

Chemical Pollution and One Health – from Reactivity to Proactivity October 2023

A Global Plastics Treaty and Beyond: How can legal instruments most effectively contribute to eliminating pollution from plastics and chemicals at large?

Mikael Karlsson, Yaffa Epstein

Introduction

Chemical and plastic pollution has costly and devastating impacts on human health and biological diversity. Although the levels of some hazardous substances have decreased owing to laws and policies limiting their use, the gap between the existing situation and internationally agreed-upon goals is immense, despite the impressive growth of knowledge in recent years^{1,2}. The main reason for lack of progress is policy failure, not least on the international level.

Background

Plastic pollution

Plastic pollution is widely acknowledged to be one of the most pressing environmental problems globally. It is a threat to life and the stability of earth systems and processes both in water and on land. Microplastics and chemicals associated with plastics harm both biodiversity and human health. The impact of plastic pollution in marine environments has been particularly severe and, without radical policy changes, may continue to grow exponentially³, with dire consequences for aquatic ecosystems and global health in general. Measures that seek to reduce plastic pollution can also exacerbate other environmental problems. Recent research has demonstrated, for example, that the recycling of plastic can result in increased microplastic pollution in the water, air, and, eventually, our bodies⁴. Biodegradable plastics and bioplastics may likewise lead to as many pollution problems as they purport to solve⁵. While the problem of plastic pollution is urgent, it is also important to proceed cautiously in implementing potential solutions before the impact of those solutions can be adequately assessed. Moreover, the chemical content of plastics must also be addressed, not only the litter dimension.

Legal solutions

A multitude of current, proposed, and developing legal

instruments attempt to mitigate harmful plastic pollution. The UN Sustainable Development Goals, adopted in 2015, contain several goals and targets related to this issue. Goal 12, for example, calls for sustainable consumption and production; measures pursuant to this goal include targeting plastics and encouraging circular economies. Goal 14 calls for the conservation and sustainable use of oceans, seas, and marine resources. One target under this goal requires significant reduction of all kinds of aquatic pollution by 2025. However, the UN's 2022 report on progress towards its goals found that, to the contrary, in 2021 "more than 17 million metric tons of plastic entered the world's ocean, making up the bulk [85 per cent] of marine litter. The volume of plastic pollution entering the ocean each year is expected to double or triple by 2040, threatening all marine life"⁶. Goals alone may be too porous to have the desired impact.

Many new laws have been enacted that respond to or are at least complementary to the sustainable development goals. In the EU, for example, the 2019 Single Use Plastics Directive aims to reduce the impact of plastic waste on the environment. The European Green Deal promises more drastic measures to achieve a goal of "zero pollution." Whether movement towards this goal will survive the evolving political climate remains to be seen.

Significantly, negotiations are underway within the UNEP to draft "an international legally binding instrument on plastic pollution, including in the marine environment," which it has committed to producing by the end of 2024. Hopes are high that this legally binding, global treaty will be able to reverse the long-standing trend towards environmental degradation.

Laws as tools

Laws can be important tools for achieving environmental goals, but if they are to succeed, they must be formulated appropriately, as well as implemented and enforced⁷. Many international agreements currently in force, such as the aforementioned Basel, Rotterdam, Stockholm and Minamata



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conventions, have attempted to mitigate chemicals pollution, but have not been able to stop planetary boundaries from potentially being exceeded⁷. Likewise, the proliferation of environmental laws at national and regional levels has not yet had the intended effect of curbing pollution⁹. How can a new plastics treaty succeed when so many laws and policy instruments have fallen short? Can the problems with existing laws and policies be found in their goals, their formulation, their implementation, their monitoring or enforcement mechanisms, or something else? And would yet another partial treaty be sufficient for addressing chemicals pollution, or would a global framework convention be needed, targeting hazardous substances more broadly, as done in EU and national law as well as in other areas of public environmental governance?¹⁰ Legal scholars have suggested a number of reasons why

environmental laws have not been optimally effective, or could be more effective^{11,12,13}. Similarly, environmental governance research has pointed out mechanisms in the science-policy spheres that delay goal achievement¹⁴. In this workshop, we brought together legal, scientific, and policy expertise to make policy recommendations for better plastic and chemical pollution laws.

