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ALPO workshop – Session 3

Biobased plastics made from renewable and circular resources

Gilles Crahay, CEO at PolyPea

PolyPea

PolyPea

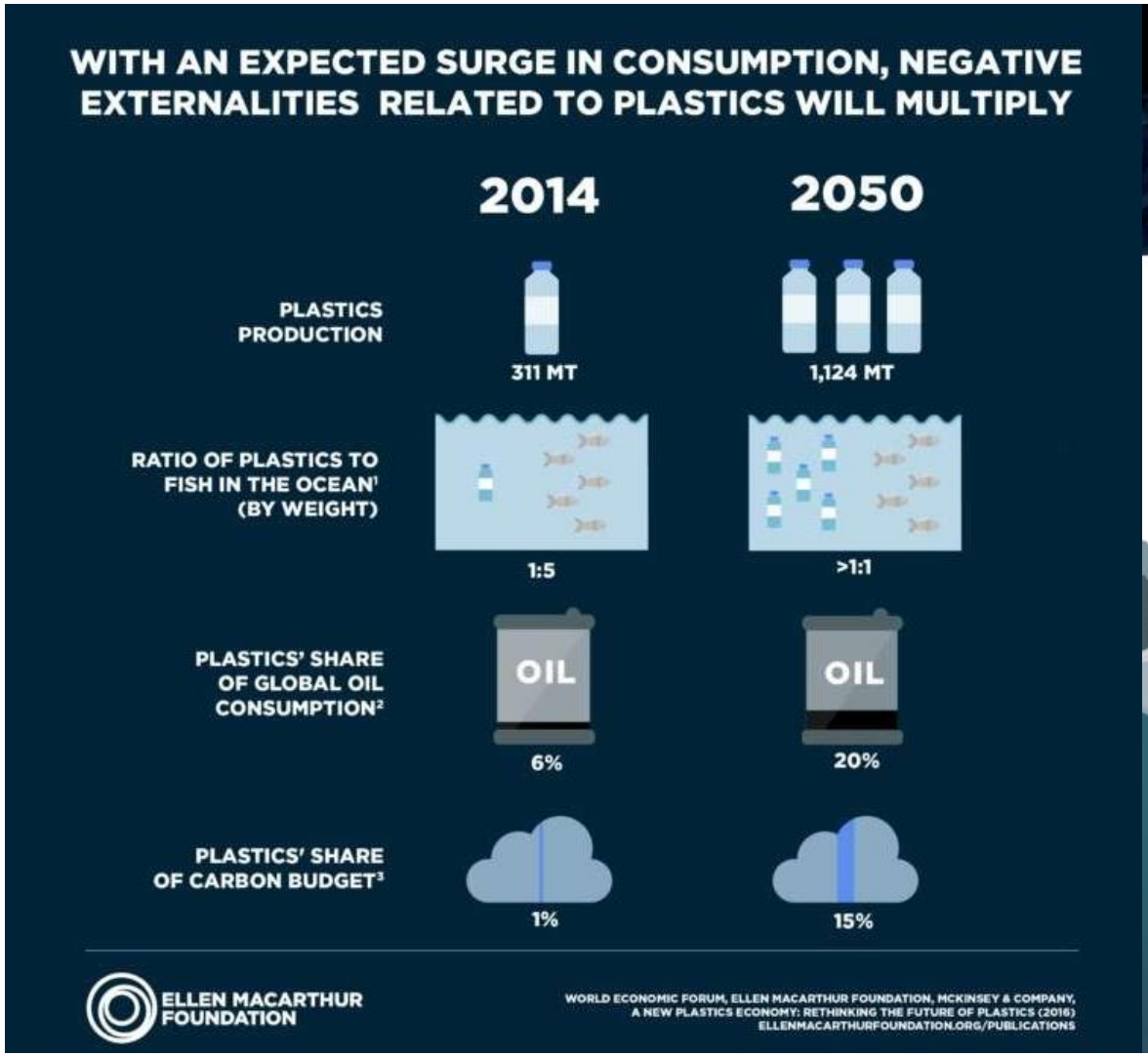
- Founded in 2020, **start-up** in R&D stage.
- Developing a **bioplastic** made from **pea starch.**
- Active in **circular economy** and **eco-design.**
- Research program in collaboration with UMONS.
- Website : www.polypea.be (available in French)

