

Online public consultation questionnaire

Fields marked with * are mandatory.

PART 1: General information about the respondent

Country of Origin

Please add your country of origin, or that of your organisation.

Belgium

* I am giving my contribution as:

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

First Name

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Surname

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Email (this won't be published)

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Please provide the following information about your organisation:

Organisation name:

255 character(s) maximum

EurEau

Organization size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number:

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

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The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published.

For the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.

Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

*** Contribution publication privacy settings**

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

- Anonymous** - Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.
- Public** - Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

If you are answering as a professional, which of the following best describes your sector or, if an association, the sector that your association represents? (*you may only tick one box so choose carefully*)

- Polymer production (primarily biobased)
- Polymer production (primarily fossil-based)
- Plastics processing industry (primarily biobased, biodegradable or compostable)
- Plastics processing industry (primarily conventional ie fossil-based, non-biodegradable, non-compostable)
- Agriculture
- Fisheries

- Retail
- Private/public procurement of plastic products
- Hotel(s), restaurant(s) and catering
- Organisers of large public events (sports, concerts)
- Waste collection
- Public administration responsible for cleaning of litter
- Sorting and recycling industry
- Operators of compost/digestion plants
- Government (national, regional)
- NGOs and other civil society interest organisations
- Research/academia
- Standardisation and certification
- Other

If you ticked other, please elaborate

Waste water service providers in charge of collecting and treating urban waste water, often also including road run-off. Many larger operators run digesters to treat sewage sludge and produce sewage gas.

Background to the survey

There is currently no EU policy in place applying to biobased, biodegradable and compostable plastics in a comprehensive manner. Therefore, in the [European Green Deal](#) and new [Circular Economy Action Plan](#), the European Commission announced a policy framework on the sourcing, labelling and use of biobased plastics, as well as the use of biodegradable and compostable plastics.

In view of this framework, the Commission wishes to assess where the use of biobased feedstock leads to genuine environmental benefits, beyond reducing the use of fossil resources. The Commission also wishes to assess where using biodegradable and compostable plastics can be beneficial to the environment, and under which conditions.

What are biobased, biodegradable and compostable plastics?

There is widespread confusion among consumers about the nature, sustainability and environmental impacts of different types of plastics. The umbrella term “bioplastics” may be misleading as it is often used to describe, all together, materials of different properties, and thus combining the terms “biobased”, “biodegradable” and “compostable”.

Biobased plastics are fully or partially made from biological resources, rather than fossil raw materials. They are not necessarily compostable or biodegradable. It is important to examine the full life cycle of biobased plastics, to ensure they have a lower environmental footprint beyond the reduction in use of fossil resources.

Biodegradable plastics biodegrade in certain conditions only (e.g. biodegradable in soil or in the marine environment).

Compostable plastics are a subset of biodegradable plastics that only biodegrade in perfectly controlled conditions e.g. industrial composting facilities. “Home” compostable plastics (biodegradable plastics that

only biodegrade in somewhat controlled conditions e.g. home compost), may also exist. In some specific cases, these plastics can bring advantages compared to conventional, non-biodegradable or non-compostable plastics. Using biobased feedstock does not define the functional characteristics of the resulting plastics or whether they will be biodegradable or compostable. It is quite possible to have biodegradable or compostable plastics which are made from fossil feedstock and vice versa. It is also possible to have biobased plastics which are neither biodegradable nor compostable.

* The Questionnaire includes two sets of questions.

Please select the set of questions that best applies to you by clicking on the appropriate button. Note: If you select the first set for citizens/purchasers you will also be given the option of answering the second set, following completion, if you so wish.

- Questions for citizens and other potential purchasers of biobased, biodegradable and compostable plastics. Answer these questions if you are a citizen or a procurer/user of plastic products (for example in the hotels, restaurants, canteens sector, agricultural sector, fisheries sector, organiser of large public events).
- Questions for all other professionals and experts who have an interest in biobased, biodegradable and compostable plastics in their professional life.

PART 2: Questions for citizens and other potential purchasers of biobased, biodegradable and compostable plastics.

Q1: Have you ever purchased or received plastics that have been described or marked as follows?

