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**Intergovernmental negotiating committee to develop  
an international legally binding instrument on plastic  
pollution, including in the marine environment  
First session**

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Item 4 of the provisional agenda\*

**Preparation of an international legally binding instrument on  
plastic pollution, including in the marine environment**

**Priorities, needs, challenges and barriers relating to ending  
plastic pollution at the national level**

**Note by the Secretariat**

1. Pursuant to paragraph 5 of United Nations Environment Assembly resolution 5/14, entitled “End plastic pollution: towards an international legally binding instrument”, an ad hoc open-ended working group met in Dakar from 30 May to 1 June 2022 to prepare for the work of the intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution, including in the marine environment. The open-ended working group agreed on a list of documents that the secretariat would provide to the intergovernmental negotiating committee at its first session. Among other things, the secretariat was requested to provide information on priorities, needs, challenges and barriers, especially in developing countries, along with an overview of national measures, based on submissions from Member States.
2. The annex to the present note responds to the request of the ad hoc open-ended working group. As at 12 August 2022, 21 submissions had been received from Member States. To complement the summary of submissions from Member States, the annex was further developed with references to other sources, including official documents of the ad hoc open-ended expert group on marine litter and microplastics and relevant literature. A more complete literature review on the subject is provided in document UNEP/PP/INC.1/INF/8.

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\* UNEP/PP/INC.1/1.

## Annex

### Priorities, needs, challenges and barriers relating to ending plastic pollution at the national level

#### A. Summary of submissions from Member States

1. Although few Member States provided direct input on priorities, needs, challenges and barriers, a number of key issues for inclusion in the negotiation process did emerge from the submissions. The following elements were mentioned as needing to be included:

- (a) Clear definitions of concepts such as “life cycle”, “circular economy”, “problematic plastics”, “plastic pollution” and “problem plastics”;
- (b) An “international risk assessment framework that considers the multidimensionality of plastic and microplastic particles”;
- (c) Reducing the production of virgin plastics;
- (d) Sustainable product design;
- (e) Reducing and eliminating single-use, problematic, unnecessary, hazardous and harmful plastics through product design;
- (f) Removing hazardous chemicals used as additives in plastics that pose risks to human health;
- (g) Innovating and developing more sustainable alternatives;
- (h) Standardization for the benefit of trade, especially for recycled plastics;
- (i) Standardization of materials to ensure that feedstock and quality requirements are met and to improve reuse and economically feasible recycling;
- (j) Labelling to improve traceability, minimum recycled content, recyclability and safe disposal;
- (k) “Substitutive materials for plastic” and the substitution of hazardous or harmful and unnecessary plastics;
- (l) Reduction in consumption and sustainable consumption in the use phase;
- (m) Special and specific attention to microplastics;
- (n) Safe, efficient and environmentally sound collection, management and disposal of plastic waste, including sea-based sources of marine plastic litter;
- (o) Recognition of equity issues such as a “just transition”, “human rights and public health” and “the right to a healthy environment”, and issues related to waste pickers and the informal sector;
- (p) Recognition of the importance of trade in the plastics value chain;
- (q) Synergies with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Paris Agreement on climate change and other international conventions.

2. These issues are addressed further below, based on previous submissions from Member States and other stakeholders in the framework of the ad hoc open-ended expert group on marine litter and microplastics, as well as relevant literature. A more complete literature review is provided in document UNEP/PP/INC.1/INF/8.

#### B. Priorities, needs, challenges and barriers for countries with activities along the plastic life cycle

3. The present section provides an overview of key activities and roles along the plastic life cycle, highlighting the critical hotspots and key problems to be addressed. It first summarizes the priorities and needs, based on existing submissions from Member States. Then, challenges and barriers to meet these priorities and needs are assessed based on relevant literature, and analysis is also

provided for developing countries. The assessment here is divided into the upstream, midstream and downstream phases of the plastic life cycle.

