

## Scientists' Coalition submission: Part B - Input on the potential areas of intersessional work to inform the INC-3

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Following discussions in Contact Group 1, the [Scientists' Coalition](#) broadly agrees with the list of proposals for intersessional work provided by the chairs of the contact groups. We believe that a core focus of this intersessional work should be to **develop multi-level criteria as tools to inform substantive control measures to scale-down and simplify plastics production and use**. We believe this should include criteria for listings of “problematic and avoidable plastic products,” “substances of concern” and “problematic plastics, sectors, uses and functionalities for which no substitutes exist” as well as exploring **targets and pathways on how to progressively and substantially reduce the production of plastics and hazardous chemicals**.<sup>1</sup>

Building on the work of the Nordic Council,<sup>2</sup> the BRS Secretariat,<sup>3</sup> and UNEP,<sup>4</sup> we recommend that **safety, essentiality, and sustainability** should guide decision-making on all possible core obligations,<sup>5</sup> and that intersessional work is guided by the principles of the zero-waste hierarchy.

Given that scientific information is rapidly evolving in this field, it will be important to have a living treaty design which can be updated in line with emerging science and knowledge.

The experts of the Scientists' Coalition remain open to consultation during the intersessional period.

### Input to Intersessional Work for Contact Group 1

The Scientists' Coalition recommend the chair with support from the Secretariat to prioritize discrete intersessional work on the following areas:

1. Reducing the production, supply and use of primary plastic polymers (Core Obligation 1)
2. Polymers and plastic-associated chemicals of concern (Core Obligation 3)

<sup>1</sup> Contact Group 1 Summary

<sup>2</sup> Rognerud, I., *et al.* (2022). International sustainability criteria for plastic products in a global agreement on plastic pollution. Nordic Council of Ministers.

<sup>3</sup> BRS (2023). Global governance of plastics and associated chemicals. Secretariat of the Basel, Rotterdam and Stockholm Conventions, United Nations Environment Programme, Geneva. Karen Raubenheimer, Niko Urho.

<sup>4</sup> United Nations Environment Programme and Secretariat of the Basel, Rotterdam and Stockholm Conventions (2023). Chemicals in plastics: a technical report. Geneva.

<sup>5</sup> Options for Elements, Available at: <https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf>

3. Product design e.g. for durability, reuse, and circularity (Core Obligation 6).<sup>6</sup>
4. Transparency and right to information (Additional Matter 2).<sup>7</sup>

This partitioning will serve to prioritize work on the extraction of feedstocks, polymers, associated chemicals, and products/product design, which are the immediate priority. We also recognise the need for work on safe and sustainable substitutes and alternatives, extended producer responsibility, sound waste management and safe and sustainable removal and remediation technologies as well as material and product transparency across the full life cycle. All of these approaches should meet ambitious safety and sustainability standards that are improving over time. We propose that these initiatives adopt sector-specific strategies, while taking into account regional needs and priorities<sup>8</sup>.

### **Reducing the production, supply and use of primary plastic polymers (Core Obligation 1)**

During Contact Group 1, a number of Member States expressed their support for the establishment of global targets concerning the production of primary plastic polymers. The Scientist Coalition aligns itself with these suggestions, and acknowledges the utmost importance of establishing verifiable time-bound global reduction targets, control measures and means of implementation (including financing) to progressively and substantially reduce primary plastics and associated chemicals production. This should be guided by the principles of the zero-waste hierarchy. They also emphasized the necessity of incorporating measures for reporting and monitoring to ascertain production, use, import, and export.

The Scientists' Coalition believe it is imperative to engage in open-ended intersessional efforts to thoroughly contemplate the most suitable mechanisms and pathways for achieving this necessity. Such discussions should also consider harmonized monitoring and reporting requirements and the substantial financial and technical support that will be required to support them.

