Scientists' Coalition for an Effective Plastics Treaty

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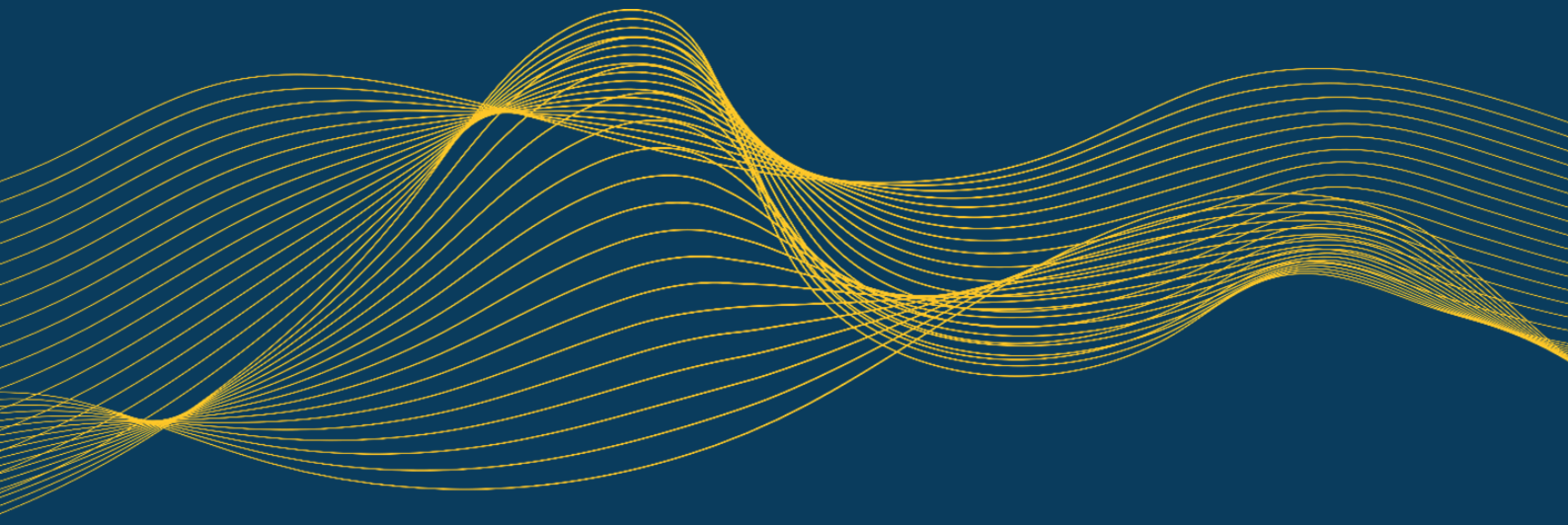
Response to the Revised Zero Draft



21 March 2024

Scientists' Coalition's response to the revised draft text of the international legally binding instrument on plastic pollution, including the marine environment (UNEP/PP/INC. 4/3)

The Scientists' Coalition for an Effective Plastic Treaty expresses gratitude to the Chair and Secretariat for preparing the revised Zero Draft (rZD), to which we present our commentary. We strongly urge Member States to prioritise independent scientific evidence in decision-making while drawing from the precedents of other multilateral environmental agreements (MEAs). Our commentary emphasises the imperative of addressing plastic pollution within the broader context of interconnected human and planetary threats. This is best achieved by prioritising mandatory measures that simplify and reduce global quantities of plastics produced.

The evidence-based assessment criteria proposed in this document and a subsequent comprehensive regulatory framework will enable baselines and targets for global plastics production reduction, and phase-outs of unsustainable, hazardous and non-essential plastics while ensuring transparency throughout the supply chain. Our proposal, set out here, will not only strengthen global policy, but, when also implemented at regional and national levels, will further strengthen plastic pollution prevention at multiple scales of governance. This proposal is intended not only to reduce global plastic production, but to assess systems and technologies at mid and downstream for safety, sustainability, transparency, and essentiality while adopting a holistic lifecycle approach. We also stress the importance of a just transition through sector-specific implementation measures[1] guided by principles of prevention, precaution, polluter-pays, and non-regression.

