

4. STANDARDISATION & CERTIFICATION IN PRESERVE

by Kristina Block
and Christian Schulz



Making (bio)plastics up-cyclable and standards applicable: The role of certification in a Biobased and Circular Economy

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Our vision: Bioplastics drive the evolution of plastics

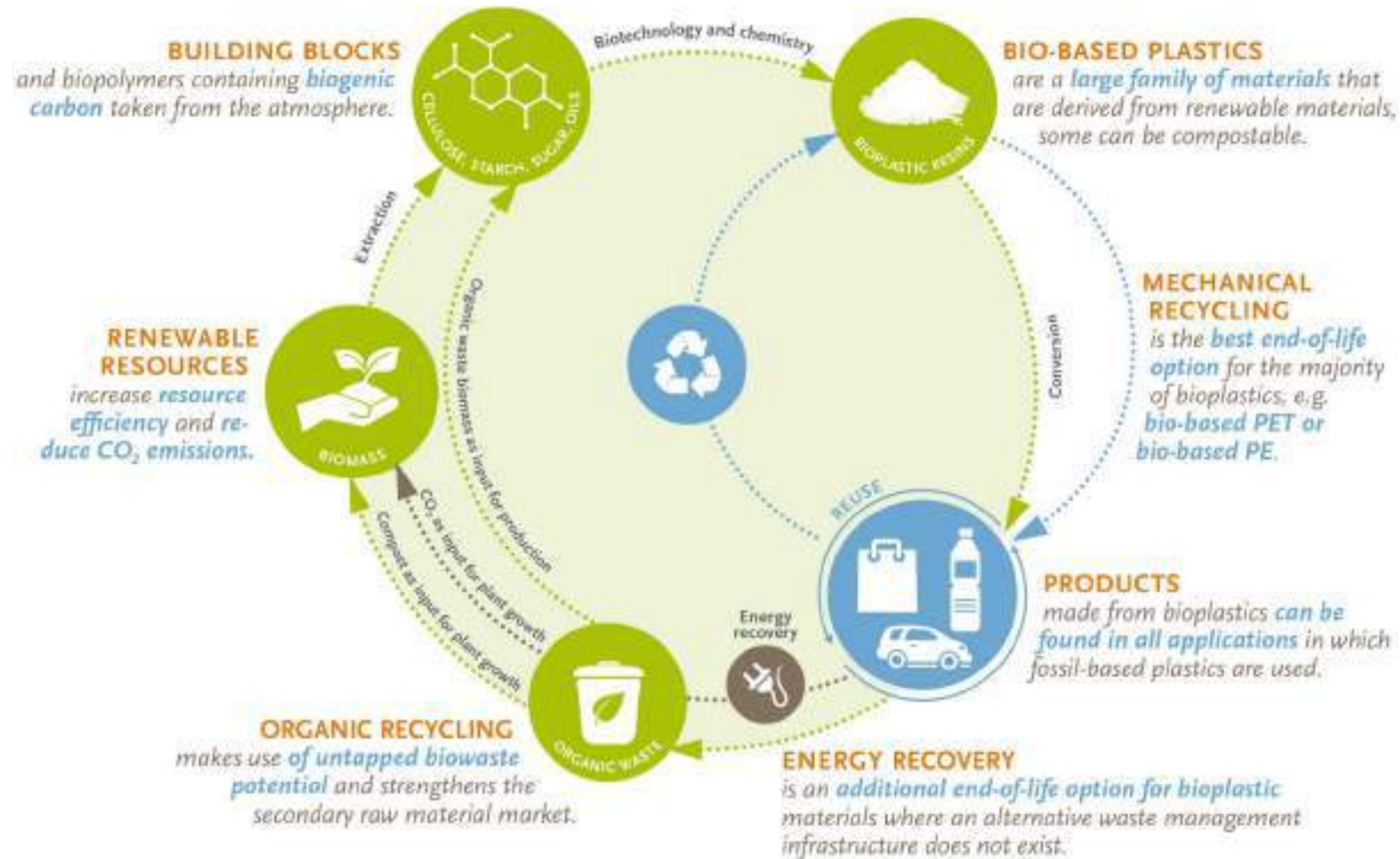
- **Our Vision**

Bioplastics drive the evolution of plastics and contribute significantly to a sustainable society.

- **Our Mission**

European Bioplastics' mission is to align the bioplastics value chain and work in partnership with various stakeholders towards a favourable landscape enabling the bioplastics market to grow.