Description	Yes	No	I don't know
Bioplastic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biobased plastic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Compostable plastic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2: If you answered yes to Question 1, for which purposes have you purchased or received such plastics? (*You may tick more than one box in each row*)

	Biobased plastic	Bio-degradable plastic	Compostable plastic	I don't know
Packaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Shopping bag 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Bin liner or bag for the residual waste bin (waste that cannot be separated) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> • Bag for the biowaste bin (food and kitchen waste) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Food and drinks packaging (take-away cups, containers and other food and drinks packaging) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Other packaging 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Footwear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agricultural mulch films	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plastic plant pots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Products other than those listed above:

Q3: How likely are you to purchase these kinds of plastics in the future?

Designation	Very likely	Quite likely	Not very likely	Don't know
Biobased plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compostable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4: How do you normally dispose of the following types of plastics?

Type of plastic	Mixed waste	Waste container for plastics (i.e. plastics recycling)	Home compost	Waste container for biowaste (food and kitchen waste)	I don't know
Fossil-based, non-biodegradable, non-compostable plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biobased plastic (non-biodegradable, non-compostable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegradable plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compostable plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

'Comments on your answers to Question 4'

Q5: If you selected 'mixed waste' in any rows in Question 4 above, please select a reason for why you do this:

Designation	No separate waste system available	Unclear about which separate waste system to use	Don't believe it will make a difference	Other	I don't know
Fossil-based (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biobased (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compostable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please elaborate if you selected 'other' in any row above:

Q6: How well do you consider that you are informed about the correct usage and disposal of the following types of plastics?

Designation	Very well informed	Well informed	Moderately Informed	Slightly informed	Not informed at all	I don't know
Fossil-based (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biobased (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compostable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7: How well do you consider that you are informed about the environmental benefits and risks of the following types of plastics?

Designation	Very well informed	Well informed	Moderately informed	Slightly informed	Not informed at all	I don't know
Fossil-based (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biobased (non-biodegradable, non-compostable) plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compostable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8: If you consider yourself well, or very well informed, where did you gain this information? (*You may tick more than one box in each row*)

	Product labelling	Information from waste collector	Information from other public authorities	Information from media	Other	I don't know
Fossil-based (non-biodegradable, non-compostable) plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biobased (non-biodegradable, non-compostable) plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegradable plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compostable plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please elaborate if you selected 'other' in any row above:

Q9: As far as you are aware, are the following types of plastics environmentally preferable compared to conventional (i.e. fossil-based non-biodegradable, non-compostable) plastics?

Designation	Yes	No	Depends on how is sourced /used/ disposed of	I don't know
Biobased plastic (non-biodegradable, non-compostable)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compostable plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10: As far as you are aware, what are the potential environmental benefits of the following types of plastics compared to conventional (i.e. fossil-based non-biodegradable, non-compostable) plastics? (*You may tick more than one box in each row*)

	Biobased (non-biodegradable, non-compostable) plastic	Biodegradable plastic	Compostable plastic	I don't know
Less environmental impacts during the production of these plastics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Less greenhouse gas emissions over the life-cycle (including production and disposal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Avoids harmful substances in the production of these plastics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegrades in composting facilities together with food and kitchen waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Readily biodegrades into harmless components if left in the open environment (land or sea)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Readily biodegrades into harmless components if incorporated in the soil for suitable biodegradable plastic applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q11: As far as you are aware, if a product is labelled as 'biobased', can it still include a certain percentage of raw materials from fossil sources?

- Yes
- No

- Don't know
- No opinion

Q12: Do you think that plastic products labelled as 'biobased' should display the share that comes from biological sources (*e.g. biomass such as plants and biowaste*) rather than fossil sources?

- Yes
- No
- Don't know
- No opinion

Q13: As far as you are aware, approximately how long does it take plastics that are labelled as "biodegradable" to completely biodegrade into harmless components, if littered in the open environment?

- 1 month
- 6 months
- 1 year
- At least 5 years
- I don't know

Q14: In your opinion, if citizens are supplied with compostable plastic bags for the separate collection of biowaste (food and kitchen waste) and are also informed about their correct use and disposal, how likely are each of the following effects?

	Very likely	Moderately likely	Low likelihood	I don't know /no opinion
More consumers would collect biowaste (food and kitchen waste) separately.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some of the compostable plastic bags will be used for other purposes than for collecting biowaste (food and kitchen waste) separately	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some of the compostable plastic bags would be discarded in the separate collection of plastics intended for material recycling (ie plastics recycling)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The compostable plastic bags would be more likely to be littered in the open environment than conventional plastic bags	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please specify other risks that you consider likely:

Q15: In your opinion, if plastics labelled as "biodegradable" or "compostable" become more widespread, how likely are each of the following effects?