### 1. Upstream phase of the plastic life cycle

4. Key industrial activities affecting countries in the upstream phase of the plastic life cycle are:
- (a) The extraction of fossil fuels to produce plastics (oil and gas industries);
  - (b) The use of alternative feedstocks (e.g., bio-based feedstocks, recycled content) for production;
  - (c) The production process of petrochemical industries producing plastics.

### 2. Priorities and needs in the upstream phase

5. The submissions from Member States highlighted the need for:
- (a) Measures to reduce virgin plastics;
  - (b) Harmonized standards for feedstock materials and quality;
  - (c) Access to competitively priced, high-quality recycled materials;
  - (d) Incentives to encourage the use of recycled plastic materials produced at the national level.

### 3. Challenges and barriers

6. The following challenges and barriers to meeting the identified priorities and needs have been reported as existing in countries:
- (a) Hydrocarbons as stranded assets and climate litigation during the transition from virgin feedstocks;
  - (b) The plastic industry's dependence on the byproducts of the oil and gas industries;
  - (c) In the insurance and reinsurance sector, the increased risk for assets and liabilities that climate change poses;
  - (d) State aid and incentives for virgin fossil fuels;
  - (e) Market pricing of feedstocks and market incentives;
  - (f) Lack of regulation and failure of operational licences to limit the climate impact of plastic production caused by the use of hydrocarbons as feedstock;
  - (g) The potential of planning and environmental impact assessment laws to present a barrier to making the transition away from fossil fuels as feedstock;
  - (h) Lack of sustainable and competitively priced alternative feedstocks for plastic production.

### 4. Midstream phase of the plastic life cycle

7. Key activities for countries with a significant role in the midstream phase of the plastic life cycle include the design and manufacture of plastic and plastic-containing products, the distribution and trade of plastic products, and use and reuse. The production of plastic products is relevant for countries with large-scale manufacturing sectors (packaging, food and beverage, automotive, electrical and electronic, construction, healthcare, textiles, etc.), while all countries face issues relating to growing consumption of plastic products by individual and business users.

### 5. Priorities and needs in the midstream phase

8. In the 21 submissions received by the intergovernmental negotiating committee in preparation for its first session, Member States identified the need for action and raised issues concerning responsible and sustainable consumption, especially the environmental, social and economic impacts of the use of plastics and the need for sustainable consumption of plastics by private consumers, public procurers, business and industry. Specific mention was made of the following needs:

- (a) Identifying problematic and unnecessary products and packaging that should be eliminated through product design;

- (b) Plastics design measures, from the establishment of design criteria to the implementation of measures that eliminate or reduce harmful, hazardous or unnecessary plastics;
- (c) Extended producer responsibility policies and schemes;
- (d) Removing hazardous chemicals used as additives in plastics that pose risks to human health, and the need to innovate and develop more sustainable alternatives;
- (e) Labelling systems for products to improve transparency and traceability throughout the supply chain regarding the type of plastic as well as other chemicals and additives used, and to enable correct disposal, including remanufacturing or recycling;
- (f) Recognizing the importance of trade in the plastics value chain and the need for the clear identification and tracking of plastics;
- (g) An “international risk assessment framework that considers the multidimensionality of plastic and microplastic particles”;
- (h) A system for compiling data on plastics material flow and balance throughout the life cycle of plastics at the national, regional and global levels;
- (i) “Good science” to enhance the distribution and trade of plastic products;
- (j) A scientific body for decision-making, with “scientific decision-making to include (a) parameters, (b) a pollution standard index, (c) sampling procedures and (d) laboratory testing”.

## 6. Challenges and barriers

9. The following challenges and barriers to meeting the identified priorities and needs have been reported as existing in countries:

- (a) Lack of policies, standards, incentives, support, markets and good practices for sustainable product design;
- (b) Lack of links between extended producer responsibility and other end-of-life-oriented policies and upstream and midstream goals;
- (c) Lack of affordable and accessible reuse schemes;
- (d) Lack of consistent standards, data, information, transparency and traceability relating to the distribution and trade of plastic products, including the lack of reliable and disaggregated data on cross-border trade flows along the life cycle of plastics;
- (e) Lack of reliable information, awareness and incentives to encourage sustainable consumption, including labelling schemes;
- (f) Littering during the use phase, especially in relation to single-use plastic products;
- (g) Inadequate monitoring and assessment of the effectiveness of measures taken by countries to manage plastics;
- (h) Prevalence of design for single-use and disposable products;
- (i) Misleading “green product” claims resulting from a lack of standardization;
- (j) Lack of inclusion of environmental criteria in decision-making about public procurement.