Our bioeconomy strategy: Bioplastics life cycle model



European Bioplastics at a glance

25 years of bioplastics experience

- European Bioplastics represents the interest of the bioplastics industry along the entire value chain in Europe.



Activities & services

- EUBP is a knowledge partner and business network for companies, experts, and all relevant stakeholder groups of the bioplastics industry
- **Our activities and services at a glance:**
 - > Gathering insights and knowledge about the industry
 - > Formulating & communicating industry's key positions
 - > Representing members' policy interests in Europe
 - > Connecting members with potential business partners
 - > Facilitating a dynamic stakeholder dialogue
 - > Supporting standardisation, certification & labelling: EUBP owns the Seedling mark for (industrial) compostability awarded by certifiers DIN CERTCO and TÜV AUSTRIA (former Vinçotte)

Networks and Networking hub

- Bioplastics Organisations Network (BON) Europe
- European Bioeconomy Alliance (EUBA)
- Annual EUBP Conference (06/12 – 07/12/2022)
Largest bioplastics industry forum (more than 350 participants) in Europe which will can also used for project dissemination

www.european-bioplastics.org/events/



Our members cover the whole value chain

Supporting members



Renewable raw material Green chemistry

Agrana Staerke
Alcogroup
Allessa
Cargill
Ingevity
Neste Corporation
Total Corbion PLA

Bioplastics manufacturers and auxiliaries

A.P.I.
Avantium
BASF
BIO-FED
BIOTEC
Bio Valore
Carbiolice
CJ Europe
Corbion
Danimer Scientific
DuPont
FKuR Kunststoff

Futerra
Futamura Group
Indochine Bio Plastiques
Jinhui Zhaolong High Tech.
Kaneka Corporation
Kimberly-Clark
Microtec
Mitsubishi Chemical Europe
NatureWorks
Novamont
Promateris
Sukano
Sidaplast
Sulapac
Taghleef Industries
TIPA Corp
Toro Gips
United Biopolymers
Zhejiang Hisun Biomaterials

Bioplastics distribution

BROSBIO

Plastic converters

BioBag International
Fiberweb Berlin
KIK Compounds
Kompuestos
Polifilm
SIBUR
SIG International Services
SPHERE

Machinery, engineering, equipment

Coperion
Sulzer Chemtech

Research, consulting and others

AIMPLAS
C.A.R.M.E.N.
COBRO
DIN CERTCO
Fraunhofer ISC
Fraunhofer LBF
IFA Tulln
IfBB

Institut für Kunststofftechnik
ISCC
nova-Institut
Organic Waste Systems
Packbridge
ProfiKomp
Roundtable on Sustainable Biomaterials
TÜV AUSTRIA BELGIUM
University of Bologna

Industrial end user

Cofresco Frischhalteprodukte
Danone
Kimberly-Clark
Lavazza
Reckitt Benckiser
Tetra Pak



High performance sustainable bio-based packaging
with tailored end of life and upcycled secondary use

PRESERVE

PRESERVE

PRESERVE context

Europe is far from its targets in terms of CO₂ footprint (neutrality by 2050) and circular economy (all plastic packaging recyclable by 2030)!



- EU consumes in the range of 50 Million tonnes per year fossil-derived plastics, 40% of which for packaging
- Only 32% of plastic wastes is currently recycled
- Globally 32% of the plastic packaging leaks in the environment leading to dramatic long-term pollution.
- Bioplastics have advantages in terms of renewable feedstocks (leading to lower CO₂ footprint in general) and EoL modularity but still represents a very limited share of plastics (ca. 1-2%).
 - But:
 - High performance bio-based materials need to be developed.
 - Their recycling is insufficiently established (except for drop in ones).
 - Biodegradability of biopolymers makes sense for specific applications but is *not* possible in every environment.

