# Instruments to encourage design for circular plastics

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CITEO

# RESULTS OF THE FRENCH EPR SYSTEM FOR HOUSEHOLD PACKAGING

**18%**
**in 1992**

**68%**
**2016**

Recycling rate multiplied **by 4**

**89%**

of recycling **in France**
(10% in Europe, 1% in Asia)

**More than 3Mt**

**recycled per year**
Equivalent to the loading charge of 160 000 trucks

**25%** **2017 > 2022** **100%**

**French population sorting all plastic packaging**

**2,1 Mt**

**Of avoided Co2 per year**
Equivalent to one million fewer cars on the roads

## ❑ EPR can financially incentivise producers to design their packaging for recycling

- ➢ Through the main applicable fees:
  - A fee per weight for each material incentivise packaging weigh reduction
  - A fee per consumers' packaging unit incentivise the suppression of superfluous packaging
- ➢ Through a fees modulation defined acc. to key principles (e.g. meeting products requirements, simplicity) and agreed by producers after consultation of recyclers.

## ❑ EPR must then facilitate prevention and design for recycling by providing tools & services to producers

- ➢ Monitoring : packaging reduction of 106kt measured between 2007 and 2012
- ➢ Training; eco-design tools to assess environmental impact of a packaging (BEE), and recyclability (TREE)
- ➢ Guides on plastics recyclability; online catalogue of best practices
- ➢ Co-leading R&D projects with clients

# **WEIGH REDUCTION** of 1g brings **3 TIMES MORE BENEFITS** than recycling 1g more (CO2 equ.).

**Eco-Emballages**

Août 2009

Analyses de Cycle de Vie de différents systèmes d'emballages pour boissons

bio Intelligence Service

Life-cycle analysis of different beverages packaging systems

**Effects of weight**

If I reduce/underestimate the weight of my bottle of 1g, I will improve/will underestimate the ecological footprint of my system by 3.3 g CO2 eq on average, for a system of 25cl, 50cl, 100cl or 150cl.

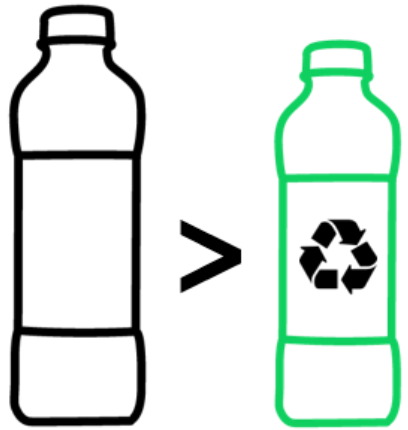
**Effects of transport distance**

If I bring closer my suppliers or my clients/underestimate the distance between plants and supply or delivery about 100km, I will improve/will underestimate the ecological footprint of my system by 0.8g Co2 eq for the system of 25cl, by 1.5g Co2 eq for the systems of 50cl, by 2.6g CO2 eq for the systems of 100cl, and by 3.7g CO2 eq for the systems of 150 cl.

**Effects of selective collection rate**

If I improve/underestimate the weight of the bottle selectively collected from public waste, I will improve/will underestimate the ecological footprint of my system by 1.1g CO2 on average, for a system of 25cl, 50cl, 100cl, or 150 cl.

## Limiting environmental impacts of plastic packaging



- **Weigh reduction**
- **Design for recycling**
- **Consumer participation to selective collection and sorting**

## ❑ Bonus

- ➢ Reduction
- ➢ Simplification
- ➢ Recyclable
- ➢ Consumers information

## ❑ Malus (recycling disruptors)

- ➢ PVC mixed with PET
- ➢ Aluminum mixed with PET.

## ❑ Malus (new material with limited recycling)

- ➢ Opaque PET (decided by French authorities)

# EXAMPLES OF RECYCLABILITY IMPROVEMENTS WITH PRODUCERS

## REDUCTION OF THE NUMBER OF MATERIALS SUPPRESSION OF ALUMINIUM


## PUBLICATION IN THE GOOD PRACTISES CATALOGUE

## INNOVATIVE PACKAGING


## DARK PACKAGING

## TOWARDS MONO-MATERIAL PACKAGING

## NEED TO INVOLVE ALL ACTORS OF THE PACKAGING VALUE CHAIN:

- ✓ Packers & fillers (« design for recycling »)
- ✓ Consumers (in sorting their waste properly)
- ✓ Municipalities (optimised selective collection)
- ✓ Recycling industry (expertise sharing)

## NEED TO USE DIFFERENT TECHNOLOGIES AND FIND THE OPTIMUM:

- ✓ Weigh reduction and design for recycling
- ✓ Mechanical and chemical recycling
- ✓ Material and energy recovery

**THANK YOU FOR YOUR ATTENTION**

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