Petcore Annual Conference 2021

2-3 June 2021 | Virtual Conference

CPME aisbl.

Committee of PET Manufacturers in Europe

PET the unique plastic

Brussels – 2 June 2021

Antonello Ciotti – CPME Chairman

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CPME Mission

To ensure the European PET industry is sustainable and can develop and grow by focusing on stakeholder needs.

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CPME is a European non-profit trade association and represents all of the European PET resin producers. Collectively we represent an industry with a name plate capacity of ~3.5 million tonnes of Virgin PET (vPET) per year.

In addition, we have associate members such as Ineos Aromatics in their capacity as a PTA producer.

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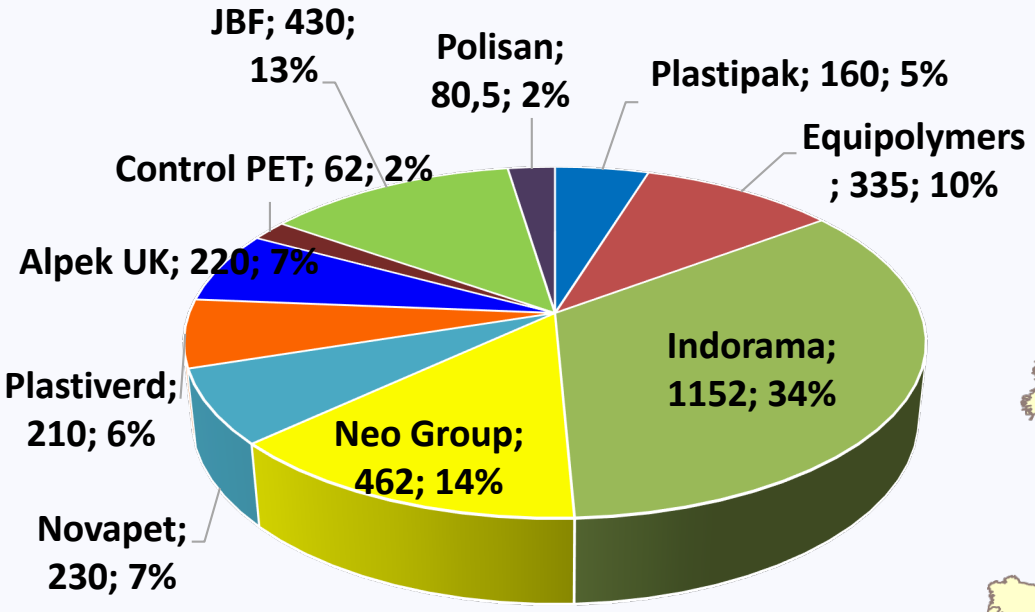
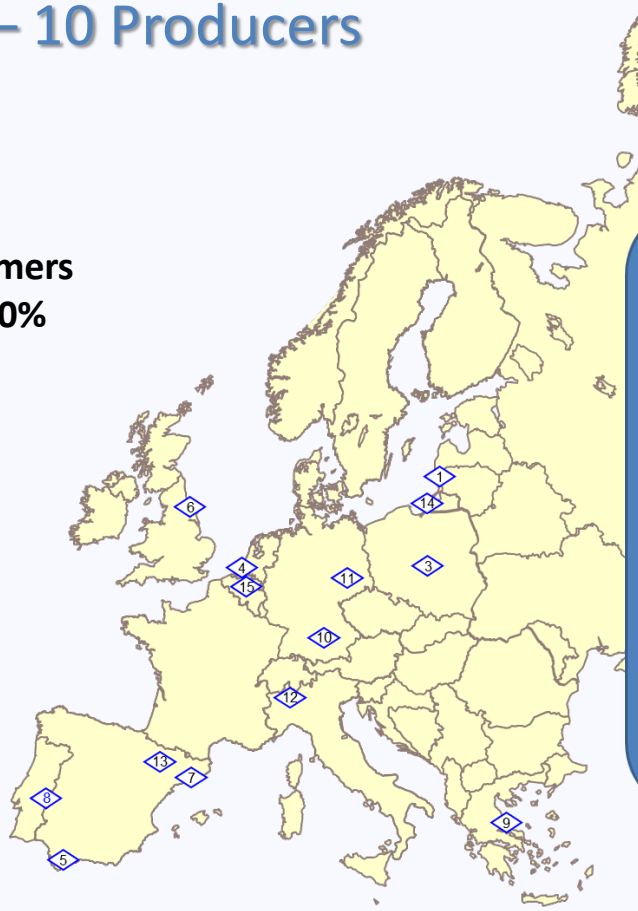
European PET Business 2020

