

To:
Aurel Ciobanu Dordea, Director
Directorate B: Circular Economy and Green Growth
DG Environment, European Commission

Cc:
Emmanuelle Maire, Head of Unit, DG ENV B1
François Wakenhut, Head of Unit, DG ENV B3

10 June 2026

RE: Ensuring alignment between bio-based plastics policy and EU circular economy objectives for packaging

Dear Mr Aurel Ciobanu Dordea,

The Rethink Plastic Alliance and supporting organisations recognise the importance of addressing fossil resource dependence in the plastics sector and we welcome efforts to explore pathways towards reducing the climate impacts of packaging materials. The study *Support for bio-based feedstock in plastic packaging analysis under the Packaging and Packaging Waste Regulation (EU) 2025/40*, however, does not provide a sufficiently balanced basis for future policy development.

The study heavily relies on a narrow set of industry-aligned assumptions and position papers to produce policy options and recommendations, while insufficiently engaging with independent scientific, alternative industry, and civil society viewpoints. Overall, the study falls short of the European Commission's Better Regulation principles in providing a robust evidence base for policy recommendations, supported by a comprehensive assessment of socio-economic and environmental trade-offs across a diversity of policy alternatives, rather than a few options. Selecting a consultancy without financial or institutional ties to the related industries would have likely secured a more balanced evidence base for policy development.¹

In the year we expect publication of the new EU Circular Economy Act, the dilution of circular economy objectives to promote bio-based feedstocks in various policy proposals (including the Industry Accelerator Act and the End of Life of Vehicles Directive), risks taking the EU off-course from the goal of cutting waste at source and growing the market for secondary raw materials. In this sense, the study does not sufficiently build on the conclusions of the European Commission's Communication on an EU policy framework on bio-based, biodegradable and compostable plastics.²

To **strengthen alignment between future bio-based plastics policy and existing EU circular economy, climate, and pollution objectives**, we encourage the Commission to consider the following recommendations when preparing its next steps under the PPWR.

On process and quality of the evidence base:

- Critically reassess the assumptions and policy recommendations contained in the study.
- Conduct an impact assessment of different policy options, in line with the Better Regulation Guidelines.
- Ensure future analytical work reflects a broader range of scientific expertise and stakeholder perspectives.
- Strengthen conflict-of-interest safeguards in future procurement of policy research.

¹ EU Court of Auditors. (2022). [Special report: Use of external consultants](#).

² European Commission, *EU policy framework on biobased, biodegradable and compostable plastics*, COM(2022) 682 final, 30 November 2022.

On the substance of future bio-based plastics policy:

- Do not treat recycled and bio-based content as fungible or equivalent.
- Reject misleading climate neutrality or net-negative claims for short-lived bio-based plastic applications.
- Prioritise real waste prevention, reuse, and recycling, including for bio-based plastics, in line with the waste hierarchy.
- Ensure that any future policy approach fully accounts for biodiversity, land-use, pollution, toxicity, and governance risks.
- Develop clear, transparent and science-based communication principles to prevent misleading claims regarding bio-based plastics.

We detail below the findings of our review of the study.

1. Bio-based feedstocks must support waste prevention, reuse and recycling, not substitute them

While the study rightly recognises the need to reduce dependence on fossil carbon, its framing of a “circular carbon economy”, conflates feedstock origin with circularity. This conceptual basis weakens the distinction between the sustainability of inputs and the circularity of materials, and risks shifting policy attention away from the structural measures that actually determine circularity, namely packaging reduction, reuse systems, and high-quality recycling infrastructure.

To remain aligned with the objectives of the PPWR and the EU waste hierarchy, circularity should continue to prioritise reducing material throughput, maintaining materials in circulation at their highest value for as long as possible, and promoting the simplest material compositions to ease recycling.

In this context, bio-based carbon feedstocks used for primary plastics production should not be treated as equivalent to recycled content. Doing so risks creating unintended competition for investments and policy support between bio-based plastics production and waste prevention and recycling systems, as also pointed out by actors from the recycling sector.^{3 4} Overall, this could weaken incentives to improve collection, sorting, reuse, and high-quality recycling performance - despite these remaining central objectives of EU circular economy policy.

2. Recycling infrastructure readiness must precede policy recognition

The study identifies important limitations regarding the practical recyclability of several bio-based polymers, yet does not fully explore how these materials could realistically integrate into existing collection, sorting, and recycling systems. Recyclability in practice and at scale should remain the guiding principle for assessing packaging circularity, including for bio-based materials. Without stronger consideration of end-of-life systems, there is a risk of increasing reliance on incineration or other disposal pathways that are incompatible with EU climate and circularity objectives.

