Statement of European Bioplastics

EU POLICY FRAMEWORK ON BIOBASED, BIODEGRADABLE AND COMPOSTABLE PLASTICS

In 2022, the European Commission adopted a policy framework[1] on the sourcing, labelling and use of biobased plastics, and the use of biodegradable and compostable plastics. The policy framework was announced in the European Green Deal, Circular Economy Action Plan, and Plastics Strategy with the aim to contribute to a sustainable plastics economy. In particular, it aims to improve the understanding around bioplastics. The framework clarifies where these innovative materials can provide environmental benefits, under which conditions, and for which applications, while holding them to the same strict standards as any other material.

There is currently no EU law in place applying to bioplastics specifically, although some legislation, such as EU Taxonomy, the Single Use Plastics Directive, the Plastic Carrier Bags Directive, the Packaging and Packaging Waste Directive as well as the Waste Framework Directive address some aspects and applications of biobased, biodegradable and compostable plastics. And while the Commission's Communication for the EU policy framework is non-legislative, i.e., is not legally binding, it reflects the Commission's views and intentions on these materials and will guide future EU policy making, such as the initiatives on green claims, ecodesign for sustainable products, carbon removal, or microplastics.

EUBP position

European Bioplastics (EUBP) and its members welcome the Commission's initiative to develop a first comprehensive policy framework on bioplastic materials. The Communication provides an extensive analysis of our sector in Europe and acknowledges advantages and potentials of our materials to provide genuine environmental benefits.

However, despite strong and sound scientific evidence, a few persistent misconceptions remained in the policy framework with regards to land-use, the evaluation of environmental benefits, alleged risks of cross-contamination of waste streams, and biodegradability in different environments.

The policy framework fails to recognise and promote the main advantages of biobased plastics, i.e., the use of renewable resources to produce plastic materials, and their contribution to the transition to a circular and carbon-neutral bioeconomy. The framework also presents a very limiting and overly cautious view on the special property of biodegradability in specific environments, hence neglecting the huge potential, in the case of industrially compostable plastics, for the circular economy and, generally, hampering innovation in this young and promising sector.

We fear that these flaws in the Communication will prevent the Commission from fully embracing the shift to biobased products that are necessary to enable Europe to reduce its dependency on fossil resources and achieve its ambitious climate and circularity goals. We are also concerned that the current approach will stifle rather than stimulate further innovation and market potential of sustainable material solutions in Europe.

In this paper, EUBP would like to highlight the benefits of bioplastics and clarify some of the shortcomings of the Commission's Communication.

General comments:

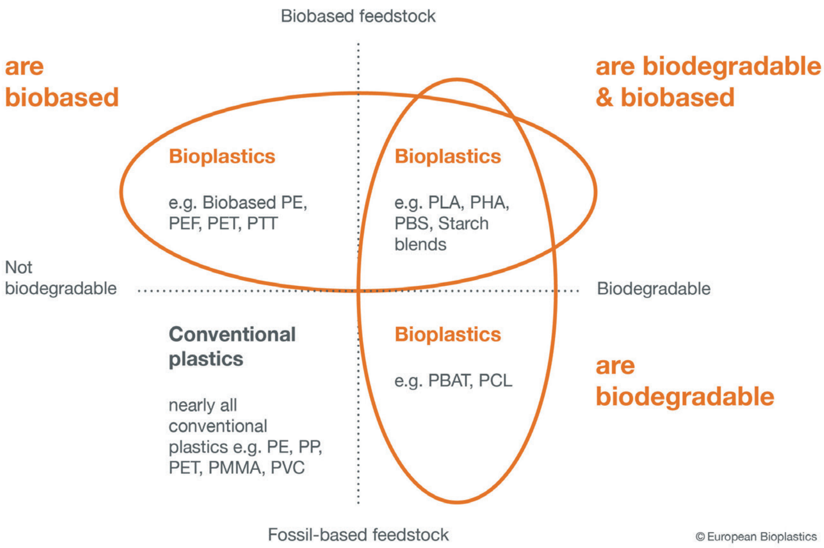
The European Commission's Communication on the EU policy framework on biobased, biodegradable and compostable plastics provides an extensive overview and analysis of the bioplastics sector, including the wide-ranging material solutions and their functionalities, end-of-life options, and contributions to the EU's ambitions on sustainability, circularity, and climate.

