

Global Plastics Treaty: Babies, young children and women are most at risk

Plastics containing hazardous chemicals in food and drinks packaging pollute our lands and our oceans, and risk harming the health of humans and our planet.

The draft Global Plastics treaty will be negotiated from November 25th-December 1st:

<https://www.unep.org/inc-plastic-pollution/session-5>

IBFAN, the International Baby Food Action Network <https://www.ibfan.org/> is concerned that the draft text of the Treaty contains only 3 references to babies and children and 6 to women, who are included under ‘vulnerable populations’ and as “agents of change.”

Babies, young children and their mothers are most at risk from toxic chemicals contained in plastics. Plastic pollution harms their physical, intellectual and reproductive health, both now and in the future. Yet they have no voice to express the problems they face.

Lifecycles and Our Lives

Plastics lifecycles: Plastic pollution harms the health of humans and our planet. The Treaty must “address potential health risks and exposures associated with plastic polymers, chemicals and additives, microplastics and nanoplastics at all stages of the plastics lifecycle.” (1)

https://resolutions.unep.org/incres/uploads/full_who_statement_inc_22.4.24.pdf

Human lifecycles: Plastics have an impact on all stages of the human lifecycle because their toxic properties impact the immune, reproductive and endocrine systems: “Plastics include additives, including carcinogens, neurotoxicants, and endocrine disruptors, that can have harmful effects on human health and the environment.” <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2824%2902254-2>

Newborn babies, infants and young children

Up to 140 million babies are born in the world each year <https://ourworldindata.org/births-and-deaths> These babies and children are not ‘small adults’ and are at special risk because of their vulnerable stage of development. The kidneys of these youngest populations are still immature and this limits their capacity to detoxify and rid their bodies of these harmful chemicals. (2)

Just like the kidneys and body organs, the baby’s immune system is also still immature at birth. Whereas breastfeeding protects the slowly maturing immune system to help guard against infection, formula-fed babies have no such protection: <https://www.gifa.org/en/immunology/#htoc-breastfeeding-and-the-immune-system>

Formula is an ultra-processed food that needs packaging and the use of plastic which contributes to pollution. In addition, formula fed infants and young children are exposed to risks from endocrine-disrupting chemicals in baby bottles and feeding equipment. Polycarbonate feeding bottles contain Bisphenol A, a hormone disrupting chemical, “classed as toxic to reproduction and

banned from use in baby bottles and cups by the Food and Drug Administration in 2012 due to its ability to leach into food.”

Polypropylene feeding bottles are now promoted instead by manufacturers. But these “also release toxic microplastics when they are heated up, as shown by law suits claiming that manufacturers misled consumers by not disclosing on their labels or packaging that the material their bottles are made from, which is the microplastic polypropylene, can seep into food or drinks when heated.”

<https://www.forbes.com/sites/ariannajohnson/2024/06/25/new-lawsuits-claim-baby-bottles-manufacturers-misleadingly-exposed-infants-to-harmful-microplastics/>

Many of these plastic feeding bottles are single-use plastic items. These must be discarded to avoid degradation of toxic plastic components due to heating and microwaving, as well as to prevent re-use to avoid increasing the risks of bacterial infection and chemical harms:

<https://foodpackagingforum.org/news/majority-of-plastic-food-contact-articles-likely-endocrine-and-metabolism-disrupting>

Women are mothers and care-givers of future generations

Women are not minority groups. (3) They are exposed to toxic plastics in food and drink packaging as well as all around them in “Clogged waterways, burning rubbish dumps, overflowing landfill sites ... Discarded plastics from medical devices contaminate soil and waterways, or produce toxic fumes when burned. Risks of exposure to chemicals and toxins during the production and discard stages of the plastic lifecycle disproportionately affect low income and disadvantaged communities globally.” <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.713385/full>

Plastic pollution is caused not only by medical devices, but by packaging of many consumer products. The plastics used in packages and containers may contain Endocrine Disrupting Chemicals (EDCs) and the PFAS group of per- and polyfluoroalkyl substances. Both EDCs and PFAS are POPs, the Persistent Organic Pollutants which contaminate the environment. They are found in every corner of the globe and are toxic to reproduction. They cause health risks from preconceptual, prenatal and postnatal exposure.