## 7. Downstream phase of the plastic life cycle

10. The downstream phase of the life cycle includes repair, refurbishment and recycling, the trade of plastic waste and the disposal of residual wastes.

## 8. Priorities and needs in the downstream phase

11. The submissions to the intergovernmental negotiating committee and a literature review indicated that countries had identified as a priority the need for waste minimization and reduction, reuse, repair, refurbishment, remanufacturing, recycling and final disposal, and in particular:

- (a) Measures that ensure the safe, proper and environmentally sound collection, management and disposal of plastic waste and other types of waste containing plastics while enhancing recyclability and creating a more circular value chain for plastics;

- (b) Measures to address the transboundary nature of plastic pollution;
- (c) A mechanism for tracing and controlling illegal trade, dumping and transportation of plastic waste and its floating through sea water currents;
- (d) Improving the informal sector's links to industrial value chains, including recognition of human rights;
- (e) Improving the repair culture.

**9. Challenges and barriers**

12. The following challenges and barriers to meeting the aforementioned priorities and needs have been identified through the submissions and literature review as existing in countries:

- (a) Lack of legislation and incentives concerning the “right to repair”;
- (b) Barriers to repair including technical and legal barriers, lack of durability (including the integration of planned obsolescence as part of design), and the high cost of repair;
- (c) Lack of a common legal definition of end-of-life products as waste that excludes recyclable plastic products;
- (d) Lack of legislation, technology, infrastructure, capacity and investment for waste management, along with a lack of effective compliance with and enforcement of waste management laws and policies;
- (e) Lack of knowledge at the household level, which leads to poor sorting of plastic waste;
- (f) Poor collection and segregation of waste, which inhibits effective recycling;
- (g) Lack of industrial recycling processes on a large enough scale to be sufficiently feasible and profitable for investors;
- (h) Lack of traceability and control of the illegal trade of plastic waste;
- (i) Lack of sufficient traceability of recyclable and hazardous materials to ensure transparent and effective recycling;
- (j) Lack of recognition of the proximity principle, which advocates that pollution should be managed at the point closest to its source;
- (k) Lack of regulation and fiscal policy requiring the accountability from producers for a product at each phase of its life cycle;
- (l) The presence of the informal sector, in which primitive recycling to extract valuable materials is practiced in developing countries;
- (m) Open burning and dumping of plastic waste in uncontrolled circumstances where affordable waste management is not available.

**C. Summary of challenges and barriers in countries along the plastic life cycle**

13. The present section groups challenges and barriers into the following categories: knowledge-related, regulatory, economic, technological and behavioural.

**Overview of challenges and barriers at the national level**

<i>Life-cycle phase</i>	<i>Types of challenges and barriers at the national level</i>				
	<i>Knowledge-related</i>	<i>Regulatory</i>	<i>Economic</i>	<i>Technological</i>	<i>Behavioural</i>
Cross-cutting	Lack of data across the whole plastic life cycle on quantities, flows, pathways, and impacts at different scales  Lack of knowledge on the impacts of plastics on human	Lack of a coherent, overarching and holistic regulatory framework on plastics at the national level, covering the full life cycle  Lack of definitions, standards and technical	Limited understanding of the costs of plastic pollution on the environment and human health  Costs and benefits for different strategies, interventions and	Lack of harmonized labelling and tracking systems for plastic products	Lack of awareness from the private sector on the impacts of plastic pollution  Lack of awareness and responsible action by individual and business users

