How to make PET beverage plastic bottles more sustainable in industrialized and in emerging countries?
About EFBW:

Who we are
Not-for-profit association representing the European bottled water industry
Offices based in Brussels, Belgium (staff of three)

Members EFBW
National trade associations, bottling companies and suppliers

Memberships
ICBWA (International Council of Bottled Waters Associations)
Food Drink Europe
# EFBW Members

## Countries represented

<table>
<thead>
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<tbody>
<tr>
<td>Austria</td>
<td>Luxembourg</td>
<td>Netherlands</td>
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<td>Belgium</td>
<td>Poland</td>
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<td>Croatia</td>
<td>Slovenia</td>
<td>South Africa</td>
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<td>Czech Republic</td>
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<td>Denmark</td>
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<td>Spain</td>
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<td>Greece</td>
<td>UK (2)</td>
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## Companies

- Danone Waters
- Gerolsteiner
- Karlovarske Mineralni Vody
- Nestle Waters
- Spadel

### Others

- Lab Oliver
- Rodes
- NSF
- Watercoolers Europe (WE)

## Over 650 bottlers represented
1. Europe

- Collection / sorting / recycling
- Lightweight / Ecodesign
31 national shared responsibility schemes engaged in the selective collection and recycling of packaging waste.
Specific role played by stakeholders
1,5 litre PET bottle weight evolution (still water)

Source: ADEME/Adelphe/Eco Emballages/CNE
European PET Bottle Platform
www.petbottleplatform.eu

• Main objective:
  – Evaluate PET bottle manufacturing technologies and products
  – Allow new PET bottle innovations, while minimizing the economic and environmental consequences for the European PET recycling industry.
• Is a voluntary initiative

• Created in 2007

• Grouping technical experts in the field of PET production, design, use, collection and recycling

• To provide an objective evaluation of the impact of new technologies on PET recycling processes across Europe.

• Supported by the European Association of Plastic Recycling and Recovery Organisations (EPRO), the Plastics Recyclers Europe (PRE), PETCORE-Europe, the European Federation of Bottled Waters (EFBW) and the European non-alcoholic beverages association (UNESDA).
EPBP has established several test procedures in order to assess the recycling profile of new PET bottles, including barriers, additives, closures, labels, etc.

The first set of test procedures are relatively rapid and low-cost techniques for the quick assessment of the recycling profile of PET bottles, including oven test, optical sorting test, glue separation, etc.

In addition, the Platform establishes specific test procedures using up-to-date testing methods that produce qualitative and/or quantitative test results.

For more information, visit www.petbottleplatform.eu.
• EPBP has assessed the impact of several innovations on the PET recycling stream. These assessments are based upon tests carried out according to the EPBP testing protocol.

• Applicants must demonstrate that materials and/or components used in PET bottles can be recycled safely and economically with an environmental benefit, using existing recycling technologies and processes, by eliminating or significantly reducing materials that may impede recycling without affecting the yield or the quality of the recycled PET.

• To date EPBP has considered more than 20 applications. Many are ongoing, but there are 9 so far on the positive list.
• EPBP focuses on some **key principles of the Design for Recycling Guidelines** that are appropriate for all PET bottles. These include:

  – Avoid the use of materials and/or components that are known to impede the PET recycling process or reduce the quality of the recycled PET.
  
  – Reduce the amount of non-PET components to allow for ease of separation and efficiency of recycling.
  
  – Design components, such as closures and labels, so that they can easily, safely, cost-effectively and rapidly be separated and eliminated from the recycled PET.
  
  – The goal of improving the recyclability of PET bottles **cannot compromise product safety**.
Please check the EPBP website www.epbp.org for the Design for Recycling Guidelines, the endorsements (including its conditions), and the test protocols.
POLYMARK Project

- Polymark aims to develop a technology to identify and separate food contact plastic material from non-food contact plastic (by using UV markers and a spectrometer detection system)
- Goal: increase recycling and re-use + reduce environmental impact of plastics
- 36 months
- Budget: € 1.47 million
2. Emerging countries
Mexico Municipal solid waste management

- 102 K tons municipal solid waste daily
- 260 landfills

- 61% “landfills”
- 8.5% controlled fields
- 26% unregulated
- 4.5% recovery recyclables

Source: SEMARNAT2012/PASA /Mundo Sustentable
“Pepenadores” = waste pickers

- Responsible for 90% of Mexican recycling!
- Very low efficiency due to very hard conditions
- Social exploitation & poor life conditions (220USD / month average)
Project idea: improving recycling flow

Recollection firm → 35km → Landfill

Final Buyer ← Intermediate Buyer ← Pepeadores
Project idea: improving recycling flow

Recollection firm → 5km → Segregation Plant → Final Buyer → Landfill

CIRCULAR ECONOMY
saving resources, creating jobs
Green Week, Brussels > 3-5 June 2014

TODAY
CIRCULAR ECONOMY
saving resources, creating jobs
Green Week, Brussels > 3-5 June 2014
Nigeria

- Nestlé is actively engaged in a PET Recycling initiative in association with key stakeholders in the PET Industry (Coca-cola, Nigeria Breweries, PEPSI Co., Nigeria Bottling Company, etc.).

- Nestlé has invested alongside these stakeholders in a partnership with ALKEM (a recycling multinational) towards increasing PET collection centers around the country. These bottles are later recycled into useful household materials. Focus is to engage more workforce in the collection of improperly disposed bottles off our environment and transfer to ALKEM.
Nestle Waters China Broke Guinness World Record on World Water Day in 2011!

- The Chinese market recycled the largest number of plastic bottles in 8 hours on 21 March 2011
- Nestlé Waters employees and school children from 120 local primary schools (Shanghai’s factory)
- 8.8 tonnes collected (around 402,000 bottles)
- Nestlé Waters China donated all proceeds to the Shanghai Charity Foundation.
Chile

• Nestlé is helping to reduce waste and boost responsible disposal in Chile by supporting a new recycling network.

• The company has backed the ‘Collective Recycling Project’, which aims to recycle about 1,200 tonnes of waste per year through the installation of five recycling centres in the capital of Santiago.

• Nestlé signed a partnership with Walmart Chile, Coca-Cola Chile, PepsiCo, and Unilever, in a joint collaboration to improve waste management in the country.

• Reducing waste

• The new sites, managed by Triciclos, an organisation specialised in recycling and sustainable consumption, are providing consumers with an easy and efficient way to recycle their household waste.

• Each centre can recycle about 20 different types of materials such as glass, PET plastic, aluminium, paper, cardboard and clothes - avoiding further waste to landfill.
Benefits of the project

• Political
  – Influence government to design good waste management legislation and phase out open dumps

• Social
  – Waste pickers: better work, better pay

• Environment
  – Improved impact due to transport reduction
  – Increase material recycling
PET recycling rates

Sources: ABIPET, NAPCOR, ARPET, PETCORE.
Thank You!

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