

Informal Briefing Note

Considerations for Ensuring Protection of Human Health From Plastic Pollution in the Future Treaty

August 2025

A growing body of evidence demonstrates that plastic pollution has a range of impacts on human health and the environment across the full life cycle of plastics. As negotiations to develop an international legally binding instrument on plastic pollution have advanced, a diversity of governments have called for the objective of the future treaty to include the protection of human health and the environment from plastic pollution.

This informal briefing note has been prepared ahead of the second part of the fifth session of the Intergovernmental Negotiating Committee (INC-5.2) to support INC members' discussions on how to reflect elements essential to achieving the protection of human health from plastic pollution in the future treaty.

It addresses the following questions:

- *How could an integrated approach to the protection of human health, considering the full life cycle of plastics, be reflected in the treaty text?*
- *What role could a dedicated article on human health play in supporting international cooperation, and what measures should it include to effectively protect human health?*
- *In what ways could a dedicated article on human health be complemented in other areas of the treaty text? What are some specific priorities in relation to other articles that could support achievement of the objective of protecting human health and the environment from plastic pollution?*

I. Plastic Pollution – A Public Health Crisis

Scientific evidence has established that plastic pollution harms human health at every stage of the life cycle.

- Many of these impacts are associated with **harmful chemicals in plastics and plastic products**, including through exposure to several hazardous chemicals (for example, heavy metals like lead and cadmium) that people would not otherwise encounter in typical daily activities. The adverse implications that harmful chemicals in plastics and plastic products have for human health are wide-ranging, including neurotoxic, carcinogenic, immune- and endocrine-disrupting impacts. Infants and children are particularly vulnerable, and the impacts of exposure to harmful chemicals in the womb can have lifelong effects. Notably, the chemicals used in plastics that have been studied to date for impacts on human health are only a small fraction of the chemicals known to be present across the life cycle of plastics.
- Evidence that **nano- and micro-plastics accumulate in the human body** has steadily grown. Microplastics have now been detected in a wide range of human samples and tissues, including blood, breast milk, brain, heart, lung, liver, kidney, colon, placenta, and spleen, prompting growing research to understand the health impacts of the presence of these particles in our bodies.
- Recycling and end-of-life treatment practices also have known impacts on human health and the environment. Recycling of plastic products can result in **toxic chemical accumulation in recycled plastics**. Waste management practices such as open burning and other combustion operations release hazardous air pollutants.
- The **presence of plastic waste in the environment has further impacts for health**, including from the degradation of plastic into microplastics and chemical leaching from plastic waste in the environment. This has impacts for soil quality and can result in water and food contamination. The presence of plastic waste in the environment also exacerbates the spread of a range of diseases, including mosquito-borne diseases, and can interfere with critical systems and conditions to support human health, including infrastructure for delivering clean water and sanitation.
- Exposures and associated **health impacts occur for workers across the full life cycle of plastics**, including those working in plastic production facilities, recycling facilities, and in waste management.
- While plastic pollution poses risks and adverse impacts to the health of all populations, **people and communities in vulnerable situations are disproportionately affected and at risk**. Especially impacted communities include informal waste workers, for whom exposure is high and safety protections low, as well as fence line communities living near extraction, production, and conversion facilities and in proximity to dumping, open burning, incineration, and landfill sites.
- Current patterns of plastic production and consumption result in significant harms to human health and the environment, with impacts across the full life cycle of plastics. Without active intervention and international cooperation, global production and consumption of plastics are projected to grow significantly over the coming decades, accompanied by increasing volumes of plastic waste and leakage, amplifying harms to human health and the environment.¹

¹ See, for example: OECD. (2024). *Policy scenarios for eliminating plastic pollution by 2040* (p.47). https://www.oecd.org/en/publications/policy-scenarios-for-eliminating-plastic-pollution-by-2040_76400890-en/full-report.html; Landrigan, P.J., et al. (2023). The Minderoo-Monaco Commission on Plastics and Human Health. *Annals of Global Health*, 89(1), p. 23. <https://doi.org/10.5334/aogh.4056>.

II. Pathways to the Effective Protection of Human Health from Plastic Pollution

As negotiations to develop an international legally binding instrument on plastic pollution has advanced, there has been growing convergence among a diversity of governments that the objective of the treaty should include both the protection of human health and the protection of the environment from plastic pollution.² In recent months, INC members championing the protection of human health have been exploring options for ensuring that the treaty advances international cooperation to achieve this objective.

Options being considered by INC members include:³

- **Option 1:** An integrated approach to the protection of human health in relevant provisions of the text. This could include strengthening some existing references to human health in the Chair's Text and, where relevant, by adding or integrating additional references or language that would link to and support the objective of health protection;
- **Option 2:** A standalone, dedicated article on health protection. This may include provisions in the treaty text and aspects that could be further developed at future meetings of the Conference of the Parties (COP); and
- **Option 3:** An integrated approach to the protection of human health in relevant provisions of the text, complemented by a dedicated article on human health.