Approach

This workshop explored various options to improve global chemicals governance, with a focus on public policy and international law. Against the background of experiences

with the present Basel, Rotterdam, Stockholm and Minamata conventions, and the SAICM, workshop participants discussed the emerging global plastic treaty, which is expected to be put forward by the end of 2024. Aspects examined included the objectives, principles, obligations and institutional and processual components required for controlling plastic-generated pollution. Precaution stood out as a central principle for policy development. We then collectively explored the prospects for developing a more coherent global framework for governance of hazardous chemicals. We debated whether an international framework convention for chemicals was needed, and how such a treaty could be designed. We arrived at five concrete, scientifically informed, policy recommendations for using law to reduce hazardous substances in the environment.

Recommendations

Recommendation 1: The precautionary principle is essential for chemicals policy

Considering the striking lack of knowledge and data on intrinsic properties of and exposure to tens of thousands of chemical substances, the precautionary principle should be invoked in chemicals policy. It means that unknown substances should be targeted for group-based classification, and that hazardous intrinsic properties, such as toxicity, persistency and liability to bioaccumulate, should guide substitution, authorization and restrictions. The burden of proof should rest with the operator.

Recommendation 2: Increase the focus on chemicals in plastic articles

The production and use of plastic articles cause health and environmental problems due to both physical and chemical properties. Substances that are shown or suspected to be hazardous should as a basic rule not be permitted in plastic articles, neither as polymers nor as additives. The emerging plastic treaty therefore needs to target hazardous substances in plastics. Full disclosure of the chemical content in consumer plastic articles should be required.

Recommendation 3: Focus on reducing, not recycling

Risk assessment, labelling, controlled use and circular systems are important parts of chemicals management, which decrease damage and improve efficiency. However, knowledge deficits and implementation gaps still cause – together with steadily increasing plastic production volumes – huge problems. Reducing overall use of plastic and other materials should thus be a main policy objective, promoted by comprehensive regulation with rationing tools.

Recommendation 4: The plastic treaty must be legally binding and contain sufficient and just enforcement mechanisms

To ensure the effectiveness of the treaty, there must be compliance mechanisms in place to ensure the obligations set out

in the treaty are followed. These mechanisms should include both incentives and penalties and must avoid unfair impacts in less wealthy countries. Compliance mechanisms must have the capacity to account for both the best available science and the knowledge of local people impacted by plastic and chemical pollution.

Recommendation 5: A global framework for governance of hazardous chemicals is needed

The present fragmented international system for chemicals management does not cover more than a fraction of the substances that cause hazards, risks and problems around the world, and the provisions are often weak in relation to stated targets. While a plastic treaty will counteract some of these problems, a broader binding effective governance framework, e.g. a global chemicals convention, is needed.

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These recommendations are based on the collective knowledge and synthetic discussions of the workshop participants.

The workshop facilitators and authors of this brief were:

Mikael Karlsson*, Senior Lecturer/Associate Professor, Natural Resources and Sustainable Development, Climate Change Leadership, Department of Earth Sciences, Uppsala University

Yaffa Epstein**, Associate Professor, Department of Law, Uppsala University and Research Fellow, Swedish Collegium for Advanced Study

*mikael.karlsson@geo.uu.se

**yaffa.epstein@jur.uu.se

The workshop speakers were: **Luis Vayas**, Ambassador, Ecuador, Chair, Intergovernmental Negotiating Committee on Plastic Pollution; **Vito A. Buosante**, Law and policy advisor, International Pollutants Elimination Network (IPEN); **Bethanie Carney Almroth**, Gothenburg University Department of Biological & Environmental Sciences and **Baskut Tun-cak**, Toxic Use Reduction Unit, University of Massachusetts, Lowell.

The workshop rapporteurs were Judith Lundberg-Felten and Mar Ouro Ortmark, Uppsala University.