Calculation and verification methodology for recycled plastic content in automotive products - Stakeholder consultation

Joint position of DUH, ECOS, EEB and ZWE

The Environmental NGOs DUH, ECOS, EEB and ZWE welcome the JRC stakeholder consultation on calculating, declaring and verifying recycled plastic content in vehicles. Experience from recycled-content methodologies under other EU legislation, in particular the Single-Use Plastics Directive (SUPD) and the Batteries Regulation, shows that calculation and verification rules are decisive for the credibility and effectiveness of recycled-content targets. The methodology for vehicles should therefore draw on lessons from these processes, while avoiding approaches that create loopholes, weaken traceability or allow claimed recycled content plastic to diverge from the amount of recycled plastic actually contained in vehicles. In the following, the undersigning organisations would like to provide some general comments on selected aspects of the questionnaire.

1. Reliable definitions and classification of recycled content origins

The distinction between pre-consumer recycled plastic (PrC) and **post-consumer recycled plastic (PoC)** should be clearly maintained throughout the whole supply chain. This is particularly important because the EU End-of-Life Vehicles Regulation (ELVR) requires a minimum of 15% post-consumer recycled plastic in new vehicle types from 1st September 2032, increasing to 25% from 1st September 2036. At least 20% of these targets must come from end-of-life vehicles or from parts and components removed from vehicles during their use phase. For PoC claims, only recycled plastic originating from products that have been placed on the market and subsequently entered the waste stream should qualify. Its post-consumer origin should be supported by verifiable chain-of-custody documentation from waste collection and treatment through recycling to its incorporation into the vehicle, excluding pre-consumer waste and unverified material flows.

Strict criteria should also apply to any **PrC claims**. Only material that has genuinely become waste and has undergone a separate recycling process should be counted as recycled. Rework, regrind or production scrap that can be reclaimed within the same process in which it was generated should be excluded, irrespective of whether it is transferred between production units, sites or legal entities.

For PoC-A recycled plastics (recycled plastics from post-consumer automotive origin), the **automotive origin** should be demonstrated through robust and verifiable evidence for the collection and treatment of end-of-life vehicles or vehicle parts through recycling and subsequent incorporation into new vehicles. Documentation should enable verification of the origin, material type and quantity of the relevant waste and recycled material. Self-declarations alone should not be sufficient and double counting or unsupported allocation of automotive-origin recycled content should be excluded.

For composite materials**, only the actual plastic fraction** should be taken into account when calculating recycled plastic content, rather than the total mass of the composite component.

2. Reliable and transparent Chain of Custody Model

The chain of custody used to verify recycled content is crucial for the success of recycled plastic content targets for automotive products. Environmental organisations observe with concern the current developments and decisions regarding batteries (Article 8, Batteries Regulation) and the recently adopted decision on single use beverage bottles (Article 6, SUPD). A calculation method that is too flexible could render recycled content targets completely ineffective and may cause significant problems in terms of consumer trustworthiness. Particularly, environmental organisations warn to allow mass balance with flexible/non-proportional allocation and credit methods. Such chain of custody models are difficult to control, may jeopardize consumer confidence in the recycling industry by incentivizing misleading claims and could disadvantage economic actors investing in techniques which allow high waste proportions in the input. We therefore propose to **only allow the methods segregation and, in case needed, controlled blending (proportional allocation at product level)** which ensure physical and chemical traceability. Please consider joint open letters (joint statement[1] and letter of Business-NGO coalition[2]) in the context of SUPD as well as our position paper[3] in the context of the recycled content method for batteries. The scope of calculation and verification should remain as close as possible to the physical material flow, preferably at **batch, component or process level,** and should not be limited to organisation-level accounting. Likewise, **accounting periods should be sufficiently short**, preferably monthly or quarterly rather than annual, to maintain a robust link between recycled material inputs and corresponding outputs.

[1] Zero Waste Europe and others (2023): Joint statement calling for a transparent and reliable policy framework defining recycling content in plastic, https://zerowasteeurope.eu/library/joint-statement-transparent-reliable-policy-framework-recycling-content-plastic/

[2] Business-NGO Coalition supports the motion objecting to the Commission's draft Implementing Act on the calculation of recycled content in single-use plastic beverage bottles (2024) https://ecostandard.org/wp-content/uploads/2024/04/2024-04-22_SUPD_Commission-draft-recycled-content-calculation.pdf

[3] Please see newest version of joint position paper of ECOS, EEB, DUH and Zero Waste Europe sent together with this consultation (Version of May 2025) or older version at https://ecostandard.org/wp-content/uploads/2024/09/240503_DUH_EEB_ECOS_TE_Joint-position-recycled_content_calculation_verification.pdf

3. No crediting of pyrolysis and gasification towards recycled content targets

Regarding the definition of recycled content targets for plastics, we like to note that **"recyclates" from pyrolysis and gasification** should not be counted towards these targets. The undersigning organisations classify these techniques as "chemical recovery" (please see position paper[4]) because they only recover the feedstock for plastics production and this cannot be counted as recycled. In fact, current pyrolysis plants mainly produce fuels and small proportions are used for plastics production. We also like to note that pyrolysis was found to have very low yields and pyrolysis oil needs considerable dilution with virgin material (more than 99 percent) to meet requirements of the steam cracker[5]. It, therefore, cannot be considered as a method to create **"virgin quality"**. It is also not justified to allow flexible calculation methods on the basis of this false claim on "virgin quality". Additionally, we like to warn against the concept of "**dual use outputs**" developed within the SUPD Delegated Act which would allow even more flexibility in mass balance calculation[6] and is not in line with the European waste legal framework[7].