Bioplastics comprise a whole family of different materials. A plastic material is defined as a bioplastic if it is either biobased, biodegradable, or features both properties. Compostable plastics are biodegradable in industrial composting (industrially compostable) or under home composting (home compostable) conditions. It is necessary to always clarify the environment in which biodegradation is supposed to take place and support these claims with certifications and labels based on the according standards.

[1] COM(2022)682, https://environment.ec.europa.eu/system/files/2022-12/COM_2022_682_1_EN_ACT_part1_v4.pdf

Material coordinate system for bioplastics

Bioplastics are biobased, biodegradable, or both.



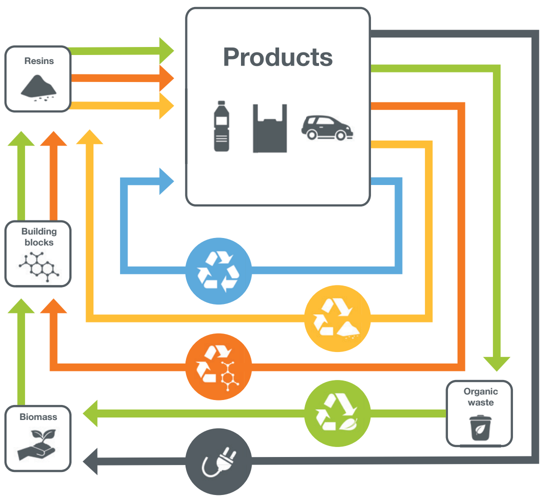
Source: Institute for Bioplastics and Biocomposites (IfBB) and European Bioplastics (EUBP)

Biobased plastics can contribute to the EU's goal to achieve climate neutrality by 2050 by storing and repurposing the carbon from carbon dioxide. Thus, they replace the need for further extraction of fossil resources, while creating a sustainable, competitive advantage for the European industry. Biobased plastics can be **recycled** in existing (mechanical, organic when industrial compostable, and chemical) recycling infrastructures. They have the environmental advantage to **reduce the dependency on fossil resources and to reduce greenhouse gas (GHG) emissions** or even be carbon neutral. Moreover, biobased plastics can make a considerable contribution to increased resource efficiency through a **closed resource cycle** and use cascades.

Industrially compostable plastics provide added value through organic recycling (i.e., industrial composting and anaerobic digestion) as an additional waste treatment option. Industrially compostable plastics are proven to enhance the quality and quantity of the collection and recycling of biowaste (incl. food waste) and, therefore, for the return of carbon to the soil.

All bioplastics can significantly contribute to global sustainability goals, but they do so in different ways. Their wide range of properties highlights the need for distinct and clear communication when referring to a specific material or product when engaging with consumers. It is particularly important to avoid misunderstandings or greenwashing. Hence, the term 'bioplastics' without any further explanation should be avoided in B2C communication about a specific product. The same holds true for claims on 'biodegradability', which shall only be made by specifying the environment in which biodegradation takes place. Clear and substantiated claims based on existing standards and certification schemes should be made on the biobased content and designated waste management option (e.g., mechanical recycling, organic recycling).

Closing the loop



REUSE ranks higher than recycling in the **EU waste hierarchy** and should be considered first. Biobased plastics offer numerous opportunities for creating reusable products.

MECHANICAL RECYCLING recovers (biobased) plastic waste through **mechanical processes** to **recreate resins** without changing the chemical structure. It's an end-of-life option for the majority of biobased plastics.