cosucra
Groupe Warcoing

UMONS
Université de Mons

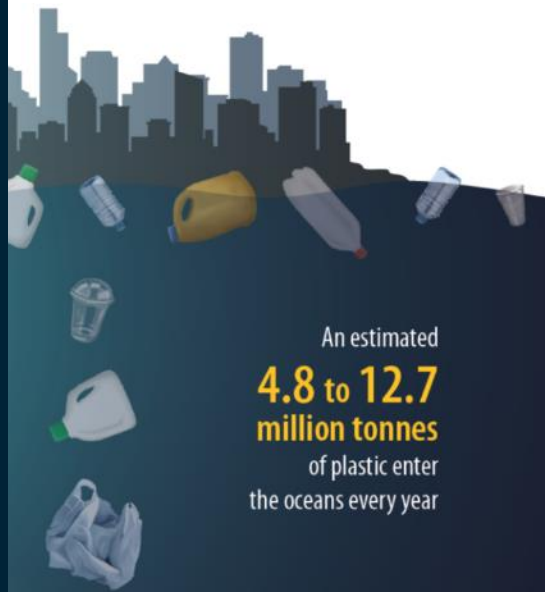
Wallonie

Plastic pollution



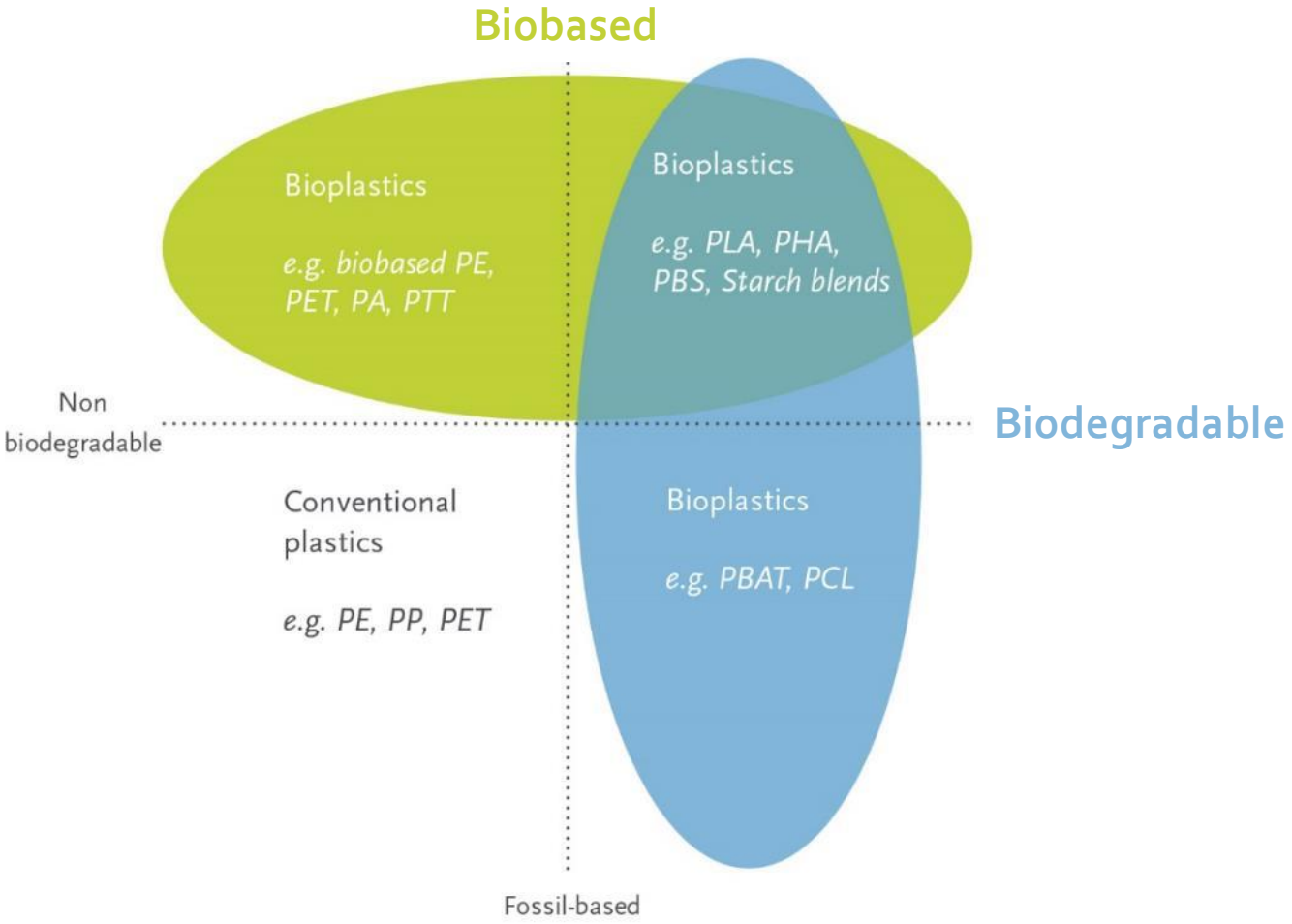
Source : Ellen MacArthur Foundation (2017)

