HEALTH DIPLOMACY ALLIANCE

ROAD TO INC-5.2

INTERGOVERNMENTAL NEGOTIATING COMMITTEE TO DEVELOP AN INTERNATIONAL LEGALLY BINDING INSTRUMENT ON PLASTIC POLLUTION, INCLUDING IN THE MARINE ENVIRONMENT

Policy Brief

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HEALTH IN PLASTIC POLLUTION

Plastic pollution is one of the most pressing challenges of our time. It causes severe damage to the environment and threatens biodiversity. However, through a One Health lens, it devastates ecosystems and endangers human health in alarming ways.

Today, humans are exposed to plastic throughout its entire life cycle, this means constant, ongoing exposure. Microplastics have been detected in drinking water, food, agricultural soils and a wide range of consumer products. This widespread contact increases the likelihood of plastic particles entering the human body[1].

Numerous studies have demonstrated plastics harmful impact to human health, linked to multiple chronic diseases and health disorders. In this sense, the plastic crisis is not only an environmental issue, but also a health crisis[2].

To address the plastic pollution crisis, a coordinated and international response has been initiated.

In March 2022, the UN Environment Assembly adopted a resolution to develop a legally binding international instrument on plastic pollution, including in the marine environment. Since then, negotiations have been ongoing, with several rounds leading up to the most recent one held in Busan in December 2024.

The next key step is the second part of the fifth session of negotiations (INC-5.2), to be held in Geneva from August 5 to 14, 2025. Throughout the negotiation process, as efforts continue toward finalizing a global agreement on plastic pollution, an increased attention to human health has emerged as a point of focus.

CURRENT POLICIES IN PLACE

Most actions to address plastic pollution have been taken at a national level. According to a 2018 UNEP report on Legal Limits on Single-Use Plastics and Microplastics[3], 127 countries have adopted some form of legislation regulating plastic bags.

INC-1
First session of the INC
Punta del Este, Uruguay
28 Nov to 2 Dec 2022

INC-2
Second session of the INC
Paris, France
29 May to 2 June 2023

INC-3
Third session of the INC
Nairobi, Kenya
13 to 19 Nov 2023

INC-4
Fourth session of the INC
Ottawa, Canada
23 to 29 April 2024

INC-5.1
First part of the fifth session of the INC
Busan, Republic of Korea
25 Nov to 1 Dec 2024

INC-5.2
Second part of the fifth session of the INC
Geneva, Switzerland
5 to 14 August 2025

These regulations include restrictions on production, distribution, use, trade, as well as taxes and disposal requirements. The issue of plastic pollution has been addressed at the international level on several occasions, but it has mainly focused on waste management.

The Basel Convention[4] is the primary transnational instrument on waste management, especially hazardous waste. Its 2021 amendments extended the scope to certain non-hazardous plastics. The Convention grants states the right to ban plastic imports and requires exporting countries to ensure that waste is only sent to regions capable of environmentally sound management. Yet, plastics were not explicitly included in the Convention from the start, despite concerns being well known since the 1970s. Moreover, the focus on waste management is hard to apply effectively to plastics, as most are notoriously difficult to eliminate[5].

A second international approach comes through the Stockholm Convention[6] on Persistent Organic Pollutants (POPs), which also emphasizes environmentally sound waste management. Some POPs are used in plastics, and plastics can absorb and carry these pollutants.

The Convention requires states to eliminate certain POPs, which may indirectly reduce specific plastics. However, because it targets chemicals rather than plastics themselves, its impact remains limited. States can shift to alternative chemicals without reducing plastic production or ensuring sustainable disposal[5].

All these gaps highlight the importance of the upcoming international legally binding instrument on plastic pollution, including in the marine environment. This treaty offers a direct opportunity to address plastic pollution and its impacts at the global level. It requires an approach that also accounts for the various risks it poses to human health throughout its life cycle.

WHY INCLUDE HEALTH IN THE PLASTIC TREATY ?

The issue of plastic pollution is global and widespread, which means it requires a coordinated response at the international level.

Fully integrating the health dimension into the treaty would support more effective targeting of the hazards to which populations are exposed, while also enhancing the overall effectiveness of the measures undertaken. In other words, including health within this legal framework ensures that the proposed solutions will be sustainable, balancing the protection of human health and the environment. The goal is to find responsible solutions that limit its harmful impacts throughout its entire life cycle, for a healthier and more sustainable future[7].

HEALTH THREATS THROUGHOUT THE ENTIRE PLASTIC LIFE CYCLE

Plastic harms human health at every stage of its life cycle and the burden will continue to grow without urgent global action.

Extraction (fossil fuels, coal, oil, gas):
Workers face injuries, lung and cardiovascular diseases, and cancers; oil-spill cleanup causes acute toxicity and long-term neurological stress[8]. Fossil fuels, the main raw materials for plastics, drive environmental harm and health risks in communities.

Production & manufacturing:
Exposure to vinyl chloride, benzene, and other petrochemicals drives excess leukemia, liver & brain cancers, mesothelioma, and fertility loss.

Use phase:
Additives and residual monomers leach from consumer products; people are continuously exposed through contaminated food, water, air, and everyday items[9].