Integrated Assessments of Sustainability, Safety, Essentiality and Transparency. Achieving safe and sustainable production and consumption of plastics requires rigorous, independent scientific assessments, drawing on the knowledge and expertise of multiple stakeholders, in particular the scientific community, Indigenous scientists and knowledge holders, and other rights holders. These assessments must comprehensively consider varied uses, implications and impacts on environments, societies and economies, while ensuring sufficient, accurate, and accessible information to safeguard human and ecological rights and ensure just transition. To this end, we strongly recommend evidence-based refinement of the proposed assessment criteria in annexes A-D and F into an integrated framework of distinct safety (hazard-based), sustainability, essentiality, and transparency criteria shaped by independent expert input through a subsidiary scientific body.

[1] Including through dedicated programmes of work (Part II, 4 *bis.)*.

This assessment framework should be applied across the full life cycle of plastics, from the extraction of fossil and bio-based feedstocks for primary plastic polymers, through to the environmental remediation and compensation of communities affected by pollution. Integrated assessments should result in regularly updated annex listings of polymers, plastics chemicals, products, technologies, systems and services; as well as full assessment of any materials or technologies considered as substitutes for plastics and alternative plastics. These listings should reflect a comprehensive start-and-strengthen regulatory approach, prioritising items already banned or restricted in other multilateral environmental agreements (MEAs) and in the domestic legislation of Parties. Expert working groups should be established, inclusive of sectoral expertise and free from conflicts of interest (CoI). We underscore the urgent need for a mandate for intersessional work to begin developing this assessment framework.

Primary Plastic Polymer Reduction Baselines and Targets. We define primary plastic polymers (PPP) as: 'Plastic materials made of synthetic and semi-synthetic polymers that are used for the first time to create plastic products in any form.' This necessarily includes all thermoplastic, thermoset, elastomer, and composite resins made from both bio-based and fossil-based feedstocks. Integrated sustainability, safety (hazard-based), essentiality and transparency assessments can effectively guide the development and implementation of reduction targets for PPP through the proposed integrated criteria and assessment framework. Learning from other MEAs, we stress the importance of globally defined targets,[2] and avoiding nationally determined approaches as in the Paris Agreement, with demonstrated limited effectiveness. To this end, we support a time-bound international legally-binding PPP reduction target and supportive national PPP reduction targets.[3]

We recommend replacing ambiguous language such as "prevent" or "mitigate'' with "eliminate," and aligning the definition of 'supply' with the definition of "consumption" in which consumption = production + imports - exports as applied in the Montreal Protocol. Equally important are transparency criteria for data that enable the establishment of baselines, informed reduction targets, harmonised safety and sustainability guidelines and standards, effective monitoring and reporting, and the avoidance of greenwashing - all in service to the human right of access to information.[4]

[2] E.g. in the Montreal Protocol.
[3] Part II.1. Option 1.1.
[4] https://www.ohchr.org/sites/default/files/Documents/Issues/Expression/Factsheet_5.pdf

Sustainability Criteria. Definitions of 'sustainability' generally align with the UN Brundtland Commission (1987), which emphasises and integrates the environmental, societal, and economic pillars of sustainability. This concept is central to global policies including the Sustainable Development Goals (SDGs), Paris Agreement, and Convention on Biological Diversity (CBD), as well as underpinning the INC mandate.[5] Furthermore, the United Nations Human Rights Council recently recognised access to a 'clean, healthy, and sustainable environment' as a fundamental human right.[6]

Building on this precedent, we endorse the adoption of distinct sustainability criteria to evaluate plastic chemicals, polymers, materials, products, alternatives, substitutes, technologies, systems and services in a balanced manner across environmental, societal, economic, and environmental dimensions according to resource consumption (including energy and water), land use, as well as carbon and other hazardous emissions. Sustainability criteria must be informed by Indigenous knowledge and promote a holistic life cycle approach by fostering sustainable design features such as simplification, durability, material reduction, repairability, reuse, recyclability and minimisation of carbon emissions, while also considering societal and economic aspects. Furthermore, a safer and more sustainable economy must factor in all externalised costs to society and ensure competitiveness without resorting to ineffective and similarly harmful fossil fuel subsidies or plastics/carbon credits/offsets.