PRESERVE: Main figures

- **4 years (January 2021 - Dec 2024)**
- **Budget : € 8M**

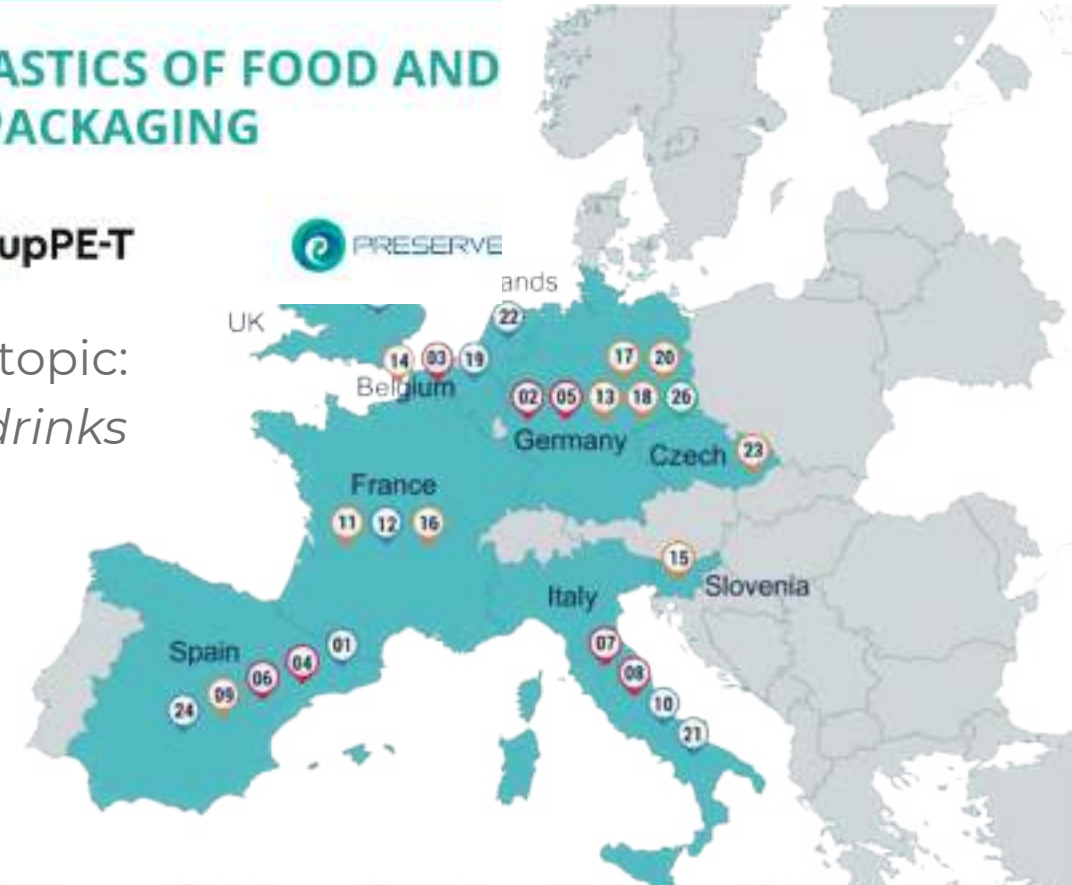
• Funding from EC Horizon 2020 programme under the topic: *CE-BIOTEC-09-2020 Upcycling Bio Plastics of food and drinks packaging*

- **26 partners** including 7 research organisations, partners along the circular supply & value chain with large end users and the largest bioplastics producer/users' association.

Cluster H2020 Bioplastics UPCYCLING BIO PLASTICS OF FOOD AND DRINKS PACKAGING



Circular PRESERVE Value chain (only business partners, no RTOs or support service providers)



- | | | | | |
|------------|-----------|------------|-----------|------------|
| 01 IRIS | 06 ITENE | 11 BOSTIK | 16 DANONE | 21 ROMEI |
| 02 ASU | 07 NTT | 12 CARB | 17 MDLZ | 22 DENIM X |
| 03 CTB | 08 UNIBO | 13 SUDPACK | 18 BDF | 23 SILON |
| 04 AIMPLAS | 09 BIOPOL | 14 GPI | 19 OWS | 24 KNEIA |
| 05 IVV | 10 PLANET | 15 SIBO | 20 PLATO | 25 CHX |
| | | | | 26 EUBP |

Bio-based packaging for food & drinks (Primary upcycled bioplastics)



Snack pack
flowpack



Film and tray
for dairy packaging



Film and tray
for meat packaging



Beverage brick



Pulp moulded
packaging



Secondary raw material upcycling into cosmetic packaging, textiles & composites



Packaging textile (reusable
shopping bags)



Personal care
(wet wipes)



Composites (Carrier boxes
and cases)



