



European Commission

SCIENTIFIC OPINION ON

# Biodegradability of Plastics

## in the Open Environment



December 2020

### 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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