CHEMICAL RECYCLING comprises different varying technologies that convert (biobased) plastic waste into an **upstream feedstock** resulting in **secondary raw materials** that have the **same quality as virgin materials**.

ORGANIC RECYCLING includes **industrial composting** and **anaerobic digestion**. Compostable plastics save valuable organic waste from landfill and incineration and help turning waste into **beneficial high-quality compost**.

ENERGY RECOVERY is an **additional end-of-life option for biobased and/or biodegradable plastic** materials where an alternative waste management infrastructure does not exist. In the case of biobased plastics, renewable energy can be obtained from the **biogenic carbon** – a significant advantage compared to fossil-based plastics.

Specific comments:

On biobased plastics

Key advantages of using biomass:

Climate neutrality – Europe's ambition for 2050 – will only be achievable by cutting the emissions associated with the production, use and recycling of materials. They account for nearly one fifth of the total EU CO_2 emissions. Biobased plastics can and will, if enabled, contribute towards this objective by storing and repurposing CO_2, replacing the need for further fossil carbon extraction and the related environmental impacts. Biobased plastics are produced using renewable, plant-based feedstocks. Sustainably sourced renewable materials offer a key opportunity to help achieve Europe's climate ambitions while supporting a sustainable economic development in EU's rural areas.

Biobased and recycled content:

The Commission's Communication on 'Sustainable Carbon Cycles'[2] sets out the aspirational objective that at least 20% of the carbon used in chemical and plastic products should be from sustainable, non-fossil resources to help reaching climate neutrality. Focussing on recycling and reuse alone is not enough to replace the EU's dependency on fossil resources and to reduce GHG emissions. Every product has a lifespan and losses are inherent to any recycling process. Virgin raw materials will therefore always be needed, especially when strict requirements on food safety and health must be met. To achieve a true circular economy, it is essential to substitute fossil-based, virgin materials with sustainably sourced biobased materials. Consequently, the Commission should promote a minimum biobased content to the same extend as recycled content in plastic products, such as the recycled content targets for plastic packaging set out in the proposal for a revised Regulation on Packaging and Packaging Waste (PPWR). Both, biobased and recycled content contribute to reduce the dependency on virgin fossil resources and GHG emissions, and they should be supported equally.

Biobased plastics help to defossilise the economy

Substituting the annual European demand* for fossil-based polyethylene (PE) with biobased PE **would save around**

73 million

tonnes of CO_2**

* Based on the European demand for conventional polyethylene in 2020 (Plastics Europe).
** Based on -3.09 CO_2 eq/kg biobased PE (Braskem, I'm Green™)

This is equal to the CO_2 emissions of

20 million flights

around the world per year!

[2] COM(2021)800, https://ec.europa.eu/transparency/documents-register/detail?ref=COM(2021)800&lang=en

Methods to calculate and communicate biobased content:

When communicating with consumers, claims on 'biobased' plastics should refer to the share of biobased content in the product, stating for example that the 'product contains 50% biobased content'. Claims on the biobased (carbon) content of a plastic product in B2C communication can only be made based on calculations using the C-14 (radiocarbon) method in line with the European standard EN 16785-1. Independent, third-party certification schemes for biobased content based on C-14, such as the TÜV Austria OK biobased scheme and the DIN CERTCO biobased scheme, already exist.

Product Environmental Footprint and Life Cycle Assessment approaches:

As the Commission plans to rely on the Product Environmental Footprint (PEF) and Life Cycle Assessment (LCA) methods as the guiding approach for environmental impact assessment, an accurate method to assess the carbon footprint of biobased products is critical. Yet, in the currently proposed PEF rules addressing biogenic carbon, there is no recognised benefit granted for the use of biogenic carbon at the beginning of the product life cycle. The JRC's Plastics LCA method referenced in the policy framework does not even account for biogenic carbon uptake at all. Thus, as it stands, there is no appropriate incentive to use biobased resources, and these methods fail to appropriately assess the actual environmental benefits of biobased products. A lot more effort is needed to make PEF and LCA approaches fit for purpose. An updated method[3] must provide for a balanced and fair evaluation and comparison of biobased and fossil-based products by awarding a carbon bonus at the stage of its uptake and giving a carbon malus when it's released back into the atmosphere. The European Committee for Standardization CEN/TC 411 WG 4 is currently preparing a standard that intends to give clear guidelines for a comparative LCA of fossil-based and biobased products.