2020 Active EU 27+1 capacity in kt
3,342 kt – 10 Producers





1. Indorama, Klaipeda
2. NEO Group, Klaipeda
3. Indorma, Wloclawek
4. Indorama, Rotterdam
5. Indorama, Spain
6. Alpek Polyester, Wilton
7. Plastiverd, Barcelona
8. Control PET, Portalegre
9. Polisan, Volos
10. Indorama, Gersthofen
11. Equipolymers, Schkopau
12. Plastipak, Verbania
13. Novapet, Barbastro
14. Ekopet, Kaliningrad
15. JBF, Geel

2019 Invista bought by IVL
2020 Alpek UK closure M5

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CPME members - Leaders in Sustainability

By 2050, the world's food production system must support an estimated 9 billion people, with a shrinking base of agricultural land and **limited water resources**.

CPME members combine the **power of science and technology** to develop **innovative packaging solutions for a more sustainable world, focusing on** four key pillars:

- **Innovations for tomorrow**

Developing innovative technologies for current and future markets. (strong R&D focus)

- **Partners for change**

Leaders in advancing all aspects of sustainability, openly collaborating with key customers , suppliers and public institutions.

- **Smart solutions for today**

Our technologies and our partners enable our customers and their customers to develop products for a more sustainable future.

- **Responsible Operations**

Our infrastructures have a positive impact on our communities and our shareholders as Our operations are a global reference.

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Plastic Packaging

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Plastic Packaging

Packaging of ALL types has saved Foodstuffs; however, a very large part of that saving is due to plastics and the use of plastics is increasing because it is an **environmentally sustainable material**

Plastics have revolutionised food packaging:

- Food quantity deteriorates between production and transport from 50 % in developing Countries to less than 3 % in "packaging oriented" Countries (*)
- Plastic reduces food wastage: within large-scale distribution, the deterioration of unpacked fruit and vegetable is 26 % greater than pre-packaged ones
  - 10 grams of a multilayer film extends the life of steak from few days to over a week
  - Packaged in modern multilayer packaging, Parmigiano Reggiano has a "shelf life" of up to 50 days
  - A cucumber shelf life is extended from less than 3 days to 14 days by plastic shrink film

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(*) Source: British Plastic Federation- Plastic protect the environment

Plastic Packaging: efficacy

The emissions of CO_2 to produce food and plastic packaging (*)

Food	Kg CO_2/Kg food
Beef meat	13.3
Coffee	8.5
Soft cheese	1.95
Milk	1.3
Pasta	0.92

Packaging	Kg CO_2/product
PP tray for meat 0.5 l	0.084
PET bottle 1.5 l	0.085
PP Yogurt 0.5 l	0.073
PS tray 0.5 l	0.065
LDPE Film 1 m^2	0.049

(*) Source: On the Sustainability of Plastic packaging – German Association of Plastic Packaging IK

CO_2 emissions of the food which could be lost are much higher than the CO_2 emissions of the plastic packaging which prevents this loss.

