

Scientists' Coalition Responses to WTO DPP Guiding Questions

1. *What are the main challenges in implementing TrPMs targeting single-use plastics (SUPs) and goods?*
 - **Avoiding regrettable alternatives and substitutions** (including materials, products and technologies).
 - **Determining what is meant by “safer”** this would require transparency on the quantities and types of materials and chemicals present in products, as well as establishment of independent evidence-based safety criteria and their review.
 - **Assessing alternatives and substitutes** such as “bioplastics” alongside conventional plastics. Such assessments must be based on the same safety, sustainability, essential use, and transparency criteria considering full life cycle and country context.
 - **Establishing broad product design recommendations** that include and extend beyond the narrow list of examples included in Annexes X and Y in Article 3 and better integrate across Articles 3 and 5.
 - **Restricting recycling and associated targets** to recycled products that have been tested and shown to be safe in the context of specific applications or sectors (e.g. food-contact materials or toys). Assessment of potential hazards in relation to essential use. This is dependent upon development of transparency, safety and sustainable criteria.
 - **Assessing ‘recycling’ claims** against clear criteria accounting for chemical composition, polymers and polymer combinations, effective collecting, sorting, cleaning, technologies and practice, including availability, capacity, resources, energy, GHG emissions, and releases of MNPs, chemicals, and ash.
 - **Evaluating the safety and sustainability implications of increasing global demand for refuse derived fuel (RDF)**. Including and responding to ongoing discussions in Basel.
 - **Ensuring transparency** as a prerequisite to establishing safety and sustainability criteria and successfully meeting global and national targets (including trackability and traceability throughout the supply chain). This requires accurate labelling and transparency on goods in trade and avoids confusing terminology such as bioplastic, but it will be hard to tie this down until definitions for Global Plastics Treaty (GPT) are agreed. To be effective the WTO language must be consistent with GPT.
 - **Ensuring equitable access to financial, capacity and technical support for developing countries** to effectively implement and enforce TrPMs including enabling robust monitoring and enforcement mechanisms.

2. *What trade-related outcome by the DPP at MC14 would be helpful to facilitate implementation and avoid illegal trade? Would voluntary guidelines and mechanism to increase the alignment of trade-related requirements applicable to SUP bags and/or other often targeted single-use goods (e.g. tableware, food containers, plastic straws, cups, bottles) be useful?*
 - We are not clear what is being suggested. Are the WTO suggesting they produce voluntary guidelines that align with the trade measures they develop? Is the suggestion that the WTO develop guidelines to explain TrPMs? Or is this point more about aligning TrPMs with existing voluntary guidelines of Member States? Voluntary action, when carried out

independent of mandatory controls and lacking in a comprehensive regulatory response, has consistently proven ineffective on a global scale. This is evidenced by increasing global plastic pollution despite voluntary action and has signaled the urgent need for legally binding, and global and nationally aligned, obligations.

- A growing number of countries and regions have established SUP guidelines as well as voluntary and mandated SUP mechanisms to ban, phase out, or phase down the most problematic plastics, SUPs, and categories of SUPs. However, **global standards, criteria and indicators, and mandated monitoring, reporting requirements and legally binding mechanisms would substantially support these diffuse efforts.**
- Specific SUPs are listed in the INC Chair's text Article 3 annexes. **Broader categories of plastic products are needed in these annexes as a more effective basis of trade-related requirements.** Lists of broad categories of SUPs may be partly guided by global and national audits, including brand and litter audits (including citizen science initiatives) and groupings of SUPs currently regulated in national jurisdictions could provide a strong starting list to adopt over time as new data and evidence emerges.
- **Harmonized international standards and globally mandated requirements for SUPs** will enhance transparency, trust and consistency in product quality, monitoring, and reporting and will reduce costs of monitoring and reporting.
- **Mandated transparency, monitoring and reporting** would reduce illegal trade of plastics and support the Basel Convention in eliminating the illegal trade of plastic waste.