The rZD exhibits strengths in acknowledging the diverse impacts of plastic pollution and the need for multidimensional considerations to achieve sustainability.[7] However, the need for comprehensive sustainability assessment and responses appears inconsistent.[8] In addition, terms such as 'sustainable alternatives'[9] are applied but not defined, creating the potential for regrettable substitutions. While we do not endorse dedicated intersessional work on definitions, we do promote the consistent integration of 'sustainability' as applied in other MEAs. This definition should be reflective of a holistic and comprehensive systems approach supported by sustainability assessment criteria that guard against burden shifting and regrettable responses, alternatives and substitutes. We also advise against using terms such as "sustainable economic growth"[10] where assessments of economic growth are not balanced with sustainable societal, human health, and environmental dimensions.

[5] UNEA Resolution 5/14.
[6] UNGA Resolution A/76/L.75
[7] In particular this includes the Preamble (Part I.1), which recognises the "environmental, social and economic dimensions of sustainable development", as well as Part II, section 5d, Option 3.3, and Part II, section 6, Op2 bis 2
[8] E.g. the lack of explicit mention of sustainability in Part II.8.
[9] Preamble (Part.1)
[10] Part II, section 10 a, sub-option 2.

Safety (Hazard-based) Criteria. Ensuring the safety of plastics necessitates specialised hazard assessment criteria to limit and gradually phase out chemicals and properties detrimental to human and environmental safety. 'Hazard' generally denotes inherent properties of substances, materials or activities known to cause direct damage or harm to the environment and human health, particularly in the context of chemicals.[11] It is, therefore, distinct from sustainability, which is primarily concerned with designing sustainable circular systems, including carbon and material footprints. A hazard-based approach is vital, because: (i) the alternative, a risk-based approach,[12] incorrectly assumes it is possible to derive safe levels of hazardous chemicals throughout the full life cycle of plastics, (ii) it aligns with precautionary and prevention principles, ensuring human, ecological and environmental safety, and (iii) precedents exist for a hazard-based approach in several MEAs.[13]

Safety assessment criteria should cover human and environmental hazards, including wider ecological harm, across the full life cycle of plastics, including toxicity, persistence, bioaccumulation, mobility, flammability, propensity to shed micro-nano plastics (MNPs) or leach chemicals, entanglement of wildlife, and propensity to transport and/or magnify the impact of other pollutants, pathogens, antibiotic resistance genes, invasive species and their impact on climate change, and food systems safety. Hazard assessment criteria should be applied across the entire biological hierarchy, from subcellular to ecosystem levels and at all stages of the life cycle of plastics. We also recommend advancing beyond regulating 'polymers and chemicals of concern'[14] to assess the more inclusive category of 'plastic chemicals' for their hazardous properties; encompassing all plastic chemicals comprehensively, including polymers, starting substances, additives, processing aids and non-intentionally added substances (NIAS), incorporated, produced and/or released from all plastic materials and life cycle processes, including end-of-life technologies or processes.

Hazard assessments are crucial for enhancing product quality,[15] ensuring regulatory certainty, and fostering innovation. As existing trade agreements are inadequate to ensure safety, we recommend the integration of hazard-based criteria and implementation mechanisms within trade provisions.[16] Lastly, we challenge the use of the obscure term 'problematic,' proposing instead 'hazardous' and 'unsustainable'. Robust and comprehensive hazard-based and sustainability assessments are dependent on data transparency.

[11] E.g., in the Montreal Protocol and BRS Conventions.
[12] E.g. Part I, 1; Part II, 8, Op1ter.; Part III, Op10; Part IV Op 8bis (d).
[13] E.g. in the Stockholm Convention. A hazard-based approach is needed where there is a paucity of data.
[14] Footnote 59
[15] Part II, section 5
[16] Part II, section 10

Essentiality Criteria. We strongly suggest the application of the essential-use concept to facilitate PPP reduction targets and to eliminate non-essential, hazardous and unsustainable uses, and/or their substitution for safer, more sustainable alternatives where their use is assessed as currently 'essential'. The development of clear essentiality assessment criteria will provide globally harmonised decision-making tools which can be adapted to national circumstances. The Montreal Protocol serves as a precedent for the assessment of essential use. An item is only assessed as essential if its 'essential use' is 'necessary for health, safety or is critical for the functioning of society' and 'there are no available technically and economically feasible alternatives.'[17]