### **Polymers and plastic-associated chemicals of concern (Core Obligation 3)**

The Scientists' Coalition observe a need for intersessional work to develop criteria for problematic polymers and plastic-associated chemicals of concern to include in an Annex of the instrument. The development of such criteria should be based on **safety**, **essentiality**, and **sustainability**, employing sector-specific and regional approaches. It should also prioritize the identification and phase out of the most unsafe, unessential and unsustainable polymer and chemical groups for the long-term benefit of natural environments, human health, economy and society.

#### *Essentiality*

The Scientists' Coalition proposes to embrace the 'essential uses' concept to identify uses that are 'necessary for health, safety or critical for the functioning of society,' as per the Montreal Protocol.<sup>9</sup> We support a broad application of the concept considering technologies and products as well as polymers and plastic-associated chemicals through dedicated criteria.<sup>10</sup> Essentiality criteria would aid in unraveling complexities and empower policy measures that discern genuine necessities and open up circularity. We also advocate for these criteria to consider economic, geographical, and capacity

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<sup>6</sup> Options for Elements. Available at: <https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf>

<sup>7</sup> Options for Elements.

<sup>8</sup> Erdle, L.M., Eriksen, M., 2023. Monitor compartments, mitigate sectors: A framework to deconstruct the complexity of plastic pollution. *Marine Pollution Bulletin* 193, 115198. Available at: <https://www.sciencedirect.com/science/article/pii/S0025326X23006318>

<sup>9</sup> Montreal Protocol on Substances that Deplete the Ozone Layer. See also: UNEP (2023) *Chemicals in Plastics*, p.52

<sup>10</sup> Cousins, I. T., De Witt, J. C., Glüge, J., Goldenman, G., Herzke, D., Lohmann, R., ... & Wang, Z. (2021). Finding essentiality feasible: common questions and misinterpretations concerning the "essential-use" concept. *Environmental Science: Processes & Impacts*, 23(8), 1079-1087.

constraints of specific communities, and account for overconsumption of products otherwise deemed essential, such as certain health care plastic products.

### *Sustainability*

'Sustainability' in the Sustainable Development Goal (SDG) framework encompasses fostering social equity, economic viability as well as environmental stewardship. As such, the Scientists' Coalition believe that sustainability criteria should move beyond a narrow interpretation of 'environmental performance'<sup>11</sup> to include water usage, energy, carbon emissions, biodiversity, and also social equity, economic viability and sustainability.

The intersessional groups may take inspiration from the Nordic Council's proposal as a starting point for developing sub-criteria for each life cycle stage. These could draw upon principles of safe circularity, such as minimization, durability, and recyclability.<sup>12</sup>

### *Safety*

Intersessional work on safety criteria could draw on the recent report from the Secretariat of the Basel, Rotterdam and Stockholm (BRS) Conventions.<sup>13</sup> A specific focus on safety criteria would help to mitigate adverse mechanical, hormonal, antimicrobial, or other deleterious effects associated with plastic polymers and chemicals (and separately, products and technologies). The formulation of these criteria should be guided by considerations encompassing chemical composition and toxicity, including carcinogenic and endocrine-disrupting human health impacts as well as nonhuman welfare, such as entanglement in fishing gear.

They could also work to ensure safe handling of hazardous chemicals, prevent contamination in recycling, uphold human and workers' rights, minimize microplastic releases, and facilitate responsible plastic waste trade.<sup>14</sup>

### *Prioritising Listings for Plastic Polymers and Associated Chemicals of Concern*

The Scientists' Coalition posits that intersessional work should prioritize the identification of the most unsafe, unessential and unsustainable polymer and chemical groups. These identified substances could be incorporated into an Annex to provide an initial list of polymers and chemicals of concern to target for immediate control based on existing scientific knowledge.

To this end, and building on discussions in Contact Group 1, polymers and associated chemicals that align with the below prioritization criteria could be included in such an initial list:

- a. Polymers and associated chemicals for which there is sufficient evidence for their hazardous properties (**unsafe**)
- b. Polymers and associated chemicals that can be substituted / for which alternatives already exist for defined (and essential) applications and uses (**non-essential**)

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<sup>11</sup> BRS (2023). Global governance of plastics and associated chemicals. Secretariat of the Basel, Rotterdam and Stockholm Conventions, United Nations Environment Programme, Geneva. Karen Raubenheimer, Niko Urho.

