



Biobased plastics in a circular economy

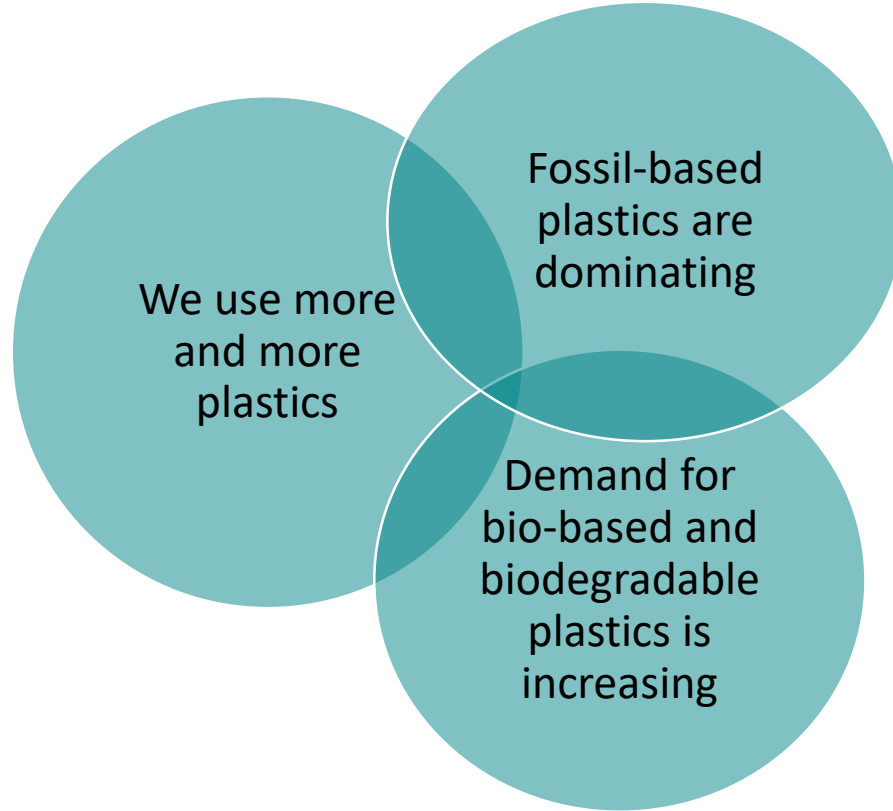
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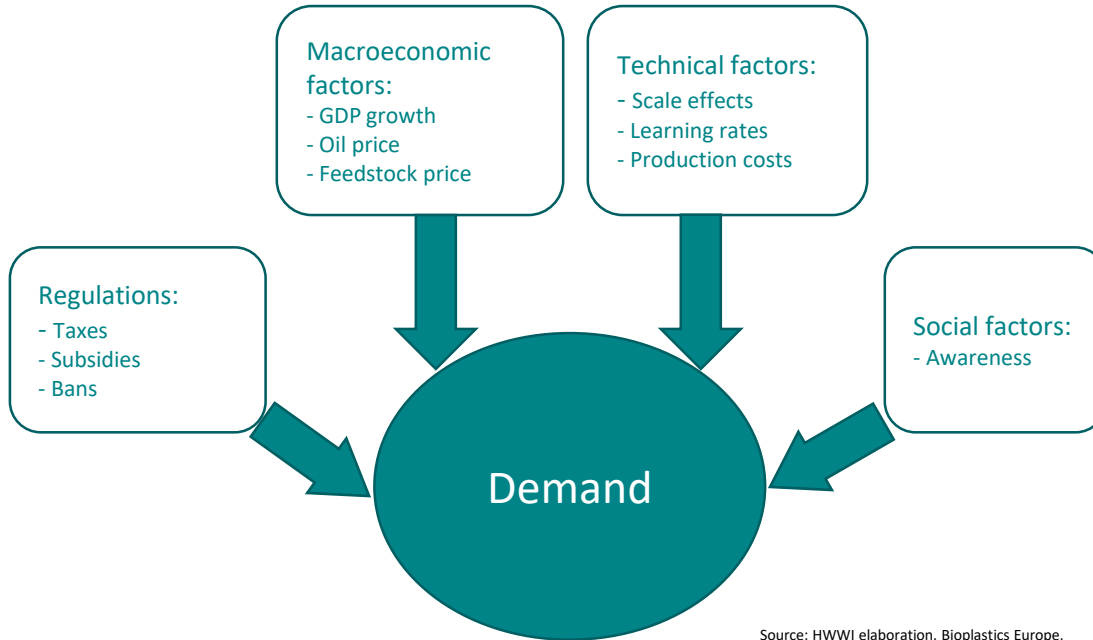
IVL Swedish Environmental Research Institute

Sweden's leading organisation for applied
environmental and sustainability research

We know for a fact that:



Factors affecting the demand for bio-based and biodegradable plastics



Source: HWWI elaboration. Bioplastics Europe.