³ Recycling Europe (2023) [EP plenary vote on PPWR advances circularity, but fails to correct priority access and using bio-based plastics in recycled content targets](#)

⁴ Recycling Europe. (2026). *Recycling Europe's guide for a Circular Economy Act that delivers*

3. Abstract accounting methods cannot substitute for verified material content

The study also includes support for mass balance approaches and “bio-attributed” content claims, whereby products may be counted as bio-based without corresponding physical traceability of bio-based material in the final product. It further proposes counting entire packaging items as bio-based where only 20% or more of the content is bio-based. Such approaches overstate actual fossil displacement by using abstract notions of bio-based product content linked with traceability risks and create issues of transparency over the real composition and environmental performance of packaging.

4. Net-negative carbon claims are misleading for short-lived packaging applications

The study gives prominent visibility to claims that bio-based plastics can achieve “net-negative” carbon footprints, which sit uneasily alongside caveats later introduced about the reality that most packaging applications are short-lived and will rapidly re-release stored carbon through incineration, degradation, or other end-of-life pathways. In the context of packaging, framing bio-based plastics as contributing to carbon removals tends to overstate their climate mitigation role given the temporary nature of the carbon storage in these applications.

5. Experience shows certification systems could not stop RED enforcement failures

The study recommends building on Renewable Energy Directive sustainability criteria and existing biomass certification schemes. Recent assessments, including by the European Scientific Advisory Board on Climate Change, highlight the continuing decline of the EU land carbon sink and conclude that current EU land-use policies, including for bioenergy, remain insufficiently aligned with climate and sustainability objectives.⁵

A more detailed assessment of implementation and enforcement challenges observed in bioenergy sectors shows important issues of reliability. This is explained by flaws in both their verification methods - schemes do not check for overall demand volume against actual sustainable feedstock supply to prevent false labelling, for instance - and their implementation⁶, with real governance shortcomings and fraud cases associated with biomass certification systems. The EU has, for instance, seen large volumes of virgin palm oil, a product associated with deforestation and other environmental damage, falsely labelled as used cooking oil to meet policy targets.⁷ ⁸ These experiences demonstrate that certification alone cannot ensure sustainability, traceability, and integrity in rapidly expanding biomass markets, particularly where strong economic incentives are created. Delivery of environmental outcomes must be primarily obtained through enforced environmental protection and restoration legislation.

6. Bio-based plastics do not solve plastic pollution or toxicity concerns

The study does not fully address pollution and chemical safety considerations associated with bio-based plastics. Most bio-based plastics are not biodegradable in natural environments and perpetuate, rather than solve, the growing problem of plastic and microplastic pollution.

⁵ European Scientific Advisory Board on Climate Change. (2025). *Scaling up carbon dioxide removals Recommendations for navigating opportunities and risks in the EU*.

⁶ Fern. (2024). *Mass Imbalance Why the voluntary certification of biomass fuels under the EU Renewable Energy Directive is failing to protect forests and the climate*.

⁷ [Used Cooking Oil: The Certified Unknown | T&E](#)

⁸ [France, Germany urge tougher EU checks on biofuel imports in fraud probe | Reuters](#)

Scientific research shows that bio-based and biodegradable plastics can contain many of the same toxic substances used in conventional fossil-based plastics, including additives associated with harmful impacts on human health and the environment.⁹ To ensure coherence with the EU's pollution prevention and safe and sustainable by design objectives, future policy discussions on bio-based plastics should integrate considerations related not only to feedstock origin, but also end-of-life impacts, chemical safety, and material toxicity.

7. Consumer communication on bio-based plastics must prevent misconceptions

Finally, the study suggests that consumer perceptions of bio-based plastics as “natural” can be framed as an advantage, and that it could be leveraged to accelerate market uptake. The “biofuels” precedent calls for caution: consumer communication on bio-based plastics must be carefully designed to avoid misconceptions regarding biodegradability, environmental performance, toxicity, or littering impacts. Public understanding of these materials remains limited and often conflates “bio-based”, “biodegradable”, and “compostable”. In order to create trust in EU sustainability policy, clear and accurate consumer communication must avoid misconceptions.

We remain available for further discussion and would welcome the opportunity to contribute to future analytical work on this topic.

Rethink Plastic Alliance and supporting organisations.



⁹ Zimmermann, L., Dombrowski, A., Völker, C., & Wagner, M. (2020). Are bioplastics and plant-based materials safer than conventional plastics? In vitro toxicity and chemical composition. *Environment International*, 145, 106066. <https://doi.org/10.1016/j.envint.2020.106066>