEB the main LCA studies carried out illustrate that re-use systems are environmentally superior to most one-way packaging.

Corrections

Several comments and conclusion made in this chapter are incorrect or inappropriate. The EEB asks to delete or correct these remarks. For example:

- Page 5: negative remarks of individual stakeholders on the UBA study
The EEB stresses that these remarks do not reflect the discussions of the stakeholders at the time. The mentioned stakeholder ignores the consensus-oriented process of prioritising ecological parameters chosen by UBA. The remarks are closer to pure public relation activities. It has to be noted that a comprehensive and formal critical review was carried out and is available for the consultants. Any mentioning of individual views outside this review will give a unbalanced picture and should be avoided. The EEB requests the deletion of these comments.
- Page 5: the quoted statements by Prognos had to be withdraw immediately after its publication due to the protest and legal claims of the German Environment Agency. The EEB requests the deletion of these comments.
- The comment on international systems, as being unlikely to facilitate re-use systems that make environmental sense, is not correct. Coca-Cola Germany successfully uses re-use systems. The logistics are optimised and are environmentally superior by comparison to one-way packaging. The EEB asks to correct the comments.

- There is no general break-even point for transport distances. The break even point for distances depends on the material (e.g. glass or PET), the chosen ecological parameter (e.g. CO₂, greenhouse gas, energy etc.) outline of the logistics and can only be analysed case by case.

Given the above facts the EEB is concerned that the conclusion drawn by the consultants cannot be relied on so far. In some cases the quotation made might be correct in itself but within the given context lead to misinterpretation. EEB asks to ensure that

- Only high quality and recent LCAs are consider (see remarks under LCA)
- The results of the studies are presented in an objective and balanced way

1.2.2.1 Non-consumer reusable packaging

The EEB suggests to shift the information given in this chapter to: *C Re-use systems for transport packaging and the subsequent sections.*

The EEB cannot comment on the studies nor on the conclusions drawn until having worked through the studies. An overview on the available and suitable (see remarks under LCA) LCA studies on transport packaging should be given.

1.2.2.2 Trip rates

The EEB suggests to shift the comments on trip rates to the relevant LCA section of transport packaging or drink beverage, since the trip rates are already properly recognised within the LCA studies concerned. It should be noted that there is no general break-even point for trip rates. It mainly depends on the material.

The last sentence of the paragraph is of particular concern. “ *LCA tend to use ‘optimal real world’ refill rates...Therefore, where studies show that refillable packaging offers environmental advantages, in the real world any problems in the system have the potential to jeopardise these advantages.*” The sentence implies that LCAs are based on false or ‘unreal’ data. For any scientifically sound LCA a sensitivity analysis will be carried out in order to ensure that the LCA results are robust. The comment seems to be made in order to undermine the credibility of LCAs. The EEB asks to refrain from these conclusions unless concrete evidence is given.

1.2.2.3 Float

The EEB suggests to shift the comments on float to the LCA section of transport packaging or drink beverages since the float is relevant regarding these LCAs. However, the calculation made cannot be supported by the EEB. The float has to be related to the functional unit and the operational life of the system. Since the time factor was ignored, the findings are considered as inaccurate. The EEB asks to change the paragraph accordingly.

1.2.2.4 Capital Impact

The major remarks under this heading are linked to social aspects and should be dealt with in a different section (see structure). The remark that additional fuel consumption is required

when buying refillables should be deleted. People buying one-way packaging also purchase by car.

1.2.2.5 Other financial issues

The EEB provided the consultant with a summary of the Fraunhofer Institute study “*Comparison of the economic viability of different packaging systems for mineral water*” before the first working group meeting. The Fraunhofer Institute comes to the conclusion that refillable systems show a clear cost advantage. It is suggested to include the results of the Fraunhofer Institute study into this study.

1.2.2.6 Other social issues

See remarks under structure above

1.2.2.7 Non-LCA environmental impacts

The anti-littering effect as well as the prevention of packaging needs to be addressed. The EEB recommends to include these aspects within the chapter on LCAs.

1.2.3 What key parameters means

The comments made are mainly on the social dimension and should be dealt with in the relevant chapter.

Concrete measures

Reuse (Art 5)

The current formulation of the Article is weak. Therefore, it should be reinforced in accordance with the importance given to the reuse concept in Article 1, in which reuse of packaging is mentioned as a fundamental principle aiming at the prevention of waste.

