



The plastics value chain in transition

Bernard Merx
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DOING NOTHING IS NOT AN OPTION

BERNARD MERKX

- Entrepreneur
- Managing Director EuropeanPlasticsConverters
- Secretary General PET Sheet Europe
- Honorary President PlasticsRecyclersEurope
- Co-Founder WasteFreeOceans
- Board Member & CIO Plastix AS Denmark
- CEO / owner GreenWavePlastics
- And others



European Plastics Converters in a few words

Brussels based European umbrella organization established to represent the interests of the plastics converting industry. An association for national associations and sectors

Representing around **50.000 converting companies** in Europe, many of them SME and family owned.

Direct employment: around 1,6 million FTE's.

Indirect employment in our supply chains likely more than double

Joint turnover: around 300 billion Euros

Our members convert plastics raw materials into products that are used in all industrial sectors of the European and global economies

Many converters also operate integrated recycling facilities and / or own mechanical recycling facilities

Main topics EuPC Q1-Q4 2023 in random order



Poly Vision : transition of EuPC & PCE

CPR revision status quo – recycled content / post-use

CPA status quo, CEN standardisation requests

ESPR revision proposal

EPR B&C introduction in countries (France example)

SUP implementation in EU Member States

Taxonomy

PPWR revision proposal

ELV-R revision proposal

Waste Shipment Regulation revision

JRC End of Waste Criteria

CEN standards amendments, including DDS (demand driven standards)

REACH – legacy

Mass balance (predominantly for chemical recycling processes)

EU projects & ECP4 (Innovation Platform)

And more

EuPC Senior Executives Forum



The EuPC Senior Executives Forum (SEF) was founded in 2006 to **advise the EuPC Steering Committee and to provide strategic guidance** on the plastics converting industry's most important developments. The SEF is composed of **industry leaders and senior-level executives from the top European plastics converters** and is open to all interested converting companies.

EuPC Partners Executive Forum



The EuPC Partners Executives Forum (PEF) is founded in 2023 to **bring strategic partners in our several supply chains into direct dialogues with our member associations, sector groups, companies and business leaders** in the plastics converting industry.

Strategic partners will play an important role in the acceleration of our industry into a more circular and innovative way of working.

The PEF is composed of **industry leaders and senior-level executives from leading supply chain partners (i.e. producers and suppliers of equipment, moulds, energy, raw materials, additives, AI and much more)**

PEF partners will however not have any voting rights in EuPC

-6000

-8000



PET Sheet Europe represents some 22 leading European converters in the PET sheet market. There is growing interest from additional converters to join this EuPC sector group

In close cooperation between PetCore and EuPC / PET sheet Europe we have formed a Consortium to work on 'Functional Barriers'

Tomorrow in Session 3 you will get more details on the extensive work that has been done in recent months.



IN TODAY'S CONTEXT

GLOBAL WARMING & PLASTICS BASHING

Opportunities

Climate change

Circularity

Decarbonization

Innovation

Communication

Climate Change / Challenges & Pollution

Sustainability & Vox Populi (Conference NL EU Presidency 2016)



