

Tailored Solutions: Embracing Sector-specific Product Design in the Global Plastics Agreement as a Driver of Circularity and Pollution Prevention

The International Legally Binding Instrument to End Plastic Pollution (ILBI-PP) aims to end plastic pollution by 2040 through a comprehensive approach along the plastics life cycle. The proposed Product Design provisions under Part II/5 contribute to this goal by enhancing the design and composition of plastic products, increasing their durability, reusability, reparability, and recyclability, while minimising environmental and safety impacts across their life cycle in alignment with national plans, capabilities, and international standards.

To combat plastic pollution by improving and strengthening the Product Design provisions, Plastics Europe would like to address three key aspects in context of Product Design:

- 1) We support the proposals for a sector-differentiated approach under various text options in Part II.5, acknowledging the unique characteristics and needs of different industries to support the development of tailored solutions.
- 2) We emphasise the importance of sector-specific Product Design Principles as an enabler for sustainable and circular products.
- 3) The complexities of different sectors like automotive, building & construction, agriculture, packaging, and electronics, require tailored circularity and end-of-life strategies. The ILBI-PP must therefore consider the potential wider environmental, socio-economic and security of supply implications of measures such as arbitrary and unscientific listing of polymers that could lead to unintended consequences for the industries, economies and the transitions of different countries. The policy framework of the future agreement must ensure that sector-specific needs are met without stifling innovations and align with the broader policy objectives such as climate change mitigation, energy and mobility transition, as well as biodiversity protection.

A sector-specific approach acknowledges the diverse uses, materials, distinct challenges, and opportunities for circularity in different industries, while considering the life cycle and end-use scenarios of plastic items to promote circular designs suitable for their intended purpose while minimising environmental impact. Each sector has unique material needs and faces specific challenges and opportunities related to circularity and environmental impact across ecological, social, technical, and economic dimensions. For example:

- **The packaging sector** achieves product designs that prioritise food preservation and hygiene in healthcare thanks to the versatile properties of plastics. The use of plastics is often combined with other materials such as paper or metal, making it essential to apply design principles consistently across products, independently of their material composition.
- **The automotive sector** relies strongly on very durable and ever lighter parts made of plastics which ensure low part fatigue, reparability and excellent crash safety during years and decades of use in harshest conditions as well as reduced vehicles emissions. This requires designs that are circular (e.g., increasing the use of recycled materials and improving the recyclability and reuse of materials) without compromising on performance and safety.

- **Electronics** often contain highly integrated, miniaturised and complex assemblies with strong material diversity at grammes scale. Future assemblies require designs that enable further functional integration, robustness, reparability to ensure efficiency and material recovery strategies at their end of life.
- **In the agricultural sector**, plastics are extensively used for items such as mulch films, irrigation pipes, and greenhouse covers, coatings on fertilisers, pesticides and seeds, fruit and plant protectors and others.

By focusing on the performance needs and abilities of each sector and tailoring product design to the application, the ILBI-PP can drive the development of innovative, sector-specific solutions that maximise environmental benefits, reduce plastic pollution, ensure a circular product design while maintaining the necessary functionality and performance level of the application.

- **International Product Design Principles**

Promoting common circular product design principles on a global level can leverage the sustainable production and consumption of plastics applications and close the loop of value chains while maintaining the resource efficiency and performance of products. The current text proposal on product design provisions and performance (Part II/5) and the linked Annexes¹ lack sector-overarching principles to ensure the effective ramp up of circularity while allowing sufficient national and sectorial flexibility.

The development of Product Design Principles holds the potential to reduce pollution, increase recycling and where possible reuse, repurpose and refurbishment².

International Product Design principles should consider:

- an application-based approach;
- waste hierarchy (prevention, reuse, recycling, environmentally sound disposal);
- life cycle assessment (LCA) where possible and appropriate;
- technology and material-neutrality;
- chain of custody models (i.e., mass balance approach);
- the broader environmental and socio-economic costs and benefits.

Currently, there is no globally aligned methodology for the development of circular plastics applications. The ILBI-PP should aim to promote the harmonisation of sector-specific design and performance standards for plastics and plastic products through international consensus-based standards organisations in line with internationally established governance practices such as the Vienna agreement³. This process should involve application-specific experts to guide the

¹ Annex C and the additional proposed annex relating to element II.5I on p.76 and 77

² <https://plasticseurope.org/wp-content/uploads/2023/12/2023-11-08-INC-3-Position-Sustainable-Production-and-Consumption.pdf>

³ The Vienna Agreement is a framework for cooperation between the International Organization for Standardization (ISO) and the European Committee for Standardization (CEN). It aims to avoid duplication of effort and conflicting standards by allowing for the joint development and adoption of standards that are recognized both internationally and within Europe

https://boss.cen.eu/media/CEN/ref/vienna_agreement.pdf

establishment of technology- and material-neutral design criteria. To ensure effective product design provisions, it is essential that the harmonised standards are tailored to specific sectors and applications.

These criteria could be the basis for promoting globally harmonised certification procedures and labeling measures to support and implement these standards.

- **Other elements to interlink**

To *bring product design to life through sector-specific guidelines*, it is essential to include detailed provisions on definitions, scope, structure, boundaries, and a standardised language for certification and labelling in the product design provisions (part II/5 Product design and performance of the revised draft text).

- **Conclusion**

Adopting a sector-specific approach in the ILBI-PP, based on common Product Design Principles, will enable the effective consideration of the unique needs and challenges of each industrial sector and foster tailored solutions. The complexities of various sectors require the ILBI-PP to consider the broader implications of proposals for arbitrary lists, ensuring a policy framework supporting sector-specific needs without hindering innovation and impacting negatively the climate goals and the transitions of different countries and industries.