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

Busan, Republic of Korea, 25 November–1 December 2024  
Item 4 of the provisional agenda

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

## **Information submitted by the United Nations Children’s Fund**

### **Note by the secretariat**

1. The annex to the present note contains the summary of the report by United Nations Children’s Fund entitled “Generation Plastic”, a link to the summary is provided in the bottom of the summary. The full report will be available on 27 November 2024.
2. The document presented in the annex has been submitted by the United Nations Children’s Fund, it is presented as received and has not been formally edited.

## Annex

# Information that could be of relevance to the intergovernmental negotiating committee submitted by the United Nations Children Fund

## Generation Plastic

### Summary

Today's children are surrounded by more plastics than ever before. Despite this, our knowledge of the lifelong and intergenerational effects of exposure to this chemical cocktail remains limited. Plastic pollution in places where children live, learn, and play, along with the presence of toxic chemicals in plastic products they use, highlights only part of this growing crisis.

The invisible aspect of the crisis is the lasting health effects that will shape children's well-being from early development through adulthood. Compared to adults, children absorb more pollutants relative to their size and are less able to eliminate them from their bodies, while they also have more years of life ahead of them during which disease and disability may develop.

*Generation Plastic* draws attention to five types of hazards plastics present for children, summarizing research findings and highlighting knowledge gaps.

#### 1. Children's toxic exposures from plastic waste

Children who live in communities with open dumping and burning of plastic waste deserve the world's attention and concerted action. Here, socio-economic vulnerabilities amplify the toxic effects of pollution (1,2). Recent research estimates that around 57 per cent of plastic pollution is openly burned each year (3). The dark smoke generates large amounts of toxic ash and hazardous air pollutants including heavy metals, carbon monoxide, hydrogen cyanide, styrene gas, and persistent organic pollutants like dioxins, chlorinated furans, and polychlorinated biphenyls (4,5). Children are particularly vulnerable because they breathe more per body weight than adults, leading to higher exposure (6). Toxic chemicals from informal dumpsites are released into the air, water and soil and can contaminate nearby water and food sources (7). Exposure to these toxicants via inhalation as well as ingestion and through the skin has been associated with birth defects, cancer, respiratory disorders, eye damage and even death (5).

The most disadvantaged are the most vulnerable. Globally, there are over 20 million adult and child waste pickers, who collect approximately 60 per cent of all the plastic gathered for recycling globally (8). Children as young as 5 years of age and pregnant women are known to work in the sorting, dismantling, and recycling of e-waste (9), which is made of approximately 20 per cent plastic (10). Prenatal exposure to hazardous chemicals in e-waste recycling is linked to increased rates of stillbirth, preterm birth and lower birth weight (9). Because children's bodies metabolize and eliminate toxic substances differently compared to adults, children are less able to break down and eliminate some hazardous substances (7). Meanwhile, their rapidly developing organs are more vulnerable to hazardous substances that can potentially lead to lifelong health consequences and permanent damage.

#### 2. Pollution from the plastic production process

Pollution from plastic production, from natural resource extraction to plastics manufacturing, includes the release of toxic petrochemicals that can reach nearby "fenceline" communities (4). Studies have shown that families living near fossil fuel extraction sites in "fenceline" communities experience higher rates of childhood cancer, especially leukemia, compared to those who live further away (4,11). Children's unique vulnerabilities and child-specific behaviours mean that their bodies absorb more of the contaminants in the environment compared to adults (6). Ninety-nine per cent of plastic is produced from fossil fuels (12), and plastic production is responsible for over 5 per cent of global greenhouse gas emissions (13) – a significant contribution to climate change. Today's children and youth are sounding the alarm that climate change is one of their greatest concerns (14).

#### 3. Impact of plastic waste on livelihoods and flooding

Children are also affected when families' livelihoods are impacted by plastic pollution. Examples include local declines in fishing and tourism (15,16), although the scale of these impacts on children has not been sufficiently assessed. Plastic waste including bottles, nylon threads from the fishing industry, plastic bags, used diapers and sachets are commonly found in drainage systems (17,18). Additional effort is needed to address the potential for flooding that is

aggravated by plastics and other waste (17). Plastic waste such as discarded tires provide breeding grounds for transmission of vector-borne diseases (19). Flooding damages important WASH infrastructure, contaminating food and water supplies. Children's dependence on caregivers and their vulnerability to killer infectious diseases like malaria makes them uniquely vulnerable in these situations.