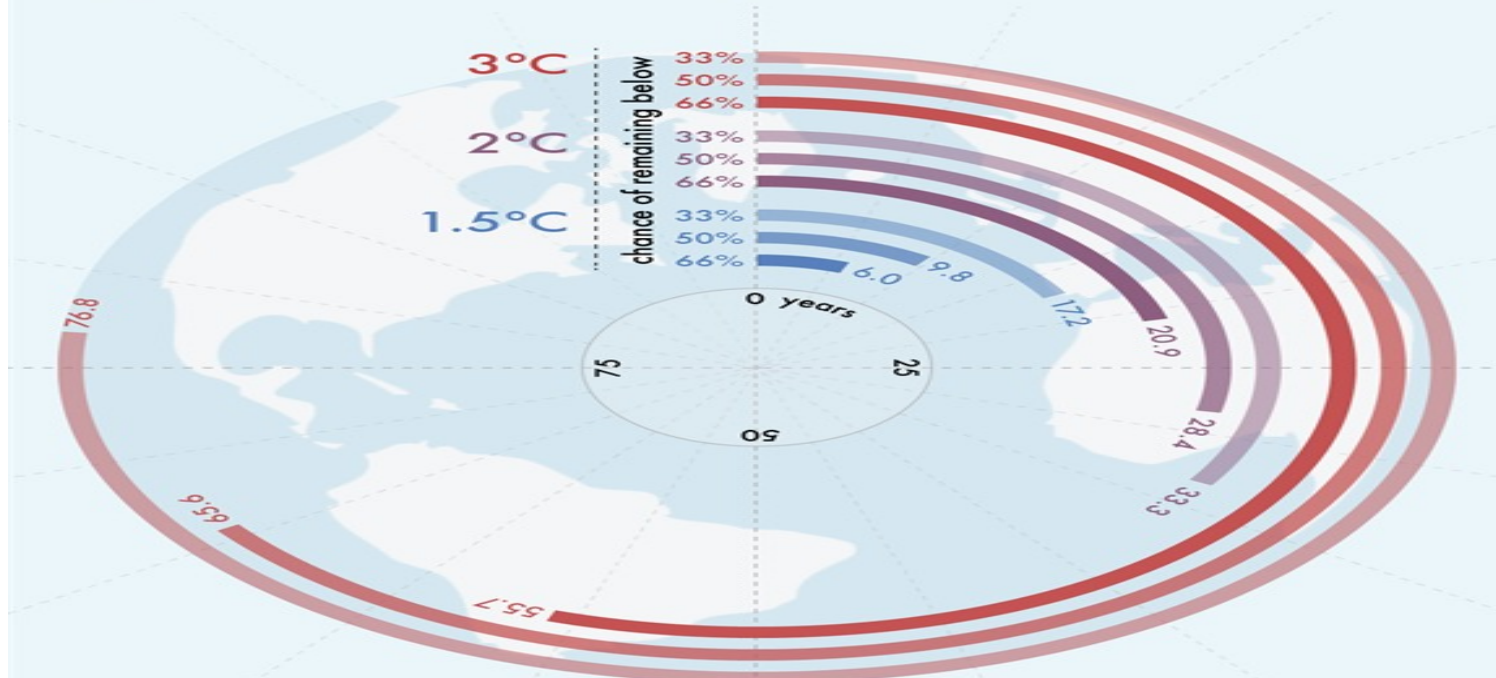
CLIMATE CHANGE



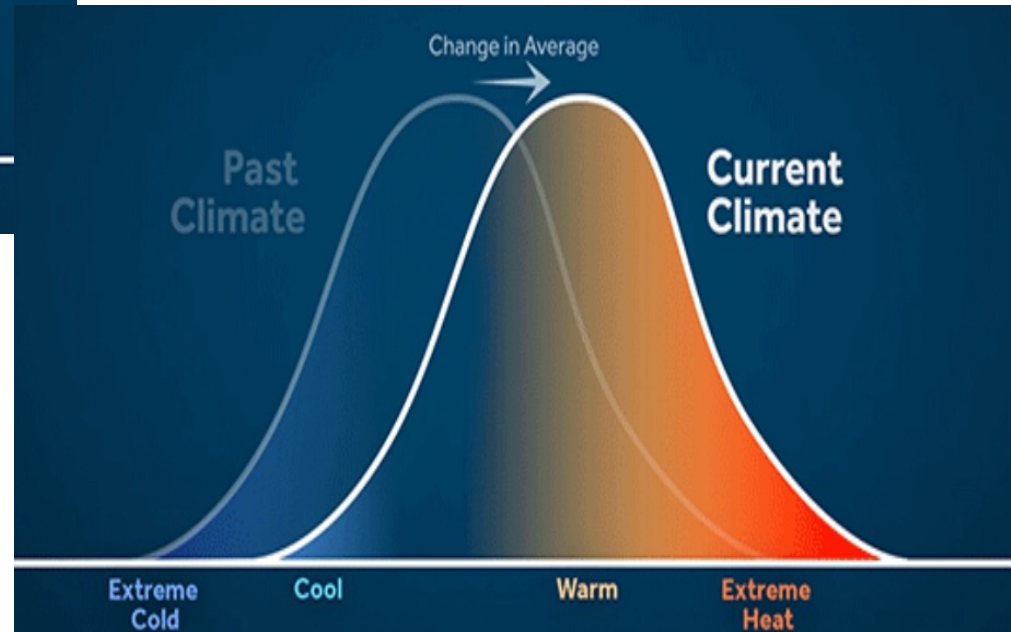
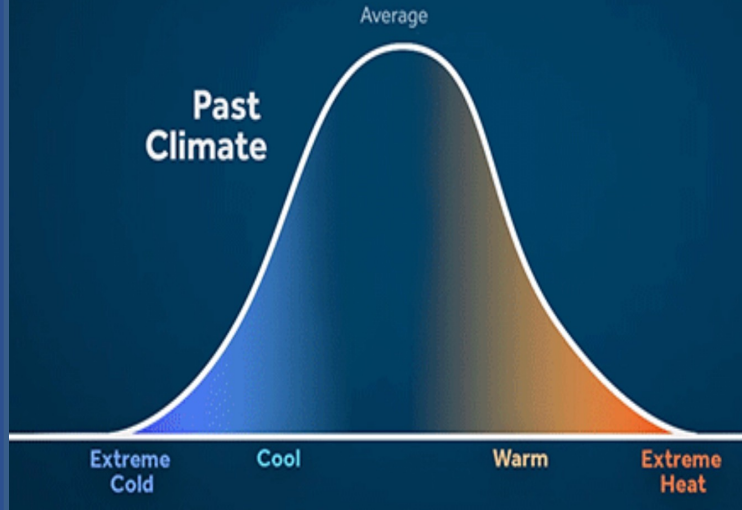
Climate Change / Challenges & Pollution

Carbon Countdown

How many years of current emissions would use up the IPCC's carbon budgets for different levels of warming?