Source : CIEL (2019)



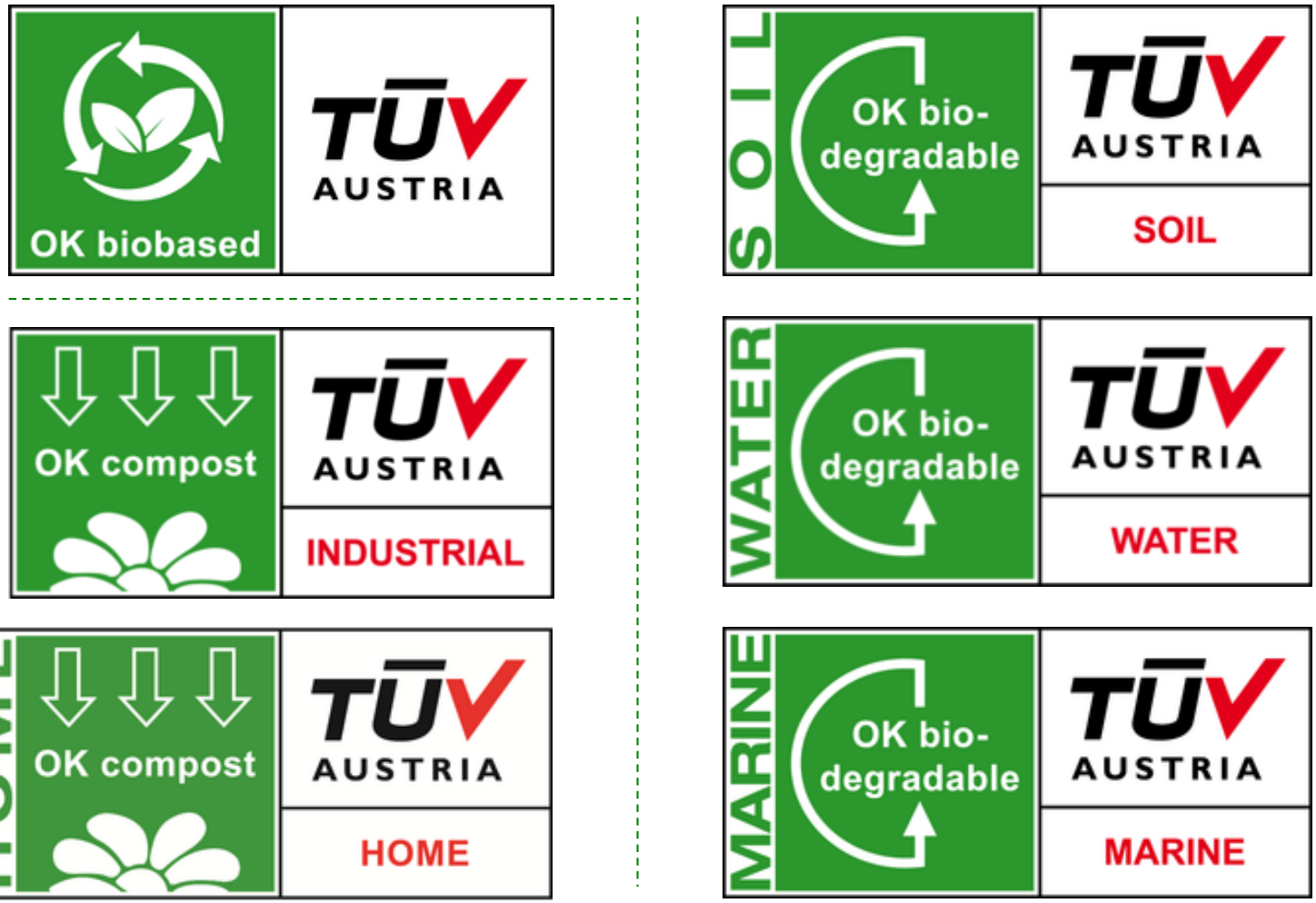
Source : European Parliament (2018)

