

## POSITION PAPER

### RECENT POLICY DEVELOPMENTS IN DENMARK AND GERMANY SERIOUSLY THREATEN PACKAGING CHAIN GOAL OF CONTINUOUS ENVIRONMENTAL IMPROVEMENT

---

#### EXECUTIVE SUMMARY

Policymakers in Denmark and Germany are using interpretations of life cycle analysis (LCA) to distinguish between “good” and “bad” packaging systems and/or materials. This distinction is then being used to impose regulatory sanctions on packaging or packaging materials rated less favourably. EUROPEN wishes to alert policy makers, business leaders and opinion formers to the dangers of this development both for industry and for the environment.

LCA is an excellent tool for environmental improvement, when used properly. It can identify where the most significant environmental burdens occur so that weaknesses can be corrected. In this way, it can generate continuous improvement of products and processes.<sup>1</sup>

But the Danish and German legislators are using LCA in the opposite way. Instead of applying it dynamically, as part of a policy of continuous improvement, they are taking a snapshot of the situation at the time the data were collected and using the results to set rigid hierarchies, rules and sanctions.

LCAs show the position at one point in time, but the relative merits of different options will change over time as a result of system changes and innovation. Cementing production and distribution patterns through the adoption of market restrictions such as bans, quotas and taxes will create inflexibility, distort competition and actually hamper industry’s efforts to improve its environmental performance.

---

<sup>1</sup> EUROPEN has advocated the use of LCA for this purpose since our first publication on the subject in June 1993.

In any case, LCAs on packaging show only marginal differences in environmental impact. Neither Denmark nor Germany have taken account of the proportionality test recommended by CEN<sup>2</sup>. The result is that LCAs are now being used to differentiate legally between packaging systems or packaging materials without any evidence of significant environmental risk.

Because use of LCA is increasingly advocated in policy proposals, EUROOPEN urges that a stakeholder workshop be organised to clarify the use and the limitations of LCA in public policy making.

## **THE VALUE AND LIMITATIONS OF LCA IN POLICYMAKING**

LCA is a tool that can help us understand potential environmental impacts of products and services. It is useful for identifying environmental weak points and potential for improvement, and it can provide business and political decision-makers with valuable information. LCA should not however be the sole basis for decisions. Environmental policy requires judgements to be made, and these need thorough discussion with a view to a final consensus agreement between all stakeholders.

The German industry federation BDI<sup>3</sup> has pointed out that answers are needed to vital questions such as:

- How significant is the ecological benefit from using the “better” product?
- Are the identified differences substantial?
- What would be the ecological repercussions of an exclusive decision in favour of the “winner”?
- What important ecological aspects were not sufficiently taken into account?
- Are there other ways in which more could be achieved at lower cost?
- Under what circumstances could the “losers” overtake the “winners”?

Both the German and Danish policy developments using LCAs leave these questions unanswered.

BDI stresses the fundamental difference between state intervention and innovation. A policy based on a single assessment of “better” or “worse” is fundamentally flawed: either the judgements made will be permanent, or else

---

<sup>2</sup> CEN Report, *Packaging - Criteria and methodologies for life cycle analysis of packaging* (CR 13910).

<sup>3</sup> *Implementation of Life Cycle Assessments to inform the public and politicians*, Bundesverband der Deutschen Industrie (BDI), August 1999.

legislation will constantly try to catch up with changing technology by repeatedly introducing exceptions. The alternative is to aim for an overall reduction of potential environmental impacts by promoting decentralised market-driven innovation – for which LCA is ideally suited. EUROPEN agrees that LCA is not a sound basis for “command and control” legislation<sup>4</sup>.

## DEVELOPMENTS IN GERMANY

In August 2000 Environment Minister Jürgen Trittin, supported by the President of the Federal Environmental Agency (UBA) Prof. Dr. Andreas Troge, released part of the results of an LCA of packaging used for carbonated and non-carbonated soft drinks, juices, mineral water and wine.

On the basis of these findings, the German authorities declared that non-refillable bottles and beverage cans are “*ecologically disadvantageous*” and that reusable packaging, beverage cartons and plastic pouches are “*ecologically favourable*”. They have not however offered a legal definition of “*ecologically favourable*” packaging.