SMALL CHANGE IN AVERAGE BIG CHANGE IN EXTREMES



PLASTICS SUMMIT GLOBAL EVENT LISBOA OCTOBER 2022 (SESSION 4 CLIMATE CHANGE)



WFO IS PRIVILEGED TO PARTNER WITH SANTA MARIA MANUELA AND ITS FANTASTIC CREW



SAVE THE DATE: NEXT PLASTICS SUMMIT GLOBAL EVENT LISBOA 6 OCTOBER 2025





CIRCULARITY – ENVIRONMENTAL SOCIAL GOVERNANCE CORPORATE SUSTAINABILITY REPORTING DIRECTIVE a.o.





Mechanical recycling & chemical recycling

What is needed and why ?

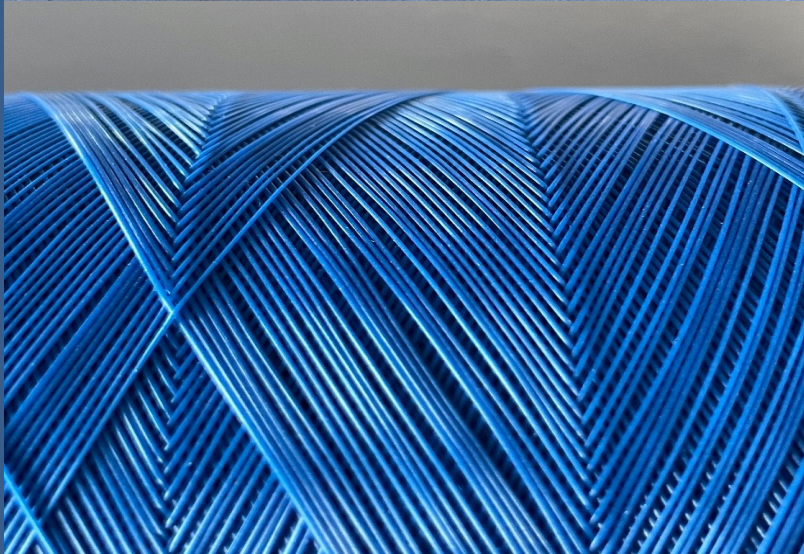
MORE



MOnitoring Recyclates for Europe

Together we will achieve **MORE**

CIRCULAR ROPES -> SOME 7 YEARS OF CONTINUOUS QUALITY IMPROVEMENT



rPET DANUBE

Role of brand-owners & retailers in B2C



IMPROVED WASTE MANAGEMENT

Finally, after some 20 years, a breakthrough in Dutch politics

The Dutch have introduced deposit return system now also on cans (April 2023) and small bottles (July 2021) – as anti litter & circularity measure → Q4-2023 <<75% less litter on the streets



Show good examples

(packaging is not only SUP)



Show good examples APIP member FAPIL

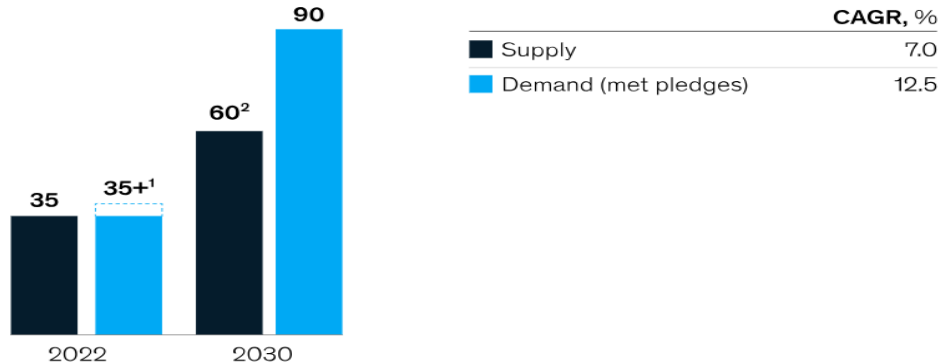


Challenges ahead → urban mining ?



The demand for recycled plastics is expected to far outpace the available supply by 2030.

Recycled plastic supply-and-demand balance, million tons per year



¹The 2022 demand figure is limited by high-quality-materials supply constraints, putting upward pressure on prices. Real unmet demand for high-quality materials is higher.

²The 2030 supply figure refers to the current-trajectory scenario.

Source: McKinsey analysis

McKinsey & Company

Recycled content rates in each plastics application

7.2%
(4 mt)



