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SHAPING A SUSTAINABLE FUTURE FOR PACKAGING

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# Communication on the EU Policy framework on biobased, biodegradable and compostable plastics

The present note aims to provide an overview of the key elements/relevant extracts of the European Commission's Communication on the EU **Policy framework on biobased, biodegradable and compostable plastics**, published on 30 November 2022 as part of the Circular Economy Package II, which also includes the Commission proposal for the revision of the Packaging and Packaging Waste Directive (PPWD).

For information, the synopsis on the consultation on the policy framework on biobased, bio-degradable and compostable plastic is available here.

## 1. Introduction

The Commission's Communication introduces the aim of its policy framework for biobased, biodegradable and compostable plastics, which is to **provide better understanding of the challenges and benefits of their use.**

Key objectives of the policy framework include:

- Set out the conditions to ensure that the environmental impact of the production and consumption of biobased, biodegradable and compostable plastics is positive
- Fill policy gaps, guide future EU policy or legislation and provide orientation for the market
- Facilitate a common understanding across the EU on the use of these materials to facilitate the single market and prevent differences at national level fragmenting the market

This policy framework, set out in the form of a Communication, is a non-binding document. Some of its proposed recommendations are however outlined in the Commission's proposal for the revision of the PPWD. In the conclusion of the Communication, the Commission stresses that it "encourages citizens, public authorities and businesses to use this framework in their policy, investment or purchasing decisions".

## 2. Content of the Communication

This section of our note is structured in the same manner as the Communication and outlines key elements raised throughout the Commission's text.

### The concepts: biobased, biodegradable or compostable plastics?

This section of the Communication explains what biobased, biodegradable and compostable plastics are in comparison to conventional plastics made from fossil resources, and what happens at the end of life of those materials.

### Biobased plastics

The Communication recalls that the Circular Economy Action Plan 2.0 adopted in March 2020 identifies the need to address emerging sustainability challenges related to sourcing, labelling and the use of biobased plastics, to ensure that the use of biobased feedstock does not have negative impacts on biodiversity, ecosystems or land and water use.

It lists some of the potential benefits of biobased plastics, including:

- Using organic waste and by-products to produce biobased plastics can offer a partial decoupling from fossil resources and support the achievement of the EU climate neutrality targets,
- Biobased plastics can also stimulate the creation of jobs, especially by increasing the role of primary producers in local bioeconomies.

### Biobased plastic content

The text outlines recommendations on biobased plastic content and highlights that:

- **Measuring biobased content:**
  - There is currently no mandatory minimum biobased content nor agreed certification scheme or label for a plastic product to be labelled as biobased: the European Technical Committee for Standardisation for biobased products (CEN/TC411) offer guidance on measuring methods of biobased content, business-to-business and business-to-consumer communication. **The application of these voluntary standards is recommended to ensure a consistent approach.**
  - **Biobased content should be measured precisely.** To that effect, radiocarbon-based methods should be preferred. **Documenting the use of biomass through a chain of custody and attributing a share to end-products through mass balance accounting is not a suitable method to confirm the actual share of biobased content**.
- **Biobased content claims:**
  - **Generic claims on plastic products such as 'bioplastics' and 'biobased' should not be made** to avoid misleading consumers. It recalls that the Commission's proposed text on empowering consumers for the green transition puts forward a ban on such claims unless they are underpinned by recognised excellent environmental performance.
  - Also to avoid misleading consumers, **claims should only refer to the exact and measurable share of biobased plastic content in the product**, stating for example that the "product contains 50% biobased plastic content".

### Feedstock sustainability

The Communication also outlines some recommendations linked to the sustainability of biobased plastics' feedstock. Those are:

- **Primary biomass:**
  - Producing plastics from primary biomass can lead to direct or indirect land-use change, which can result in biodiversity loss, ecosystem degradation, deforestation and water scarcity, as well as competition with crops intended for human consumption. **Producers should therefore prioritise the use of organic waste and by-products as feedstock.**
  - **When primary biomass is used, it is important to ensure that it is environmentally sustainable** and does not harm biodiversity or ecosystem health. **Biomass should be preferably used to produce materials, including plastics, and only in subsidiary order, as a source of bioenergy.**
  - **Biomass used to produce biobased plastics must meet the EU sustainability criteria for bioenergy.** The Commission has proposed, as part of the review of the Renewable Energy Directive (REDIII), such criteria. Pending the adoption of REDIII, the REDII sustainability criteria for bioenergy should be applied.
- **Long-lived products:**
  - **Priority should be given to long-lived products over short-lived products**, including single-use products.

  - **Only biobased plastic products with long lifetime that are not incinerated when they become waste can have beneficial carbon storage effects.**

- **Assessing impacts of biobased plastics:**
  - **Methodologies to assess the impacts of biobased plastics compared to fossil-based plastics** from a life-cycle perspective **are still under development**. The **most harmonised methodology currently available is the framework developed by the Commission's Joint Research Centre**, referred to as the "Plastics LCA method", which builds upon the EU Product Environmental Footprint (PEF) method.