Long- vs. short-term biogenic carbon storage:

The Commission's Communication states that priority should be given to long-lived products over short-lived products, including single-use applications. While we support such priority as it is necessary to tackle the challenges of waste reduction and sustainable use of resources, we insist that it must surely apply to all products, including conventional fossil-based plastic products. Biobased plastics are increasingly used in long-term products such as in the transport sector, building and construction sectors, fibres, and electronics. At the same time, certain short-term products and single-use applications might not be avoidable, especially when it comes to strict requirements on (food) safety, hygiene, and consumer health. These products should be encouraged to be manufactured from biobased renewable resources as this would still represent an improvement compared to conventional fossil-based materials.

Land use and competition for land used to produce food and feed:

Despite the steep growth projection in the next years, the production of biobased plastics will not compete with land used to produce food and feed. In fact, food security and sustainability are two sides of the same coin and delivering on the green transition today is essential to ensure food security tomorrow. Current estimations show that not more than 0.06% of the global agricultural area will be used to produce biobased plastics in the coming years.[4] Even if the entire current global plastics production were based on biomass feedstock – although such scenario is unrealistic – the demand for biomass would only be around 5% of the total amount of biomass produced and harvested around the globe each year.[5] These numbers show that there is no competition between the use of biomass for food, feed, and for material use.

What is more, bioplastics made from agri-based feedstock will eventually facilitate the transition to later generations of feedstock. The industry is already looking into the use of non-food crops (from ligno-cellulosic feedstock), as well as waste products and side streams of the agricultural industry to produce biobased plastics.

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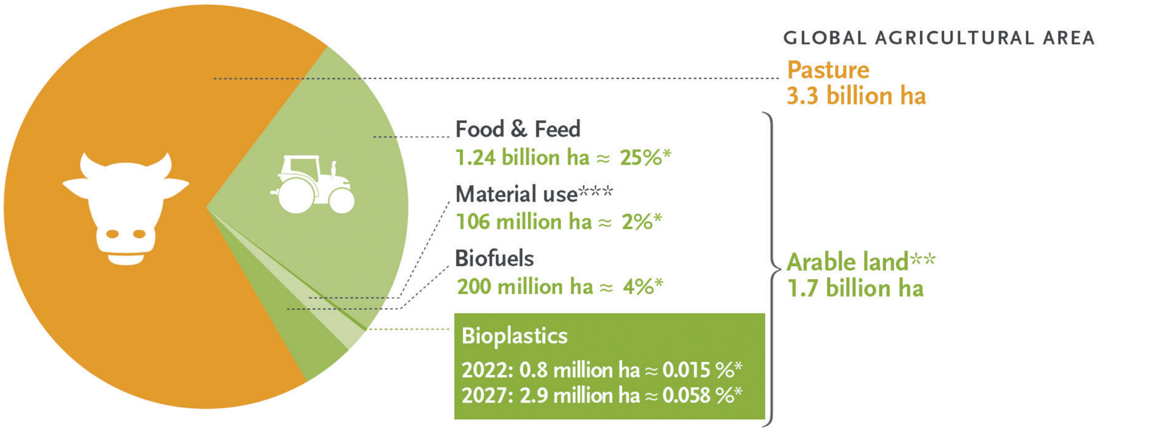
3 Towards an accurate accounting for carbon from biomass in the Product Environmental Footprint (2022) https://wordpress.biochem-europe.eu/wp-content/uploads/2022/08/20220722-Final-coalition-paper-on-CO2-credits-for-biobased-products-in-PEF-alternative.pdf
4 European Bioplastics and nova-Institute (2022) Global bioplastics market data: Land-use estimation for bioplastics 2022 and 2027. https://docs.european-bioplastics.org/publications/market_data/2022/Report_Bioplastics_Market_Data_2022_short_version.pdf
5 Wageningen Food & Biobased Research (2017) Bio-based and biodegradable plastics – Facts and figures, https://research.wur.nl/en/publications/bio-based-and-biodegradable-plastics-facts-and-figures-focus-on-f

