THE BIG PICTURE: CALIFORNIA IN A GLOBAL CONTEXT

By
Victor Bell
Environmental Packaging International
October 12, 2005

Producer Responsibility

What's driving environmental packaging and product legislation?

- A growing global commitment to sustainable growth
- An increased emphasis on extended and shared producer responsibility
- A growing commitment to recycling, recyclability and recycled content
- Waste management costs

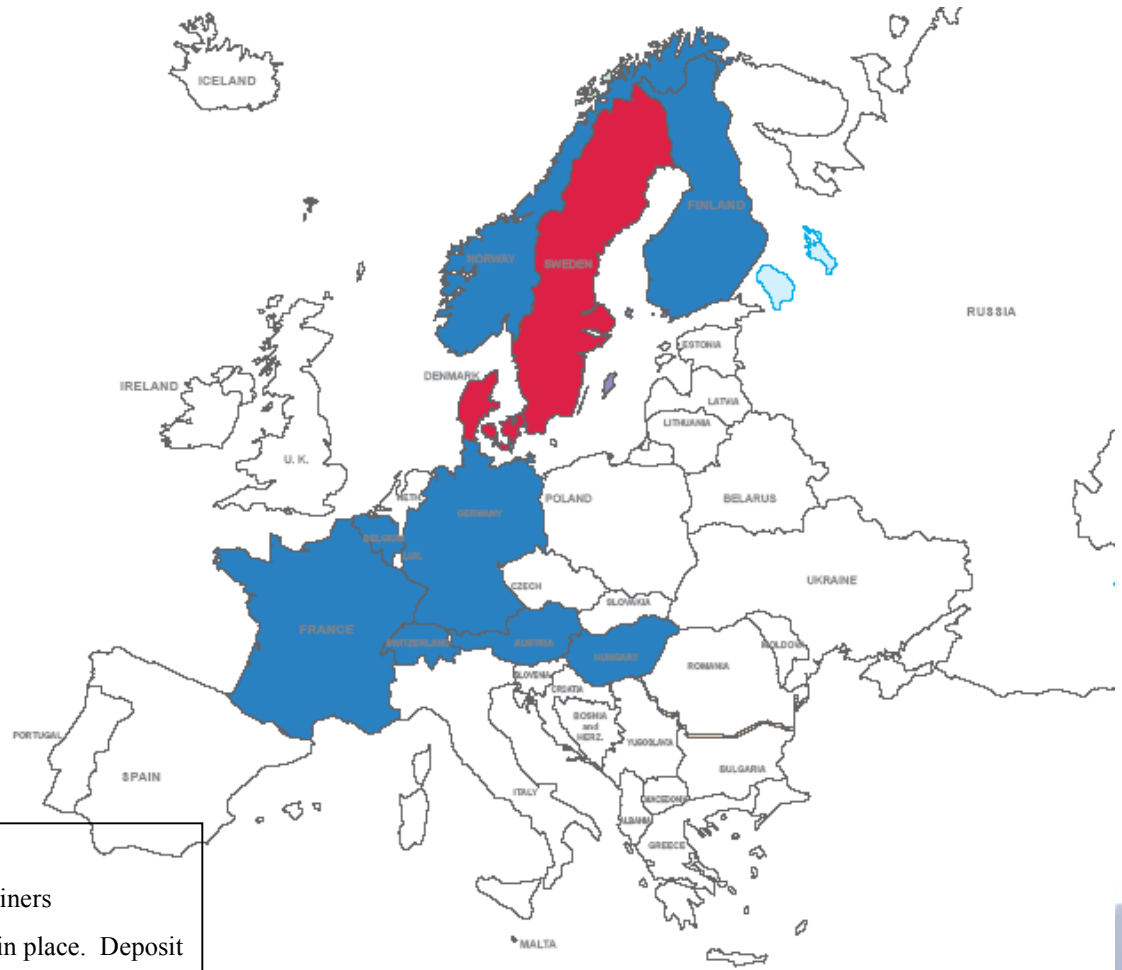
The result is: Extended Producer Responsibility

- Foundation of packaging and product legislation
- Places responsibility on producer
- Based on:
  - Polluter Pays Principle
  - Belief that upstream pressure yields better results