	<p>health and the environment</p> <p>Lack of monitoring schemes to evaluate the progress and effectiveness of existing measures</p>	<p>specifications for recyclability, reusability, safety and labelling of chemical content, plastic types and disposal means</p> <p>Lack of clear, timebound targets, monitoring and reporting schemes at the national level</p> <p>End-of-life-oriented policies that do not link to upstream and midstream goals</p> <p>Lack of coordination between countries on the development of action plans for reducing plastic pollution</p>	<p>actions are not always quantified</p> <p>Limited implementation of extended producer responsibility schemes with eco-modulated fees</p>		<p>regarding plastic pollution</p>
Upstream	<p>Lack of information and transparency regarding the content of and trade information (sources and destinations) for plastics</p>	<p>Lack of legislation (e.g., planning, environmental impact assessments, licensing regulations) for sustainable material sourcing (virgin or recycled materials)</p> <p>Lack of legislation to phase out harmful chemicals as well as intentionally added microplastics</p> <p>Lack of inclusion of environmental criteria in public procurement decision-making</p>	<p>The plastic industry's dependence on the byproducts of the oil and gas industries</p> <p>Fossil fuel aid and subsidies keeping virgin plastic cheaper than recycled plastic.</p> <p>Lack of markets for secondary plastics</p> <p>Lack of investment in the development of alternatives</p>	<p>Lack of development and uptake of sustainable alternative feedstocks</p>	<p>Lack of awareness of climate change and other environmental impacts of fossil fuels</p>
Midstream	<p>Lack of transparent and reliable consumer information (e.g., eco-labelling, sustainability information) for individual and business users on the content of, impacts of and disposal means for plastic products</p>	<p>Lack of legislation on the design of plastic products to reduce the production of unnecessary, disposable and difficult-to-recycle plastics, and the need for greater stimulation for upstream innovative solutions</p> <p>Lack of legislation and policy to support reuse</p>	<p>Lack of economic disincentives targeting single-use plastic products</p> <p>Lack of economic incentives for more sustainable products</p> <p>No fiscal policies or economic incentives to encourage reuse</p> <p>Lack of investment for reuse systems, reuse infrastructure and reverse logistics</p>	<p>Lack of technology to design out hazardous chemicals while ensuring the functionalities of products</p> <p>Insufficient innovation for new business models for reduction and reuse</p> <p>Lack of design and innovation to reduce the prevalence of hard-to-recycle plastics (e.g., multi-layered plastics) and</p>	<p>Lack of communication, education and public awareness regarding sustainable consumption</p> <p>Lack of awareness regarding reuse</p> <p>Voluntary targets for reducing packaging set by industry are not ambitious enough</p>

		<p>Lack of legislation to encourage the use of recycled content by setting mandatory targets for packaging and durable goods containing plastics</p> <p>Lack of public procurement policies favouring sustainable alternatives</p>		foster sustainable alternatives	Lack of standardization leads to misleading “green product” claims
Downstream	<p>Lack of information and transparency on the content of and trade information for plastic products and waste</p> <p>Lack of information on the performance of formal and informal waste management systems, including on efficiency, leakage and impacts</p>	<p>Lack of repair and waste management regulation and policies and their enforcement</p> <p>Lack of effectively implemented extended producer responsibility and lack of the use of eco-modulation to stimulate the reduction of problematic and unnecessary packaging and plastic products</p> <p>Lack of integration of the informal sector in decision-making</p> <p>Lack of effective enforcement of regulations against open burning and dumping</p>	<p>No fiscal policies or economic incentives to encourage the repair, remanufacturing and environmentally sound management of plastic waste</p> <p>Collection and recycling of single-use plastic products and hard-to-recycle plastics are not profitable</p> <p>No industrial recycling process exists which is sufficiently feasible and profitable for investors</p> <p>Lack of investment in waste management infrastructure</p> <p>Existing infrastructure for recycling limited by poor collection and sorting</p>	<p>Lack of affordable and accessible repair and remanufacturing solutions tailored to specific country needs</p> <p>Insufficient technologies and solutions for hard-to-recycle plastic products</p> <p>Lack of technologies to improve sorting and recycling</p> <p>Lack of technologies for the filtering of microplastics in wastewater treatment plants</p>	<p>Lack of awareness regarding repair and remanufacturing</p> <p>“Throw-away” attitude of consumers and lack of awareness of how to properly sort and collect plastic waste</p> <p>Lack of awareness in the informal sector of the environmentally sound management of plastic waste</p>