Essential use is a practical, flexible, equitable and effective means to respond to the social, material, economic and environmental context and complexities associated with each phase of the full life cycle of plastics. When accompanied by sufficient financial, capacity, and technical support,[18] essentiality assessment criteria offer a rights-based approach supportive of a just transition away from hazardous and unsustainable items. For example, a use could be found to be hazardous and/or unsustainable under safety and sustainability criteria and yet it may be assessed as essential if no technically or economically feasible alternative currently exists. In such a case, a party could apply for an exemption. In this case, the item could be assessed and a time-bound exemption could be applied. Such exemptions should trigger financial, capacity, and technical support to facilitate timely phase-out[19] while all health and environmental hazards are monitored and minimised.[20]

Essentiality criteria are primarily valuable in reducing production by identifying and eliminating non-essential upstream uses to support the objectives of various sections of the rZD,[21] including reducing emissions and releases throughout the life cycle.[22] Transparency of content, origin, and the safe and sustainable use and end-of-life management[23] is imperative for the successful implementation of essentiality criteria. Where groupings are not immediately identified as non-essential, effective essentiality assessments are particularly dependent on the effectiveness of hazard-based and sustainability assessments. We challenge the use of terms such as 'avoidable' and 'unnecessary,'[24] because they have no precedent in any MEA and are broadly interpreted and therefore difficult to assess. We propose replacing these terms with 'non-essential' taking guidance from the essential use concept in the Montreal Protocol.

[17] Montreal Protocol Decision IV/25.
[18] Administered via a dedicated multilateral fund, Part III. Op6. Alt2.
[19] Part III.1 and Part III.2
[20] Part III.1 and Part III.2
[21] Part II sections 8-11
[22] Part II section 823
[23] Part II, Section 13
[24] E.g. Part II section 3 and Part IV section 4 b.

Transparency Criteria. Transparency, as a governance mechanism by which targeted disclosure of information is employed to steer the behaviour of certain actors, is increasingly pursued in both state-led MEAs and private environmental initiatives,[25] [26] informing 'rights associated with the environmental and societal impacts of plastics.'[27] However, existing MEAs are not effectively empowering countries to prevent and minimise hazardous chemicals and products due to limited chemical listings and a bias for market-based logic over democratisation-oriented logic. These lessons underscore the need for comprehensive and harmonised information disclosure mechanisms that are closely aligned to the treaty's objectives, and that provide the information necessary for sound decision-making by all stakeholders across the life cycle, from feedstock extraction to environmental remediation. This includes the data requirements and outcomes of integrated sustainability, hazard, and essentiality assessments.

The rZD exhibits strengths in emphasising the need for transparency (Part I, 13) including tracking, monitoring, traceability, disclosure of material composition, marking and eco-labelling. Transparency's democratising logic for disclosure of information necessary to protect people and the environment serves the human right to access information. Part II provides diverse options for transparency obligations, especially regarding trade. Part IV introduces an extensive framework for information disclosure, emphasising numerical data on production, consumption, and waste management. However, there is a lack of clear linkage in the draft between transparency mechanisms and treaty objectives, operational details, non-compliance measures, non-state party provisions, and capacity-building efforts, as well as challenges in harmonising information disclosure. The draft falls short in specifying reporting modalities, potentially hindering the creation of a universally applicable reporting framework.[28] Transparency criteria and assessment should not be limited to plastics chemicals, polymers, materials, and products; but also to plastics alternatives and substitutes, and technologies, systems, and services relevant to the full life cycle of plastics. For this reason, we support standardised and harmonised information disclosure, labelling, tracking, and monitoring specific to the full life cycle of plastics for the future instrument, and caution against dependency on other multilateral trade regulations while ensuring complementarity and knowledge sharing, and avoiding duplication with other MEAs.