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Towards Circular Economy

European Commission

Eu Plastic strategy

All plastics must be recyclable by 2030
50% of plastics must be recycled by 2025
55% of plastics must be recycled by 2030
PET containers: **25% RPET** content in **2025** and **30% in 2030**
Collection of PET containers: **77% in 2025** and **90% in 2030**

- ❑ **At least 25 %** of recycled plastic for single-use PET beverage bottles from 2025
- ❑ **At least 30 %** of recycled content for all single-use plastic beverage bottles from 2030

- **PlasticsEurope** (PO/PVC/PS)
  - ✓ 100 % re-use, recycling and/or recovery of all plastic packaging by 2040
  - ✓ 60% re-use and recycling of plastic packaging by 2030

- **EUPC-Petcore** (PET/PO/PVC/ECRA)
  - ✓ focus on the overall objective: 100% recycling of collected PET packaging material
  - ✓ commit to 65% recycling and reuse of PET packaging material collected by 2030
    - Amongst which, 30% of closed loop

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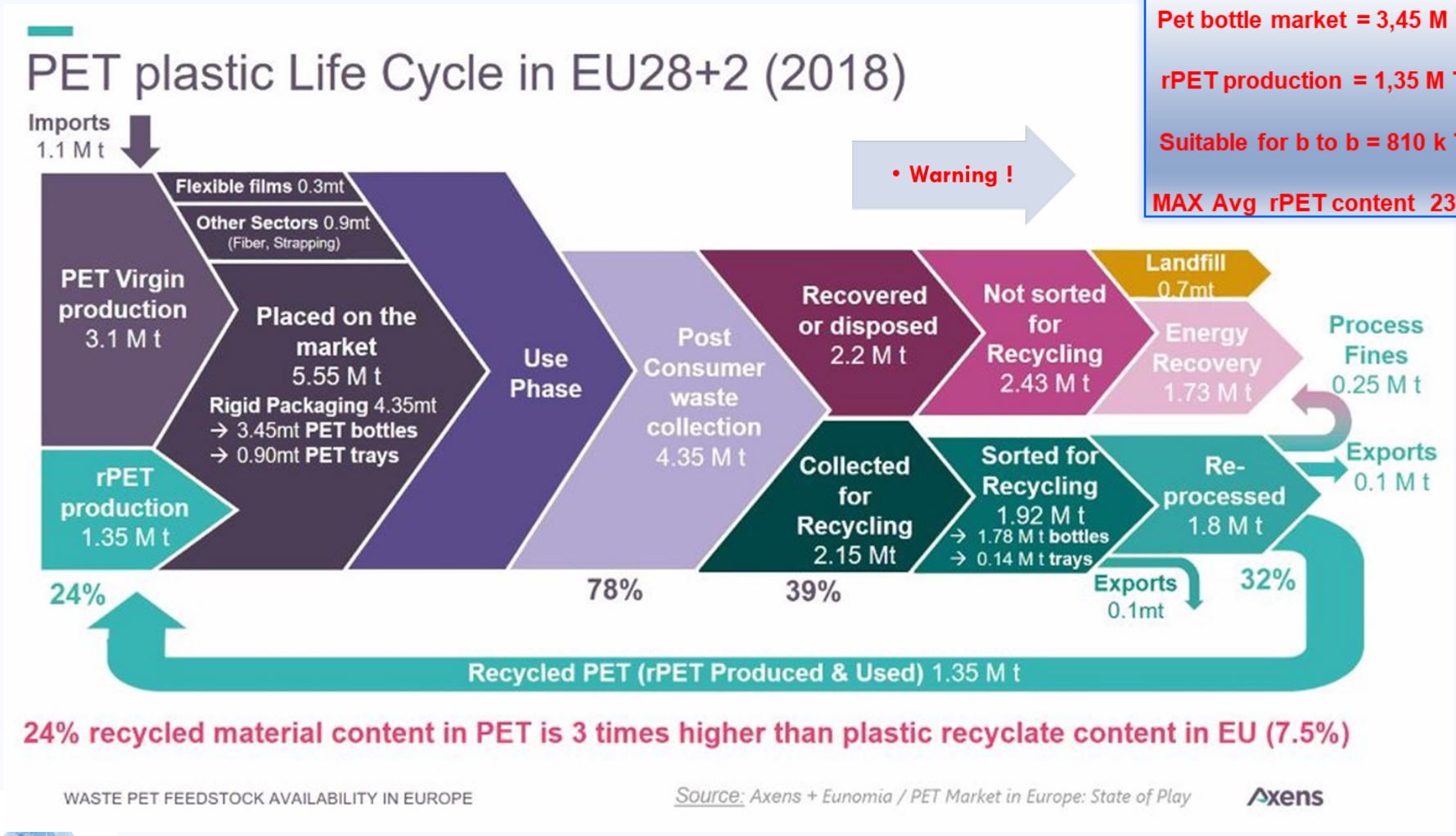
PET plastic Life Cycle