2018

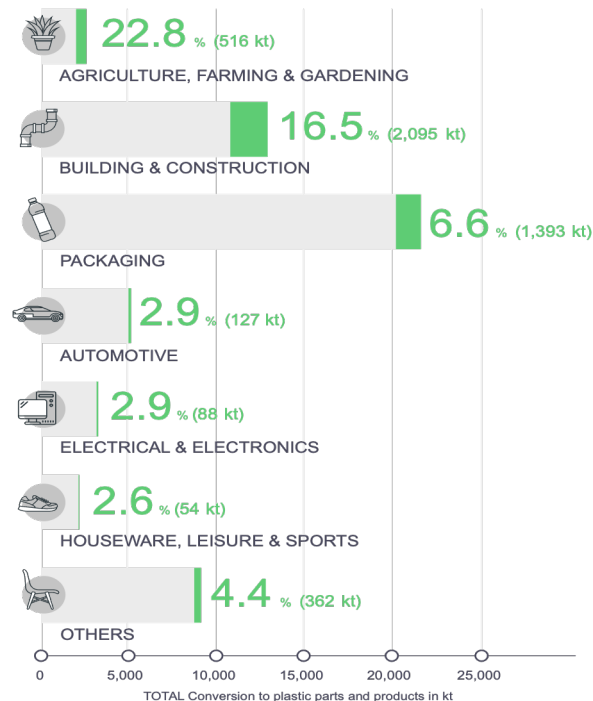
Recycled content in new products



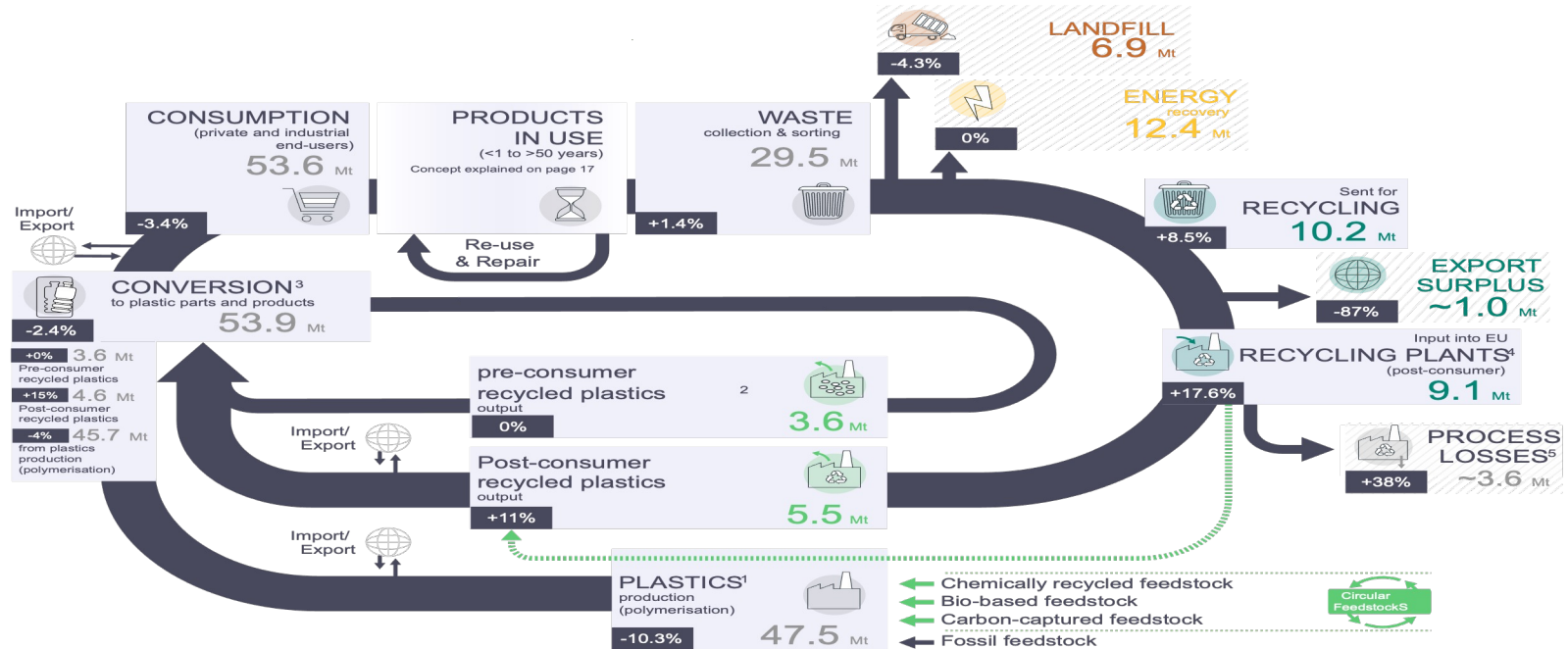
2020

8.5%
(4.6 mt)

- The agriculture sector is the one with the highest percentage of recycled content in its products (22.8%), followed by the building and construction sector (16.5%).



The Circular economy overview & evolution



¹ Does not include elastomers, adhesives, coatings and sealants. ² Pre-consumer plastics waste is mainly originating from the plastics conversion and from plastics production (polymerisation) to a lesser extent. ³ Compounding of recycled plastics and plastics from polymerization may occur prior conversion. ⁴ Includes chemical recycling. ⁵ Process losses are usually sent to energy recovery or landfill. Parts of plastics residues could be a potential future source of

Summary : mandatory recycled content



Application	Sub-application/polymer	Regulation	Status	Level	Comment
Packaging	Bottles	SUPD	In force	2025 : 25% PET bottles 2030 : 30% all bottles	
Packaging		PPWR	Proposed	2030 : 10% to 35% 2040 : 50-65%	Lower target for "sensitive packaging"
B&C		CPR	Proposed. Exact levels will be defined via CEN TCs	2030 : 20-30% 2035 : 25-35%	Estimate industry
Automotive		ELV	Proposed	2030 : 25%	EC proposal; post-consumer <u>plastic</u> waste only



Umbrella compliance scheme harmonizing existing certification systems for converters of polymeric materials in Europe



EUROPEAN FOOD CONTACT PLASTICS CONFERENCE

11 & 12 March 2024
BluePoint Brussels



[Early Bird Registration](#) until February 9: Use promo code "[EarlyBirds](#)" for 15% discount!