	Very likely	Moderately likely	Low likelihood	I don't know /no opinion
Biodegradable or compostable plastics will be properly used and disposed of, if properly labelled and information is given on their disposal pathway	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will not look at the labels and will use biodegradable or compostable plastics in the same way as conventional ones	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will litter more with plastics in the open environment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People will purchase more plastics	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable or compostable plastics will be disposed of in separate collection of plastics intended for material recycling (ie plastics recycling)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please specify other risks that you consider likely:

Q16: What kind of assistance is most likely to help you to use and dispose of biobased, biodegradable or compostable plastics in the right way? (*You may tick up to three types of assistance*)

between 1 and 3 choices

- Colour coding
- Information campaigns
- Guidance text on the product
- Pictograms on the product
- Pictograms on the product are the same as pictograms on the biowaste bin
- Reference to a standard, certification scheme or label
- QR code with a link to additional information
- Other

Please elaborate if you selected 'other' in any row above:

Q17: To what extent would you support the following policy measures guiding the use and disposal of biobased, biodegradable and compostable plastics?

Policy measure	Very much	Reasonably well	Not that much	Not at all	I don't know /no opinion

Label for biobased plastics only allowed if the biobased content (e.g. biomass) exceeds a minimum threshold	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum EU sustainability requirements for plastics labelled as 'biobased' are defined	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limit the use of biodegradable plastics in the open environment to products that are difficult to collect (e.g. plastics on agricultural fields, plastic clips for trees, plastic components in fireworks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Limit the use of compostable plastics to products that are difficult to separate from food waste and are likely to end up with food waste (e.g. fruit stickers, tea bags, coffee pods)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ban plastics that are simply labelled as 'biodegradable', and have no specifications on the suitable receiving environment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Require that plastics that are labelled as 'compostable' display information on their intended collection and disposal pathway	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information campaigns on the difference between biobased, biodegradable and compostable plastics and how they should be used and disposed of	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is there other action that you think is important?

* Do you now wish to answer the questions for professionals and experts, or are you finished?

- Yes, I'd like to answer the questions for professional and experts
- No I'm finished

PART 3: Questions for all other professionals who have an ACTIVE interest in biobased, biodegradable and compostable plastics in their professional life

EQ1: As you may know, the term "bioplastic" is not specific and can be misleading, as it covers a whole range of plastics with different properties that can be ecologically favourable or unfavourable, depending on the application and other circumstances including end of life. However, it is assumed that many consumers have positive associations with the term "bioplastics".

In light of this: Would you prefer to avoid using the term "bioplastic" when communicating with consumers to avoid potentially misleading associations?

- Yes
- No
- Don't know/No opinion

Questions concerning biobased plastics

EQ2: Currently, under available standards, there is no minimum biobased content (or share that comes from biological e.g. biomass rather than fossil sources) for plastics to be labelled as “biobased”. In your opinion, should there be a minimum biobased content for plastics to be labelled as “biobased”?

- Yes
- No
- Don't know/No opinion

EQ3: If you answered yes to EQ2, in your opinion, what should the minimum biobased content be?

	20%	40%	50%	60%	80%	100%	Don't know /No opinion
Minimum share of biogenic carbon in 'biobased plastics'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

EQ4: In your opinion, should there be a harmonised method to measure the biobased content?

- Yes
- No
- Don't know/No opinion

EQ5: If you answered yes to EQ4, which method would you prefer to use in order to calculate the biobased content for communication to consumers?

	Yes	No	Don't know/No opinion
Based on C14 measuring	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Based on a mass balance approach	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

If other, please elaborate on your answer:

EQ6: Depending on the production process, the application and end-of-life, biobased plastics can have different lifecycle environmental footprints. A standardised Life Cycle Assessment or Product Environmental Footprint method could make energy consumption and emissions comparable between biobased and fossil-based plastics.

In your opinion, are there any gaps in LCA knowledge and Environmental Footprint methods for comparing biobased and fossil-based plastics?

- Yes
- No
- Don't know/No opinion

If you answered yes or no, please elaborate on your answer:

Include the environmental impact from the biomass feedstock production (forestry, agriculture) comprising the use of water and pesticides and the impact on eutrophication, next to climate change and energy use. End of life: The time required to re-capture (for example through tree re-growth) the GHG emissions linked to the production, use and disposal of these materials should be taken into account. This should be compared to possible recycling scenarios. The system boundaries should also include the disposal pathways and their potential impacts (correct versus incorrect disposal i.e. through the toilet).

