

Consultation on the Amendment of the Environmental Management Act for a national circular plastic standard

The chemical sector alone represents 5% of the global carbon footprint¹. It plays a pivotal role in accelerating sustainability by providing innovative solutions that enable downstream partners to work towards a circular and net zero economy². Today, more than 98% of carbon feedstock still comes from fossil resources³. The production of plastics is expected to increase its share of global oil consumption from 6% to 20% by 2050. Additionally, in a business as usual scenario, the **future demand of plastics is expected to triple by 2050**, reaching more than 1'100 Mt per year. This leads to a share of 15% of the yearly GHG emissions for plastics within a 1.5°C scenario.⁴ To decarbonize the chemical sector there is a need to find alternative non-fossil carbon sources in order to improve sustainable production and consumption. Various publications tout that to reach a net zero chemical sector by 2050, the share of **biobased feedstock in chemicals must increase to double digit figures at least**.^{5 6 7} This paper will focus on the contribution of biobased plastics specifically in hopes of supporting the success of this landmark legislation.

This legislation is aligned with the EU's ambitions for the bioeconomy which includes legislative targets for biobased plastics, including biobased content targets in the current, uncoded, legislative agreement on the Packaging and Packaging Waste Regulation. The Biotechnology and Biomanufacturing Communication, the Biobased, Biodegradable and Compostable Communication, and finally the Sustainable Carbon Cycles Communication all demonstrate the increasing awareness of biobased plastics and their potential to make a meaningful contribution to a sustainable future. Moreover, a number of EU Member States are signatories to a letter calling on the EU to boost the European bioeconomy, with biobased materials named as a core pillar of growth.

In 2022, the volume of bio-based plastics in the Netherlands (for plastic product applications), **represented approximately 0.1% of all production**⁸. A shockingly small amount considering our net zero ambitions. In the Dutch Biobased Plastics Action Plan, drawn up in consultation between companies, the government, and NGOs, it has been established that some form of stimulation is necessary to increase the current share of bio-based plastics to, for example, the targeted 15% for 2030. The mandatory requirements for biobased (and recycled) content is the best mechanism to achieve this ambition⁹. This new law will provide this stimulation to the industry, enable the growth of the sustainable plastics sector, and decouple dependence on fossil fuels as feedstocks for the industry.

That being said, under **article 9.9.1.2**, the scope of the legislation refers to converters only, and does not elucidate how checks and balances will be in place for importers who risk undercutting the production of sustainable plastics within the country. Further attention should be given to

¹ <https://ourworldindata.org/emissions-by-sector>

² <https://www.systemiq.earth/reshaping-plastics/>

³ <https://www.systemiq.earth/planet-positive-chemicals/>

⁴ <https://ellenmacarthurfoundation.org/the-new-plastics-economy-rethinking-the-future-of-plastics>

⁵ <https://www.science.org/doi/10.1126/science.abq9853>

⁶ <https://cefic.org/policy-matters/climate-change-and-energy/towards-implementing-the-climate-law/>

⁷ <https://pubs.rsc.org/en/content/articlelanding/2021/ee/d1ee00532d>

⁸ Conversio - Polymer production and processing in the Netherlands - 05.04.2024.pdf

⁹ CE_Delft_200289_Mandatory_percentage_of_recycled_or_bio-based_plastic_Def.pdf (cedelft.eu)

ensuring a level playing field that protects local and sustainable production. We therefore suggest that the point of verification should be at the final product level.

In **article 9.9.3.1** referring to circular polymer units, the trading system for circular units focuses on quantity, not quality, which risks undercutting biobased and chemical recycling with cheap credits garnered from mass produced, less sustainable solutions. The qualification should instead be per raw material used to ensure [the CO₂ reductions](#) aimed for in the legislation are in fact actualised; ~~the~~ [This current credit scheme](#), again, targets the wrong audience (converters), [as well as jeopardising](#) and [jeopardises](#) sustainable solutions. Moreover, the current ~~legislation~~ [trading system](#) risks incentivising waste production [to increase credit generation](#), which works against the core aim of the law.

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Furthermore, in order to ensure the use of first-generation feedstocks for biobased plastics – as well as second-generation sources, as both are needed to meet the proposed targets - the incoming legislation should build a sustainability criteria for sourcing biomass. We recommend to effectively utilise existing sustainability certification schemes, such as ISCC PLUS, RSB Advanced Products, FSC, PEFC and Bonsucro. This should also be harmonised with the incoming sustainability criteria being developed by the EU on sustainable biomass sourcing for materials, based on the current guidelines given in the Renewable Energy Directive (RED III).

For the accounting and measurement of biobased content in plastics, both approaches based on measurement (e.g. C14) or mass-balance should be considered to trace back biobased origin, with preference given for C14 measurements as they provide better transparency and traceability. For determination of the physical biobased content by measurement, there are already several standardised approaches that can be used. However, for mass-balance-based claims, a harmonised method needs to be further developed. Approaches developed in existing sustainability certification systems (e.g., ISCC PLUS and RSB Advanced Products) should be used as a basis. Again, recognition of the need to harmonise this across Europe should be given in the legislation.

More about Braskem

Braskem is a Brazilian petrochemical company with its EU headquarters in Rotterdam. With 41 industrial plants spread across Brazil, United States, Mexico and Germany, the company produces over 16 million tons of thermoplastic resins and other petrochemicals per year. Braskem is the world's leading biopolymers producer and has committed to produce 1 million tons of bio-based plastics by 2030.

Braskem's 'I'm green bio-based™' portfolio is the world's first bio-based plastic produced on an industrial scale, a polyethylene made from sugarcane the renewable alternative to polyethylene, a thermoplastic resin widely used in products for consumer goods packaging such as food and beverages, personal and home care products, toys, trash cans and plastic bags. Our portfolio features approximately 40 grades in the HDPE, LDPE and LLDPE families.

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