Women are exposed before conception, during pregnancy and after giving birth. Research has shown that the toxicity of EDCs and PFAS includes carcinogenic activities. In the case of EDCs, this is linked to breast, prostate, testicle, ovary, and thyroid cancer. Some of these hormone-dependent cancers can thus affect men. <https://pubmed.ncbi.nlm.nih.gov/36526827/>

In relation to PFAS “Many communities have had water contaminated by PFAS, and cancer is one of the important community concerns related to PFAS exposure... The cancer sites (in the body) with the most evidence of an association with PFAS are testicular and kidney cancer.”

<https://pubmed.ncbi.nlm.nih.gov/33385391/>

The placenta is no longer seen as a barrier that protects the developing foetus. Research on EDCs and PFAS provides alarming evidence on their impacts in the womb and on pregnancies:

‘Several **EDCs** have been studied because they can cross the placenta, accumulate in placental tissues, and persist in fetal circulatory systems and organs’.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC9989293/>

PFAS can cross the placenta: “Prenatal exposure to per- and polyfluoroalkyl substances (PFAS), a ubiquitous class of chemicals, is associated with adverse outcomes such as pre-eclampsia, low infant birth weight, and later-life adiposity.” <https://pmc.ncbi.nlm.nih.gov/articles/PMC7723450/>

Gender Benders: EDCs have a disruptive effect on the body’s hormone system, a complex network of glands, hormones and receptors acting as the key communication and control link between the nervous system and bodily functions such as reproduction, immunity, metabolism and behaviour.

(4) <https://worldnutritionjournal.org/index.php/wn/article/view/30>

<https://worldnutritionjournal.org/index.php/wn/article/view/30/19>

Forever Chemicals:

PFAS, per- and polyfluoroalkyl substances are “widely used, long lasting chemicals, components of which break down very slowly over time. Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present at low levels in a variety of food products and in the environment. PFAS are found in water, air, fish, and soil at locations across the nation and the globe. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals.” <https://www.epa.gov/pfas/pfas-explained>

Because PFAS are found in our water, household cleaning products and cosmetics, they are also detected in breastmilk. However, breastfeeding provides immuno-protective factors to the baby to help build the baby’s own lifelong immune system and strengthen the body’s defences.

<https://www.gifa.org/en/immunology/>

<https://www.gifa.org/wp-content/uploads/2023/05/IBFAN2023-Breastfeeding-and-Immune-system.pdf>

Workers all over the globe: male exposures

EDCs and PFAS contained in plastics used in food contact materials and found in water supplies are a risk for women’s and men’s reproductive health, even before conception. EDCs mimic our bodies’ natural hormones such as estrogen and testosterone. They thus act as impostors and interfere with the body’s own hormone signals. In this way, EDCs can affect the quantity and quality of sperm and the development of male genital organs in the womb.

Tiny plastic particles – but potential major health impact?

In addition to these toxic chemicals, plastic bottles of drinking water also contain micro- and nano-particles: “Microplastics and nanoparticles can leach into the water in plastic bottles of mineral and spring water; the potential health risks are of growing concern. Researchers found that “on average, a liter of bottled water included about 240,000 tiny pieces of plastic. About 90% of these plastic fragments were nanoplastics... “But the potential health effects of these tiny plastic bits are still unproven and unknown. The small size of nanoparticles has made them especially difficult to

detect and study.” <https://www.nih.gov/news-events/nih-research-matters/plastic-particles-bottled-water>

How can we influence the draft Global Plastics Treaty to include women and children?

1. Adopt the rights-based approach

WHO urges the need for Treaty negotiators “to pursue the highest attainable standard of human and environmental health... and incorporate “measures that support a rights-based approach”.

https://resolutions.unep.org/incres/uploads/full_who_statement_inc_22.4.24.pdf

The Convention on the Rights of the Child (CRC) was adopted in 1989. Article 24 (1) “guarantees the highest attainable standard of health and States Parties should pursue full implementation of this right ... by taking appropriate measures ... To diminish infant and child mortality”.

www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child

These measures include under Article 24 (2) the right to food and water “through the provision of adequate nutritious foods and clean drinking-water, **taking into consideration the dangers and risks of environmental pollution.**” This was a concern even in 1989.

This rights-based approach includes women: “To ensure appropriate pre-natal and post-natal health care for mothers.” The ILO Conventions of International Labour Office address maternity protection for women workers, and for adolescent workers especially in agriculture.