LCAs always need interpretation. In the case of an LCA aimed at continuous improvement, this will focus on identifying the weaknesses which it is possible to change and those which are worth changing. In the case of an LCA aimed at establishing an overall environmental ranking, judgements have to be made on the weighting to be allocated to each of the numerous parameters quantified, and on whether any policy measures should result.

The recent German conclusions give a surprisingly low priority to land-use. This is inconsistent with the German Packaging Ordinance’s prime objective, which is the avoidance of a “landfill crisis” through a huge emphasis on recycling. Industry has achieved all the recycling rates demanded of it, and now finds for some materials that this counts for little in the new assessment.

---

<sup>4</sup> See the EUROPEN paper, *Use of Lifecycle Assessment as a Policy Tool in the Field of Sustainable Packaging Waste Management*, September 1999 ([http://www.europen.be/issues/lca/lca\\_revised.html](http://www.europen.be/issues/lca/lca_revised.html)). Additionally, the European standards organisation, CEN, recommends that great caution should be used in the application of LCA, due to limitations associated with factors such as choice of system boundaries, how energy and other inputs are allocated between linked products and processes, and the choice and weight of impact categories. The ISO standard on LCA provides a code of conduct for practitioners. It says that LCA is not a guarantee for a scientific approach, particularly with respect to the weighting of impact categories and the interpretation of the results.

The Federal Environment Ministry is now preparing a draft amendment to the present Packaging Ordinance to better protect these “ecologically favourable” packaging types by hampering even more than today the marketing of “ecologically disadvantageous” packaging. The latter would be subject to a deposit-and-return system which would mean that they would be collected at retail outlets; they would no longer be allowed to be part of the DSD “green dot” kerbside and close-to-home collection system.

In EUROOPEN’s view, the German government is suggesting to add an additional layer of capital intensive complexity with consequently higher costs for the consumer and putting at risk the industry achievements to date. Despite all the handling and administrative costs associated with a deposit system, it is very questionable whether this will result in any environmental benefits at all<sup>5</sup>.

### ... AND DENMARK

In December 2000 the Danish Parliament passed an amendment to the Act on tax for certain packaging and certain paper or plastic bags etc. This followed a recommendation from the Environmental Protection Agency (EPA) that differentiating taxes should be imposed on packaging materials based on the results of new LCAs they have conducted. The EPA has concluded that packaging made from paper, paperboard and glass should be taxed at a lower rate than other materials.

This ignores the different functional properties of the various packaging materials. The choice of packaging materials is influenced by many factors, among them:

- the nature of the contents (liquid or solid, fragile or robust, corrosive, flammable, odorous or perishable, etc);
- the type of protection required (against vibration, crushing, extremes of temperature, moisture, pest infestation, etc);
- the distribution system (from bulk loads to single-serve, local or long-distance); and
- the needs of the end-user (how and where the product is consumed, convenience of opening and dispensing, tamper-evidence features, ease of disposal or recycling, etc).

---

<sup>5</sup> For more information on deposit systems and other economic instruments see the EUROOPEN paper *Economic Instruments in Packaging and Packaging Waste Policy, October 2000* ([http://www.europen.be/issues/Economic\\_Instruments.pdf](http://www.europen.be/issues/Economic_Instruments.pdf)).

Different materials or combinations of materials are suitable for particular applications, and it is quite wrong to imagine that packaging materials are always interchangeable. CEN warns that “LCA of different materials used for the same packaging purpose should be interpreted with great caution. There is no certainty that one packaging material can fulfil the same functions as another material.”<sup>6</sup>

Although the Danish EPA’s study claims to be based on the principles of the ISO 14040 standard, it contravenes them in a number of important respects. In particular, the functional unit selected for the study was 1 kg of each material. ISO 14040 defines a functional unit as the quantified performance of a product [or service] system. In this context, that means a container or package with a specific service purpose and which meets a specific demand. A single-portion pack cannot justifiably be compared with a larger pack intended for consumption by the whole family, possibly over a period of time.

Also, the study does not define the product system to be evaluated nor does it cover the distribution phase. ISO 14040 defines an LCA as “a compilation of the inputs, outputs and the potential environmental impacts of a product system **throughout its life cycle.**” If the study had included distribution impacts, the relationships between the different materials in the tax index would all have changed.

## CONCLUSIONS

Both the German and Danish governments are already facing EU legal proceedings over their respective packaging regulations. Both actions concern the free movement of packaged goods and distortion of competition within the European Single Market. In Germany the case concerns the quota which reserves the majority of the beverages market for products in refillable containers, and in Denmark the court action is against the ban on the sale of beer and carbonated soft drinks in metal cans and in non-refillable bottles produced in Denmark.