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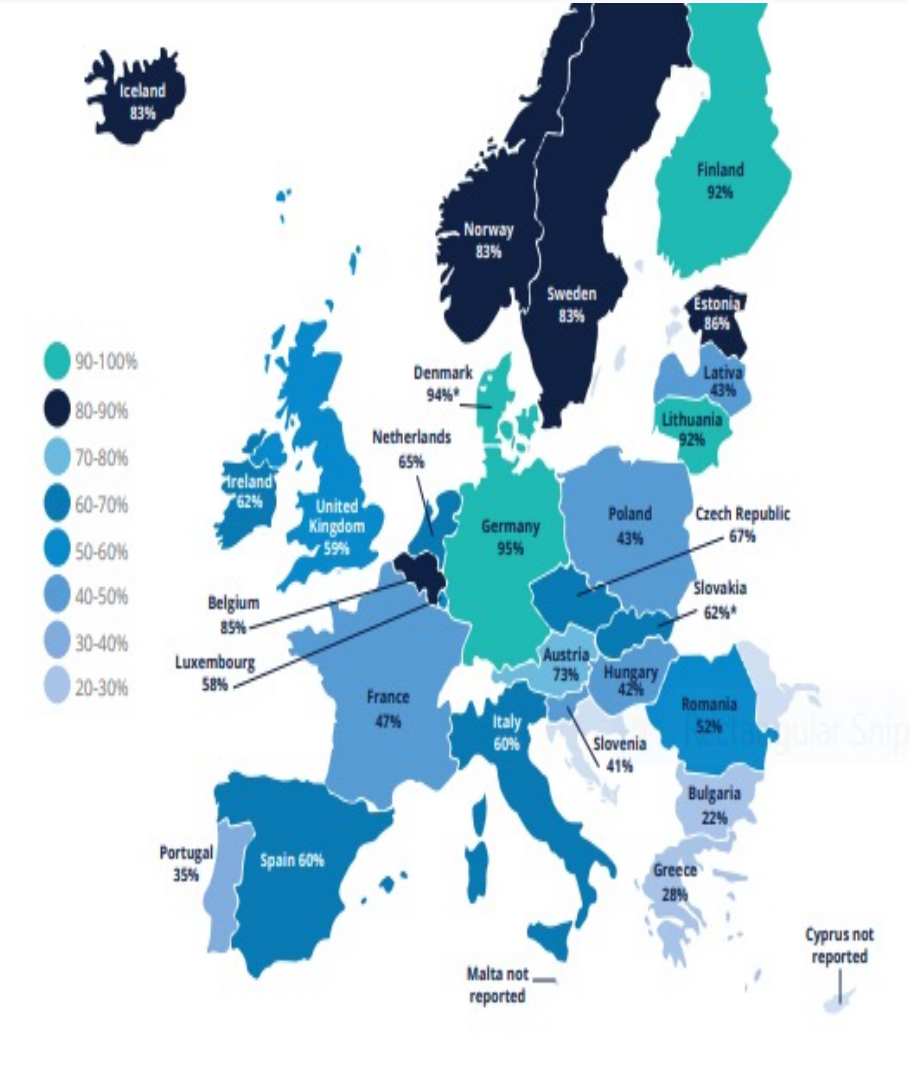
PET Collection

- Recycled PET bottles into food grade containers is a key example of the environmental benefits and sustainability of PET as a packaging material
- Collection is a **BOTTLENECK** to achieving ambitious recycling rates