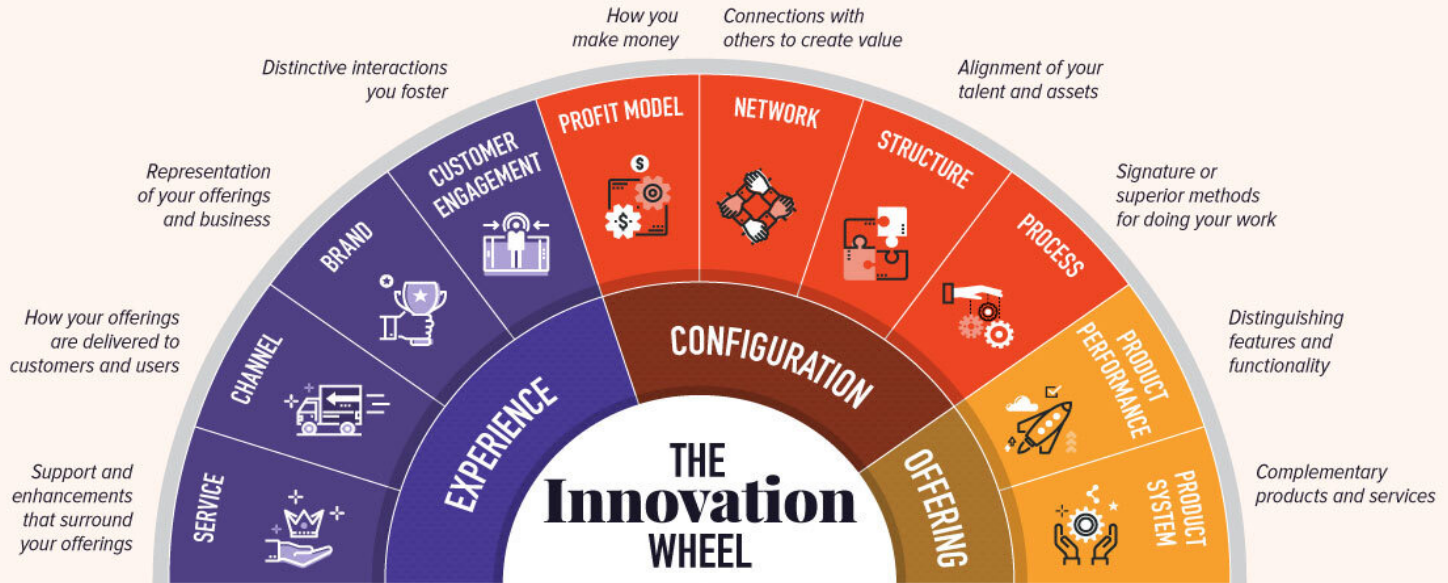
HIGHLIGHTS FROM THE AGENDA

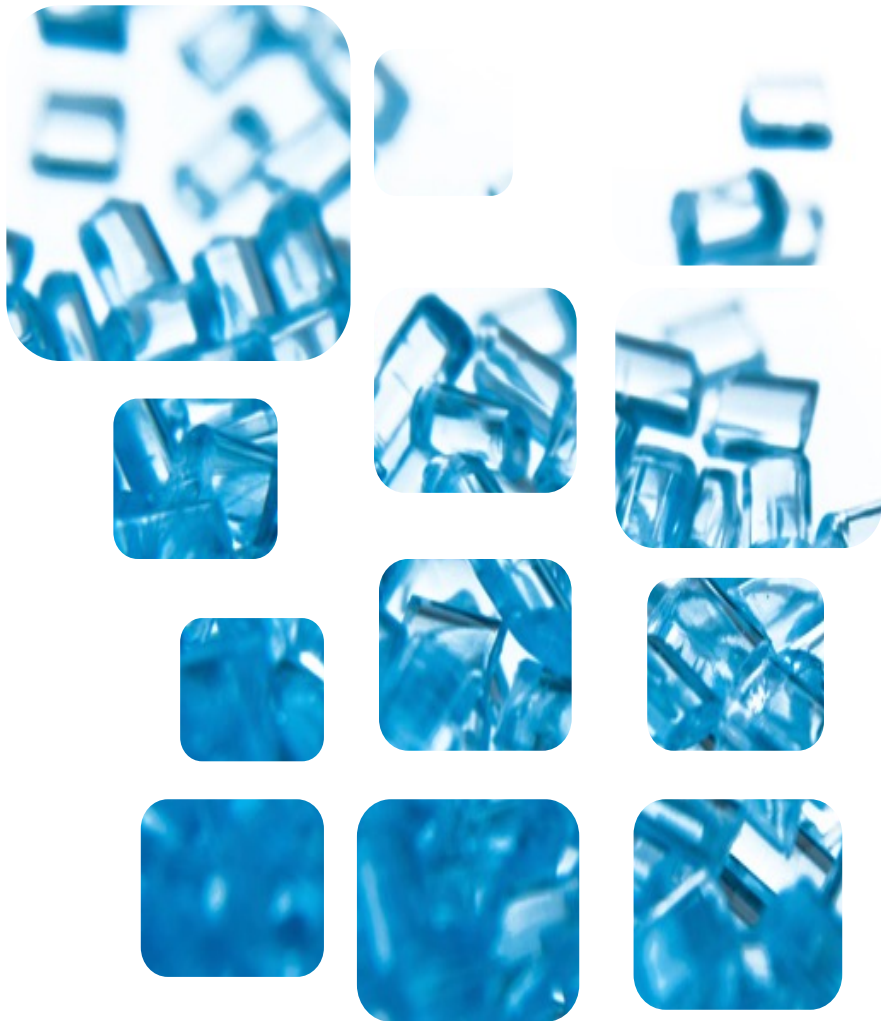
- OTTO LINHER (EC – DG GROW) on the **EU Chemicals Strategy for Sustainability**
- MATTIA PELLEGRINI (EC - DG ENVI) on the **Packaging & Packaging Waste Regulation**
- BASTIAAN SCHUPP (EC – DG SANTE) on **EU Food Contact Materials Legislations**
- LUIGI GARAVAGLIA (ILPA GROUP) on **FCM- and Novel technology-Recycling**
- CAROLINE RODE (BELGIAN FEDERAL AGENCY FOR SAFETY OF THE FOOD CHAIN) on **Enforcement of FCM Legislation**
- DR. KRASIMIR ALEKSANDROV (KIT) on **PTFE Incineration Studies**

Communication



UNDERSTANDING THE 10 Types of Innovation





Boosting innovation by implementing the synergies between industry and research: EuPC and ECP4 networks come together





An Animated Infographic

What Is Decarbonization, and How Do We Do It?



Illustration by Julie Winegard



Scope 1: direct emissions

Scope 1 emissions are direct emissions from company-owned and controlled resources. In other words, emissions are released into the atmosphere as a direct result of a set of activities, at a firm level. It is divided into four categories: stationary combustion (e.g. fuels, heating sources). All fuels that produce GHG emissions must be included in scope 1.

Then, **mobile combustion** is all vehicles owned or controlled by a firm, burning fuel (e.g. cars, vans, trucks).

Fugitive emissions are leaks from greenhouse gases (e.g. refrigeration, air conditioning units). It is important to note that refrigerant gases are a thousand times more dangerous than CO₂ emissions. Companies are encouraged to report these emissions.

Process emissions are released during industrial processes, and on-site manufacturing (e.g. production of CO₂ during cement manufacturing, factory fumes, chemicals).

