Addressing plastic product design in the Global Plastics Treaty

"Thinking about design is hard, but not thinking about it can be disastrous" –

Ralph Caplan

Background

Establishing a clear vision for product design is essential to mitigate plastic pollution and reduce toxic exposure in line with resource efficiency and circular economy principles and the waste hierarchy.

Moreover, a binding global obligation on product design will provide market signals to unlock investment in the management of plastics across the lifecycle. Product design, recognising the needs and priorities of different sectors, should be at the heart of the future Global Plastics Treaty, providing a straightforward demand-side approach to reduce virgin material use, promote resource efficiency, the circular economy and chemical simplification and facilitate environmentally sound end-of-life treatment.

The benefits to a common global approach to product design are multiple:

- **environmental protection** – plastic pollution impacts all environments on Earth. Under a business-as-usual scenario, the amount of plastic waste entering aquatic ecosystems could nearly triple from some 9-14 million tonnes per year in 2016 to a projected 23-37 million tonnes per year by 2040.[1] Designing more sustainable products can mitigate some of this impact while also protecting the finite resources of the planet

- **human health safeguards** – more than 16,000 chemicals are used or present in plastics, with more than 4,200 "of concern" because they are hazardous to human health or the environment.[2] Exposure to these chemicals is linked to various health risks, including cancers and developmental disorders. Implementing rules that promote the use of safer materials and limit harmful additives can significantly reduce these risks

- **genuine circular economy** – in the absence of sustainable products, waste management systems are overwhelmed, with only nine per cent of plastics recycled globally,[3] in part due to poor design impacting the economic and technical viability of recycling. Waste management infrastructure cannot effectively scale without significant improvements to the design of products before they become waste to provide confidence in investment. Global rules can promote a genuine circular economy, where products are designed for reduction, optimisation, longevity, reuse, repair and recyclability while minimising waste generation, microplastic emissions and the need for virgin materials

- **level playing field** – plastic pollution is a transboundary issue, affecting countries regardless of their contribution to the problem. Countries that rely heavily on imports, such as small island developing states, have limited control over the design of imported products and face significant end-of-life treatment challenges. Global rules can ensure a unified approach, preventing scenarios where certain regions become dumping grounds for unsustainable products

- **innovation and the scaling of reuse** – it is estimated that moving to reuse models can provide a greater than 20 per cent reduction in total annual plastic leakage to the ocean by 2040, complementing efforts to reduce greenhouse gas emissions, water consumption and virgin plastic use in the process.[4] Currently, the economics favour a linear economy due to subsidies supporting plastic production and a lack of investment in the necessary infrastructure for scaling alternatives. Harmonising approaches to systems such as reuse and providing the economic incentives to roll out these models is critical

- **economic benefits** – sustainable design reduces inefficiencies in the system that lead to increases in leakage and dumping of plastics. Clean-ups, as well as the broader impacts of pollution on sectors such as tourism, agriculture and fisheries, can be costly.

Treaty text

A strong provision on product design, one that is flexible and allows for strengthening over time, will contain certain core elements, namely to:

- require parties to ensure products manufactured and imported comply with the product design and performance criteria adopted by the Conference of the Parties (CoP)
- empower the CoP to adopt, and update as appropriate, product design and performance criteria for plastic products
- require the CoP, at its first session, to adopt an indicative list of principles and a schedule of work, following a sectoral approach, to inform the development of product design and performance criteria as well as guidelines to assist parties with implementation.

Implementation by parties

implementing this article, there are various ways in which parties may wish to ensure products comply with the product design and performance criteria agreed by the CoP.

This could include domestic legislation and regulation or reliance on domestic, regional or international standards, coupled with appropriate certification and enforcement for goods manufactured and placed on the market within national jurisdiction.

Moreover, guidelines could promote the effective and harmonised operation of reuse systems, extended producer responsibility and deposit-refund schemes.

Diplomatic Conference (DipCon) resolution

In addition to the treaty text, an accompanying DipCon resolution should set out the process for developing key aspects during the intersessional period between DipCon and CoP-1. Intersessional work should include:

- development of an indicative list of design principles, for example for reduction and optimisation, longevity, use and reuse (including reuse systems), repairability and refurbishability, reduction of microplastic emissions and recyclability
- development of a schedule of work, following a sectoral approach, identifying priority products and sectors
- preparation of guidelines to assist parties with implementation.

Financing product design

Product design represents a key part of the package of upstream measures. Taken together, these measures reduce the size and complexity of the plastic-pollution problem and represent highly cost-effective approaches toward reducing plastic consumption, waste generation and pollution.

Compliance in developing countries should be supported by adequate means of implementation, including the provision of agreed incremental costs via a new dedicated multilateral fund. Examples of incremental costs include:

- cost of conversion of existing manufacturing facilities to comply with product design and performance criteria, including retraining
- cost of establishment of reuse systems, including repurposing existing facilities
- cost of technology transfer, according to mutually agreed terms.

An indictive list of incremental costs would be subject to agreement by the CoP and cost guidelines would be adopted to ensure cost-effectiveness and establish thresholds, taking into account the national strategies of the developing country.

Conclusion

Product design is a critical piece of the final package. As an upstream provision with the capability to both reduce the use of virgin material at scale and support the transition to sustainable products, while also setting the course for an industry investment and transition, product design should be a priority for negotiators to fulfil the UNEA resolution 5/14 mandate.

Agreeing on a binding obligation to adopt minimum design and performance criteria should be part of the broader conversation about linking meaningful upstream commitments to meaningful commitments on means of implementation.[5]

References

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4. Pew Charitable Trusts and Systemiq (2020). *Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution.* Page 8. Available here.
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