

HEALTH SCIENTISTS' GLOBAL PLASTICS TREATY

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**PLASTIC
HEALTH
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On a path of business as usual, plastics will overwhelm nature. We are part of nature. Plastics will overwhelm us.

We must negotiate a Global Treaty that gives us control over plastic. This requires starting from a position of strength with clear-sighted determination that can truly give us that control.

We can only do this if we focus on the known facts that should drive us to enduring action.

The current Draft Treaty, though well-intended with many useful options, lacks a unifying focus on the human and environmental costs of plastics for health. Potential solutions among the options must first ask: if implemented, does it reduce or exacerbate those costs.

As clearly documented by multiple, science-based analyses, including most recently the PlastChem¹ report, most of today's plastics are inherently toxic to life.

Recycling them into a “circular economy” only makes it worse. Whatever else it does, the final treaty should address this and forcefully avoid making today's solutions become tomorrow's problems.

Despite references to scientific knowledge about plastic chemicals and particles, the current Draft Treaty falls far short of what is needed to ensure the health of humans, wildlife and ecosystems, not just for today's world, but for generations to come, because the plastic we have already released, and continue releasing today, will persist and undermine their futures.

Failure to act on this certainty violates the precautionary principle.

1. PlastChem: State of the science on plastic chemicals. Identifying and addressing chemicals and polymers of concern. Martin Wagner, Laura Monclús, Hans Peter H. Arp, Ksenia J. Groh, Mari E. Løseth, Jane Muncke, Zhanyun Wang, Raoul Wolf, Lisa Zimmermann (2024). <http://dx.doi.org/10.5281/zenodo.10701706>.

In light of existing scientific knowledge of plastic's global impact on people, wildlife and ecosystems, the Treaty must be dramatically simplified and strengthened, with an unwavering focus on health.

Plastic is not on the periodic table. All plastics are man made/artificial and composed of chemicals, with at least 16,000 known to be the ingredients of plastics. The recent *Plastic Health Map* from Minderoo states that of the 1,500 chemicals they mapped, less than 30% have been tested at all for human health impacts. Even for those that have been tested, few if any of the testing methods are sufficient to prove safety.

What is more, all plastics contain unknown chemicals (unknown also to the producers of plastic) which, by logic, cannot be tested for their hazards. They may be safe, but it is simply not possible to determine if they pose a risk to human health or not.

How is this possible? Most people assume that materials are thoroughly tested before they are put on the market, but for plastics this is not the case.

In fact, for reasons that defy all logic and responsibility, plastics have largely escaped regulatory scrutiny for over 100 years.

Even more concerning, multiple research studies already tell us that many of the thousands of plastic chemicals are hazardous and possess characteristics causing endocrine disruption, mutagenicity, carcinogenicity and more. Again, this is a fact that is often ignored, but very fundamental and of great concern regarding human health and the protection of the environment.

The scientifically verified presence of these hazardous chemicals undermines any aspirations for a sustainable plastic circular economy. These chemicals persist even when plastics are downcycled into new products, resulting in toxic residues that are difficult to trace and for which no one is held accountable. In addition, research shows that plastic recycling facilities can release huge quantities of small plastic particles. Over time, plastic particle pollution will worsen as plastic production, consumption and mechanical recycling rise.

An additional emerging threat to humans and nature is plastic particle pollution. All plastic produced and left in the environment will eventually degrade into micro- and nano-sized particles. These micro and nano sized plastic particles also act as trojan horse for the thousands of toxic chemicals they are composed of, or that they absorb or adsorb in the environment.

A move toward chemical recycling would be the worst outcome the Treaty could endorse for managing plastic waste. Chemical recycling is immensely expensive, energy intensive and produces a plethora of toxic substances. Its adoption will add significantly to the overall toxicity burden of plastics at each recycling stage.

Relying on recycling—whether mechanical or chemical—as a solution to our plastic dilemma is no longer tenable.

Ample evidence demonstrates that plastic particles pollute the air, drinking water, and food, leading to an ever-increasing risk of inhalation and ingestion on a global scale.

