Biobased plastics: EU strategy

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European Commission sets out the challenges facing the EU in reducing plastic pollution

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: EU policy framework on biobased, biodegradable and compostable plastics

Update

The European Commission has published a Communication setting out its vision for tackling plastic pollution. It highlights the issues that need to be tackled, summarises the initiatives already being undertaken, and describes expected future actions.

Background

The EU distinguishes between biobased, biodegradable and compostable plastics.

Biobased: plastics that are made from biomass rather than conventional fossil resources (oil and natural gas). The biomass typically comes from plants grown specifically for use as feedstock (e.g. sugarcane, cereal crops, oil and wood). Biobased plastics can also be produced from organic waste (e.g. used cooking oil). Plastics can be fully or partially made from biobased feedstock. The Commission (under its proposal on empowering consumers for the green transition) aims to ensure that consumers are not misled by the term “biobased” by obliging manufacturers to refer to the exact share of biobased plastic content in a product.

Biodegradable: plastics that decompose fully and are not likely to persist and accumulate in the environment. The timescale for biodegradation must be short enough not to harm ecosystems. There are concerns that use of biodegradable plastics may remove the incentive to find innovative solutions to increase re-use and reduce waste (European Commission 2020). The Communication emphasises the need for plastics labelled as biodegradable to provide information on the timeframe and conditions for biodegradation, and for frequently littered products not to be labelled as biodegradable.

Compostable: plastic bags that are compostable can play a role in reducing plastics pollution if they meet relevant standards, and consumers are adequately informed on their use. The Commission proposal for a Packaging and Packaging Waste Regulation mandates the use of compostable plastic packaging for fruit and vegetable stickers, tea bags and filter coffee pods.

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What is changing?

The Commission's Communication sets out its overall vision for tackling plastic pollution. It recognises the potential of biobased, biodegradable and compostable plastics to contribute to reducing plastic pollution, but notes the importance of understanding the potential challenges that switching to bioplastics could create. This includes the need to ensure food security, which may be affected by changes in land use from food to biomass production. It is essential that the production of biomass used for making plastics does not have negative impacts on biodiversity and ecosystems.

The central themes of the Communication are the need to:

- carefully evaluate trade-offs, for example through improved measurement of the impacts of biobased content in plastics compared with fossil-based plastics, from a life-cycle perspective
- improve knowledge, including on the biodegradability of plastics in the environment, in particular the marine environment
- encourage innovation with the aim of designing biodegradable biobased plastics that can be reused or recycled
- prioritise long-lived over short-lived products, including single-use products
- prevent greenwashing and ensure that terms such as "biodegradable" or "compostable" do not mislead consumers
- develop certification with a view to ensuring that biodegradable and compostable plastics meet appropriate standards
- ensure biobased plastics do not slow down the development of circular economy solutions based on reducing waste and reuse of plastics.

The Communication summarises the multiple initiatives currently aiming to contribute to these objectives, including:

- Proposal on empowering consumers for the green transition: putting forward a ban on generic claims such as "bioplastics" and "biobased"
- Renewable Energy Directive (RED III): channelling the use of biomass towards the production of higher economic added value products including plastics, rather than using it as a source of bioenergy
- Fertilising Products Regulation: requiring agricultural mulch films to biodegrade in natural soil conditions and aquatic environments
- Single-Use Plastics Directive: providing a framework for a standard for biodegradability in the marine environment

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- Packaging and Packaging Waste Regulation: clarifying which plastics should qualify as compostable and how this should be displayed on packaging
- Commission Communication on Sustainable Carbon Cycles: setting out the aspirational objective that 20% of the carbon used in chemical and plastic products should be from sustainable non-fossil resources.

In addition, the Commission will:

- request the revision of the existing European standard EN 13432:2000 with a view to clarifying the concepts of biodegradability and compostability
- promote research and innovation with the aim of designing safe and sustainable biobased plastics that are reusable, recyclable and biodegradable
- strengthen the EU's approach to international standardisation on plastics with the aim of achieving consistent global standards.

Why?

The Communication reports that only 14% of plastic waste was recycled domestically in Europe in 2020. Plastic production is anticipated to double in the next 20 years, creating significant challenges for reducing greenhouse gas emissions, littering and plastic pollution.

Resources

Online resources from the European Commission:

- Questions and Answers - Communication on a policy framework for biobased, biodegradable and compostable plastics
- Biobased, biodegradable and compostable plastics
- Single-Use Plastics
- Proposal for a Directive on empowering consumers for the green transition
- Renewable Energy Directive (RED III)

European Commission (2020) Relevance of biodegradable and compostable consumer plastic products and packaging in a circular economy. Directorate-General for Environment. [download]

Regulation (EU) 2019/1009 on EU fertilising products

Proposal for a Regulation on packaging and packaging waste

Communication on Sustainable Carbon Cycles

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Sources

Communication: EU policy framework on biobased, biodegradable and compostable plastics

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