Definition of bioplastics



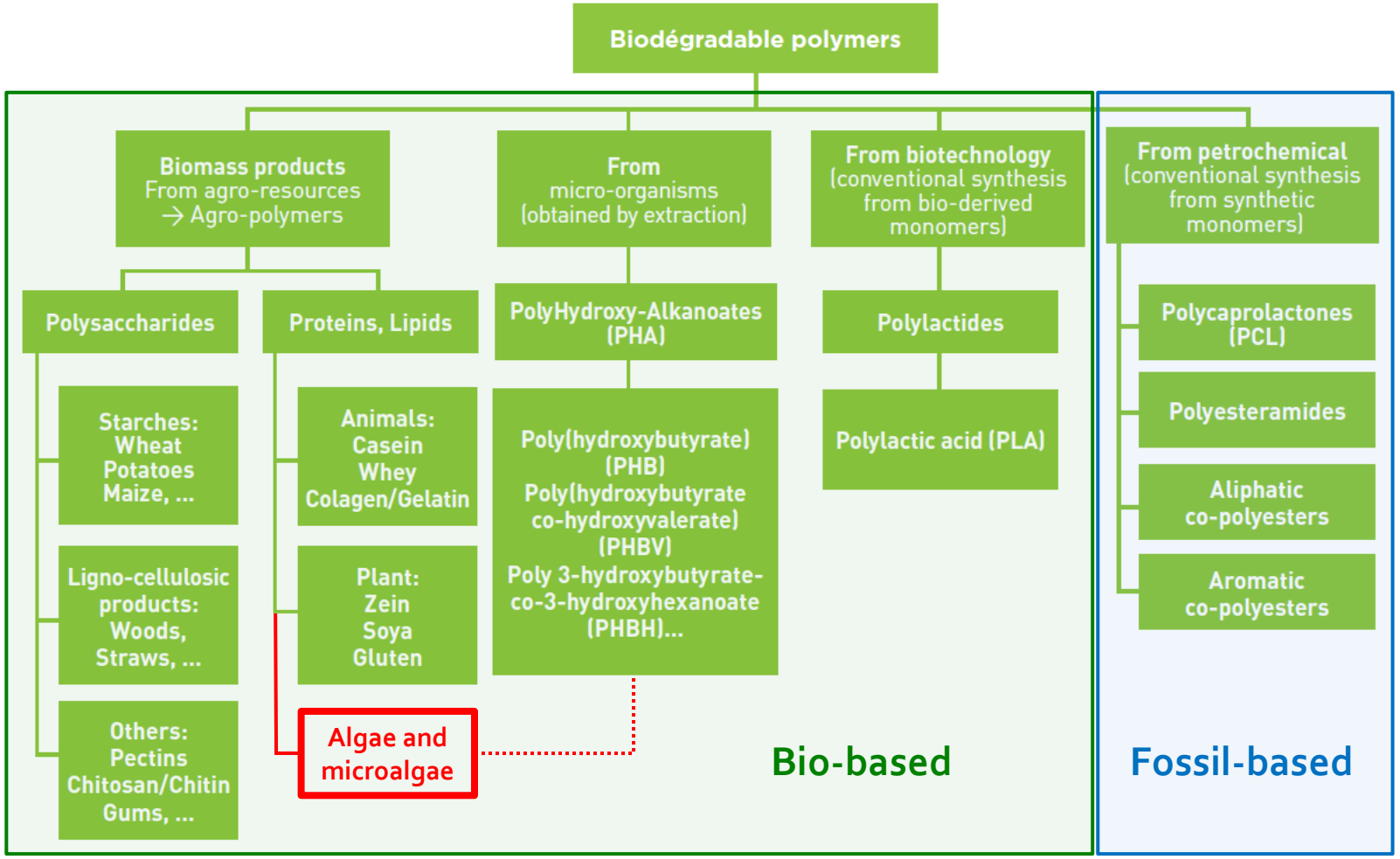
Source : European Bioplastics, nova-Institute (2018)

Biobased and biodegradable certifications (EN 13432)