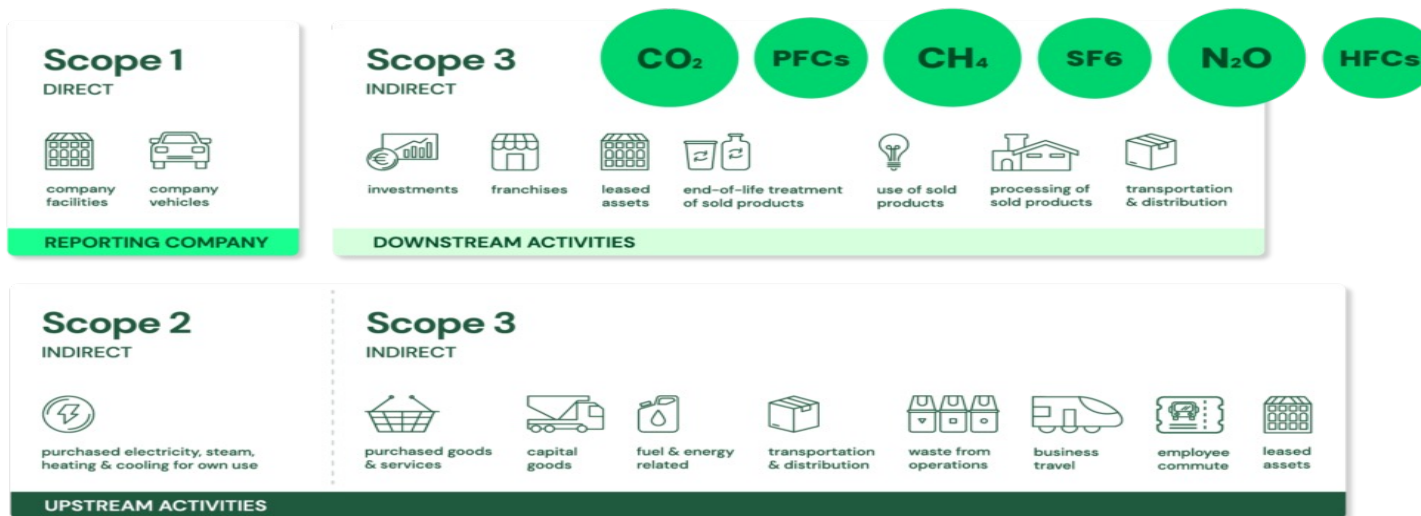


Scope 2: indirect emissions – owned

Scope 2 emissions are indirect emissions from the generation of purchased energy, from a utility provider. In other words, all GHG emissions released in the atmosphere, from the **consumption of purchased electricity, steam, heat and cooling**.

For most organisations, electricity will be the unique source of scope 2 emissions. Simply stated, [the energy consumed falls into two scopes](#): Scope 2 covers the electricity consumed by the end-user. Scope 3 covers the energy used by the utilities during transmission and distribution (T&D losses).

Decarbonization → Scope 3



GHG Protocol

Scope 3 emissions

These are also indirect emissions – meaning those not produced by the company itself – but they differ from Scope 2 as they cover those produced by customers using the company’s products or those produced by suppliers making products that the company uses.

No prizes for guessing which of the three scopes is the hardest to tackle – and it is often the most significant

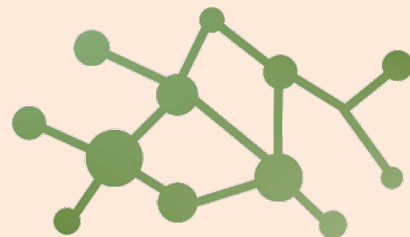
Decarbonization:

- **Supply chain transparency & evaluation. (Scope 3)**
- **Potential Role of carbon credits ??**

- **LCA's (based on circularity)**

Life cycle assessment (LCA) is a methodological tool used to quantitatively analyse the life cycle of products/activities within the context of environmental impact. In LCA, the total life cycle of a product or activity is considered, from the extraction of resource materials to the waste and waste treatment stage, also referred to as from the cradle to the grave. For this purpose, specific calculation tools are being applied.

- **Role of biobased**
- **Role of energy transition (incl. in equipment, logistics)**
- **Role of AI, robotica**
- **Role of other business models**
- **Several others, i.e. global versus regional**