EQ7: In your opinion, should the EU develop sustainability criteria for the feedstock used to produce biobased plastics?

- Yes
- No
- Don't know/No opinion

If you answered no, please elaborate on your answer:

EQ8: If you answered yes to EQ7 above, which of the approaches below would you advocate?

- a) Use the sustainability criteria defined for feedstock for biofuels as in the Renewable Energy Directive (2018 /2001) and related Commission's proposal (2021/0218(COD))
- b) Use the sustainability criteria defined for feedstock for biofuels as in the Renewable Energy Directive (2018 /2001) and related Commission's proposal (2021/0218(COD)) as a starting point, but with adjustments to take account of specificities of biobased plastics
- c) Develop a new set of sustainability criteria that do not take the criteria defined for feedstock for biofuels as a starting point
- Don't know/no opinion

Please explain your answer to EQ8

EQ9: If you answered b) or c) to EQ8 above, please indicate the extent to which the following types of criteria should be included:

Criteria type	Definitely	Perhaps	Definitely not	Don't know /no opinion
Life cycle GHG emissions savings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protection of land with high carbon stock	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protection of wetland and peatland	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protection of land with a high biodiversity value	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Protection of forests	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land-use, land-use change and forestry (LULUCF) criteria	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protection of soil quality	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please name any additional/alternative criteria type that you think should be included

Length of the carbon cycle (time needed to recapture the carbon released at the end of the product life, for example through the re-growth of trees) compared to possible recycling scenarios. The origin of the biomass (transport, growth conditions) must also be taken into account.

EQ10: If you answered a) or b) to EQ8 earlier, please indicate the extent to which the following provisions, as defined in the Commission's proposal to revise the Renewable Energy Directive (2021/0218 (COD)), should be included:

Provision	Definitely	Perhaps	Definitely not	Don't know /no opinion
Agricultural or forest biomass is not obtained from land with high biodiversity value, in or after January 2008	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural or forest biomass is not obtained from land with high carbon stock, in or after January 2008	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural or forest biomass is not obtained from land that was peatland in or after January 2008	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Revised criteria on harvesting, notably on maintenance of soil quality and biodiversity	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Revised criteria for life cycle GHG emissions savings	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biomass respects the waste hierarchy and the cascading principle	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EQ11: To what extent would you support the following policy measures to maximise the potential benefits of biobased plastics?

Policy measure	Very much	Reasonably well	Not that much	Not at all	Don't know /no opinion
Keep policy as it is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Minimum threshold of biobased content that must be exceeded before plastics may be labelled as 'biobased'	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Minimum EU sustainability criteria for the biobased content of biobased plastics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotion by the European Commission of a voluntary 'biobased plastic' label	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory mechanism that defines under which circumstances biobased plastics are to be preferred over (virgin) fossil-based plastics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory mechanism that prescribes the mandatory use of biobased plastics (complying with sustainability criteria) for specific applications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulatory mechanism that ensures that biobased plastics (complying with sustainability criteria) are counted towards mandatory recycled content targets	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measures to increase the use of biobased plastics in public procurement contracts for products and services	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voluntary pledges by producers of plastics resins or manufacturers of plastic products to increase the level of biobased content in certain products	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please elaborate as necessary on your answers

The most interesting biobased plastics are based on recycled biomass that would otherwise be wasted. Petrol-based plastics can be interesting when based on the unused part of fuel production.

Are there other policy measures that you think are important?

To avoid confusion and environmental hazards, the minimum threshold biobased content that must be met before plastics may be labelled as 'biobased' must be 100%. Other plastics must be called 'contains biobased plastics' AND/OR 'partly biodegradable plastics'.

Questions concerning biodegradable and compostable plastics

EQ12: The table below displays a number of EU standards that provide the basis for certification of biodegradability as well as compostability in diverse matrices (compost, aqueous medium, use in agriculture) *

EN 13432	Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging
EN 14995	Plastics - Evaluation of compostability - Test scheme and specifications
EN 17033	Plastics - Biodegradable mulch films for use in agriculture and horticulture - Requirements and test methods
EN ISO 17556	Plastics - Determination of the ultimate aerobic biodegradability of plastic materials in soil by measuring the oxygen demand in a respirometer or the amount of carbon dioxide evolved
EN ISO 14851	Determination of the ultimate aerobic biodegradability of plastic material in an aqueous medium, Method by measuring the oxygen demand in a closed respirometer
EN ISO 14852	Determination of the ultimate aerobic biodegradability of plastic materials in an aqueous medium, Method by analysis of evolved carbon dioxide
EN ISO 14855-1 and -2	Determination of the ultimate aerobic biodegradability and disintegration of plastic material under controlled composting conditions by analysis of evolved carbon dioxide Part 1: General method Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test

