



European Commission

SCIENTIFIC OPINION ON

Biodegradability of Plastics

in the Open Environment



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ISSUE

A growing global use of plastics has led to an increased amount of **plastic waste in the environment**, polluting and harming land and sea. Biodegradable plastics could be part of the solution to this problem.

WHAT ARE BIODEGRADABLE PLASTICS?

Different from normal plastics, biodegradable plastics can be broken down and taken up by microbes without harming the environment.

CHALLENGE

Biodegradable plastics **only biodegrade in specific environments** and under certain conditions, often generated in industrial composting facilities.

We need to find out in which situations using biodegradable- instead of conventional plastics could bring environmental benefits.

Important factors are:

- Material properties
- The environment the material ends up in
- Likelihood of spilling into other environments
- Behaviour of consumers

GOAL

Clear framework for producers and consumers to decide for which uses to adopt **biodegradable plastics**.

RECOMMENDATIONS



Biodegradable plastics are **not a solution to littering**. Limit biodegradable plastics to specific uses for which reduction, reuse and recycling are not possible.



Support the development of **coherent standards for testing and certification**, assessing the biodegradation of plastic products in specific environments.



Inform consumers and manufacturers about the correct use and disposal of biodegradable plastics, for example, by putting in place a clear, **European-wide labelling system**.

IMPACT

This Scientific Opinion informs the European Commission's forthcoming policy framework on plastics.

This is a summary of a scientific opinion by the **Group of Chief Scientific Advisors**,

an Independent expert group providing high-quality and timely scientific advice to the European Commission, to inform European Union policies and legislation, and informed by [SAPEA evidence review reports](#).

Read the full report [here](#).

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