IIa. How could an integrated approach to the protection of human health, addressing the full life cycle of plastics, be advanced in the treaty?

Recognizing the known adverse impacts for human health across the full life cycle of plastics, and mindful that understanding of the impacts will continue to grow, achieving the objective of protecting human health will require INC members to consider how they can:

1. **substantively address known adverse human health impacts across the full life cycle of plastics** (see section IIc);
2. support provisions in the treaty text that enable the **progressive development of the treaty** over time, including in response to the best available science and knowledge. This will include providing effective decision-making mechanisms and an effective science policy interface that enables the COP to be informed by the **best available science and expert recommendations**; and
3. support **effective implementation**, through both financial and non-financial means that enable parties to successfully implement their obligations under the treaty, meaningfully contributing to achievement of the objective of protecting human health and the environment from plastic pollution.

² Some formulations used, for example in the Nice wake up call for an ambitious plastic treaty, have included: "to end plastic pollution to protect human health and the environment *from its adverse effects, based on a comprehensive approach that addresses the full lifecycle of plastics*" (emphasis added).

³ The Chair's Text currently includes options corresponding broadly to options 1 and 2:

- "Option 1: In lieu of a standalone Article on Health, strengthen where they exist and newly add, where possible, references to human health in the context of respective applicable Articles and Preamble.
- Option 2: Placeholder pending an outcome of informal drafting work led by Brazil with Members that are supportive of having a standalone Article on Health. Possible types of provisions may consist of provisions that can be agreed upon at the time of adoption of the treaty and those that can be considered at the future meeting(s) of the COP."

IIb. What role could a dedicated article on health play?

A dedicated article on human health in the treaty could play an important role in bolstering international cooperation specifically needed to achieve the protection of human health from plastic pollution.

A dedicated article could, for instance, promote international cooperation in scientific research and in the development of evidence-based policies to identify, assess, monitor, and prevent or mitigate adverse impacts of plastic pollution on human health. Such a provision could require that particular consideration is given to vulnerable populations which bear a disproportionate burden of the health impacts of plastic pollution, incorporating both formal and informal workers, including waste pickers.

Further, a dedicated provision could complement other implementation measures and support—such as capacity building, information exchange, reporting, and awareness raising—by specifically promoting and enabling the strengthening of institutional capacities for the protection of human health from plastic pollution, and encouraging the involvement of key health stakeholders in support of effective treaty implementation.

IIc. What are the opportunities to support the protection of human health in other specific articles of the treaty?

Following is a high-level outline of some of the opportunities for ensuring human health protection in relevant articles of the treaty. Notably, in some key articles there are opportunities to substantively address particular impacts on human health explicitly (such as in Articles 3, 5 and 7). In other instances, it can be sufficient to refer more generally to the protection of human health or to safe management (such as, for example, in Articles 8 and 9). In regard to means of implementation and specific provisions that can support implementation, reference to the treaty’s objective could be sufficient (for example, linking means of implementation to furthering the treaty’s objective), whereas in other instances, specific reference to the support required to enable protection of human health would be helpful, as in Articles 17 and 18.⁴

- **Article 1:** A diversity of governments have called for the objective of the treaty to include the protection of human health and the environment from plastic pollution. The treaty’s objective will guide interpretation, implementation, evaluation, and amendment over time, including in response to emerging scientific evidence and knowledge. As such, the inclusion of the protection of human health from plastic pollution in the treaty’s objective, and operationalizing this objective throughout treaty measures, will be vital.
- **Article 2:** The definitions of key terms in the treaty, such as “plastic”, “plastic pollution”, and “plastic waste”, will require careful attention to ensure they reflect the scope required for the operative provisions and obligations that use them, including by ensuring that definitions reflect the full life cycle of plastics.
- **Article 3:** In terms of health protection, this Article has a key role to play in establishing legally binding obligations to eliminate the most harmful plastic products and chemicals of concern in plastic products, including those harmful to the environment and to human health.⁵ Appropriate

⁴ This outline is not intended to be exhaustive.

⁵ These measures would require:

- a means of identifying the plastic products and chemicals of concern in plastic products to which obligations will apply, which could include criteria, or a process for elaboration of criteria, and could include an initial list; and
- an effective mechanism for the COP to take decisions on the future listing of plastic products and chemicals of concern in plastic products, based on the best available science and expert recommendations. Such a mechanism could outline the relevant information to be provided to or considered by the COP to inform its decisions, or provide a process for this to be elaborated.

transparency and traceability requirements,⁶ and measures that facilitate information sharing⁷ will also be vital to enable effective management of harmful plastic products and chemicals of concern in plastic products throughout the life cycle. Striking the appropriate balance between approaches that are binding and global while considering national circumstances, capabilities, and implementation challenges in appropriate flexibility mechanisms will be key to reaching agreement among a broad diversity of INC members.⁸ Global measures could be complemented by obligations to take action at national level, taking into account national circumstances and capabilities.