Packaging Fees

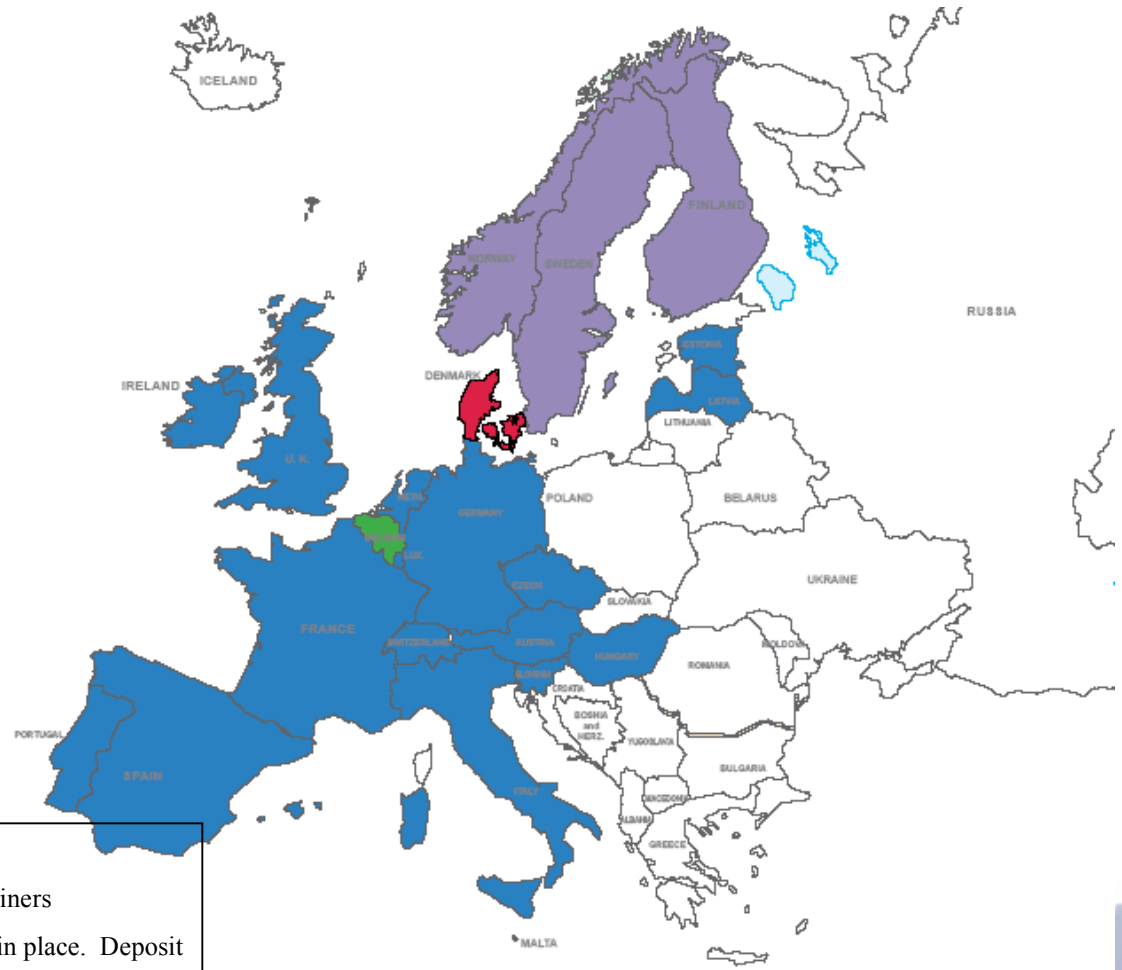
- Packaging fees in about 40 countries worldwide, soon to be > 50
- Fees are mainly used to fund recycling systems
- In general, fees are based on the amount of packaging (weight) and material type
- More packaging = more $$$ (higher fees)
- The more difficult the material is to recycle, the higher the fees
- Plastics, laminates and composites can cost up to 500% more than other materials
- Packaging fees were conceived with varying goals in mind – not as a logical, uniform system!!!