Landuse estimation for bioplastics 2022 vs. 2027



Source: European Bioplastics (2022), FAO Stats (2020), nova-Institute (2022), and institute for Bioplastics and Biocomposites (2019), University of Virginia (2016)

* In relation to global agricultural area
** Including approx. 1% fallow land
*** Land-use for bioplastics is part of the 2% material use

Sustainability criteria:

Renewable feedstock that is suited for biofuels is, in general, also suited for making biobased plastics. Therefore, the application of the sustainability criteria applying to biofuels via the Renewable Energy Directive (RED) to biobased plastics is deemed appropriate, in principle. However, unlike biofuels, where one homogenous product is compared to another (fossil-based fuels), biobased plastics and the products derived from them are at least as diverse as the products made from conventional plastics. Therefore, comparative calculations on required GHG savings must take into consideration that there is not always an adequate equivalent fossil-based polymer or product to which the biobased polymer or product can be compared to. If comparisons with fossil-fuel derived plastics are to be fair, equal, and not anti-competitive, then sustainability criteria must be developed also for fossil-based feedstocks and processes.

On compostable plastics

The role of industrially compostable plastics in a circular economy:

Industrially compostable plastics can play an essential role in putting the envisioned circular economy into practice. With reference to the European waste hierarchy, industrially compostable plastics provide added value through organic recycling (i.e., industrial composting and anaerobic digestion) as an additional waste treatment option, and by producing a higher volume and quality of valuable compost. Compost is a valuable resource that can be used as natural fertilizer benefiting soil health and helping to combat climate change. Additionally, a larger amount of separately collected biowaste can also help to increase the share of biogas production if the waste is processed via anaerobic digestion. Separately collection of biowaste is diverting organic waste away from other waste and recycling streams and reducing contamination of these streams. The more biowaste is being collected separately, the more is diverted from incineration or mechanical plastic recycling streams to organic recycling, hence reducing contamination of waste and recycling streams.

Certified compostable plastic bags & packaging

help to **collect more biowaste,** which can be turned into **valuable compost** or into **biogas**.

Facilitating mandatory biowaste collection:

Separate collection of biowaste will be mandatory across Europe by the end of December 2023. Certified industrially compostable plastics are proven to help efficiently manage biowaste by increasing the quantity and quality of separately collected organic kitchen waste. Compostability is a clear benefit when plastic items are mixed with food, food waste, and biowaste. Under these conditions, mechanical recycling is not feasible, neither for plastics nor biowaste. The use of certified industrially compostable plastic products such as biowaste bags, fresh food packaging, or disposable tableware and cutlery makes the mixed waste suitable for organic recycling as they can be collected and organically recycled together with the food waste.

Best case example: *In Italy, certified industrially compostable plastic packaging is politically supported and widely used and accepted by both citizens and composters. The appropriate collection systems and recycling infrastructure are in place as well as certification schemes based on the harmonised EU standard EN 13432. The use of these certified industrially compostable plastic products is evidently contributing to a substantial increase in volumes of food waste being collected and composted: in 2018, Italy achieved 80% separate collection of household food waste.[6] Italy also implemented an EPR scheme for compostable packaging that aims to collect and organically recycle compostable packaging together with biowaste. Accordingly, in 2021, Italy reached a recycling rate of 52%[7] of industrially compostable packaging placed on the market.*

In other Member States, such as Germany, Belgium, and the Netherlands, the collection rates of food waste remain low at around 15-25%[8] despite separate food waste collection being mandatory. These countries have very restrictive rules on the use of industrially compostable plastic packaging for biowaste collection and organic recycling, which also inevitably leads to higher contamination rates (with conventional plastics) of the organic waste streams and the resulting compost.