3. *Please provide domestic examples of how international standards have been successfully applied for non-plastic substitutes and alternatives to single-use plastics and packaging (including to facilitate their trade)? Can you list them? What key attributes, such as re-usability, biodegradability, recyclability, compostability, material safety, efficiency, effectiveness and environmental impact (life cycle assessments) are important for those standards?*

- **The terminology applied in this guiding question is too simplistic.** There are currently no standards to adequately describe these attributes. This is partly because the attributes above are entirely context dependent. For example, a product that might be biodegradable in one environment will not necessarily do so in another. Independently sourced data and research should culminate in a comprehensive and accurate set of terminologies and associated descriptors. In addition, existing standards, such as those from the ISO standards, are driven by market needs rather than the environmental, health and societal necessities that are the motivation for the GPT. Appropriate standards need to be developed for the attributes listed, before, the WTO can apply them.
- **Adequate testing (or certification) on the attributes listed above are not reflected in any current international standard.** Following from the point above, these must be developed alongside a detailed set of terminology and accurate descriptors. There are some international standards that have been designed for plastics alternatives (less so for non-plastic substitute products). However, as noted in the point above, these are often driven by market needs and are individually and collectively insufficient to test 'whole of life cycle' safety and sustainability of alternatives and substitutes including across all the important attributes listed. For example, there is no requirement for biodegradability testing of the final product (i.e. with additives/chemicals incorporated), nor for testing in the environment in which it will be used/intended for end of life, or environments that may be unintentionally exposed.
- **Only promote the innovation of biodegradable plastics and their applications in circumstances where their safety and sustainability has been confirmed by appropriate testing,** not only of the inherent polymer biodegradability, but also the factors that influence the (bio)degradation course and timespan, such as i) product

shape/form (especially surface to volume ratio as biodegradation occurs at material surfaces), ii) the fate of additives released and microplastics generated (transient or persistent), and iii) associated environmental accumulation and impacts (short and long term) in the relevant receiving environments (environments of intended use as well as those unintentionally exposed).

- **Transparency, trackability, and traceability are key to any successful TrPMs.** For example, labelling the intended disposal pathway for ‘biodegradable’ products and ensuring this information is made available to importing countries so they are aware of performance requirements.

4. What are the main trade-related challenges with regards to international standards in the promotion of non-plastic substitutes and alternatives to single-use plastics and packaging? What are the particular challenges faced by developing members and LDCs? How can the private sector better transition to non-plastic substitutes and alternatives?

- **An independent science body must be established before any recommendations can be made.** The subsequent labelling of a product (i.e. the need for transparency standards), for example related to ‘biodegradability’ (referring back to the need for evidence-based terminology and descriptors/definitions) needs to indicate what is required to achieve biodegradability, including collecting, sorting, and processing infrastructure. Therefore, terms like ‘*biodegradability*’ and ‘*compostability*’ should come with a ‘health warning’ to indicate the circumstances required for this to be achieved. Such information needs to be understood by the importing nation in advance. In other words, importing countries and those who manage the associated infrastructure, such as composting plants, need to know the performance requirements before goods are imported or purchased. A point made at the last WTO DPP pre-plenary was the need for capacity building and knowledge transfer to ensure nations understand these details and contingencies. If the WTO DPP intends to promote TrPM using broad brush terms like ‘*biodegradability*’ and ‘*compostability*’, then it has a clear responsibility and obligation to produce written documentation, inter alia, outlining the advantages, disadvantages, requirements, risks for these materials and products to work and to ensure they do not cause regrettable outcomes for human and environmental health, economies, and communities. This documentation needs to be prepared by an independent science body.
- **The promotion of plastic alternatives and non-plastic substitutes are often based on insufficient international and regional standards and testing (as previously noted) as well as standard life cycle assessments/analyses (LCAs).** Standard LCAs do not sufficiently assess or analyse the full life cycle of plastics from extraction through to remediation and removal and seldom address health hazards (specifically, toxicity) and socio-economic implications of product or material choices. Standard LCAs generally compare one material another material or one product another product (and seldom consider plastic or material free systems, services, or solutions. Standard LCAs prioritize factors such as carbon emissions, production, and transport and seldom focus on use and management phases which can have significant impacts on human and environmental health (e.g. fragmentation, chemical leaching) as well as social and economic impacts. For example, LCA outcomes may lead to decisions based exclusively on shipping weight / gas consumption while excluding toxicity considerations.
- As mentioned in response to previous guiding questions, there is clear independent scientific evidence that **international and regional standards are insufficient**, e.g. biodegradability tests, because these do not test for degradability in real world conditions. Before they can be used by WTO these tests need substantial improvement in line with the current body of independent scientific knowledge in the field.

