

# Plastics treaty must tackle problem at source, researchers say

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The new Global Plastics Treaty must tackle the problem at the source, researchers say. An [international negotiation meeting](#) (INC-3) in Kenya begins on Monday, aiming to further develop a legally binding treaty on

plastic pollution.

[Writing in the journal \*Science\*](#), researchers say the treaty must prioritize "upstream" issues: cutting total production and consumption of plastics, phasing out hazardous chemicals and tackling [fossil fuel subsidies](#).

They highlight a "worrying" level of focus on downstream recycling and [waste management](#)—when the true solution must address the full life cycle of plastics.

They say the treaty must be holistic—with more focus on early interventions and the people, places and ecosystems most impacted by [plastic pollution](#).

"Right now, simply too much attention and capital is focused 'downstream'—recycling and cleaning up plastic already in the environment, in many cases just after a [single use](#)," said Dr. Mengjiao (Melissa) Wang, from Greenpeace Research Laboratories at the University of Exeter.

"That is vital work, but it can only be part of the solution if done in a safe, environmentally sound and socially just way."

"Removing the mess while making more is a doomed strategy. We cannot recycle our way out.

"An effective treaty must be holistic, covering everything from fossil fuel extraction and plastic production to recycling and removing waste that already pollutes our land and ocean."

Currently, "downstream" recovery and recycling receives 88% of investment money—while just 4% is directed to "upstream" reuse solutions.

The authors say this imbalance comes from "fossil-fuel-entwined political economy of plastics," which continues to accelerate production, consumption, and waste, adding further to the triple Planetary Crisis—[climate change](#), biodiversity loss, and pollution.

They say the zero draft of the treaty "disproportionately emphasizes waste management investment and neglects opportunities" for more efficient and cost-effective upstream strategies like reduction, redesign, and reuse.

The researchers say the treaty should require polymer manufacturers to pay a "substantial fee pegged to the quantity of primary plastics produced," define criteria for strong and independent Extended Producer Responsibility schemes, and ensure both public and private financing aligns with the [zero waste hierarchy](#) by prioritizing upstream strategies.

## **An effective Plastics Treaty to close the back door for fossil fuels**

The new treaty could and should become a global mechanism, to close a key loophole left by the [Paris Agreement](#).

"The problem of plastic pollution is huge, and it can feel overwhelming," said Dr. Lucy Woodall, from the University of Exeter.

"But there are opportunities and challenges at each stage of the life cycle of plastics—from fossil fuel extraction onwards."

Global climate governance aims to stop the burning of fossil fuels, but they could still be extracted and used to make plastics—so the Plastics Treaty provides a not-to-be-missed opportunity to close this "back door."

In three letters to *Science*, the researchers—the majority from the [Scientists' Coalition for an Effective Plastics Treaty](#)—highlight several other points that the treaty must include.

"One vital step is to focus on ecosystems," said Dr. Woodall.

"Once in the environment, plastic litter can entangle and choke wildlife, and plastic objects can act as a reservoir for invasive species and concentrate other pollutants."

"Plastics can also break down into potentially toxic micro- and nanoplastics."

The treaty's zero draft used terms such as "hotspot" and "cleanup"—putting the focus on concentrations rather than the [natural systems](#) and their specific context, therefore the well-being and livelihoods of the nature and people these pollutants affect are ignored.

"This implies that the plastics problem can be solved without considering ecosystem restoration and the disproportionate burden of plastic pollution in some ecosystems," Dr. Woodall said.

"Vibrant ecosystems are vital for biodiversity and human health, so protecting them should be the center of our approach."

## 'Chemical simplification'

Chemicals in plastics are one of the key barriers to addressing global plastic pollution.

Current regulations don't require producers to track or publish information on the levels of harmful chemicals.

The authors argue for "chemical simplification," significantly reducing the production and use of especially [hazardous chemicals](#), and increasing transparency and traceability along the whole supply chain, to fulfill one of the many necessary steps to ensure products can be safely and effectively recycled.

The researchers are hopeful that an effective treaty can be agreed—but some countries are expected to resist more ambitious language and delay the process.

"When we speak to negotiators, they give us a political 'reality check' about balancing ambition with getting a treaty agreed in due time," Dr. Wang said.

"In return, our role as scientists is to provide a scientific [reality check](#) about the scale of this problem and the solutions that can actually work to bring us back to the safe operating space of the Earth."

"We need a treaty that is holistic and ambitious, tackling every stage of this problem—extraction, production, [resource allocation](#)—to stop the build-up of [plastic](#) waste and harmful chemicals in our planet's precious ecosystems."

The letters published in *Science* are entitled: "Chemical simplification and tracking in plastics," "Plastics [treaty](#) text must center ecosystems" and "Finance plastics reuse, redesign, and reduction."

**More information:** Bethanie Carney Almroth et al, Chemical simplification and tracking in plastics, *Science* (2023). [DOI: 10.1126/science.adk9846](https://doi.org/10.1126/science.adk9846)

Ina Tessnow-von Wysocki et al, Plastics treaty text must center ecosystems, *Science* (2023). [DOI: 10.1126/science.adl3202](https://doi.org/10.1126/science.adl3202)

Mengjiao Wang et al, Finance plastics reuse, redesign, and reduction, *Science* (2023). [DOI: 10.1126/science.adl4491](https://doi.org/10.1126/science.adl4491)

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