Effects of compostable plastics on other waste streams[9]:

The Commission's Communication presents the perceived risks of cross-contamination as an argument for restricting the use of compostable plastics. This argument, however, lacks any real-world evidence. In the unlikely event of compostable plastics ending up in conventional plastics recycling streams due to accidental misthrows, the existing sorting technologies are perfectly capable to sort them out, just as any other residual wastes. Cross-contamination is a general problem that involves all materials and all recycling streams. Singling out compostable plastics is discriminatory. Any restrictions based on the assumption of cross-contamination would have to apply to all materials.

Certified industrially compostable plastics can, in fact, help to reduce the contamination (plastic impurities) in the organic waste collection[10] caused by misthrows of conventional plastics that often end up in the final compost and cause persistent microplastic residues in the environment.[11, 12, 13] Certified compostable plastics also help to reduce the contamination of conventional plastic waste streams with organic waste by providing tools to make the separate collection of organic kitchen waste more convenient and efficient.[14]

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6 Italian compost association CIC, www.compost.it, and Zero Waste Europe (2020) "Bio-waste generation in the EU: Current capture levels and future potential." https://zerowasteeurope.eu/wp-content/uploads/2020/07/2020_07_06_bic_zwe_report_bio_waste.pdf

7 Biorepack (2022): https://biorepack.org/comunicazione/comunicati-stampa/bioplastiche-compostabili-il-riciclo-raggiunge-il-61.kl

8 Zero Waste Europe (2020) commissioned by the Bio-based Industries Consortium (BIC): "Bio-waste generation in the EU: Current capture levels and future potential." https://zerowasteeurope.eu/wp-content/uploads/2020/07/2020_07_06_bic_zwe_report_bio_waste.pdf

9 With regards to waste management options, it is important to note that bioplastics include a whole family of different materials. These materials can be treated in various established recycling and recovery streams and offer additional options such as organic recycling or chemical recycling. The major share of bioplastics produced today is mechanically recyclable. Biobased plastics that are chemically and physically identical to their fossil-based counterparts, but are made from biomass (so-called drop-in materials, e.g., biobased PE and biobased PET) can be recycled in already well-established recycling streams for PE and PET.

10 A field test carried out by the University of Bayreuth (2020) examined composts from eight different biowaste treatment plants. Over 98% of the film plastic particles detected were attributable to PE or other conventional plastics. The researchers concluded that the use of compostable plastic bags for the bio-waste collection would lead to a significant reduction in plastic particles in the compost if PE bags were substituted: https://doi.org/10.37307/j.1863-9763.2020.05.05

11 https://www.sepa.org.uk/media/327640/investigation-into-plastic-in-food-waste-derived-digestate-and-soil.pdf

12 Weithmann et al., Science Advances 04 Apr 2018: Vol. 4, no. 4; "Organic fertilizer as a vehicle for the entry of microplastic into the environment"

13 Kern et al., Müll und Abfall 05/2020, Kunststoffe im Kompost (Plastics in compost)

14 A field test conducted by C.A.R.M.E.N. e. V. (2022) confirmed a very high acceptance and use of the compostable bio-waste bags for the collection of domestic biowaste amongst consumers. The compost analysis testified a consistently good compost quality, and no fragments of the compostable plastic foil material were detected in any of the compost samples that were analysed: https://www.carmen-ev.de/service/forschungsprojekte/praxistest-bio-beutel/

Biowaste collection and recycling infrastructures across Europe:

The Communication states that not all Member States support the use of compostable biowaste. While this is the case in some Member States, there is a number of Member States and regions where compostable biowaste bags are well-established as means to collect household kitchen waste. These Member States have appropriate collection systems and organic recycling infrastructures are in place. It has to be noted that the waste management infrastructure across Europe, and in particular separate collection and sorting systems as well as recycling infrastructures, vary greatly. All too often appropriate and modern technologies are not used, especially when it comes to separate collection and organic recycling of biowaste. Sound investments in separate collection systems are needed to achieve an acceptable, higher functioning and more harmonised landscape across Europe. This is especially the case with a view on the upcoming mandatory separate collection of biowaste by end of December 2023, which will increase the amount of bio-waste (especially food waste) that will enter industrial composting and anaerobic digestion (AD) facilities.

Key applications of compostable plastic for the circular economy:

We fully support the priority of prevention and reduction in the EU waste hierarchy. Hence, we recognise that bioplastics are not intended to simply replace existing applications but, instead, to offer innovative solutions. To enable innovation, we recommend developing a set of criteria, similar to the criteria proposed in Annex III of the Commission's proposal for a revised Packaging and Packaging Waste Regulation (PPWR), for which industrial compostability offers a valuable contribution to a circular economy and/or waste reduction. Such criteria should include the increase in the amount of separately collected biowaste and a reduction of the contamination of organic waste streams with non-compostable materials. Also, applications that cannot or are not likely to being recycled because they are contaminated with food waste, too small to be collected/sorted/cleaned prior to recycling, or that are made of non-recyclable multi-layer films, should also be made from compostable plastics.

The range of compostable plastic packaging applications suggested in the Commission's Communication as well as in the Commission's PPWR proposal should not be limited to a listed number of specific applications. Industrially Compostable plastic packaging should be allowed for all applications where they can bring benefits as laid out in Annex III of the proposal. Additionally, compostable plastic packaging must remain allowed in organic recycling waste streams for which they are designed and certified.

Single-use applications:

We agree on the importance of reducing single-use plastic products where feasible, but hygiene, health, and food safety cannot be compromised. The Commission's Communication overlooks the important functional role of certain (packaging) applications in preventing food waste and in ensuring the strict safety and hygiene requirements for contact sensitive applications, also in the medical and health sector. Biobased and compostable plastic materials can provide sustainable alternatives where reuse, recovery, or recycling are not an option.

Compostable plastics for food-contact materials:

All kinds of bioplastics must comply with the same strict regulations as conventional plastics when used as food-contact materials (FCMs) and they must undergo the same testing procedures to access the market of the European Union. This includes migration tests according to the Regulation (EU) No. 10/2011, and tests on the composition of multi-component materials to make sure only substances and materials that have been assessed and listed as safe (Union List of authorised substances) are used. Additionally, plastics that are intended to be certified as compostable must undergo further ecotoxicity tests as part of the EU standard EN 13432 for industrially compostable packaging to prevent health risks. Therefore, some bioplastics materials need to pass even more rigorous testing than conventional plastic products.

Many biobased plastics offer new material properties for improved performance, e.g. enhanced breathability, increased material strength, and improved optical properties.

Home composting for plastics:

EUBP supports the Commission's view that home composting should only be considered in the context of specific local conditions. Home composting is not a professional waste management activity, but a private gardening practice carried out on private premises. It is also not available throughout the year due to seasonally fluctuating and generally geographically diverse ambient temperatures. The European standard EN 17427 covers disintegration and biodegradation requirements for home compostable carrier bags, and includes extensive ecotoxicity tests as well as clear rules on SVHC and fluorinated organic chemicals. The standard also includes guidelines on how well-managed home composting should look like and under which the certified bags then also biodegrade. Independent third-party certification schemes and labels exist based on EN 17427. However, EUBP recommends the separate collection of organic household waste with a dedicated biowaste collection system and subsequent treatment in industrial composting and AD plants. Home composting should only be considered as an additional option for the treatment of organic waste, especially for garden waste.