[25]Gupta, A., & Mason, M. (Eds.). (2014). Transparency in Global Environmental Governance: Critical Perspectives. The MIT Press.
[26]State-led MEAs (e.g., the Cartagena protocol to the CBD, the Rotterdam convention) and private environmental initiatives (e.g., CDP, formerly Carbon Disclosure Project, Global Reporting Initiative, Global Commitment).
[27]GRID-Arendal, Karen Raubenheimer, Niko Urho (2023). Science-Policy Interface for Plastic Pollution. Arendal: GRID-Arendal.https://www.grida.no/publications/1007
[28]Part II.

Science Policy Interface (SPI) and Conflict of Interest (CoI). As highlighted by other MEAs, the forthcoming treaty necessitates a robust interface between science and policy to facilitate a two-way dialogue and ensure delivery of policy-relevant information, knowledge and guidance. While the rZD emphasises the need for scientific input, proposing a subsidiary body under the future instrument,[29] it lacks clarity in terms of its establishment, functions, responsibility and mandate. We strongly advocate for a dedicated SPI, due to: (i) strong successful precedents in existing MEAs,[30] [31] (ii) need for high responsiveness to the objectives of the agreement, and (iii) the inability of other mechanisms, existing and forthcoming,[32] to meet the required scientific and technical demands.

The design of the SPI should take inspiration from well-functioning precedents in existing MEAs.[33] Functions could include developing and updating sustainability, safety, transparency, and essentiality criteria; conducting integrated assessments; developing baselines; updating PPP reduction targets; identifying optimal strategies to address knowledge requirements; coordinating with other scientific mechanisms and platforms to maximise synergies and avoid duplication; and translating scientific findings into recommendations to the Conference of the Parties (CoP)[34]. Given the breadth and the diversity of functions and topics requiring scientific input we suggest the formulation of several open-ended working groups and expert committees. It is imperative that the body is constituted of balanced, representative, and independent experts and that adopted policies are free from CoI.[35] CoI guidelines should limit participation by those with past or present ties to the chemical or plastics industries or other parties with clear vested interests.

[29] Part V, 2.
[30] Akhtar-Schuster, M., Amiraslani, F., Morejon, C. F.Diaz et al. (10 more authors) (2016) Designing a new science-policy communication mechanism for the UN Convention to Combat Desertification. Environmental Science and Policy. pp. 122-131. ISSN 1462-9011
[31] GRID-Arendal, Karen Raubenheimer, Niko Urho (2023). Science-Policy Interface for Plastic Pollution. Arendal: GRID-Arendal.https://www.grida.no/publications/1007
[32] Including the Science-Policy panel on Chemicals, Waste and Prevention of Pollution.
[33] E.g. , the UN Convention to Combat Desertification (UNCCD) and the Montreal Protocol.
[34] Drawing on the knowledge and expertise of multiple stakeholders including frontline and fenceline communities, industries and sectors, waste pickers in informal and cooperative settings, Indigenous scientists and Knowledge Holders, and other rights holders
[35] Schäffer, A., Groh, K. J., Sigmund, G., Azoulay, D., Backhaus, T., Bertram, M. G., ... & Scheringer, M. (2023). Conflicts of Interest in the Assessment of Chemicals, Waste, and Pollution. Environmental science & technology, 57(48), 19066-19077. https://pubs.acs.org/doi/10.1021/acs.est.3c04213

Concluding remarks. Emphasising the critical role of scientific advice free from CoI, evidence-based decision making and existing precedent, our independent scientists urge Member States to take a full life cycle approach in their treaty negotiations. Such an approach will need to respond to plastic pollution within a broader system of planetary threats including climate change and biodiversity loss. Therefore, we urge Member States to support a global binding PPP reduction target supported by mandatory national PPP reduction targets to reduce the complexity and overall global volume of plastics produced. To support the global PPP reduction target, we strongly recommend the integrated safety, sustainability, essentiality, and transparency criteria, assessments and associated comprehensive regulatory framework as outlined in this document. Finally, we stress the need for a dedicated SPI with clear functions and guidelines, that can ensure balanced, representative, and participatory engagement, free from CoI. As we are all well aware, plastic pollution is an incredibly complex global problem requiring multi- and disciplinary and stakeholder teams working toward just and effective trans-disciplinary responses. The success of PPP reduction targets, criteria, assessments, a comprehensive regulatory framework and therefore the global plastics treaty rely on ensuring the broadest range of relevant knowledge and expertise can meaningfully contribute to its design and implementation.

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