European
Packaging Fees or Deposits – 1995



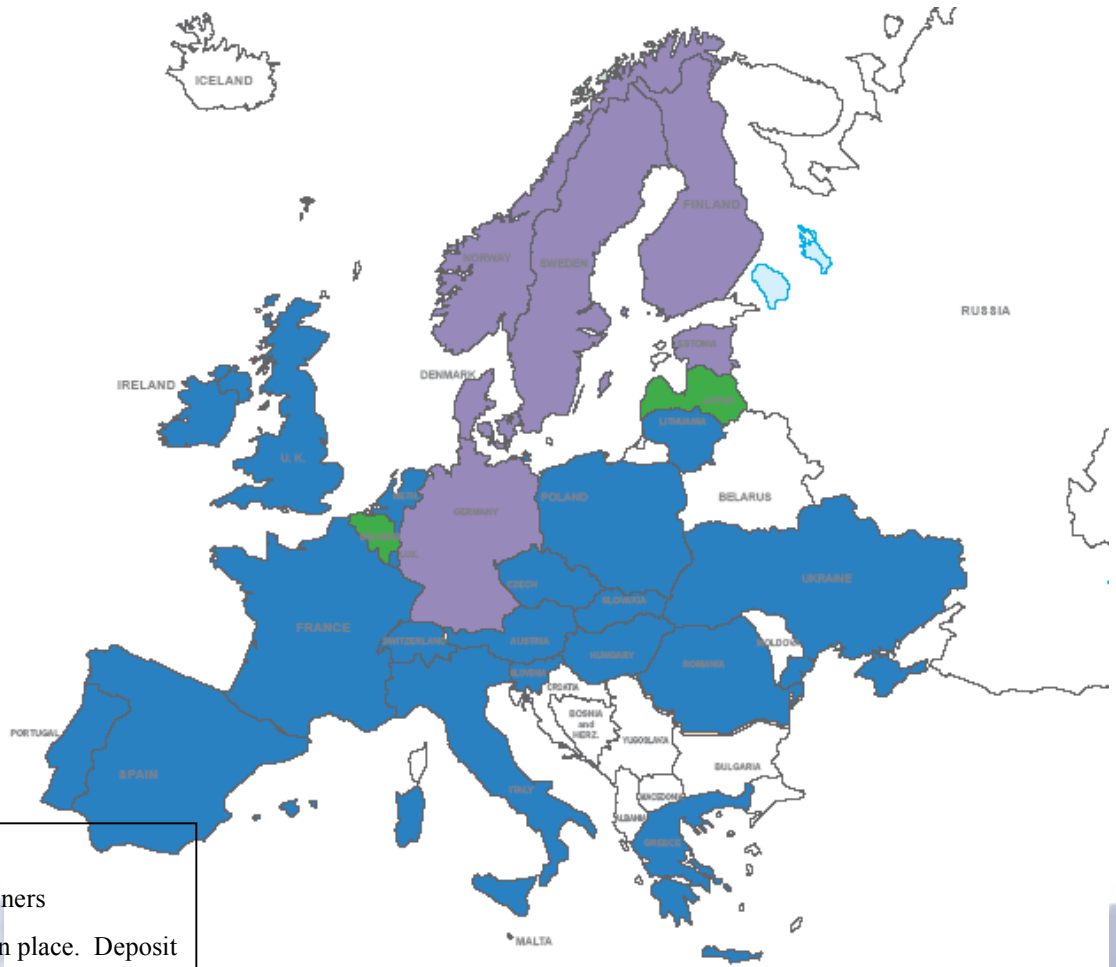
- Packaging fees or eco-tax
- Deposits on one-way containers
- Packaging fee and deposit in place. Deposit containers not subject to fees.
- Eco-tax and fee in place. Containers subject to both regulations.

European
Packaging Fees or Deposits – 2000



- Packaging fees or eco-tax
- Deposits on one-way containers
- Packaging fee and deposit in place. Deposit containers not subject to fees.
- Eco-tax and fee in place. Containers subject to both regulations.

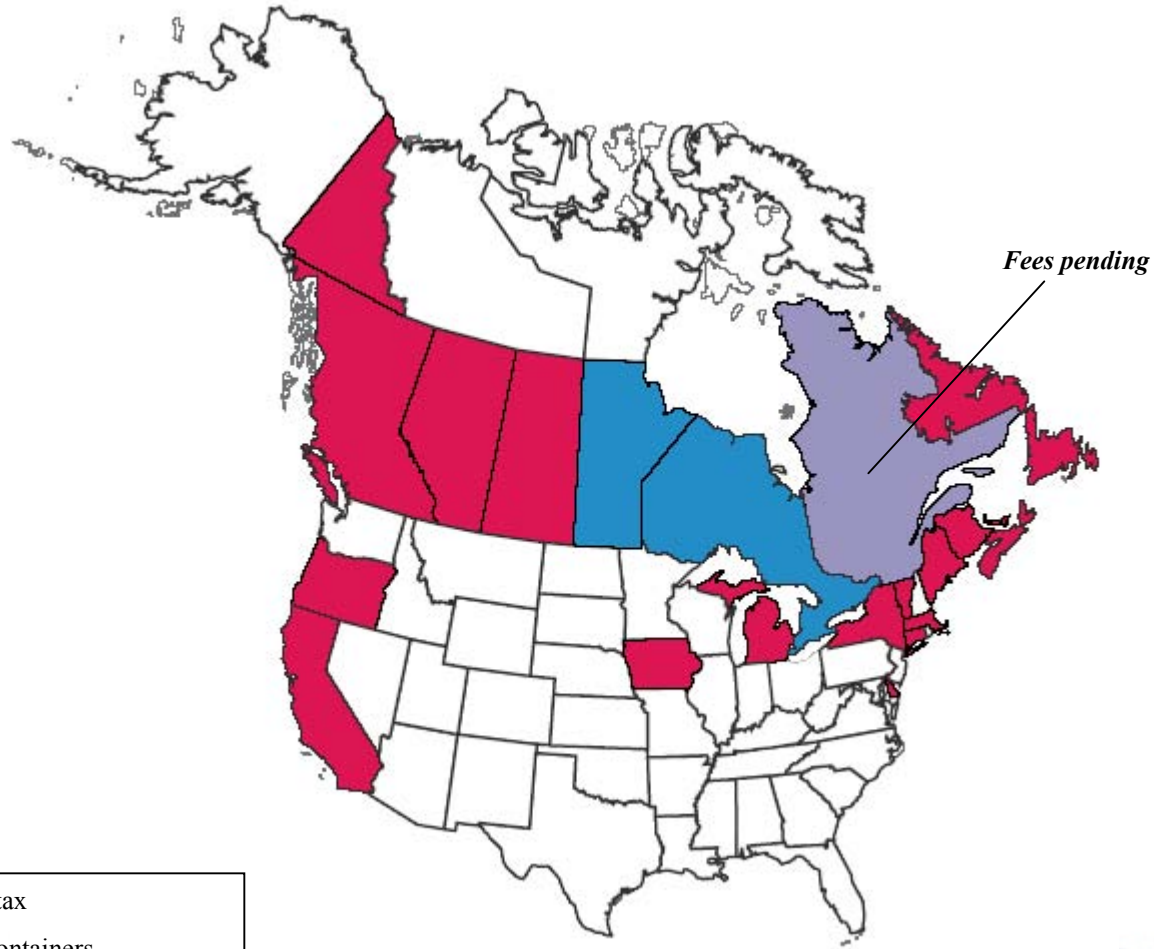
European
Packaging Fees or Deposits – Present



