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Global Organization for PHA

GO!PHA commends the Commission for the most recent proposal on Packaging and Packaging Waste Regulation and suggests the following modifications

The Global Organization for Polyhydroxyalkanoates (**GO!**PHA) is a non-profit science, advocacy, and networking platform promoting the proliferation of PHA biopolymers. PHA Biopolymers are renewable and biodegradable, home and industrially compostable, and an excellent replacement for many plastic materials.

Introduction

GO!PHA supports the Commission in proposing the draft Packaging and Packaging Waste Regulation on November 30, 2022. The proposal tackles many essential challenges to reduce packaging, over-packing, and, as a result, packaging waste. The proposal highlights waste reduction measures and targets to improve packaging circularity goals complementing the new circular economy action plan.

However, we see the potential for achieving a higher impact on circularity by addressing missing elements integral to packaging and packaging waste collection, recycling, and reuse.

We recommend the following:

1. Even though recycling is emphasized in the PPWR, the concept should be broadened to be more holistic to achieve circularity

The Cambridge University Dictionary defines “Recycling” (noun) as:

“The process of treating things that have already been used so that they can be used again”

In this respect, used plastic packaging creates materials that can be reused for packaging or other uses. However, the commission has only referenced mechanical recycling, including remelting and reusing plastics.

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In contrast, other types of recycling also exist, such as “Chemical Recycling” and “Organic Recycling.” Chemical Recycling refers to breaking down plastics into their constituent monomers and re-polymerizing them back into plastics for use. “Organic Recycling” refers to composting and/or anaerobic digestion where packaging materials, along with other organic matter, are subjected to microbial action to recover constituent carbon molecules such as biogas and organic fertilizer, all of which can be reused, including manufacturing materials such as PHA and other bio-based chemicals and materials.

Chemical and Organic Recycling needs to be addressed as recycling in the PPWR.

Organic recycling is essential since it also creates a value-added stream for agriculture (organic fertilizer) and biogas (CO_2+CH_4) which can be repurposed to produce renewable energy, chemicals, and materials. Compostable packaging materials can use the existing waste management process in all member states in the EU under the proper legal circumstances. Industrial composting and anaerobic digestion are growing industries that should be further encouraged, and we urge the Commission to do so in the PPWR.

Furthermore, this old but innovative recycling pathway would encourage using renewable carbon-based packaging materials, thus supporting packaging materials' de-fossilization.

2. Protect the mandatory positive list for composting and expand it based on the concept of “composting”

Article 8, which refers to compostable packaging of certain types of tea and coffee packaging, sticky labels attached to fruit and vegetables, and very lightweight plastic carrier bags, must be protected and kept as it is. We are pleased with the Commission’s proposal for mandating this science-based list[1] of packaging items to be compostable. It would undoubtedly encourage a circular packaging management system and benefit the environment. We would also like the legislators to open the possibility for another biodegradable and compostable packaging, such as those

[1] Hann et al., Scientific Advisory; nova-Institut, BioSinn – Products for which biodegradation makes sense.

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according to the conditions set out in Annex III for packaging, to be considered when mandating the use of compostable packaging format.

We also request the Commission mandate all fruit/vegetable and grocery carry bags, especially those packaging that touches food, to be compostable. Packaging contaminated with food can be disposed of in the organic stream or the plastics recycling stream. If such packaging is not compostable, it may contaminate the organic recycling waste stream if discarded with food, or it may contaminate the plastics recycling stream due to food contamination, causing problems in both industrial composting facilities and plastics recycling plants.

While we support mechanical recycling, it will continue to be industrially and economically challenged until the industry solves the issue of separating polymers in multilayered plastic packaging without cross-contamination. In this respect, bio-based and compostable materials such as PHA, being both recyclable and compostable, allows waste management to choose means of disposal without incinerating. Since compostable packaging materials can also be recycled at scale, choosing whether to compost or recycle should further expand their use. This creates innovative packaging solutions with multiple end-of-life options to allow the consumer, waste management organizations, and member states choice in their disposal and recycling pathways based on established waste management norms.

3. Composting is carbon recycling that must be acknowledged in the PPWR

Article 6 lists requirements for the recyclability of packaging materials at scale. However, compostable materials are not referenced. Industrial composting is presently carried out at scale, and adequately marked packaging could easily use such streams for organic recyclability at scale, and collection and treatment of biowaste will be mandatory across Europe from 2024 onwards. The Commission's Revised Waste Framework Directive accepts industrial compostability as organic recycling, and we ask policymakers to create coherence and recognize this in the PPWR.

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4. Renewable carbon-based packaging materials should be exempted from mandatory recycled content requirements

Article 7 lays down targets for recycled content to increase the mechanical recycling of fossil carbon plastics. Bio-based plastics use renewable carbon, thus avoiding virgin fossil carbon altogether, an EU Circular Economy goal. Mechanically recycled plastics have a limited life upon which fossil carbon would end up in the environment. While biobased plastics would consume carbon from the atmosphere via plant-based carbon sources keeping the carbon in a cycle and without any new carbon added to the environment.

Therefore, renewable carbon-based packaging would meet the target since they already use carbon recycled from the atmosphere. Exempting renewable carbon-based packaging from recycling targets or designating bio-based materials as having met recyclability targets would spur additional innovation in circular packaging, especially those using bio-based materials.

GO!PHA and our members are ready to answer any questions and meet with the Commission to discuss our position at the Commission's convenience.

On behalf of **GO!**PHA, Yours Sincerely,

Anindya Mukherjee

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