



## **INCPEN EVIDENCE TO LORDS SCIENCE AND TECHNOLOGY SELECT COMMITTEE INQUIRY ON WASTE REDUCTION**

### **INTRODUCTION**

INCPEN welcomes the Committee's Inquiry into sustainable approaches to waste reduction.

Designing packaging to use an optimum amount of material to ensure that goods are delivered safely from point of production to point of consumption is of paramount importance for packaging manufacturers and manufacturers and retailers of packaged goods.

Packaging has been in the environmental spotlight for many years and the industry has responded both by using fewer resources to produce and distribute goods and also by making a significant contribution to increasing the amount of used packaging recovered and recycled.

We believe that companies in the packaging and product supply chain are ahead of many others in setting themselves objectives to reduce the environmental footprint of their own operations and those of consumers who use their products. INCPEN members have committed to cradle-to-cradle thinking to optimise their use of resources.

There are a number of drivers already in place, including two laws, which make companies improve their environmental footprint. We recommend that there is no need for further regulation but a packaging watchdog would help to address the areas where consumers have concerns about excessive packaging – see para 19.

We also recommend that government should re-establish its excellent National Household Waste Analysis Programme, to which INCPEN contributed financially. It analysed the composition of household waste throughout the 1980s. Today there is no national database on quantities and composition of waste arisings for household, commercial or industrial waste. Figures tend to be extrapolated from sample surveys.

### **Waste reduction**

1. Waste has been top of the environmental policy makers' agenda for well over 15 years, often with the focus on used packaging. The packaging chain has responded not only by funding recycling schemes but also by designing to reduce materials and energy throughout the supply chain.
2. Packaging in general already makes a positive contribution to sustainable consumption, distribution and production and the packaging chain continues to seek improvements.
3. From an environmental viewpoint the only "bad" packaging is at the extremes:
  - Under-packaging is disastrous (because of damage to products and wastage);
  - Over-packaging is illegal (packaging is controlled via a number of regulations and voluntary codes of practice).
4. The packaging industry has in the last 20-30 years greatly reduced the amount of packaging needed to pack and protect a unit of goods. For example, washing up liquid bottles in the 1970s used two and a half times as much plastic as is used today.
5. Similarly in the 1970s:
  - Drinks and soup cans used twice as much metal;

- Glass beer bottles used two and a half times as much glass;
  - Yoghurt pots used two and half times as much plastic;
  - Carrier bags used twice as much plastic.
6. One major manufacturer estimates that in each of the last ten years its packaging has been reduced by between 5% and 10%.
  7. In general, packaging prevents far more waste than it generates. Under-packaging is typically ten times worse for the environment than the same amount of over-packaging. Research by Dr J M Kooijman showed that the resources used to produce packaging are typically only 10% of that needed to produce, distribute and use the products.
  8. In some areas packaging cannot be reduced further without increasing food spoilage and product damage. However, as new technology or new materials are developed, companies will seek opportunities to make further improvements to reduce material use for both environmental and commercial reasons.
  9. The amount of packaging used in the UK has increased by less than 4% since 1999 (8.5 to 8.8 million tonnes, in 2004 – excluding wood). This increase is more than accounted for by the increase in population and demographic shift to more people living alone and has been kept down to this level because industry has continued to reduce the amount of material used per pack.

### **Packaging in a Market Economy**

10. The UK Centre for Economic and Environmental Development (UK CEED) carried out a major study for INCPEN *Packaging in a Market Economy* that analysed the relationship between the functional, economic, social and environmental aspects of packaging for four very different products - fish, a computer monitor, a liquid detergent and a luxury cosmetic.
11. The study concluded that the desire to minimise costs optimises the use of packaging and that it would "defy economic logic for a company to pack a product *purposely* in excessive material". However there were some "market failures" in each market sector that could lead to too much, or too little packaging being used.
12. These include:
  - the expense of setting up new production lines to accommodate wholly new packaging acts as a strong disincentive to alter packaging design in the short term, so short runs to test consumer demand may be inappropriately packed;
  - standardised secondary packaging works well where products are of uniform dimensions, but for products which vary in size and shape or for mixed loads of smaller densities, standardised packaging may be larger than the products require;
  - information on the performance of packaging in the distribution system often does not flow back to the producer;
  - emphasis on single environmental issues may lead to inappropriate packaging eg too much emphasis on recycling fails to take account of energy use and the relationship between packaging and product loss;
  - large retailers have limited ability to check all in-coming goods individually. This can result in entire lorry loads being returned to the supplier, even if only minor product damage is observed. In response, packaging may be over-specified to satisfy other requirements of the chain, but may be justified by the manufacturer if the economic and environmental costs of returned loads are greater than the costs of extra packaging.
13. The study also concluded that while some incorrect packaging choices may be made, many criticisms of packaging are, in reality:
  - a criticism of the market system, and, by implication a criticism of the behaviour and lifestyles of consumers;
  - a failure to recognise the role packaging plays in providing consumer choice;
  - based only on consideration of environmental or end use criteria;

- in ignorance of the consequences of under-packaging, in terms of wastage of resources and environmental impact.
14. Broadly, the study concludes that the general public pays disproportionate attention to packaging as an environmental issue. This in turn leads to a serious over-estimation of the contribution of packaging to the waste stream and often to inaccurate assertions that products are packaged in a wasteful and excessive way.