- Packaging fees or eco-tax
- Deposits on one-way containers
- Packaging fee and deposit in place. Deposit containers not subject to fees.
- Eco-tax and fee in place. Containers subject to both regulations.

epi

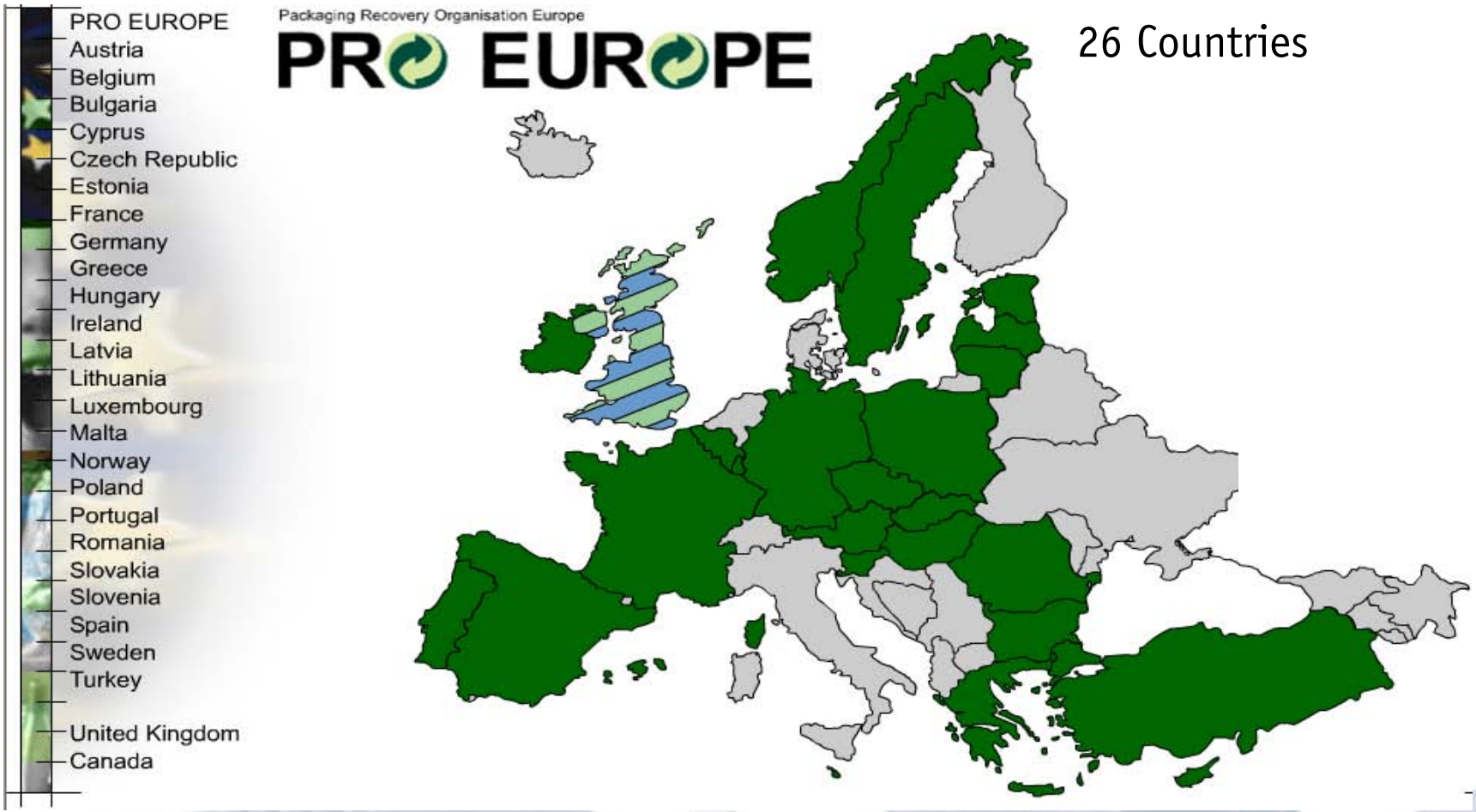
North American
Packaging Fees or Deposits – Present