## Biodegradable and compostable plastics

The Communication recalls that the Circular Economy Action Plan 2.0 outlines the need:

- To give policy direction on the use of biodegradable or compostable plastics, based on an assessment of the applications where such use can be beneficial to the environment,
- To ensure that labelling a product as "biodegradable" or "compostable" does not mislead consumers and does not encourage them to litter such products.

It notes that plastics biodegradation is more and more subject to policy measures to ensure that biodegradable plastics bring environmental benefits and that consumers are not given the impression that they can be littered.

### Biodegradable plastics

The Communication recalls that its Group of Chief Scientific Advisors assessed the biodegradability of plastics in the open environment and highlighted in its opinion that:

- The use of biodegradable plastics in the open environment should be limited to specific applications for which reduction, reuse or recycling are not feasible,
- Biodegradable plastics should not be considered as a solution for inappropriate waste management or littering,
- Coherent testing and certification standards should be developed,
- Accurate information on the properties, appropriate use and disposal, and the limitations of biodegradable plastics and their applications should be promoted to specific user groups,
- Material properties, the environment the material ends up in, the likelihood of spilling into other environments, and the behaviour of consumers are key factors to consider.

In light of the opinion of its Group of Chief Scientific Advisors, the Commission outlines key recommendation related to the use of biodegradable plastics. Those are:

- **Biodegradation of plastics:**
  - **Biodegradation must be regarded as a "system property"** that takes into account material properties, specific environmental conditions and risks.
  - Consistent and science-based **testing and certification standards for biodegradation of plastic in the open environment are essential** to define limited applications where biodegradable plastics could be useful.
- **Biodegradable plastics applications:**
  - **The use of plastics that biodegrade in the open environment must be limited to materials for which full bio-degradability has proven to be below a specific and evidence-based timeframe to avoid environmental harm**. In this regard, mulch films used in agriculture are good examples of suitable applications of plastics that biodegrade in the open environment.

- **Substituting conventional plastics by biodegradable plastics risks slowing down the development of circular economy solutions.** Substitutions should not be considered as a solution for inappropriate waste management or littering.
- **Additives** used to manufacture biodegradable or compostable plastics **should biodegrade safely and not be harmful for the environment**. **They should also be disclosed to retailers, users and the public**.
- **Biodegradability claims:**
  - **Plastics labelled as "biodegradable" must always specify the receiving open environment for which they are intended and the required timeframe for their biodegradation**, in terms of weeks, months or years.
  - **Claims (including labels) should not be made on the biodegradation of litter-prone products**, including products covered by the Single-Use Plastics Directive.

### Industrially compostable plastics

The Commission Communication also outlines key recommendations related to the use of compostable plastics. Those are:

- **Compostable plastics applications:**
  - **Industrially compostable plastics should only be used for specific applications** when the environmental benefits are higher than their alternatives and when they do not have a negative impact on the quality of the compost.
  - **Industrially compostable plastic bags for the separate collection of biowaste are a beneficial application**. These bags can reduce the conventional plastics pollution of compost. The introduction of industrially compostable plastic bags for the separate collection of biowaste in countries like Italy and Spain has led to less pollution in biowaste and increased capture of biowaste.
  - **Other examples of suitable applications in packaging include fruit and vegetable stickers, tea bags and filter coffee pods, and very light plastic carrier bags**. The Commissions introduced in its proposed Packaging and Packaging Waste Regulation (PPWR) a provision to mandate the use of compostable plastic packaging for these products. The proposal foresees the empowerment of the Commission to amend this list.
- **Compostability claims:**
  - To avoid misleading consumers, **only certified industrially compostable plastics should be qualified as "compostable"** and it should always be clear that they are intended for industrial composting.
  - **Industrially compostable packaging should display the way in which they should be disposed of using pictograms**, as proposed by the Commission in its proposal for a PPWR.
- **Certification: Industrially compostable packaging should be certified compliant** against appropriate standards. The Commission will request the revision of the European standard EN 13432:2000 to clarify the concepts of biodegradability and compostability.
- **Home composting** is more challenging in terms of ensuring full biodegradation of compostable plastics. **Home composting for plastics not covered by EU rules should only be considered in the context of specific local conditions under the supervision of the relevant authorities** and provided that the use of such plastics has clear added value.

## Continued support for research, innovation and investment

The Commission outlines in its Communication that it will promote research and innovation to support the design of circular biobased plastics that are safe and sustainable by design and that allow reusability, recyclability and biodegradability.

It also highlights that more work is necessary to assess and reduce the net greenhouse gas emissions of biobased plastics compared to their fossil-based equivalents, and that biodegradation processes as well as consumer behaviour and the claims of biodegradability as a factor that may influence littering behaviour need to be further explored and researched.

## International aspects

The text concludes that the Commission will pursue the objectives of this Communication, taking into account the views of the Member States, the Council and the European Parliament, in discussions under relevant multilateral environmental agreements, such as:

- the Basel Convention on hazardous waste and their disposal;
- negotiations of legally binding instruments on plastic pollution, in particular those initiated by the UNEA Resolution 5/14;
- discussions in the context of the WTO, including the WTO Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade,
- future free trade agreements to be concluded or enhanced by the EU;
- and dialogues and cooperation with non-EU countries.

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