<sup>12</sup> Rognerud, I., *et al.* (2022). International sustainability criteria for plastic products in a global agreement on plastic pollution. Nordic Council of Ministers.

<sup>13</sup> BRS (2023). Global governance of plastics and associated chemicals. Secretariat of the Basel, Rotterdam and Stockholm Conventions, United Nations Environment Programme, Geneva. Karen Raubenheimer, Niko Urho.

<sup>14</sup> Rognerud, I., *et al.* (2022). International sustainability criteria for plastic products in a global agreement on plastic pollution. Nordic Council of Ministers.

- c. Polymers that are not currently recyclable in a safe and sustainable manner, very difficult to recycle, or discourage non-toxic circularity (**unsustainable** or **unsafe**)

Plastic polymers that would likely fit these criteria include polyvinyl chloride (PVC),<sup>15</sup> polystyrene (PS)<sup>16</sup> and fluoropolymers.<sup>17</sup> In the case of plastic associated chemicals, these would likely include brominated and chlorinated flame retardants (BFRs/CFRs), organophosphorus flame retardants (OPFRs), and per- and polyfluoroalkyl substances (PFASs)<sup>18</sup>, among others.<sup>19</sup>

Similar prioritization criteria could be developed for products and waste technologies, including plastic waste management and removal/retrieval and remediation.

### **Product Design e.g. for durability, reuse, and circularity (Core Obligation 6)**

The Scientists' Coalition propose independent intersessional work to develop criteria to foster improved product design of plastic products, moving beyond recycling to include reuse and product-service systems. The development of such criteria should also be based on **safety, essentiality, and sustainability**, as outlined above. Due to its thematic associations, this intersessional work stream would have the option to also draw in discussions around problematic plastic products (Core Obligation 2).

### **Transparency and right to information (Additional Matter H)<sup>20</sup>**

Transparency is a necessary prerequisite to safe and sustainable circularity, and should therefore be a core and dedicated priority of intersessional work.<sup>21</sup> Achieving this objective could involve establishing a universally standardized approach to accessing essential details about product composition, utilizing modern digital tools. An illustrative instance is the EU's concept of "Digital Product Passports."<sup>22</sup> Verifying adherence to sustainability criteria could also be accomplished through globally harmonized labeling. This labeling signifies that products have undergone evaluation to meet rigorous safety, sustainability and essentiality criteria. Enhancing product transparency would also alleviate the challenges faced by importing nations, especially those with limited resources, many of which rely heavily on product imports.<sup>23</sup>

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<sup>15</sup> Rodrigues, M. O., Abrantes, N., Gonçalves, F. J. M., Nogueira, H., Marques, J. C., & Gonçalves, A. M. M. (2019). Impacts of plastic products used in daily life on the environment and human health: What is known?. *Environmental toxicology and pharmacology*, 72, 103239.

<sup>16</sup> National Toxicology Program. (2021). Styrene. In 15th Report on Carcinogens [Internet]. National Toxicology Program. [Available here](#).

<sup>17</sup> Lohmann, R., Cousins, I. T., DeWitt, J. C., Gluge, J., Goldenman, G., Herzke, D., ... & Wang, Z. (2020). Are fluoropolymers really of low concern for human and environmental health and separate from other PFAS?. *Environmental science & technology*, 54(20), 12820-12828.

<sup>18</sup> Scheringer, M. (2023). Innovate beyond PFAS. *Science*, 381(6655), 251-251.

<sup>19</sup> United Nations Environment Programme and Secretariat of the Basel, Rotterdam and Stockholm Conventions (2023). *Chemicals in plastics: a technical report*. Geneva.