Plastics have advantages, but also disadvantages

There are environmental challenges linked to every part of the life cycle of plastics.

Three aspects are central:

Climate impact

- Dependence on fossil fuels
- Energy-intensive manufacturing processes
- Incineration of plastic waste

Leakage of plastics (micro and macro)

- Macro plastics become micro plastics
- Examples of sources: littering, abrasion of car tyres, artificial turfs.

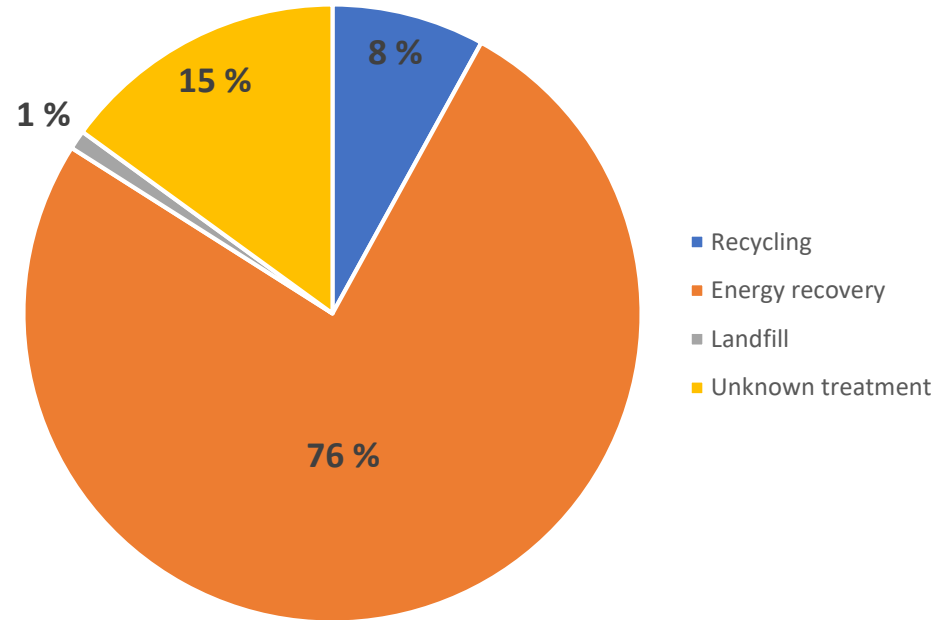
Hazardous substances in plastics

- Additives improving the properties of plastics may be hazardous to the environment and to human health.