- **Final products must be tested for safety and sustainability**, e.g. biodegradability (i.e. with chemicals present in the complete product). In other words, testing should not be limited to polymers. As noted above, testing should also be carried out in the environment in which the product is intended to be used/intended for end of life/as well as its other possible unintended uses (e.g. microwave cooking) and fates (e.g. as litter).
- **Standard tests must consider the acute and chronic toxicity of the chemicals associated with the materials**, particularly short and long-term leaching of chemical additives at every phase in the life cycle including the compounding toxicity from recycled plastics as well as micro and nanoplastics, microfiber content and release.
- **Incentivize and support regulation of plastics and chemicals of concern in LDCs.** Challenges faced by all countries, but particularly LDCs, include the financial, technical and capacity burden and needs to effectively regulate plastics and chemicals of concern including implementing functional enforcement measures. Successful regulation depends on monitoring and reporting of, inter alia, production and manufacture, import, content (of banned chemicals), potential emissions and releases, and waste generation.
- **Ensure countries have accessible and affordable established local or regional collection, sorting and processing facilities for plastics alternatives** where necessary, including for industrial and home compostable plastics.

5. *How can the WTO support identifying potential gaps and leveraging international standards to promote cooperation and transparency to non-plastic substitutes and alternatives to single-use plastics and packaging?*

- **Promote the need for an independent science body** to establish criteria for safe and sustainable chemicals and ultimately product design (with separate reuse and recycling targets).
- **Promote research, innovation, and development of safe and sustainable** plastics alternatives and substitutes (including supportive technologies).
- Help ensure **alternatives and substitutes** are fit-for-purpose and context, and do not lead to regrettable unintended outcomes.
- Ensure **standards, criteria, and promotion of alternatives and substitutes** as well as supportive technologies, systems and services, are considered in relation to the locations where the products are used, and disposed of, and are based on the best available independent science, traditional knowledge and the expertise of Indigenous Peoples and local communities.
- **The safety and sustainability of plastics alternatives**, such as plastics with biodegradable properties, **must be analyzed and assessed along their full life cycle** taking into consideration raw material sourcing, the contexts in which they are intended to be used, consumed, and managed as well as environments that may be unintentionally exposed.
- **Promote knowledge building and sharing** about the human health and environmental effects and long-term consequences of the use of both conventional plastics and alternatives and substitutes e.g. biodegradable plastics intended to biodegrade in the environment (e.g. mulch film in agriculture).
- Promote products that perform well against safety, sustainability, transparency, and essentiality criteria (once such criteria have been developed).
- Encourage **intergovernmental collaborations** and engagement with private sector to drive innovation and the adoption of essential safe and sustainable plastics, as well as plastics alternatives and substitutes.
- Assist in adequate **financial, capacity, resourcing, and technical support** to ensure essential, safe and sustainable use of materials and products.

- In the absence of appropriate safety, sustainability, transparency, and essentiality criteria, the WTO and its members, have an **obligation to produce written documentation summarizing current concerns and limitations of any alternatives and substitutes they promote**; so that importing countries are aware. This will then encourage standards agencies (e.g. ISO, ASTM) to develop more robust, comprehensive and reliable standards reflective of the realities of the flows and fates of these materials and products in the environment. **This documentation needs to be prepared by an independent science body.**

Links to relevant Scientists' Coalition outputs

Impacts of plastics across the food system

The global plastics treaty: What is the role of bio-based plastic, biodegradable plastic and bioplastic?

Transitioning to a safe and sustainable circular economy for plastics

Human health in the global plastics treaty

The Essential Use Concept for the Global Plastics Treaty

Signed on behalf of the Scientists' Coalition for an Effective Plastics Treaty:



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