**Polymers for
Europe Alliance**

**FORCE MAJEURE & PERFORMANCE ANALYSIS OF
EUROPEAN POLYMER PRODUCERS – 2024**

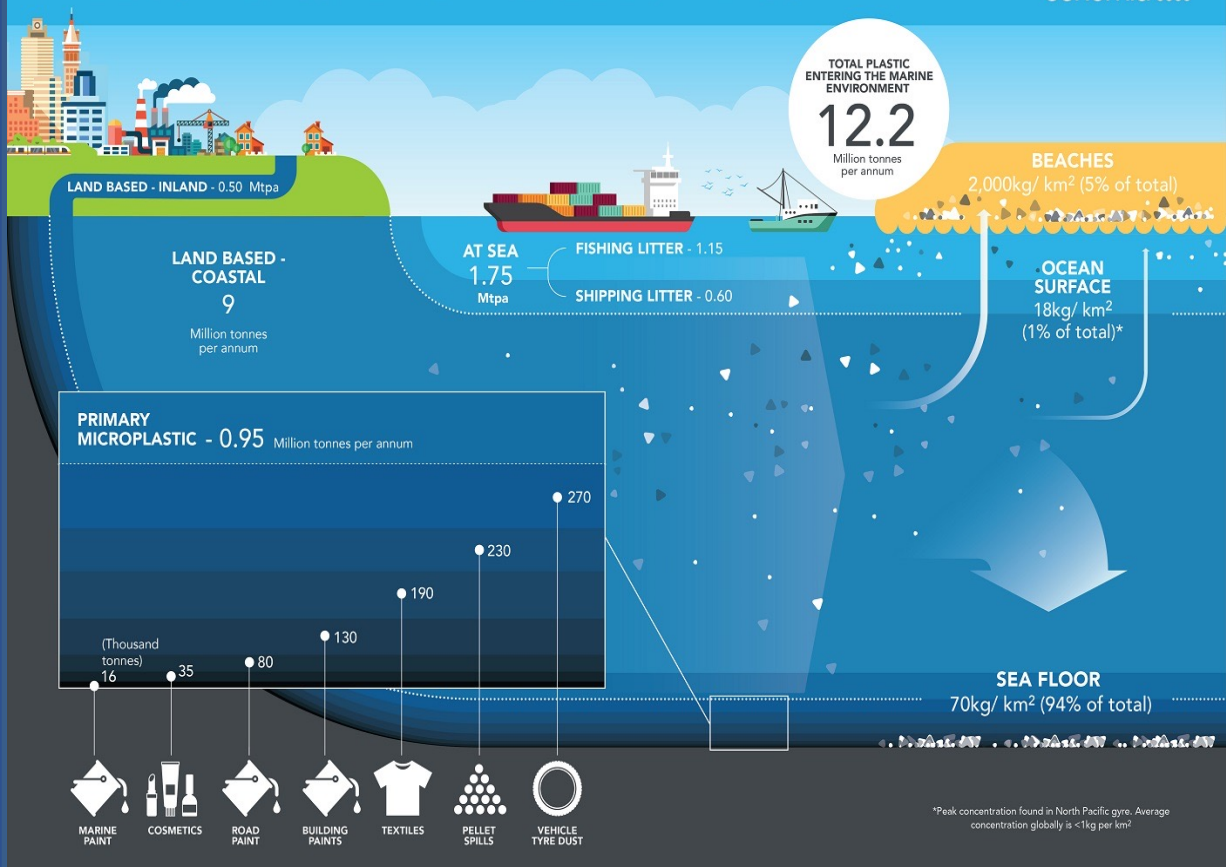


OCS & Microplastics update



PLASTICS IN THE MARINE ENVIRONMENT: WHERE DO THEY COME FROM? WHERE DO THEY GO?

economia



- Pellet loss is the **second largest source of primary microplastics**
- The plastics industry and its value chain has a direct control over pellet loss!

Microplastics Regulations summary



Intentional microplastics restriction

- Foresees restriction of intentional uses with time limited derogation

Unintentional microplastics

- [Proposal for a Regulation on preventing pellet losses to reduce microplastic pollution](#)
- Tyres** : Abrasion limits will be set in the new E7 standard

Other sources of unintentional microplastics will be regulated under existing regulatory framework through implementing acts (i.e. later)

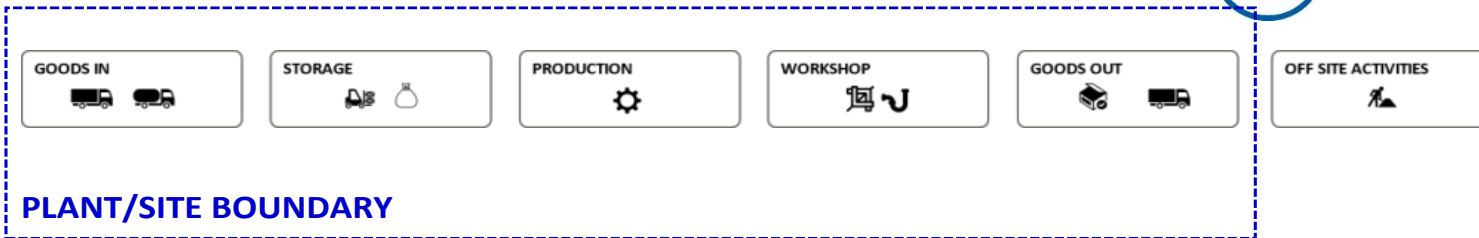
- **Textiles and Road Paints** via [Ecodesign for Sustainable Products Regulation](#)
- **Geotextiles** via Construction Products Regulation
- **Detergent capsules** measures could be taken under the detergent regulation

Obligations related to pellets, flakes, (dust)

- Safety/handling information (Safety Data sheet)
- Reporting obligations on microplastics (pellets including dust and machining) : declaration of industrial use must include transport

- Prevent pellet losses (dust, machining not in scope)
- All industrial actors
- Risk assessment plan (to be notified)
- Install equipment and implement procedure (indicative list in annex II)
- Self-declaration of conformity