On other biodegradable plastics (besides compostable):

Biodegradation in open environments:

EUBP would like to stress that biodegradation in the open environment is not a waste management option. In order to claim a product's biodegradability, the ambient conditions must be specified, and a timeframe for biodegradation must be set to make claims measurable and comparable. This is regulated in applicable standards. Biodegradability in the open environment (especially marine) is "desirable" only for very few, highly specific, applications. These could be applications that would be difficult to find and recover, such as firework casings, or applications intended to be used by professionals (e.g., farmers or fishermen/fisherwomen) under specific circumstances.

Therefore, we strongly advise that biodegradation should be regarded as a 'system property' only insofar, as it refers to the intended receiving environment. The mere eventuality that a plastic application – or small parts of it – may, in rare cases, end up in a different environment, does not justify overly burdensome biodegradation requirements. Or else, such requirements would have to apply to all other materials, too.

Biodegradation in soil without generating microplastics:

Biodegradable polymers have the advantage that they do not erode into persistent secondary microplastics upon degradation, because natural environments habit microbes that are able to metabolise these polymers. The residence time is considerably lower for biodegradable polymers compared to conventional plastic materials. Therefore, biodegradable plastics can help in minimizing environmental impacts, while reducing the accumulation of plastic particles in different environmental habitats. I.e., industrially compostable plastics significantly reduce the amount of persistent non-biodegradable microplastics in the compost and thus a subsequent leakage into the environment. Soil-biodegradable mulch films help to stop leakage and accumulation of persistent microplastics in agricultural soils.

EUBP supports efforts to gain a better understanding of the origin and creation of microplastics and their release into and effect on the environment, to minimise environmental impacts. There is no evidence of a greater dispersion of biodegradable or compostable plastic products in the environment than any other materials (glass, paper, metal, etc.). The risk for any (plastic) material to be transferred (by wind or runoff) from one (e.g., soil) environment to another (e.g., aquatic) environment applies to all plastic materials, especially conventional non-biodegradable materials, which, however, have no chance of biodegrading in any environment.

Biodegradability vs. littering:

EUBP and its members do not support any statements that advertise bioplastics as a solution to the littering problems. Littering should never be promoted or accepted for any kind of waste, neither on land nor at sea, including all varieties of plastics. Littering is a behavioural problem and should be addressed by educational and public communication measures and be supported by clear messages on the products and packaging itself. There is no evidence that claims or labels on the biodegradability or compostability of a product would lead to or even encourage increased littering. What is more, if an overall assessment of the persistence of items that are of consequence for "littering" is to be carried out, it should incorporate a risk assessment for all materials that are found in open environment.

Use of additives:

All compostable plastic applications that are intended to be certified as compostable must pass vigorous ecotoxicity tests such as plant growth or nitrification inhibition tests. They should not include any substances that are regulated under REACH as part of the EU standard EN 13432 for industrially compostable packaging to prevent any risks to human health and the environment.

The often cited 'Zimmerman study'[15], alleging that biodegradable plastics can be similarly toxic as conventional ones, is flawed. The test methods used in the study did neither follow the standardised methods for migration testing required by the EU Regulation on Food Contact Materials on plastic materials, nor REACH. Therefore, the study by Zimmerman et. al (2020) cannot be consulted when assessing the safety of additives used in biodegradable and compostable plastics. All plastic products, including conventional plastics as well as bioplastics, contain additives, the latter of which must pass even more rigorous testing than conventional plastic products.

About European Bioplastics

European Bioplastics (EUBP) represents the interests of more than 80 member companies throughout the European Union. With members from the entire value chain, European Bioplastics serves as both a contact platform and catalyst for advancing the objectives of the growing bioplastics industry. For further information, please visit http://european-bioplastics.org.

[15] Zimmermann et.al "Are bioplastics and plant-based materials safer than conventional plastics? In vitro toxicity and chemical composition", Environment International 145 (2020)

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