

Call for Evidence Response:

EU Circular Economy Act

Scaling up natural polymers to reduce plastic waste

Submitted by the [Natural Polymers Group](#), November 5 2025

The challenge

Plastic pollution is a global crisis, presenting a significant threat to human health, natural ecosystems and the global race to net zero. Even if policymakers continue current efforts to maximise recycling and reuse, plastic production is projected to triple by 2060 (Systemiq, 2024; The Lancet, 2025). The EU Circular Economy Act (CEA) provides a vital opportunity to reduce global plastics demand and support new material innovation.

The opportunity

The CEA has an opportunity to look beyond managing plastic. To truly create effective environmental protections and safeguard the planet, the CEA must recognise biological circularity and establish an EU-wide material category for unmodified natural polymers in line with existing definitions under REACH and SUPD, enabling scalable, safe, nature-based substitutes which avoid plastic in the first place. The CEA should operationalise the forthcoming EU Bioeconomy Strategy by creating a predictable market framework for bio-based, regenerative materials so that bioeconomy investments can translate directly into circularity outcomes.

About biological circularity and unmodified natural polymers

Biological circularity is the process by which renewable materials are used, collected, and naturally regenerated, closing the loop within living systems. It complements existing recycling and reuse schemes and directly supports the EU's goals for circularity, bioeconomy, decarbonisation, and waste reduction.

Natural polymers, as defined by REACH and SUPD regulations, are **created in nature, not chemically modified**, and **explicitly excluded from the definition of a plastic**. They should therefore be treated as a distinct material category. They represent a critical innovation pathway that directly addresses the CEA's core goals. These materials are derived from seaweed, plants, and agricultural by-products and offer circular solutions where technical recycling reaches its limits, particularly for contaminated or multi-material packaging.

Natural polymers create both an environmental and economic opportunity by reducing reliance on plastic. By closing material loops through biological circularity, our dependency on traditional waste management methods and on fossil fuels is reduced.

The solution

We recommend the following regulatory priorities:

- 1. Create a distinct material category for natural polymers and provide for their adoption in all relevant waste management regulation, aligned with the REACH and SUPD definitions of natural polymers and plastics**

The REACH and SUPD definitions of natural polymers as plastic-free are the basis on which the emerging natural polymer industry is growing. These definitions must be protected and translate into a distinct material category across all member states and relevant regulation, in particular in the Packaging and Packaging Waste Regulation (PPWR) and Extended Producer Responsibility (EPR) schemes, ensuring natural polymer adoption is promoted and no deviation from the definition accidentally limits the potential

of the natural polymer market. This will help make the EU home to a thriving clean-tech industry while removing harmful plastics from our lives.

2. Recognise organic recycling

The consultation focuses heavily on secondary raw materials and technical recycling, while underestimating the role of natural processes in a circular economy. Organic recycling is an optimal end-of-life route for single-use natural polymers, leaving no persistent waste and closing the carbon loop. Promoting organic recycling also recognises the harm that plastics do to our health and the need to reduce our reliance on them where possible. We therefore call on the Commission to:

- Recognise organic recycling in recyclability definitions and the waste hierarchy, ensuring it is promoted as an environmentally valuable circular output. In particular, the PPWR does not recognise organic recycling. Natural polymers will therefore face a de facto ban in 2035 when all packaging must be recycled “at scale”.
- Ensure a level economic playing field for organic recycling by including incentives that promote it over recycling of traditional plastics.

3. Fair and fit-for-purpose EPR schemes

Extended Producer Responsibility (EPR) is an important driver of circularity. However, natural polymers and the circularity benefits of organic recycling are not broadly recognised thanks to state-by-state implementation of EPR. We therefore recommend:

- EU-level recognition of and provision for natural polymers, supporting their adoption in national EPR schemes and avoiding fragmentation.
- Eco-modulation of fees based on real environmental performance so that natural polymers are prioritised over plastics.
- Transparency in how fees are calculated and spent.

Conclusion

The Circular Economy Act represents a unique opportunity to reimagine circularity in Europe while supporting a home-grown clean-tech success story. By meaningfully integrating biological circularity and promoting the adoption of natural polymers through regulatory consistency and fair, harmonised EPR schemes, the EU can create a future where our reliance on plastic is reduced, and we reap the environmental and health benefits of a cleaner planet.

Who are the Natural Polymer Group

The Natural Polymers Group is a coalition of leading innovators committed to scaling nature-based, non chemically modified substitutes to conventional plastics. Our members include pioneering companies such as Notpla, Loliware, Traceless, Xampla, ZeroCircle, MarinaTex, and PlantSea — all working to deliver sustainable materials that are safe, regenerative, and market-ready. We welcome the opportunity to support treaty negotiators with evidence, case studies, or technical insights on how these solutions can contribute to a successful, ambitious global plastics treaty.

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