Plastic particles are found everywhere we look for them. In particular, the presence of plastic particles in human blood, lungs, and placenta should sound the alarm bell. Above and beyond the effects of chemicals in plastics, the threats of these plastic particles endanger our health and the environment. While the magnitude of this additional threat remains to be determined, the risk is real and the growth in plastic production foreseen by industry investments signals that the health and environmental concerns have not gained traction and calls for immediate precautionary action.

A Treaty that does not incorporate these facts is not a Treaty, it is a surrender to business-as-usual. The ‘solutions’ promulgated by such a Treaty will inevitably become tomorrow’s problems because they gloss over the presence of hazardous and/or untested chemicals in all plastics on the market today and the particles they create.

TREATY GOALS

The following details the short and long term goals that expert Health Scientists propose for a Global Plastics Treaty that heeds the known science of the impact of plastic chemicals and plastic particles on human health.

It is not exhaustive. It is a call to the negotiating Member States to be cognisant of the importance of the Treaty and the responsibility of the INC process to not just pay lip service to proven science but to create a Treaty that protects humanity.

SHORT-TERM GOALS

1. Recognize the true cost of plastic on human health worldwide. This includes the cost of ill-health on individuals and on the public healthcare systems that are forced to deal with the impact of plastic.
 2. Eliminate externalized subsidies provided to plastic manufacturers to continue production, beginning with a 50% reduction in these externalized costs by 2035. These subsidies include ⁽¹⁾ the costs of health care for health conditions arising from widespread contamination to chemicals in plastics and ⁽²⁾ the costs of cleaning up plastics accumulating in the environment. It is immoral and unethical for the plastics industry to continue to reap massive profits even as they impose billions of dollars in externalized costs on people and the environment.
 3. Reduce single use plastic production by 50% by 2035.
 4. Reduce virgin plastic production by 70% by 2040 (compared to 2019 baseline).
 5. Immediately stop consideration of “advanced” or “chemical” recycling, recognizing the “compounding-up” effect of plastic chemicals and their associated toxicities.
- Historical and current experience with these methods demonstrate they ⁽¹⁾ cannot realistically be built to scale and ⁽²⁾ create an economic trap for local and international government subsidies that will incentivize long-term continued production of virgin plastics.
6. Ban the sale of all products containing unnecessary plastic micro and nano-particles by 2030.
 7. Eliminate chemicals of concern in plastic products by 90% by 2035.
 8. Use the revenues generated by internalization of external costs to fund:
 - a. Sustainable and safe design of plastic replacements and new plastics for essential uses.
 - b. Create alternative employment for waste-pickers at living wages.
 - c. Implement national programs for plastic waste that stop the pollution of developing countries.
 9. Decrease the contribution of plastic production to carbon in the biosphere by 50% by 2050.

LONG-TERM GOALS

1. Ensure that the commitment to banning ‘chemical recycling’ holds in all signatory countries. It is a chimera that serves only to provide false hope, creates hazardous pollution and misleads the public and policy makers.
2. Eliminate all but essential uses of single-use plastics.
3. Stop use of micro/nano plastic particles in all products, except those for medical applications.
4. Require proper testing of all chemicals in plastics and finished products for identification of hazards to human health.
5. Eliminate all chemicals of concern in plastics.
6. Eliminate the most damaging plastics in terms of plastic fragmentation, such as car tires, synthetic clothes and polymer paints and replace them with safe and sustainable substitutes.
7. Prioritize and fund innovations that lead to production of safe and sustainable plastic replacements.
8. Eliminate externalities created by plastic production and use.

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THE ENDOCRINE SYSTEM EXPLAINED

The glands and organs that make hormones and release them directly into the blood so they can travel to tissues and organs all over the body. The hormones released by the endocrine system control many important functions in the body, including growth and development, metabolism, and reproduction. The endocrine system includes the hypothalamus, pineal gland, pituitary gland, thyroid gland, parathyroid glands, thymus, adrenal glands, and pancreas. It also includes the testes in males and the ovaries and placenta (during pregnancy) in females.



**The scientists are clear.
We have the evidence.
Now we must act.**