In your opinion, as a basis for certification of biodegradable as well as compostable plastics, to what extent are the listed standards and test methods applicable? For instance, considering the comments of the scientific advice as reported by SAPEA (2020) [1]

[1] SAPEA, Science Advice for Policy by European Academies. (2020). Biodegradability of plastics in the open environment. Berlin: SAPEA. doi:10.26356/biodegradability plastics

	The standard is sufficient as a basis for labelling	The standard needs minor adjustments if used for labelling	The standard needs major adjustments if used for labelling	Don't know /No opinion
EN 13432	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
EN 14995	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
EN 17033	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
EN ISO 17556	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
EN ISO 14851	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

EN ISO 14852	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
EN ISO 14855-1 & 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please elaborate on your answer above:

The criteria must ensure biodegradability in sewers (between 3 hours in a small village and 24 hours in more extended sewage systems), and comply with the environmental quality standards for surface waters (i.e. micropollutants).

EQ13: Do you see the need for additional standards for compostability in technical systems like facilities for composting or anaerobic digestion?

- Yes
- No
- Don't know/No opinion

If yes, please specify here:

EQ14: Do you think that additional requirements are needed to assess compostable plastics?

	Yes	No	Don't know /no opinion
European Standard defining criteria and method to assess suitability for home composting [1]	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Update of standard EN 13432 (e.g. definition of worm test)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other, please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[1] There is currently no international standard specifying the conditions for home composting of biodegradable plastics. However, there are several national standards, such as the Australian norm AS 5810 "Biodegradable plastics – biodegradable plastics suitable for home composting". Belgian certifier TÜV Austria Belgium had developed the OK compost home certification scheme, requiring at least 90% degradation in 12 months at ambient temperature. Based on this scheme, the French standard NF T 51-800 "Plastics — Specifications for plastics suitable for home composting" was developed, specifying the very same requirements for certification.

Other additional requirements

The behaviour in waste water collection and treatment (total retention time about one day) must be established (including the potential to cause pipe and pump blockage etc.). Negative impacts on the environment (soil, water) must be excluded. Compostable plastics must not contain or degrade into hazardous substances (PFAS, ink, additives) or micro- or nanoplastics. Clear composting guidelines on the plastic material are required.

EQ15: In your opinion, do non-biodegradable additives to plastics potentially pose an environmental risk following break-down of compostable or biodegradable plastics?

- Yes
- No
- Don't know/No opinion

EQ16: If you answered yes to EQ15 above, in your opinion, is this risk sufficiently regulated?

- Yes
- No
- Don't know/No opinion

If you answered No to EQ16 above, what kind of policy options would you recommend?

Biodegradable / compostable plastics must not contain hazardous non-biodegradable additives (including inks) that could be released to the environment after the end of the product life. They should not degrade into micro- or nanoplastics that could pollute the aquatic environment or sewage sludge.

EQ17: Microplastics can be emitted to the environment through degradation processes, as an intrinsic part of the use of the product (e.g. abrasion of paint, tyres, shoes, textiles, fishing gear, aquaculture nets etc.).

To what extent do you consider that biodegradable plastics might be part of the solution for microfibers and microplastics releases to the environment?

	Very much	To a fair degree	To a limited degree	Not at all	No opinion/ don't know
Biodegradable plastics can be part of the solution	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please elaborate on your answer

Generally, the most sustainable solution is to drastically reduce the overall use of plastic in all products /sectors. If a use cannot be replaced, the most sustainable plastic solution should be used. In a number of cases, this will be biodegradable plastics, in others, it may be a different solution.

Looking at the waste hierarchy, the first goal is waste avoidance. This means products should first of all be durable to extend their useful service life. It must be verified whether biodegradable plastics would guarantee the durability of the above-mentioned products. The waste hierarchy then calls for recyclability, which means closed product cycles. If we let waste biodegrade, it is no longer available for recycling purposes.

The above-mentioned products contain numerous hazardous substances (additives) that could leach out in the (aquatic) environment or end up in sewage sludge.