It is a matter of serious concern that German and Danish policymakers are now using LCAs as justification for continuing with discriminatory measures which create trade barriers, distort competition between different products and packaging systems, and impair innovation. The German authorities have even stated that consumers should conclude from the LCA that they should buy beverages produced locally. *“The positive side effect – you are also supporting the economy of your region.”*<sup>7</sup>

---

<sup>6</sup> CEN Report on *Criteria and methodologies for life cycle analysis of packaging.*

<sup>7</sup> German Federal Environment Agency background paper, *Life cycle assessment of beverage packaging for non-alcoholic drinks and wine*, 10 August 2000.

The concept of “ecologically favourable” and “ecologically unfavourable” packaging or packaging materials is alien to EU law, which requires that Member States strictly adhere to common definitions, laid down by directives. This is a dangerous precedent, as this invalid distinction could then be applied to other products such as cars, washing machines, refrigerators and toys. Member States should acknowledge that the principles of proportionality and equal treatment apply to all measures.

The major environmental problems of the 21st century are not related to packaging, and singling out packaging for special discriminatory treatment when global environmental problems such as climate change and resource depletion affect almost all economic activity offers no solution to these problems. EUROPEN accepts that the packaging and packaged goods sector has its part to play, but since the problems are not packaging-specific, any remedial commitments by industry should be part of broader initiatives and not specific to packaging.

EUROPEN does however welcome the fact that policymakers in Germany and Denmark now admit that reusable packaging is not *per se* ecologically superior to single-use packaging. This supports the findings of earlier multi-stakeholder studies in the Netherlands and Austria.<sup>8</sup> Policymakers should now go further and finally acknowledge that the differences between packaging systems are small and are not really significant. Therefore protecting some systems and hampering the market freedom of others is not justified.

The misuse of LCA as a pseudo-scientific basis for discrimination between different types of packaging and packaging material overlooks the fundamental need across the packaging chain for optimisation of the intrinsic value of every packaging material, however it is used. Furthermore, decisions related to the design (or redesign) of product systems should pay close attention to economic and social factors, as well as other ecological information.<sup>9</sup>

It is vital that all companies with an economic interest in packaging, vigorously oppose the idea that environmental benefits can be gained by discriminating between packaging systems or materials. The costs and market disturbance caused by discriminatory packaging policies far outweigh any marginal differences in the environmental impact of different packaging systems and materials. This is dangerous both for industry and for the environment.

In December 1998 EUROPEN suggested to the European Commission’s DG Environment Waste Management Unit that a stakeholders’ workshop be held to

---

<sup>8</sup> *Report of the findings of the Steering Group for the Lifecycle Analysis of Packaging in the Netherlands* (October 1994), and *Comparison of one-way and refillable beverage packaging in Austria by analysis of costs, ecological effects, employment and value added* (GUA 2000).

<sup>9</sup> *Implementation of Life Cycle Assessments to inform the public and politicians*, Bundesverband der Deutschen Industrie (BDI), August 1999.

clarify the use of LCA. The Unit welcomed the idea in principle, but said that it did not have the resources to organise a workshop at that time. EUROPEN believes that the need for such an event is now greater than ever, and we repeat this proposal. The themes would be:

- the role of LCA in public policymaking; and
- what legislators can do to encourage economic operators to use LCA as a tool to bring about continuous improvement.

European Commission releases on the Sixth Environmental Action Programme and on Integrated Product Policy are imminent. According to preliminary Commission statements they are expected to include significant references to the use of LCA as one of the indicators recommended for use in future policy development. EUROPEN urges that improved understanding by all stakeholders of the correct use of a tool such as LCA is therefore an essential prerequisite to the achievement of genuine and sustainable environmental improvement.

Brussels, January 2001

<p><b>EUROPEN</b> - The European Organization for Packaging and the Environment aisbl Le Royal Tervuren • Avenue de l'Armée 6 Legerlaan • 1040 Brussels • Belgium • Tel.: +32 2 736 3600 • Fax: +32 2 736 3521 • VAT: BE 450 413 857 e-mail: <a href="mailto:packaging@europen.be">packaging@europen.be</a> • <a href="http://www.europen.be">www.europen.be</a></p>
--