4. No crediting of biobased material towards recycled content targets

From an environmental perspective, we would also like to argue **against counting biobased materials** towards recycled content targets for plastics, as suggested by the Commission in recital 32, which foresees a separate review of biobased plastics by 14th August 2032. First of all, accounting biobased feedstock for recycled content targets contradicts the rationale of replacing virgin material with recycled material and therefore hinders the transition from a linear towards a circular economy with closed material loops. Like petrol-based feedstock, biobased materials are only available in limited quantities, which leads to usage pressure on resources. **Substituting one virgin material for another does not address the issue of overconsumption; rather, it merely displaces its negative impacts**. Secondly, there is no proof through life cycle assessments that biobased materials have overall lower environmental impacts than virgin materials[8]. Even worse, assessments of the environmental performance of bio-based plastics may lead to underestimated greenhouse gas emissions, strongly rely strongly on industry-oriented assumptions and result in opaque or potentially misleading environmental claims[9]. The production of bio-based plastics

[4] Zero Waste Europe (2021): Chemical Recycling and Recovery – Recommendation to Categorise Thermal Decomposition of Plastic Waste to Molecular Level Feedstock as Chemical Recovery https://zerowasteeurope.eu/library/chemical-recycling-and-recovery-recommendation-to-categorise-thermal-decomposition-of-plastic-waste-to-molecular-level-feedstock-as-chemical-recovery/

[5] Zero Waste Europe (2023): Leaky loop " recycling" A technical correction on the quality of pyrolysis oil made from plastic waste https://zerowasteeurope.eu/library/leaky-loop-recycling-a-technical-correction-on-the-quality-of-pyrolysis-oil-made-from-plastic-waste/

[6] ECOS, Zero Waste Europe, Rethinnk Plastic (2024) Technical paper 'Dual-use output' issues for accounting recycled plastic content https://zerowasteeurope.eu/library/dual-use-output-issues-for-accounting-recycled-plastic-content/

[7] ECOS (2025): EU accounting methodology for recycled plastic content, https://ecostandard.org/publications/supd-accounting-recycled-plastic-content/

[8] Please see chapter 3 of DUH position paper on bioplastics (in German) https://www.duh.de/fileadmin/user_upload/download/Projektinformation/Kreislaufwirtschaft/Bioplastik/230229_DUH_Hintergrundpapier_Biokunststoffe_final.pdf

[9] ECOS (2026): Ensuring alignment between bio-based plastics policy and EU circular economy objectives for packaging (open letter) https://ecostandard.org/publications/bio-plastics-packaging-ppwr-eu/

requires plants whose cultivation and processing have a high environmental impact in terms of ozone depletion, acidification, ecotoxicity, human toxicity, biodiversity loss, eutrophication and land consumption. Additionally, biobased plastics are often produced from conventionally grown plants, which means that many pesticides, synthetic fertilizers and genetically modified plants can be used. Also, positive effects on reducing greenhouse gas emission are not proven because agriculture, transports and plastics production are connected to high greenhouse gas emissions and studies often do not consider indirect and long-term effects from land use change.

5. Support EU-sourced recycled content without weakening recycled content targets

While incentives for recycled content originating from recycling within the EU can be legitimate to strengthen European recycling value chains and support the use of EU waste streams, **the specific correction factor currently proposed under draft Article 8 should not be replicated for recycled plastic content in vehicles**. A factor allowing EU recycled content to be counted above its actual physical mass would undermine the recycled-content target itself, because it would reduce the amount of recycled plastic that must be physically incorporated into vehicles. Any future ELVR measures should therefore prioritise EU-sourced recycled content only through additional instruments, such as **eco-modulation of EPR fees**, but not by allowing recycled content to be counted beyond its real mass.

About DUH

Environmental Action Germany (Deutsche Umwelthilfe – DUH) is a recognized German environmental and consumer protection organization, which has been campaigning for resource conservation and consumer interests since 1975. DUH is politically independent, non-profit and it campaigns on a national and European level. It is for example renowned for its role in uncovering the Diesel Scandal and in establishing a deposit system for non-refillable beverage containers in Germany. Within its Department Circular Economy, DUH promotes waste prevention, responsible consumption and a sustainable economy. For more information, please visit: www.duh.de/englisch

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About EEB

European Environmental Bureau (EEB): The European Environmental Bureau (EEB) is Europe's largest network of environmental citizens' organisations, standing for environmental justice, sustainable development and participatory democracy. It represents over 180 members in over 38 countries: www.eeb.org

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About ECOS

ECOS - Environmental Coalition on Standards is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies, and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles. For more information visit: www.ecostandard.org

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About ZWE

Zero Waste Europe (ZWE) is the European network of communities, local leaders, experts, and change agents working towards a better use of resources and the elimination of waste in our society. We advocate for sustainable systems; for the redesign of our relationship with resources; and for a global shift towards environmental justice, accelerating a just transition towards zero waste for the benefit of people and the planet. www.zerowasteeurope.eu

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