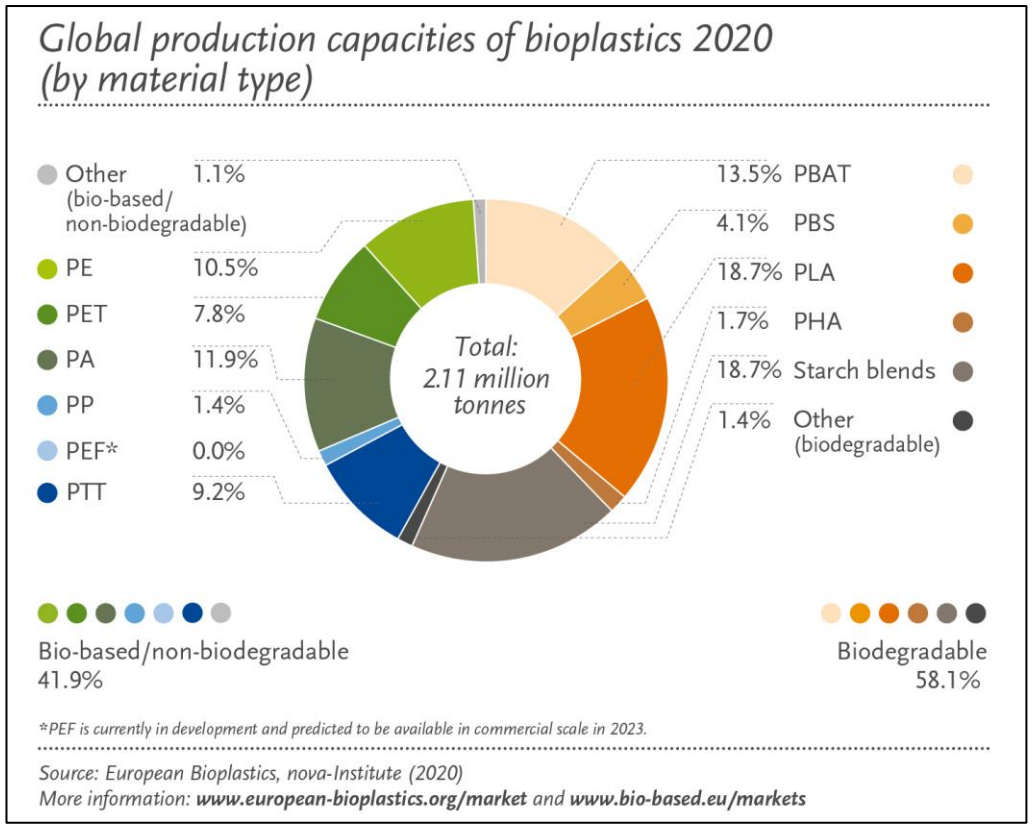
Source : TUV Austria Belgium (2020)