- Packaging fees or eco-tax
- Deposits on one-way containers
- Packaging fee and deposit in place. Deposit containers not subject to fees.
- Eco-tax and fee in place. Containers subject to both regulations.

Asian
Packaging Fees or Deposits – Present

Prevalence of Green Dot Fee Systems in Europe



Map © PRO EUROPE as of 12/04

What is Packaging?

Printed Paper, Canada only

Always Product

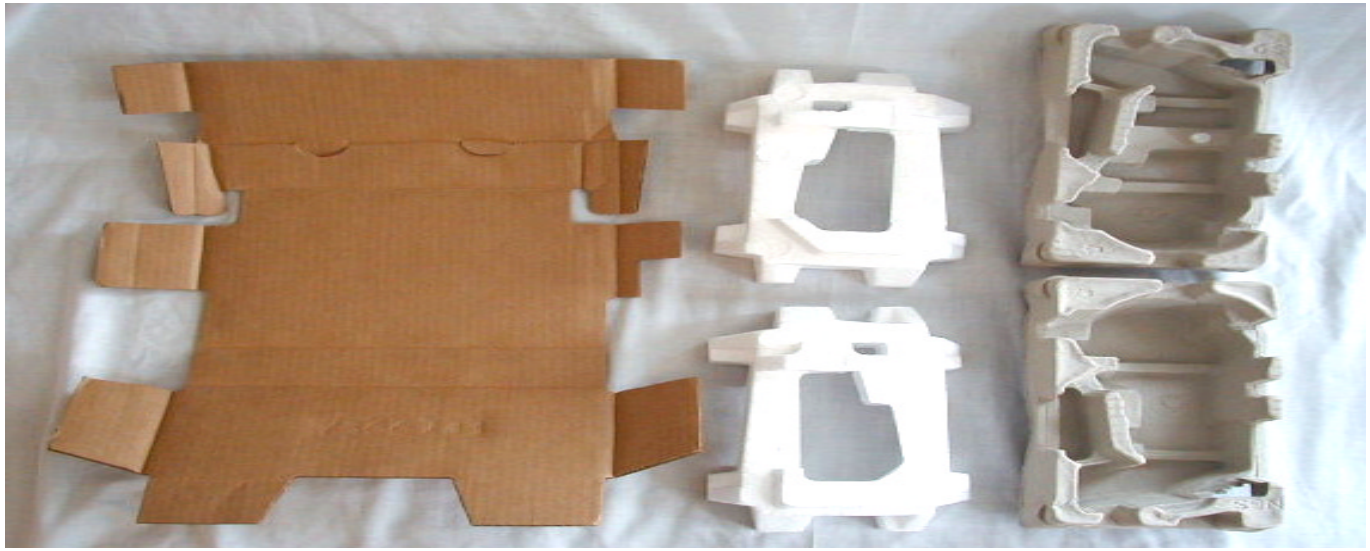
Covered in all countries

Transport packaging only covered in some countries (i.e. UK, Belgium, Austria)

Direct Mail covered in France and Canada

Copy paper and Greeting Cards covered in Quebec

Corrugated/EPS/Molded Pulp



	195 g	61.44 g	154.78 g
Germany	$0.033	$0.076	$0.027
Austria	$0.032	$0.047	$0.025
Spain	$0.004	$0.006	$0.004
Denmark*	$0.023/$0.013	$0.050	$0.011

Per unit or set

Plastic Container w/ Screw Top

Germany	$ 1.525
Austria	$ 0.706
Italy	$ 0.073
Belgium	$ 0.440
Portugal	$ 0.098
Spain	$ 0.119