Missing elements of article 5 (packaging directive in general)

Both the packaging directive from 1994 and the revised version lack a clear framework for instruments to achieve the suggested targets. Targets alone are not sufficient to allow for national policies, which are environmental and compatible with the internal market at the same time. Despite the packaging directive therefore divergence of national packaging legislation has increased and not decreased. What is needed is a common policy framework for instruments, to protect and strengthen reuse systems, other approaches to prevention and recycling. Prohibitions, compulsory deposits and packaging taxation are applied in several member states and need to be embedded into a Community framework in order to avoid future European Court cases on this issue.

The optimal solution would be a Community wide packaging tax and explicit targets for reuse systems. But considering, that the present unfavourable institutional framework for taxation and the high divergence of the packaging sector in member states, such an approach might not be politically realistic as a short-term demand (but should however be kept on the table longterm). Therefore the EEB suggests that the revised package directive at least develops a

framework, which allows member states, to apply different instruments. Listing such measures can achieve this to some degree.

In this context we also would like to recall, that barriers to enter foreign markets also exist for reuse systems (e.g. the barriers of the small German breweries to enter French markets). This is another argument for a community framework.

Measures which are missing in the packaging directive:

- A clearly differentiated definition of prevention (in a strict sense as prevention of packaging material generated and, if needed, in a wider sense as reduction of waste going to disposal).
- Standardisation of wine bottles to allow for an internal market for reuse systems in this sector under the supervision of the Commission, not under CEN.
- Harmonised and profiled European label for reuse

In more detail:

1. Clear hierarchy between policy objectives, with preference given to reuse over recycling

2. General tax/duty on packaging

For example a Tax/duty of 0. 5 ECU per litre on all beverage packaging.

Method of operation/incentive effect: The packaging tax should support the economic decisions taken to fulfil the objectives of the EU Packaging Directive in accordance with the stated hierarchy of objectives. The reduction of the use of packaging material as well as reusability are supported. The recycling and recovery requirements laid down under Article 4 are valid for all types of packaging and packaging material and should not therefore constitute differentiation criteria for determining the amount of the tax.

Technical specifications:

- The tax should be levied on all packaging placed on the market for the first time. It should be paid by the producer or the importer of packaging that places this packaging on the market.
- The tax should be levied per packaging unit, according to the packaging volume. The level of the tax or fee is based upon experiences in Norway and Finland, where by a similar level of taxation, the growth of the market share of one-way-packaging could be stopped. Scientific studies on the effectiveness of tax-instruments also conclude, that a regulatory effect can be expected beyond a level of 0,20 ECU.

3. Setting of targets for the reuse of beverage packaging. The use of reusable packaging should be promoted by setting reuse targets.

Beverage packaging represents approximately 30% of the total volume of packaging sold. Although there are alternatives in terms of reuse, one-way packaging has been growing in most EU Member States because of a lack of policy regulations. In spite of a considerable amount of recycling, the volume of waste and environmental pollution from one-way beverage packaging has significantly increased over the past 10 years.

In order to emphasise the objectives for the promotion of reusable packaging systems as well as economic instruments in this field, it is necessary to have general reuse targets concerning the development of the beverage industry.

Higher targets than current ones should be set to promote a wider use of reusable packaging systems (Article 5 of the EU Packaging Directive).

4. Standardisation of reusable wine bottles under the EU Commission

Standardisation within a year of 10 categories of wine bottles for export, including transport crates, within the framework of a standardisation process outside the CEN, managed by the EU Commission. The CEN has totally failed to standardise wine bottles. At the moment, there is no European standard for wine bottles. Even the standardisation of bottle necks has not been finalised with any amount of success. National standards are used as trade barriers to protect the national markets of glass manufacturers. In 1999, 80% of wine bottles in Europe could be classified under five main categories. But there are minor differences within these five categories in order for fillers to be bound to a single glass factory. Standardising wine bottles would be easily feasible.

5. Independent Europe-wide marking for "reuse"

Determination of a uniform, clearly indicated marking for "reuse", with text and pictures, which may be used by fillers.

The proper functioning of reusable systems mainly depends on the co-operation of consumers, who recognise reusable packaging and return it to the stores. Since 1992, the international trade of goods in the reusable packaging sector has risen, without a uniform marking for reusable packaging being available.

To optimise the return of reusable packaging, it is necessary to have a uniform marking whereby, on the one hand, foreign reusable packaging can be recognised and which makes it easier, on the other hand, for foreign travellers to take a clear decision in favour of reusable packaging.

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