<sup>20</sup> Options for Elements <https://wedocs.unep.org/xmliui/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf>

<sup>21</sup> Getor, R. Y., Mishra, N., Ramudhin, A. (2020). The role of technological innovation in plastic production within a circular economy framework. *Resources, Conservation and Recycling* 163: 105094. <https://doi.org/10.1016/j.resconrec.2020.105094>.

<sup>22</sup> BRS (2023). *Global governance of plastics and associated chemicals*. Secretariat of the Basel, Rotterdam and Stockholm Conventions, United Nations Environment Programme, Geneva. Karen Raubenheimer, Niko Urho.

<sup>23</sup> Speranskaya, O., Prevodnik, A., Euripidou, R., (2022). *White Paper for a Global Minimum Transparency Standard (GMTS) for hazardous chemicals in products*. Health and Environment Justice Support, Swedish Society for Nature Conservation, groundwork. Available online: <https://www.globalchemicaltransparency.org/>

Furthermore, waste management and removal and remediation technologies require independent environmental, economic and cultural assessments and information about emissions to air, water, and soil should be provided to communities and municipal authorities to ensure free and prior fully informed consent. The integration of such strategies holds the potential to alleviate the information gap and enhance sustainable practices on a global scale.

## Input to Intersessional Work for Contact Group 2

### Financing mechanism

The financing mechanism for the forthcoming treaty must be structured to embody and operationalize the core principle of the zero waste hierarchy, ensuring that financial resources are channeled primarily towards the upper tiers of the hierarchy. This involves directing funds towards key aspects such as rethinking and redesigning systems to minimize unnecessary and wasteful production and consumption, and prioritizing reduction efforts. Despite the greater effectiveness and efficiency of these strategies in curtailing plastic waste and pollution, they often receive insufficient attention and financial backing, a trend that needs reversal within the framework of the treaty.

Consequently, we extend an invitation to the secretariat to conduct an assessment of the current allocation of financial resources in alignment with the zero waste hierarchy at national, regional, and international levels. This analysis will serve as crucial input for shaping the financial mechanism envisioned within the new Plastics Treaty.

### Science and Technical Body

In order to provide optimal and equitable assistance to delegates, open, freely accessible versions of the latest independent scientific research should be made available to delegations during all intersessional work, Intergovernmental Negotiating Committees (INCs) and Conference of the Parties (COPs). This should take a regional and sectoral approach to ensure cognizance of linguistic requirements, digital equity, and diverse resource availability.

As a democratic, independent body with global membership and broad disciplinary expertise, we would like to remind delegates that the [Scientists' Coalition](#) is available for provision of information, data and consultation based on robust independent scientific evidence to inform the negotiations as they progress. Due to the limited time available for the negotiations during the INC process, we do not believe that a formal, Member State and UNEP-authorized scientific INC advisory body is required at present. Instead, time should be prioritized on developing concrete control measures that will form the basis of the incoming agreement. Likewise, we should not wait for the establishment of the Science Policy Panel on Chemicals and Waste to receive input from independent scientists throughout the treaty process.

Indigenous scientists and knowledge holders are also available to Member States for information and advice at all times, including intersessional periods. The Indigenous Peoples Major Group has formed as a point of contact between Indigenous Peoples and others involved in treaty negotiations. Indigenous scientists and knowledge holders are also active in the Scientists' Coalition.

With respect to the science-policy interface of the Treaty itself, we draw inspiration from the 2021 Nordic Report '*Strengthen the global science and knowledge base to reduce marine plastic pollution*'<sup>24</sup> to meet four key requirements. These are **credibility** (transparency, openness to critique and scientific independence), **legitimacy** (broad participation and ownership), **salience** (tailored outputs) and **agility**

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<sup>24</sup> Busch, P. O., Schulte, M. L., & Simon, N. (2021). Strengthen the global science and knowledge base to reduce marine plastic pollution. Nordic Council of Ministers.

(built-in review and scientific flexibility). These requirements can be best realized through the establishment of a dedicated scientific body under the future instrument, to be tasked with supporting the achievement of the Treaty objectives and the needs of the governing body, ensuring relevance and responsiveness.