Fee per unit

Overview of Environmental Packaging Design Requirements

- Environmental design requirements in more than 35 countries
  - CEN Standards (Europe +) resulting from Packaging Directive
  - Empty space and source reduction requirements (Asia/Pacific)
  - Recycled content requirements (N. America)
  - Packaging prevention planning (Europe, Asia)
- Environmental labeling (worldwide; requirements vary)

European Directive on Packaging and Packaging Waste

- Passed in 1994, 2004
- Requires Member States to meet recovery and recycling goals by 2001 (2008)
- Sets recovery and recycling targets
- Enables Member States to establish economic instruments
- Packaging fees
- Required all Member States to implement environmental packaging programs by 1996
- Seeks to reduce the environmental impact of packaging
- Stresses packaging waste prevention
- Outlines Essential Requirements to be met by all packaging placed on the European market
- Amended as of February 11, 2004

Amendments to EU Packaging Directive

- Increase in general recovery and recycling targets
  - Recovery from 50-65% to 60%
  - Recycling from 25-45% to 55% no max
- Increased material recycling targets
  - Glass 60%
  - Paper and board 60%
  - Metal 50%
  - Plastic 22.5%*
  - Wood 15%

* Includes recycling of biodegradable plastics by composting

- Deadline for Member States to meet new targets: 12/31/2008
- Greece, Ireland and Portugal – 31 December 2011
- Accession Countries – 31 December 2012:
  - Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Slovakia and Slovenia
  - Malta: 31 December 2013, Poland: 31 December 2014 and Latvia: 31 December 2015

EU Essential Requirements

- The EU Packaging Directive mandates that all packaging sold in Europe meet a set of Essential Requirements related to:
  - Recovery (must meet at least one)
    - Recyclability
    - Organic recovery
    - Energy recovery
  - Reuse (optional)
  - Source Reduction (mandatory)
    - Minimize Packaging
    - Heavy metals in packaging
    - Dangerous Substances and Preparations Standard

Packaging that does not comply with these Essential Requirements can legally be *banned* from EU markets.

From SEPA brochure

Packaging and the environment

We all discard packaging waste every day; in fact the UK produces **10 million tonnes each year**. Almost all of the waste you put in your dustbin is buried in a landfill site but new recycling targets mean that at least 50% of packaging waste must now be recovered and recycled. It is essential that we all re-use and recycle as much as possible if the UK is to meet these targets.

This booklet aims to inform you, the consumer, about how you can ensure that your packaging waste is recovered and recycled. It gives you some tips on how to reduce the amount of packaging waste in your household through re-use and recycling at home. It tells you about the common recycling markings that are found on packaging so you can identify which facilities you need to use. It gives you the contact details for your local SEPA Waste Strategy Co-ordinator and Local Authority Recycling Officer who can advise you on facilities and initiatives in your area. Finally it gives you details about other useful organisations that can advise you about general recycling.

Although the focus of the booklet is on household packaging waste, most of the information and contact details apply to general waste recycling and can be used by both businesses and the general public.

This booklet has been published by the Producer Responsibility Unit of the Scottish Environment Protection Agency (SEPA). The information is supplied in connection with the consumer information requirements of the Producer Responsibility Obligations (Packaging Waste) Regulations 1997 (as amended).

If you require any further information or if you have any difficulty in accessing contact points given please get in touch with the Producer Responsibility Unit at the address shown. Suggestions about the content of the booklet are also welcome.

Useful tips for minimising household packaging waste

Reduce Minimise packaging at the point of purchase by using re-usable shopping bags, refusing carrier bags or wrappings where possible and avoiding excessive packaging. If you think that a product has been excessively packaged contact your Local Authority Trading Standards or Consumer Protection Department. They are responsible for enforcing the Packaging (Essential Requirements) Regulations 1998 which requires packaging used by companies to be minimised.

Re-use Purchase products in re-usable containers and re-use them in the home. Some products are also sold in refill packs e.g. washing liquid. Some returnable containers (mainly glass) may also be returned so that manufacturers can re-use them.

Recycle Sort your household waste into different materials and use the local recycling and collection facilities. Use the common identification symbols in this booklet if you are unsure about the material type and do not put mixed material into collection banks. Contact the Local Authority Recycling Officer or SEPA Waste Strategy Co-ordinator if you need advice about the facilities that exist. Try and buy packaging made from materials for which local recycling facilities exist.

Buy recycled Remember that by purchasing products and packaging that contain recycled materials you are helping to create a market for waste. This helps ensure that collection and recycling facilities are developed and maintained.