#### 4. **Toxic chemicals in plastic products used by children**

Certain chemicals in plastics are linked to cancer, birth defects, damage to organs and hormone disruption (20). Because children eat and drink more per unit of body weight than adults, have immature detoxification mechanisms, crawl on the ground, and frequently put objects and hands in their mouth, they are more susceptible to environmental contaminants than adults, especially during "windows of vulnerability" during which vital organs are forming (6). Bisphenols such as BPA are endocrine disruptors with neurotoxic effects (4). Styrene is neurotoxic and is classified as a possible human carcinogen by the IARC (4). Pregnant women's levels of flame retardants like PBDEs have been linked to lower IQ in their children (4). Some plastic chemicals have been regulated. The European Union restricted use of the phthalates DEHP, DBP, DIBP, and BBP, which are added to plastics to increase flexibility, transparency, and longevity, but are toxic for reproduction and interfere with the human hormonal system; the policy is estimated to save approximately 2,000 boys each year from impaired fertility later in life (21). Children are exposed to plastic chemicals through inhalation, ingestion, via the skin, and prenatally (22). Known hazardous plastic materials are widely used in school and preschool buildings (e.g., polyvinyl chloride (PVC) flooring) and on playgrounds (e.g., crumb rubber infill) (23,24).

#### 5. **Gaps in knowledge and regulation**

The more than 16,000 chemicals potentially used and present in plastics are responsible for many of plastic's known harms, of which approximately 3,600 chemicals of concern are not currently regulated under global policies (25). Thousands more have never been tested for toxicity (4,26), though recent research has highlighted fifteen priority groups of concern for plastic chemicals (23). The absorption and potential health effects of exposure to plastics lacks comprehensive post-market monitoring (27). Numerous plastic products are marketed towards children and families, ranging from disposable diapers to plastic baby bottles, toys, food packaging and cosmetics. An approach based on the precautionary principle is needed to protect children from unknown harms from plastic production, use and waste. This includes avoiding regrettable substitution of a known hazardous plastic chemical for a lesser studied material (as has occurred with bisphenols, flame retardants, and others) (31,32). Research is needed that prioritizes children's exposures to plastic chemicals, particles, products, and waste.

Fragmented policies for regulating plastics and chemicals at local, regional, and international levels are a key challenge (20). Without stronger policies, plastics production and use are projected to rise 70 per cent from 2020 to 2040, while mismanaged plastic waste and leakage into the environment will increase by about half (28). Only about 21 per cent of plastic today is designed to be recyclable, but opportunities to reduce, reuse, refill, redesign, and reorient are available (29).

Today, children around the world are taking action as agents of change and participating in the fight against plastic pollution. In a recent UNICEF survey of over 214,000 children and young people, respondents urged governments to take stronger measures to protect the environment and called for improvements to waste management and recycling and regulations to limit plastics (14). Where possible, children and caregivers can empower themselves by avoiding single-use plastics, choosing safer building materials, and regularly washing hands and cleaning areas where children spend time.

General Comment 26 outlines that "the best interests of the child shall be a primary consideration in the adoption and implementation of environmental decisions" (CRC/C/GC/26) As the world addresses the plastic pollution crisis, ambitious regulation, international cooperation, feasible alternatives, and rigorous clean-up will be needed to protect children from hazardous plastic chemicals, particles and waste.

*Generation Plastic* calls for integrated, systemic shifts to protect children:

1. **Addressing the plastic pollution crisis through systems change:** reducing the most problematic and unnecessary plastic uses; transforming the market towards circularity through accelerating the shifts towards Reuse, Recycle, and Reorient and Diversify; and dealing with the legacy of plastic pollution (29).
2. **Advancing chemical transparency and product safety for children:** Transparency in chemicals in products can empower consumers, simplify recycling processes, and promote circularity. Products that are marketed towards children should be prioritized and awareness-raising in communities and schools can empower children

and youth. Finally, research on the lifelong health impacts of widespread exposure of children to plastic chemicals and particles should be a high priority.

3. **Concerted action for children bearing the greatest burden.** Every child has the right to a “clean, healthy, and sustainable environment” (A/RES/76/300). The rights and livelihoods of child waste pickers and fenceline communities must be respected, protected and fulfilled. Underlying structural causes need to be prioritized together with better waste management systems.

Decisions are being made today by adults that will impact children. States must act to spare the next generation a plastic-choked future. Future generations will hold us accountable.

*The full report will be available on the UNICEF website: <https://ceh.unicef.org/events-and-resources/knowledge-library/generation-plastic-unpacking-impact-plastic-children>*

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