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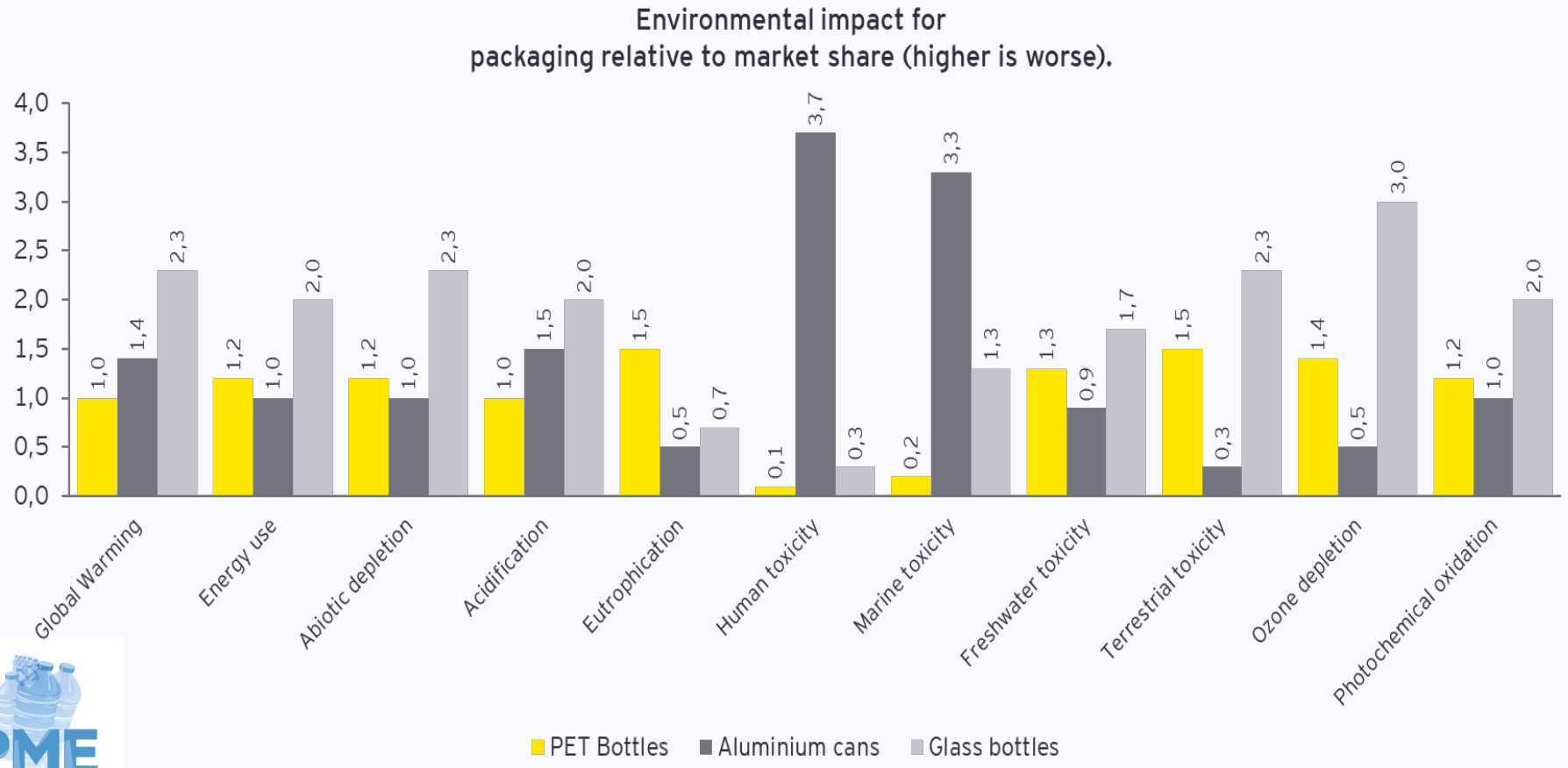
PET vs. other Materials

Why would we choose one material over another material?

Life Cycle Analysis - an LCA is how we measure the effect on the environment of a particular type of packaging. Here we use 11 different measures to compare materials.