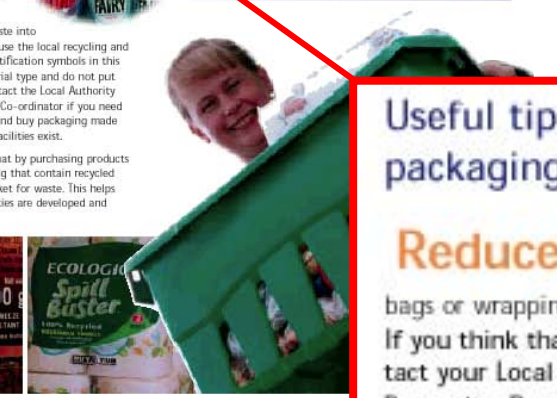
Understanding Recycling Markings

Packaging often contains symbols which help consumers identify the material type, whether it can be recycled and whether it already has a recycled content. Some companies use their own symbols, however there are standard symbols which are commonly used by everyone.

General recycling symbols: the Mobius Loop

This symbol indicates that the material is capable of being recycled. The waste material will only be recycled if you put it in the appropriate recycling collection facilities.

This symbol indicates that the packaging contains a certain percentage of recycled material. These products are not necessarily better for the environment but if you buy them you are helping to increase markets for recycled products thus reducing use of virgin raw materials.



Useful tips for minimising household packaging waste

Reduce Minimise packaging at the point of purchase by using re-usable shopping bags, refusing carrier bags or wrappings where possible and avoiding excessive packaging. If you think that a product has been excessively packaged contact your Local Authority Trading Standards or Consumer Protection Department. They are responsible for enforcing the Packaging (Essential Requirements) Regulations 1998 which requires packaging used by companies to be minimised.

Empty Space Requirements

- South Korea
  - "Ordinance of the Standards for Methods and Materials, Etc. of Product Packaging" sets limits on the amount of empty space and the number of layers that consumer product packaging can have
- Australia
  - The Standing Committee on Trade Measurement adopted a Code of Practice on Deceptive Practices in Packaging of 1990
- New Zealand
  - Fair Trade Act forbids deceptive packaging
- Japan
  - Cosmetics (primary packaging) - limit of 40% free space
- Taiwan
  - Rule on empty space and layer limits for gift boxes of pastries, cosmetics, alcoholic products, and computer program disks. Approved July 2005 and effective 6/2006
  - Regulation will cover processed foods as of 6/2007

Taiwan Designated Product - Disk of Computer Program Works

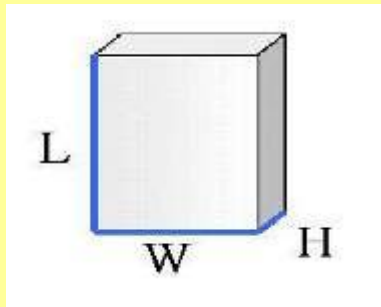
Definition

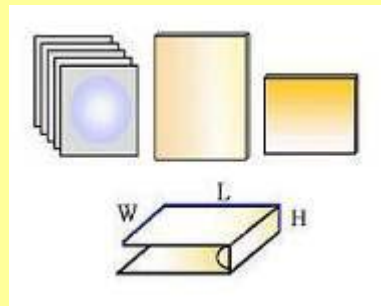
❖Pre-recorded optical disk containing computer program works to be sold, which is packaged in a box, and sold on the shelves of retailers.

Sample

Appearance

Unit Product





Volume Measurement

Taiwan Sample Analysis - Disk of Computer Program Works

Sample

Identification of Packaging Layers

- ❖ Any packaging fully wrapping disk of computer works is considered one layer.
- ❖ For product containing disks ofcomputer program works with different numberof packaging layers, the number of packaging layers of the product will be the number that is the biggest.
  - ✓ This sample has three layers of packaging：
    1. plastic bag
    2. thick paper box
    3. thin paper box.

Identification of Single Material

- ❖Except for individual packaging of a disk and the packaging of non-disk products, all packaging materials are made of paper.
- ♦The packaging is made of a single material.
- ♦A coefficient of necessary space of 3.1 applies.

Korean Reduction of EPS

EPS buffers cannot be used for IT products:

≤ 20,000 cm3 1/1/2004

≤ 30,000 cm3 1/1/2006

≤ 40,000 cm3 1/1/2008

Design Requirements

- Packaging reduction plans
  - Belgium
  - The Netherlands
  - Spain
  - Australia (Covenant)
  - Slovakia

Other Design Requirements

- **China** (Approved by the Standing Committee of the National People's Congress (NPC) of the People's Republic of China) Passed on June 29, 2002, in effect 1/2003
  - When products and packaging are designed, their influences on mankind and natural environments during their life-cycle must be considered and priority accorded to selecting toxin-free, non-hazardous, easily degraded and easily recycled options.
  - Enterprises should package the products in a reasonable manner to reduce the overuse of packaging materials and reduce the generation of packaging wastes.