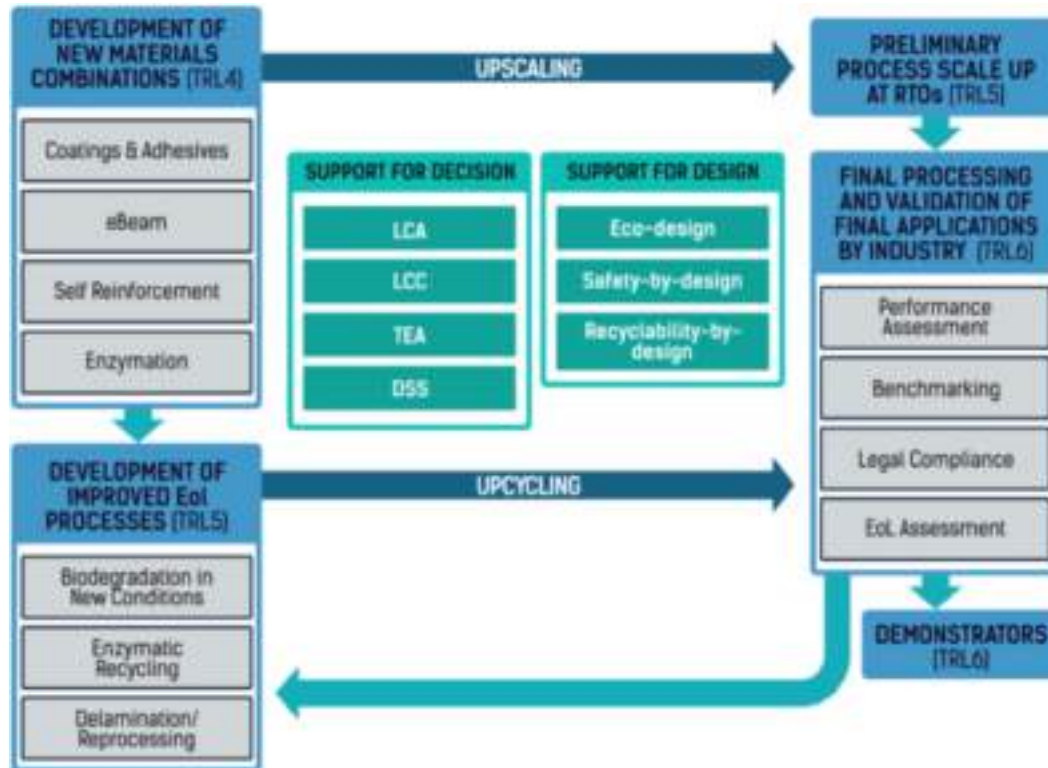
Small injected bottles



Personal care
injected jar



Technical activities to reach PRESERVE solutions



Technologies applied in PRESERVE :

- Protein-based coatings and adhesives
- PHA coatings
- eBeam treatment of biopolymers
- Use of biopolymers for personal care and transport packaging
- Reinforcement of biocomponents biopolymers
- Delamination
- Enzymes-based recycling

Supporting PRESERVE's Roadmap 2030, standardisation, certification & labelling

- EUBP is a member of the relevant standardisation committees at DIN and CEN level to monitor and participate in the review of existing as well as in the development of new standards

- CEN/TC 249 WG 9 - Biobased and biodegradable plastics
- CEN/TC 249 WG 24 - Environmental Aspects
- CEN/TC 261 SC 4 WG 2 - Degradability and organic recovery of packaging and packaging materials (this group is in duty of EN13432)
- CEN/TC 411 Bio-based products WGs 1,3,4,5 (currently few activities)

- ISO/TC 61 SC 14 WG 2 „Bio-based plastics“ and „WG 3 Biodegradable Plastics“

- DIN Committees „Biodegradable Plastics“ and „Degradable Packaging“ mirroring the activities on CEN and ISO level

EUBP as an association...

- supports independent third party certification according to acknowledged standards
- owns the Seedling mark for (industrial) compostability awarded by certifiers DIN CERTCO and TÜV Austria



EU level

International

National level

Monitoring and supporting the regulatory landscape

(Selection)

EU TAXONOMY

Sustainability criteria for EU funding and investment

Review of sustainability criteria for products to receive funding & investment through EU funds. Potential risks for bioplastics sector to be excluded from these criteria needs to be averted.

>> EUBP actively monitors and contributes to process.

(expected for 2022)

EUROPEAN WASTE LEGISLATION

Upcoming revision of the PPWD Essential Requirements

Aims to ensure all packaging is reusable or recyclable by 2030.

>> **The review should seek to:**

- **Encourage use of bio-based feedstocks for packaging equivalent to recycled content**
- **Clarify the definition of “recyclability” or “recyclable” to encompass organic recycling**

(expected beginning 2022)

POLICY FRAMEWORK

for bio-based and biodegradable/compostable plastics

Planned Communication on a future Policy Framework for bio-based, biodegradable and compostable plastics as a key deliverable of the nCEAP, Plastics Strategy, and Green Deal.

>> EUBP actively monitors and contributes to the ongoing discussions.

(expected beginning of 2022)

Contact

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