The right to health enshrined in the CRC includes: 2. (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and **are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding,** hygiene and environmental sanitation and the prevention of accidents”.

Since 1989 these ‘advantages of breastfeeding’ have expanded to include the health of the environment as well as of humans. Breastmilk is a unique renewable natural resource. Breastfeeding directly at the mother’s breast means that breastmilk is readily available on-site and needs no packaging, no transport and creates no waste. Breastmilk is both food and medicine, providing nourishment and protection against illness.

In contrast, ultra-processed foods for babies and young children are commercial breastmilk substitutes that leave a large carbon footprint and a heavy water footprint. Baby formulas and cereals require vast amounts of land, energy and water for production of ingredients, manufacturing processes, transport – and packaging. Like the snacks and pouches for young children, these foods are ultra-packaged and aggressively promoted. Their packaging is rarely recycled: their disposal creates plastic waste that pollutes our world and its inhabitants.

2. Identify and manage conflicts of interest:

The draft Treaty contains a multitude of brackets () and [] in sections affecting trade and commerce. These prove the undue influence of the chemicals and plastics and of the agri-food and packaging industries to prevent any measures that would affect their business activities - and their profits.

The long history of tobacco industry interference with the Framework Convention on Tobacco Control leads WHO to state “In our experience, to avoid potential bias or misinformation and ensure the quality of scientific and technical analysis and advice, subsidiary bodies should function independently and have robust processes in place requiring disclosure of interests and management of potential conflicts of interest, transparency of data and methodologies and opportunities for independent review of advice, recommendations and analysis.”

https://resolutions.unep.org/incres/uploads/full_who_statement_inc_22.4.24.pdf

3. The time for action is now

It is up to us to protect our planet and its people by putting our health and our threatened environment above trade and business interests.

Negotiations on the draft text of the Global Plastics Treaty are the beginning of a lengthy process. We need to share information and build public pressure on governments to adopt and implement a strong Treaty to tackle the mountain of plastic waste with all its hazardous chemicals.

We need to implement and monitor the international instruments already adopted by governments to protect the health of women, infants and young children (5): the 1981 International Code of Marketing of Breastmilk Substitutes, the 1989 Convention on the Rights of the Child, the 2000 ILO Convention on Maternity Protection and 2001 ILO Convention on Safety and Health in Agriculture.

There is a long climb ahead of us - so we need to start now.

Notes:

- (1) The plastics included are: “micro and nanoplastics, due to their widespread occurrence and potential for human exposure; polymers, the main building blocks of plastic; plasticizers and flame retardants, the two most common types of plastic additives with the highest concentration ranges in plastic materials; and bisphenols and per- or polyfluoroalkyl substances, two chemical classes of known health concern that are common in plastics.” <https://pubmed.ncbi.nlm.nih.gov/37948868/>
- (2) This immature renal function lasts for several years and includes developmental time points. These are the “‘sensitive windows of exposure’ of prenatal or postnatal periods of structural and functional kidney development” during which the maturing kidneys are vulnerable to chemicals or medicines: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5406591/>
- (3) Women do indeed ‘hold up half the sky’ because “out of 1,000 people, 504 are men (50.4%) and 496 are women (49.6%). But at adult age, women outnumber men: <https://statisticetimes.com/demographics/world-sex-ratio.php>
https://www.ined.fr/en/everything_about_population/demographic-facts-sheets/faq/more-men-or-women-in-the-world/
- (4) Endocrine disruptors may “turn on, shut off, or modify signals that hormones carry, affecting the normal functions of tissues and organs, and their development. For these reasons, the European Union (EU) and some other authorities use the term ‘hormonally active chemicals’ as an alternative to endocrine disruptors.” <https://www.gifa.org/en/immunology/>
<https://worldnutritionjournal.org/index.php/wn/article/view/30/19>

- (5) <https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/international-code-marketing-breastmilk-substitutes-resources/the-code/> and
<https://iris.who.int/bitstream/handle/10665/254911/WHO-NMH-NHD-17.1-eng.pdf>
www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child
https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C183
Article 10. A woman shall be provided with the right to one or more daily breaks or a daily reduction of hours of work to breastfeed her child...
https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C184
Article 18. Measures shall be taken to ensure that the special needs of women *agricultural workers* are taken into account in relation to pregnancy...