Plastics finally end up as waste, example from Sweden

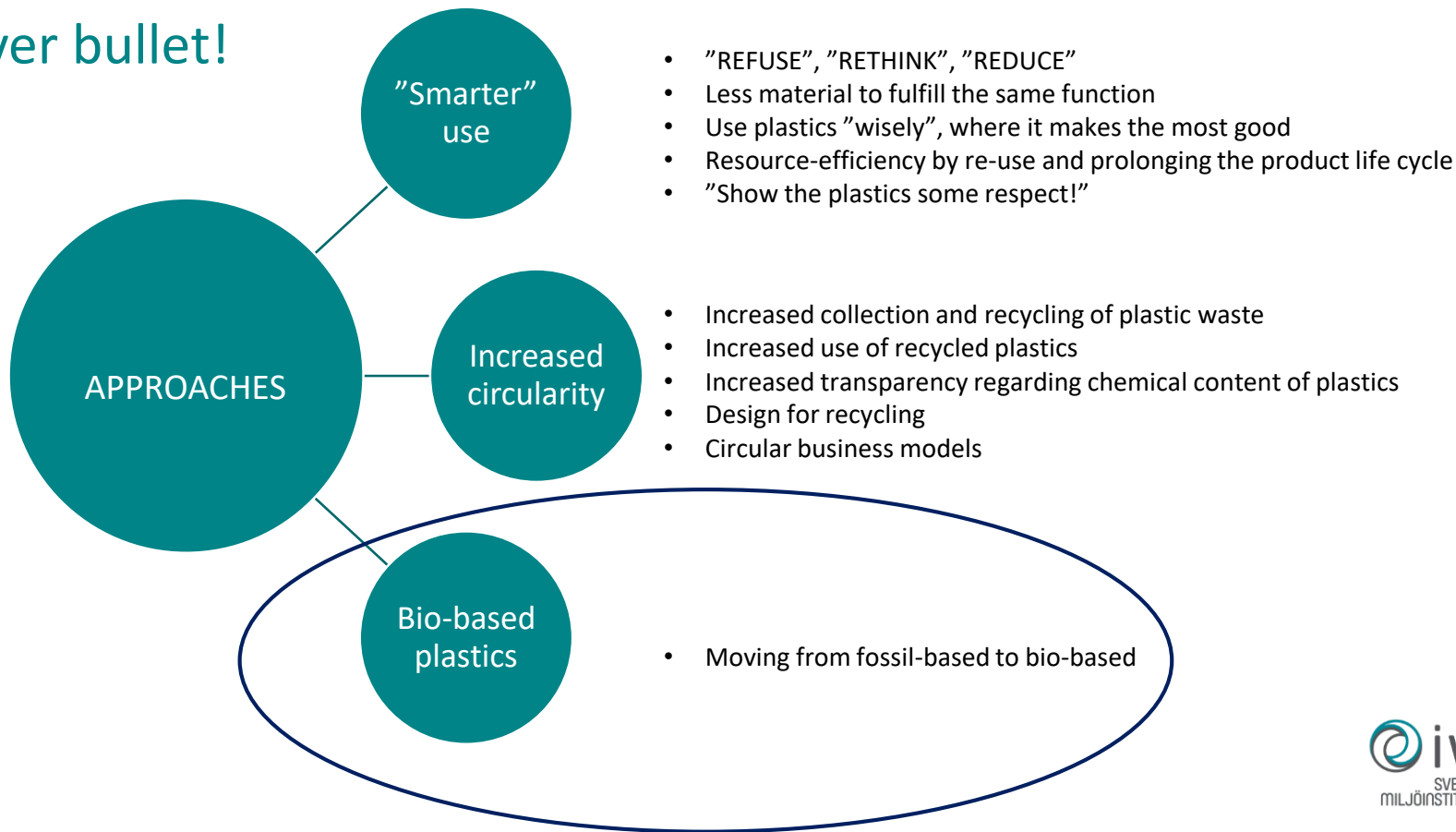
- Totally 1,7 million tonnes of plastic waste is generated every year in Sweden
- Around 60% of the plastic waste ends up in mixed waste fractions

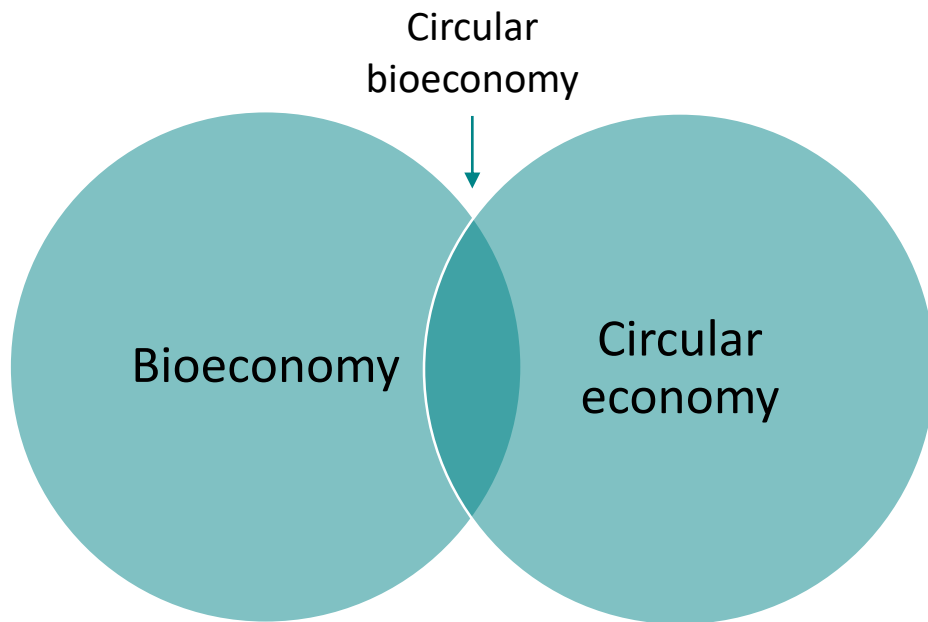


Source: SMED (2019). Reference year 2016/2017.