#### D. Existing national measures to address plastic pollution

14. The present section gives examples of the ways in which countries have responded to the challenge of plastic pollution through a range of national measures. These country-level measures focus mainly on issues that are specific to plastics, although it should be noted that there are other laws and policies that are more generic but can also cover plastics.

15. Below is a brief summary of the types of laws in operation in some countries. The first group consists of waste laws and measures which include plastics but are not specifically aimed at plastics. The second group sets out the types of laws, other types of governance instruments and voluntary industry schemes which are aimed exclusively at plastics.

**General waste and other laws and measures which include plastics but are not specifically aimed at plastics:**

- Tax and tipping fees on waste to landfill
- End-of-life laws for the segregation, collection, sorting and recycling of packaging waste
- Eco-design/sustainable product standards (e.g., the impact of the European eco-design directive<sup>1</sup> on targeted product groups)
- Extended producer responsibility regulation and guidance (note that these are end-of-life laws and policies focusing on the downstream phase, requiring that the producer-polluter bear the cost of managing waste products)
- Control of hazardous chemicals, including hazardous chemicals used in components of plastics
- A carbon tax that directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or on the carbon content of fossil fuels. Around 40 countries and 20 cities, states and provinces already use carbon pricing mechanisms. Carbon pricing schemes now in place cover about half their emissions, which translates to about 13 per cent of annual global greenhouse gas emissions. Carbon taxes have resulted in decreases in fuel consumption without harming economic growth.
- Fossil fuel moratoriums and bans regulating the supply side of fossil-fuel-based raw materials for plastics manufacturing as part of decarbonization measures (e.g., the ban on inland fossil fuel production in Denmark)

**Legal or economic instruments specific to plastics:**

- Bans on problematic and unnecessary types of plastic (e.g., microbeads, the regulation by the United Kingdom of Great Britain and Northern Ireland to limit black plastics in electronics)
- Bans on the import, production and consumption of single-use plastic products (e.g., plastic bags of a certain film size)
- Charges or levies on single-use plastic products (e.g., plastic bags)
- Extended producer responsibility specific to plastics (e.g., packaging) or products containing plastics (e.g., electronics, vehicles, cigarette butts)
- Taxes on packaging content (graduated according to the content of recycled and/or recyclable material)
- Bans on the import of plastic waste

**Government policies (not enacted into law and found in numerous jurisdictions)**

- Action plans, including circular economy action plans
- Zero-waste plans
- Special protected area plans (with specific bans on single-use plastic products).
- Deposit and return schemes (mainly plastic bottles)
- Subsidy phase-outs, gradually decreasing and ultimately removing fossil fuel subsidies to bridge the cost gap between virgin plastics (which are usually cheap) and recycled plastics
- Fossil fuel divestment policies, with the withdrawal or exclusion of funds and assets by governments, companies, non-governmental organizations, universities, individuals or other entities from financial portfolios connected to fossil fuel companies and their extractive activities
- Targets on recycled plastic content

**Voluntary schemes – examples**

- New Plastics Economy Global Commitment
- Plastics pacts in countries



## E. Conclusion

16. The present document summarizes the priorities, needs, challenges and barriers that countries have in addressing plastic pollution, based on submissions by Member States and a literature review that examined the diverse activities of countries along the plastic life cycle. Countries with similar activities along the plastic life cycle share common priorities, needs, challenges and barriers, but country-specific features also exist owing to differing socioeconomic contexts. Challenges and barriers comprise knowledge-related, regulatory, economic, technological and behavioural aspects.

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<sup>1</sup> The European Parliament and the Council of the European Union, directive 2009/125/EC.