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Source: Amienyo et al., 2013

PET vs. other Materials

- PET uses **25% less material** than other packaging materials such as aluminium and glass for the same amount of liquid.
- PET bottles have the **lowest carbon footprint** for transport among alternative packaging materials - they are 95% lighter than glass.
- PET is **less resource dependent**, compared to other materials, allowing for less material to be used in packaging the same amount of end product.
- Up to six PET bottles can be produced for **the cost** needed to produce one glass bottle.
- PET generates up to 75% **less greenhouse** gases than glass or aluminium beverage packaging.
- The manufacturing of a single-use PET bottle uses less than **half the water** of a single-use glass bottle.
- PET is the **most recycled** plastic packaging material globally.

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Source: Petcore Europe

PET vs. other Materials

- The **European PET Bottle Platform** (EPBP) is doing a great job in evaluating innovations that may damage PET Bottle mechanical recycling. For PET sustainability, damaging innovations must be removed from the market.
- Is it time for politicians to recognise that EPBP has a **part to play** in the circular economy!
  - Consider legislation against colour, i.e. in Japan only clear bottles are allowed.
  - Direct printing on bottles can contaminate RPET.
  - Some labels come off easily and sink, preventing RPET recovery.
  - What can be done to make sure that we actually recycle 100 % of post-consumer waste, not just PET.

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Critical Issues: SUP implementation

- The European PET Value Chain must advocate to EU Directives in terms of innovation and collection rates.
- The implementation of the SUPD is difficult and could lead to several National Rules that could destroy the Common Market
- **High concern:** Lack of rPET content definition and Imports of 'so called food grade flakes' from non-EU Countries
- CPME attending:

GREENWASHING AND SUSTAINABILITY

A growing trend that needs to be addressed

International Symposium on Sustainability, 6th Edition

San Servolo Island, Venice, Italy - October 1, 2021

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Regulation: Risk of Greenwashing

- CPME **works with the value chain** to ensure that Regulation is in place to protect PET
  - Need to ensure that **the public confidence** we have in virgin PET is maintained in RPET ➔ need for amendments to the outdated recycle regulation.
  - To sustain PET in Europe, Chemical Recycling **needs to recover PET RMonomers**.
  - RMonomers are of such high quality ➔ **impossible** to detect their presence in VPET.
- How to know that imported PET has any RMonomer content at all? ➔ **EU+1 needs to have a control system in place**. But, how will that work for the rest of the world? Do we have to accept potential untruths / greenwashing ?
- Need to provide data and advice to EU and Governments to ensure no unintended consequences from any new regulations that do not **recognise new and innovative** technologies.
  - **Consumer safety should be maintained and innovation should not be intentionally blocked.**

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Critical Issues: GSP & ETS

GSP: PET is included in the NON-sensitive product list ➔ exposed to huge imports at 0 % duty from non-EU Countries.

PET has been indicated as a non **eligible** sector for compensation against higher electricity costs caused by the ETS, and not included in the **list of the products protected** by carbon border tax.

These decisions will generate:

- **Carbon leakage**: by producing PET in the EU, CPME members use a consistent amount of renewable energy and are subject to stringent environmental legislations at European and local level.
- **Job Losses** in the European Union.
- **Climate Change**: an increase in the speed of climate change because of the higher emissions per MT of PET generated in the production outside the EU.
- **Shortage of a strategic raw material** used to produce several indispensable items: Syringes, blood tubes, masks, protective packaging.

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Critical Issues: TDI

Unfair competition from non-EU manufacturers

- EU is the **only macro-Region** not having any Trade Defence Instruments (TDI) in place on PET imports.
- China alone has **an excess** PET capacity (delta between domestic demand and domestic production) greater than the total EU demand.
- In addition, EU PET manufactures are penalised **by import duty on MEG**, a recent provisional duty applied to imports from USA and KSA.

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CPME Policy Paper

Coming soon: CPME Consultation Paper

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The PET Manufacturers in Europe are ready to support their customers in reaching the goals set by the Circular Economy Directive

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Disclaimer

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