Other Design Requirements

- **Australia** – is developing packaging design guidelines as part of the updated covenant; Final Covenant was issued July 2005
  - Industry signatories will work to increase recycling of materials considered "Non-recoverable" or that are currently recycled at low rates, i.e., plastics coded “3" to "7" and high wet strength carrier board.
  - Design guidelines similar to the EU’s CEN Standards
- **Austria** - Beverage manufacturers have agreed to use a certain percentage of recycled content in their containers.

Other Design Requirements

- **Japan** Council for PET Bottle Recycling developed guidelines for PET containers. These have been endorsed by MITI
  - Containers bodies must be made entirely of PET, easily compressed, and colorless.
  - Container labels and adhesives must be easily removable. PET stretch labels and PET, Polyolefin, or OPS shrink labels are preferred.
  - PVC and foil labels, adhesives which cannot be easily removed, and printing directly on PET bottles are prohibited.
  - Labels and printing ink must be able to be removed when bottles are washed in 1.5% caustic soda solution of 85 to 90 degree centigrade for 15 minutes.
  - Caps, inner plugs, and liners must be made predominantly of PE and PP. Aluminum caps are prohibited. Caps must have a specific gravity of 1.0 (i.e., the density must be that of water).

Unintended Consequences

Environmental packaging legislation may have negative impacts

- Packaging Fees
  - Only Denmark and France give a discount for using recycled content; if, by using recycled content, it adds weight to the packaging component, then the fees increase, therefore adding to the cost of using recycled materials
  - In Ontario, fees are related to the cost of processing and, in some cases, if the recycling rate increases, the fees go up.
  - In Taiwan, fees were only on PET drink and Soy Sauce containers (because they were the only items collected). As a result, much of the Soy Sauce container material was switched to PVC.
  - Fees in some cases will not always drive you to the "best" packaging

Unintended Consequences

Environmental packaging legislation may have negative impacts

- Design Requirements
  - In order to meet the EU recovery standards, some companies will add more plastic to a composite packaging component to make it meet the Energy Standard
  - To meet the empty space rule in Taiwan and South Korea, companies will leave the manual in the retail box (when they could have provided the manual electronically)
  - In CA, companies will heat seal their clamshells so that they are not subject to the RPPC law

Packaging Design Protocols

- What are other major corporations doing?
  - What are their environmental policies?
    - Sustainable packaging and products
    - Continued improvement (based on what?)
    - Transparency
    - “PVC Free”, more recycled content
    - Green Washing

Wolfgang Puck® (Green-washing)

"Environmental Considerations"

- "The OnTech container has been designed to meet **guidelines required for recyclability**.
- It is primarily composed of polypropylene (PP), a readily available resin product, which has been produced for many years and is **classified as a #7 recyclable**.
- Container ends are composed of metals that also **meet federal regulations for recycling**.
- Post Consumer Recycling (P.C.R.) of polypropylene materials is on the rise, as more of the material becomes available for secondary processing methods.
- The OnTech self-heating container has been **awarded** the Grune Punkt (The Green Point). This means that our container has been **approved for utilization in the strict European recycling and waste system**."*

*Source: OnTech Delaware Inc. http://www.ontech.com/Technology/environmental-considerations.asp

Packaging Design Protocols

- Sustainable Packaging Coalition
  - Albertsons
  - The Coca-Cola Company
  - Dow Chemical
  - Dupont Soy Polymers
  - Earthbound Farms
  - Environmental Packaging International
  - Estee Lauder/Aveda
  - Johnson & Johnson
  - Kraft Foods
  - MeadWestvaco
  - Metabolix
  - Microsoft
  - NatureWorks
  - Norampac
  - Nike
  - PepsiCo
  - Starbucks Coffee Company
  - Target
  - Unilever

BE SAFE PVC

P.O. Box 6806 * Falls Church, VA 22040 * Phone: 518-732-4538 or 703-237-2249 * Email: besafe@chej.org

NATIONAL CAMPAIGN CALLS ON MICROSOFT AND JOHNSON & JOHNSON TO PHASE OUT PVC, THE POISON PLASTIC

On December 7th, 2004, a coalition of national and state organizations asked Microsoft and Johnson & Johnson to endorse a PVC-Free Pledge to phase out PVC (polyvinyl chloride) in their products and packaging.

Johnson & Johnson uses PVC bottles for health and beauty products, such as Kids Foam Blaster Hand Wash, Kid's No More Tangle Shampoo, Neutrogena Facial Cleansing Forumula, Clean & Clear Body Wash and ACT Plus Anti-Cavity Fluoride Mouthwash.