- **Article 5:** Improved design of plastic products, including their safety in regard to human health, will require the inclusion of both safety and sustainability considerations in product design requirements as well as in any potential sectoral or other programmes of work on design. Such requirements could reflect the importance of safety through multiple use cycles (e.g. initial use, re-use, recycling) and on disposal,⁹ and ensure the availability of relevant information.¹⁰
- **Article 6:** Health protection could further be advanced by measures that ensure sustainable production and consumption of plastics across the full life cycle, including through international cooperation on the reduction of production and consumption of primary plastic polymers to sustainable levels.
- **Article 7:** Human health impacts occur from exposures via the release and leakage of chemical components and microplastics during use. Requirements to take measures to prevent, reduce, and, where possible, eliminate releases and leakages should consider and address these human health impacts.
- **Articles 8 and 9:** The principles of environmentally sound management of waste are widely recognized; some multilateral environmental agreements also expressly integrate the protection of human health in considerations for the sound management of recycling, disposal, and waste.¹¹ References to “environmentally sound management” throughout the treaty could be augmented for the protection of human health by including language such as “in a safe and environmentally sound manner.”
- **Articles 10, 11, 12, 14, 17 and 18:** Reflecting consideration of human health protection in provisions on implementation, including measures on both financial and non-financial means of implementation, could be supported by making express links to achievement of the treaty’s

⁶ These transparency and traceability requirements could apply to prioritized groups of chemicals in plastic products, if ensuring transparency and traceability in respect of all chemicals in plastic products is not initially feasible.

⁷ For example, information sharing about measures taken at national level, especially those measures for which international cooperation will be important for effectiveness (such as cooperation around import bans).

⁸ Global requirements can take national circumstances and capabilities into account in a number of ways, including by providing for appropriate specific and time-bound exemptions as well as financial and non-financial support for implementation, including support for the transition to safer alternatives and non-plastic/chemical substitutes.

⁹ Issues that INC members could consider in relation to human health and product design include: product composition (including chemical composition and additives), safety for the intended use profile (noting that sensitive applications such as food contact materials, children’s products, medical equipment, and clothing may require special attention), different possible exposure pathways, minimizing potential for releases and leakages (including of chemicals and microplastics), minimizing chemical complexity, and design for safe and environmentally sound recycling and waste management processes.

¹⁰ Including information on composition, safe and environmentally sound use (and re-use), and safe practices for disposal, recycling, and waste management.

¹¹ For example, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (2009).

objective¹² or by making specific reference or commitments to support that will enable international cooperation for the protection of human health.¹³

- **Articles 13, 15 and 16:** Effective reporting that supports assessment of implementation and compliance, and provides the data to evaluate the effectiveness of the treaty in achieving its objective, will be key to inform decisions about the treaty’s progressive development.
- **Article 20:**¹⁴ To achieve the objective of human health protection, this Article will be key to ensuring that the COP has access to the best available science and knowledge to inform its decisions. This will include providing the COP the capacity to establish a subsidiary body or bodies to support implementation of the treaty. More detailed consideration of the specifics of the mandate, terms of reference, and composition of such a subsidiary body or bodies could be an area for focus in the interim period prior to COP 1.

III. Take Aways

The upcoming negotiations in Geneva provide a critical opportunity for INC members to conclude a treaty that can effectively protect human health and the environment from the adverse impacts of plastic pollution. To achieve this objective and ensure that measures to address plastic pollution are both environmentally effective and health protective, health impacts across the full life cycle of plastics will need to be substantively addressed or reflected in relevant provisions of the treaty, including in provisions related to implementation and in provisions aimed at ensuring the progressive development of the instrument over time. Alongside, a dedicated article on health can centre the importance of human health protection and considerations as cross-cutting issues for the treaty, and establish specific commitments to bolster the international cooperation vital for the protection of human health.

This briefing note was prepared by the Forum on Trade, Environment, & the SDGs (TESS).

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¹² An example of this approach is in Article 12, para 4 of the Chair’s Text, which provides: “Parties shall promote cooperation with relevant intergovernmental organizations and other entities, including relevant scientific organizations and bodies and private sector entities, as appropriate, *to support the effective implementation of the Convention and the achievement of its objective*, while avoiding any duplication of efforts” (emphasis added). This approach could be extended, for example, to para 1 in the same Article, where a different formulation—“to assist them in implementing their obligations under this instrument”—is used. Other provisions in the Chair’s Text provide additional specific supports for international cooperation for the protection of human health (for example, in Article 17 and Article 18), which should be retained.

¹³ For example, Article 17 and Article 18 in the Chair’s Text.

¹⁴ Also 20bis.