EQ18: Please provide your opinion on whether or not there are environmental benefits from using biodegradable or compostable plastics (or alternatives) for the following list of products, while at the same time minimising environmental risks or risks to the waste management processes

	Strong benefits to be gained by using biodegradable plastics	Strong benefits to be gained by using compostable plastics	Replace conventional plastics with alternative biodegradable /compostable materials (e.g. paper / other)	Do not replace conventional plastics with biodegradable, compostable plastics or alternatives	Don't know /no opinion
Bags for biowaste (food and kitchen waste)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shopping bags	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Very light bags for fruit and vegetables	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thin film applications for fruit, vegetables and perishable food products	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fruit labels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coffee capsules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Tea bags & coffee pods	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Packaging for fast moving consumer goods (e.g. personal care products, detergents)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
(Plastic) bottles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Catering items (such as cups and food containers)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clothing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Footwear	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agriculture mulch films	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other agriculture and horticulture applications	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fishing gear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Geotextiles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Buildings & construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Coatings & adhesives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
(Outdoor) paints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Other products for which strong environmental benefits would be gained by using biodegradable or compostable plastics (please specify which products)

EQ19: As a composting or anaerobic digestion operator/waste manager/local authority have you experienced:

	Never	Occasionally	Sometimes	Often	Don't know	Not relevant to me
Biodegradable or compostable plastics in the separate plastics stream for material recycling	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problems caused in material recycling by biodegradable or compostable plastics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Use of conventional plastic bags for holding biowaste (e.g. food and kitchen waste) intended for composting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Problems caused in composting by conventional plastics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Certified EN 13432 compostable plastic bags and compostable plastic packaging that have not completely broken down after a full aerobic compost cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increased littering by biodegradable or compostable plastics-based products (e.g. bags) in the open environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Increased littering by conventional, non-biodegradable/non-compostable plastics-based products (e.g. bags) in the open environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Biodegradable mulch films that have not broken down in the soil	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodegradable mulch films that have been transferred to other environmental media like water without breaking down	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify):	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify):

These answers were given as waste water operators (= composting or anaerobic digestion):

- increased littering (containing bioplastics) in the open environment might lead to more polluted rainwater and therefore some remaining pollution after treatment
- time spent in the waste water treatment plant and biodegradability during 20 days
- non biodegradable plastics may pollute sludge

EQ20: To what extent would you support the following policy measures to maximise the potential benefits of biodegradable, compostable plastics while at the same time minimising environmental risks?

	Fully agree	Partially agree	Neutral	Partially disagree	Completely disagree	Don't know /No opinion
Adopt a definition of biodegradation as a system property which takes into account both the properties of the material and specific environmental conditions for biodegradation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limit the use of biodegradable plastics to specific applications for which reduction, reuse, and recycling are not feasible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Limit the use of biodegradable plastics to specific applications where collection from the open environment is not feasible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Do not consider biodegradable plastics as a solution for inappropriate waste management or littering, under any circumstances	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop additional standards for biodegradability in specific receiving environments such as the marine environment, the freshwater environment and/or the terrestrial environment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promote the supply of accurate information on the properties, appropriate use and disposal, and limitations of biodegradable plastics to relevant user groups	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ban the labelling of plastics as 'biodegradable', where it is not accompanied by specification of the suitable receiving environment(s)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limit the use of compostable plastics to products that are difficult to separate from food waste and are likely to end up with food waste (e.g. fruit stickers, tea bags, coffee pods)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Require that plastic packaging that is labelled as 'compostable' is certified according to EN 13432	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Require that plastic packaging that is labelled as 'compostable' displays information on its intended collection and disposal pathway	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other suggestions for policy options / Comments:

Toilets are still used as disposal route for all kinds of plastics, and this may damage the waste water infrastructure and may lead to the generation of microplastics. Another route may be from road run-off of plastic litter into combined sewers. Hence, clearly defining biobased plastics, biodegradable and compostable plastics is important, but will not solve this problem of the waste water sector. The following additional actions are necessary:

Reducing the overall plastic consumption, in particular that of single-use plastics, is the best way forward. The label on "intended collection and disposal pathways" should not be limited to compostable plastics but include all biodegradable plastics. The label should include a pictogram advising that disposal through the toilet is not allowed.

Standards for biodegradability in specific receiving environments should include the waste water treatment infrastructure.

You are welcome to upload documents that support your answers to the survey:

c27a77d2-8762-42ca-a1e5-d4a0b1b6b9e0

/EurEau_Briefing_Note_Microplastics_and_the_Water_Sector_fin_.pdf

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