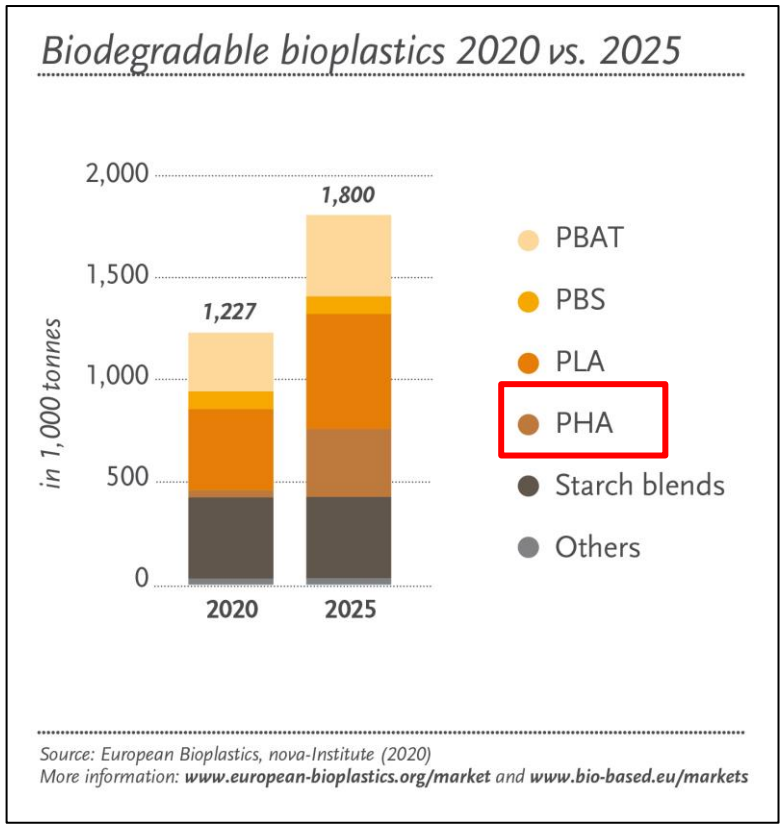
Biodegradable bioplastics by sources



Source : Luc Avérous, 2008

Bioplastics: an emerging market



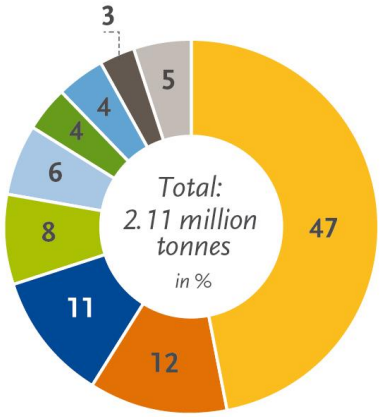


Rapidly growing market.

PHA is expected to have the biggest growth in the coming years.

Bioplastics commercial applications

Global production capacities of bioplastics in 2020 (by market segment)



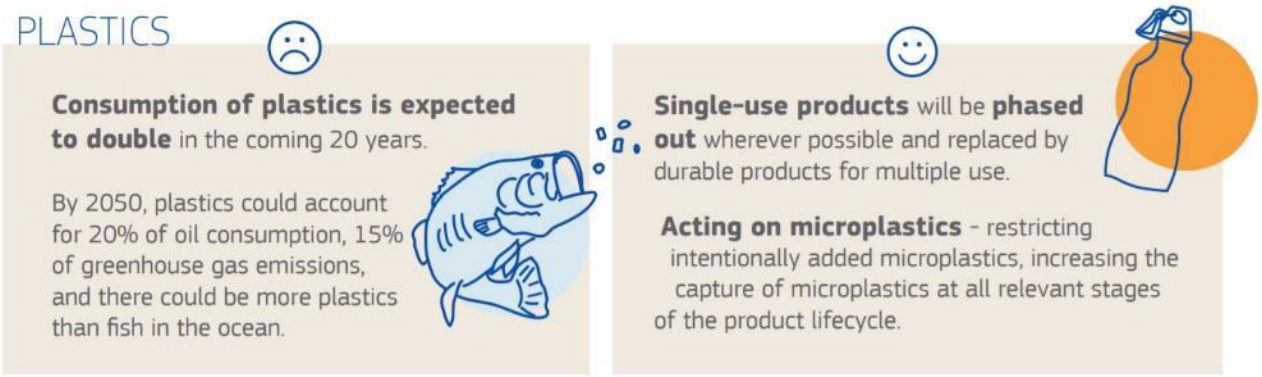
- Packaging (flexible & rigid)
- Consumer goods
- Textiles
- Agriculture & horticulture
- Automotive & transport
- Coatings & adhesives
- Building & construction
- Electrics & electronics
- Others

Source: European Bioplastics, nova-Institute (2020). More information: ***www.european-bioplastics.org/market*** *and* ***www.bio-based.eu/markets***

What about algae-based bioplastics ?

EU regulations & Green Deal

European Commission : 100% of plastics packaging must be reusable, recyclable or compostable by 2030.



Review to reinforce the **essential requirements for packaging** and **reduce (over)packaging and packaging waste**	2021
Mandatory requirements on **recycled plastic content** and **plastic waste reduction measures** for key products such as packaging, construction materials and vehicles	2021/2022
Restriction of **intentionally added microplastics** and measures on **unintentional release of microplastics**	2021
Policy framework for **bio-based plastics and biodegradable or compostable plastics**	2021

Source : European Commission, Circular Economy Action Plan, 2020

Our work at PolyPea

- Development of a **100 % biobased and biodegradable** plastic.
- Promote **circular economy** by using by-products and waste streams.
- Rely on particularities of **pea starch** with regards to other starches.
- Bioplastic film with applications in **packaging**.

Circularity at PolyPea

Biodegradable plastic pellets

Transformation into packaging (films)

Usage

Collect and composting

Biomass

Peas crops

Extraction process

By-products (starch)

THANK YOU !

I would be glad to answer your questions

PolyPea

www.polypea.be

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