Disposal:

- Landfills: Fires and leachate release toxic metals and additives.
- Recycling: Workers suffer cardiovascular disease, metal poisoning, neuropathy, and lung cancer; e-waste recycling emits OPEs and POPs.
- Incineration / open burning: Dioxins, PCBs, PAHs, heavy metals, and plastic additives cause lung cancer, endocrine, immune, reproductive, and neurodevelopmental disorders, especially in the Global South[9].

Toxic constituents:

- Phthalates & bisphenols: Endocrine disruption which leads to prematurity, infertility, obesity, cardiovascular disease, cancers, and neurodevelopmental problems[10].
- PFAS: Persistent endocrine disruptors found even in medical devices.
- Brominated flame retardants: Neurotoxic, linked to diabetes, reduced birth weight, and cancers[11].

Micro- & nanoplastics:

- Detected in blood, lungs, placenta, breast milk, and feces; they accumulate in tissues, trigger inflammation and oxidative stress, and transport toxins and antibiotic-resistant bacteria.

Most at risk:

- Infants, children, plastic and waste-sector workers, fence-line communities, marginalized and indigenous populations, and women[12].

HEALTH IN THE UPCOMING INC-5.2

The integration of health impact in the negotiations is increasing, reflecting a growing recognition of the overall risks that plastics pose to the ecosystem and human health.

The discussion is gradually shifting towards more practical and inclusive solutions to ensure health is meaningfully incorporated into the treaty[13].

Key gaps remain, which could be addressed during the upcoming INC-5.2 session in Geneva.

The current draft[14] acknowledges that plastics threaten human health, but it lacks the necessary detail to fully grasp the nature and extent of these risks, particularly considering that health is impacted at every stage of the plastic life cycle.

In addition, Article 19, which is specifically dedicated to health, still requires further development. It is essential that all health-related elements be thoroughly considered and receive focused attention to ensure the treaty is both comprehensive and effective.

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OVERVIEW OF HEALTH-RELATED CONSIDERATIONS IN THE LATEST INC DRAFT
December 1, 2024

Articles	Content related to Health	Notes
Article 1(Objective)	Mentions of human health protection as a primary objective of the convention.	Emphasizes protection of health and the environment throughout the plastic life cycle.
Article 3 (Plastic Products)	Targets plastic products that are harmful to human health.	Supports elimination or restriction of hazardous plastic items.
Article 5 (Alternatives)	Encourages development of sustainable alternatives, taking human health into account.	Aligns with a shift toward safer, non-toxic substitutes.
Article 17 (Information Exchange)	Refers to the health and environmental risks of plastic pollution in the context of data sharing.	Reinforces the need for transparency and intergovernmental cooperation.
Article 18 (Public Awareness & Research)	Includes references to public information, education, and research on health impacts.	Promotes informed decision-making and community engagement.
Pending – Article 19 (Health)	A dedicated article on health is expected, not yet included in the December 2024 version.	Informal consultations are ongoing, led by Brazil, with support from several members.

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RECOMMENDATIONS

Prioritize Health

Prioritize and strengthen Article 19 to ensure a comprehensive and coherent treatment of health aspects related to plastic pollution.

The current draft must go further in clearly defining and explaining how plastic exposure harms human well-being. Strengthening this article would help ensure that health is fully integrated into all treaty obligations, from prevention to implementation.

While having a dedicated article on health is essential, it is equally important to ensure that health considerations are integrated throughout the entire treaty wherever relevant.

Create a Cross-sector coordination mechanism

Fragmented action across sectors weakens the response to plastic-related health risks. A dedicated coordination body with a clear mandate is needed to conduct surveillance, integrate data, align policies, and ensure accountability across health, environment, agriculture, waste, and industry.

The mechanism should apply a One Health approach to capture the interdependence of human, animal, and environmental health. Health expertise must be embedded in all relevant decision-making processes.

Periodic revision of chemicals of concern

A key step forward would be to establish a mechanism for regularly updating the list of chemicals of concern, particularly based on evolving scientific evidence and health-related indicators.

This must be supported by concrete measures, such as the creation of an independent and permanent scientific body. This body would be responsible for continuous scientific monitoring, assessing emerging health risks related to plastics, and recommending regular updates to priority substances.

To achieve this, it is essential to overcome technical and institutional barriers through cross-sectoral collaboration, innovation, and inclusive policy development.

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RECOMMENDATIONS

Transparency and traceability of chemicals of concern

Improving the transparency and traceability of chemicals in products with direct implications for human health is also a priority. Extended Producer Responsibility focused on product design must address both material composition and challenges related to safe use, reuse, and end-of-life handling.

Such measures will help guide effective risk management and ensure regulatory action is grounded in both hazard and exposure potential.

Finance mechanisms

The treaty should call on effective measures to allocate resources from national budgets, with special emphasis on funding primary health care systems in low-resource settings. It should also mobilize funding through producer responsibility schemes via public private partnerships and contributions from higher-income countries.

Prioritizing support for health impact research, prevention, and vulnerable populations will strengthen the overall effectiveness of the treaty, with transparent and accountable fund management being essential.

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