Approaches to optimise the benefits of plastics

No silver bullet!





Source: UNIBO, Bioplastics Europe



HAW HAMBURG Coordinator

Presented by: Dr. Jelena Barbir
(Lead Project Manager)

BIO-PLASTICS EUROPE



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BIO-PLASTICS EUROPE project website: www.bioplasticseurope.eu



BIO-PLASTICS EUROPE

Developing and Implementing Sustainability-Based Solutions for Bio-Based Plastic Production and Use to Preserve Land and Sea Environmental Quality in Europe

October 2019 – September 2023



Project kicked-off in October 2019



PARTNERSHIP



22 partners
13 countries
8.5 million Euros



CONTACT INFO

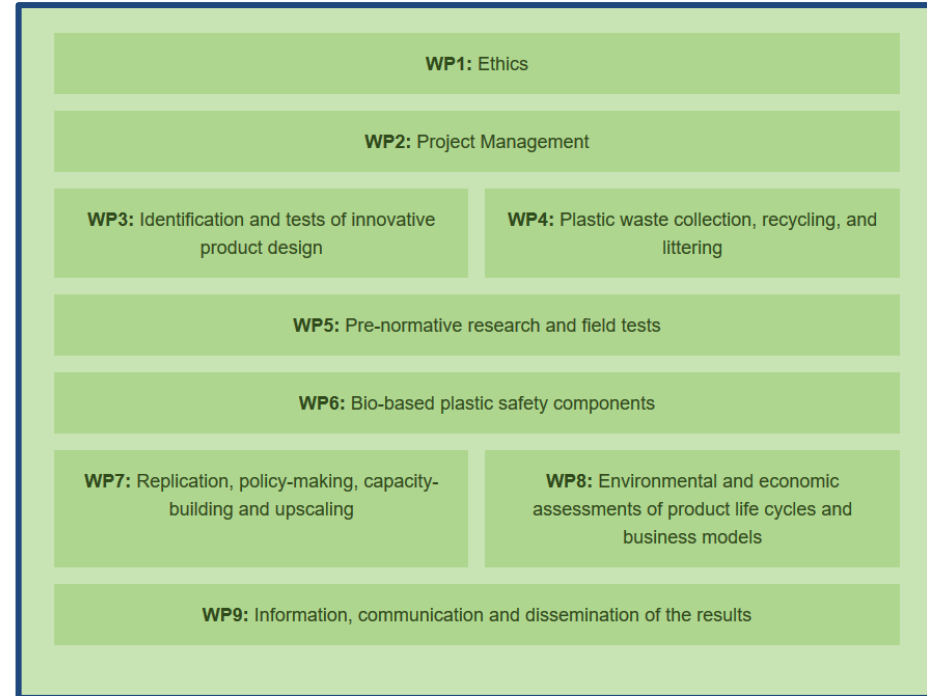
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The main objective:

To develop sustainable strategies and solutions for bio-based plastic products, as well as the to develop approaches focused on circular innovation for the whole bioplastics system. These may be deployed to support policy-making, innovation and technology transfer.

Objective 6:
Communication Strategy
+ cooperative knowledge
sharing of Best Practices and
Lessons Learned
WP9



EXPECTED RESULTS

FOCUS

Cutlery, Soft and Rigid Packaging,

Agricultural Mulch Film, Toys and Aquatic Materials

● INNOVATIVE MATERIALS

to foster and encourage deployment of innovative bio-based and biodegradable materials

● STAKEHOLDERS ENGAGEMENT

to ensure strong commitment of producers, politicians, industrial and private consumers

● BUSINESS MODELS

to experiment with innovative business models by incorporating circularity and sustainability to maximize the value of materials along the entire value chain

● SAFETY PROTOCOLS

to ensure the safe use and end-of-life management on innovative bio-based plastics

Where we stand now....



Within the BIO-PLASTICS EUROPE project, the following end-products are experimented:

- **PACKAGING (rigid and flexible)**
- **TOYS**
- **AGRICULTURAL MULCH FILM**
- **CUTLERY**
- **AQUATIC MATERIALS: geo-membrane, fishing baits, fishing crates**

First group of 5 materials developed

Thank you for listening!

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