- Obligation for medium and large companies handling more than 1000 T per site to be certified by accredited certification body (every 3,4 years)
- Members States : registers, reporting to EC, foresee penalties and enforcement
- Facilitated access to justice of NGOs and compensation system

Typical operations at risk of pellet spills/losses



GOODS IN

- Receiving area for sacks
- Receiving area for bulk containers
- Loading point for silo trucks
- Transport equipment
- Connect/Disconnect location/operation

STORAGE

- Handling of sacks
- Handling of bulk containers
- Silo area
- Outgoing warehouse
- Conveying lines and couplings
- Goods dispatch/loading ramp

PRODUCTION

- Feeding points
- Sampling area
- Shredders
- Mixing units
- Extruders
- Internal recovery unit
- Goods dispatch/loading ramp
- Sewage

WORKSHOP

- Cutting
- Drilling
- Scrap grinding

GOODS OUT

- Handling of sacks
- Handling of bulk containers
- Trucks loading/unloading

OFF SITE

- Processing of pellets



Global Plastics Treaty

INC-2 in Paris in May and INC-3 in Nairobi did not lead to major decisions

INC-4 Draft proposal has been sent out. Outcomes potentially will have some effect on global trade, once accepted. Next meeting April Ottawa Canada.

EuPC main position to Global Plastics Treaty :

Alternative solutions and materials **may look better but often are not !** → LCA's may be fair tool to compare

Close the landfills around the world as soon as possible, as they are identified as one of the major sources of littering & major source of methane gas emissions



**Save the date : EuPC Conference
“A circular future with plastics”**

11 & 12 June 2024 Brussels



The plastics value chain in transition towards more circularity