### **Drivers to reduce packaging**

15. As well as commercial considerations, there are other powerful drivers that influence manufacturers to minimise packaging:
- The Producer Responsibility (Packaging) Regulations;
  - The Packaging (Essential Requirements) Regulations;
  - The Responsible Packaging Code of Practice;
  - Best Practice Guides from Envirowise and INCPEN.
16. Packaging has grown less in the 2 European member states (UK and France) that enforce the Essential Requirements Regulations than in the rest of the EU-15.
17. Despite these drivers, some products are excessively packaged, particularly items purchased over the internet for home delivery, and electronic and electrical goods, including toys, usually imported from the Far East. At least 35% of packaging is on goods that are imported. These are designed for a global market and UK manufacturers have little influenced on how they are packaged. The Government needs to decide how to handle this issue.
18. Excessive packaging is the exception. Most products are packed in the minimum amount of material to meet the needs of transport, hygiene, storage display and use. But consumers are understandably irritated by any excessive use of packaging and often generalise from the particular.
19. To address goods that are excessively packaged in the UK, INCPEN would like the government to establish a multi stakeholder forum. This could be set up jointly with industry, and include local government, NGO's and the supply chain. It could act as a watchdog for consumers concerns about packaging and provide consumers with reliable, consistent information about packaging, waste and sustainability. It could also be a sounding board for Trading Standards Officers on matters concerning enforcement of the Essential Requirements Regulations. And it could provide companies with technical advice on how to improve their packaging.

### **Packaging and Food waste**

20. Packaging helps limit the vast amounts of food waste being generated by:
- protecting products throughout the supply chain;
  - extending the shelf life of food;
  - providing sensible portion sizes.
21. For example, before the introduction of Modified Atmosphere Packaging up to 25% of meat would become waste in the store. Today it is much lower. Similarly, a tiny piece of plastics wrapping weighing 1.5 grams extends the shelf life of a cucumber from 3 days to 14 days.
22. Eliminating packaging from fresh fruit and vegetables can lead to increased product waste. A study that compared apples sold loose with four in a shrink-wrapped tray showed that there was 27% more waste of all sorts (bruised apple and used packaging) from orchard to home from those sold loose.

## **Recycling versus minimisation conflict**

23. Often there is a conflict between the aim to increase recycling of used packaging and the aim to reduce total packaging.
24. To make packaging recyclable often requires the use of single materials, where the same job could be done as well, or better, with two or more thinner layers of different materials – often called laminates- with a resulting reduction in total resource use.
25. We need to be careful that the focus on recycling and using materials that are easiest to recycle does not override the good work that has been done over the past 20 years to reduce packaging by using laminates.
26. Use of lightweight laminates and other lightweight materials is one reason why the UK uses less packaging per person than most other large EU countries - 171kg in 2004 compared with 188kg in Germany and 200kg in France.
27. Competition between materials has been one of the key drivers in helping companies innovate and optimise the use of energy and materials. Companies need the widest possible choice of materials.
28. Laminates may be more difficult to recycle but meeting the global aim of carbon reduction means that making packaging recyclable should not take precedence over resource (and carbon) reduction.

## **Used Packaging**

29. Data on waste arisings is not good. Much of it is either extrapolated from old surveys or is based on grossing up regional or local samples. We strongly recommend that government should fund analysis of the quantities and composition of household, commercial and industrial waste arisings.
30. That's said, Defra advises that used packaging is 18% of household waste and 3% by weight and volume of waste sent to landfill.
31. Kitchen and garden waste accounts for 23% of the weight of household dustbin waste, newsprint and magazines 16%. The largest category of used packaging is paper and card at 6% of household waste. White flint glass is 4%, steel food cans 3%, plastics film 2%, and all other packaging is less than 2%, including plastic food packaging 1.2%, liquid food cartons 1.1% and aluminium drinks cans 0.4%. See Annex 1 for composition of typical kerbside collected dustbin recyclables and residual waste. (Note that this excludes recyclables collected via bring banks and waste and recyclables taken by householders to civic amenity sites.)
32. The amount of used packaging sent to landfill appears to have decreased over the last 10 years. UK companies have contributed £700 million since 1998 to increase recycling of used packaging to nearly 60%. That's 5.5 million tonnes, 1 million tonnes of which came from households.

## **INCPEN members commitment to cradle-to-cradle thinking**

33. INCPEN members have committed to adopting cradle-to-cradle thinking in developing packaging and product supply chains that make a positive contribution to social, environmental and economic development.
34. This means design that considers the entire lifecycle of packaging in the context of the product and the supply chain with the aim of optimising materials, energy and water use, minimising waste of product and used packaging, and maximising recovery of value from waste – as energy, materials or compost.
35. This broader approach ensures that waste is not reduced at the expense of causing other environmental problems, such as increasing emission of climate change gases or water

use. We currently have the knowledge and ability to manage waste safely. We do not know if we can control or manage the environmental effects of global climate change. We should therefore err on the side of caution and make reduction of climate change emissions the top priority.