

Submission on the Elimination & Restrictions of Polymers and Chemicals of Concern, and Problematic and Avoidable Plastic Products by the Co-Chairs of the High Ambition Coalition to End Plastic Pollution

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Explanatory note

Norway and Rwanda submit this written input as co-chairs of the High Ambition Coalition to End Plastic Pollution. This submission presents relevant input and a variety of options on the elimination and restrictions of polymers and chemicals of concern, and problematic and avoidable plastic products, as well as options for intersessional work between INC-3 and INC-4. The options seek to contribute to the strategic goals of the HAC to meet our common ambition to end plastic pollution by 2040. This submission is not intended to replace national submissions Members may submit, nor is it intended to represent an agreed or exhaustive list of measures considered by Members.

Submission on the Elimination & Restrictions of Polymers and Chemicals of Concern, and Problematic and Avoidable Plastic Products

Context

The UNEA mandate is to develop an international legally binding instrument on plastic pollution, including in the marine environment, that addresses the full life cycle of plastics. Reflecting its commitment to ending plastic pollution by 2040, the High Ambition Coalition has called for the overarching objective of the treaty to end plastic pollution from all sources to protect the environment and human health.

Plastics are a group of predominantly fossil fuel-based, complex materials comprising at least one type of polymer – made from a range of monomers and compounded with a range of chemical additives to obtain the desired material properties. A recent UNEP report showed that more than 13,000 different chemicals

are used in plastics,¹ many of which are hazardous.² The High Ambition Coalition has called for an international legally binding instrument including control measures, both to restrain and reduce production and consumption of primary polymers to sustainable levels, and to restrict and eliminate those polymers and chemicals of concern, and problematic and avoidable plastic products that are harmful to the environment and human health. Such measures will contribute to the High Ambition Coalition's overarching objective of ending plastic pollution by 2040.

Looking Back at INC-2:

At its second session, the INC requested the Secretariat to invite written submissions on any potential areas for intersessional work compiled by the co-facilitators of the two contact groups, to inform the work of INC-3. Regarding polymers and chemicals of concern, and problematic and avoidable plastic products, the HAC has called for legally binding obligations to restrict and to eliminate such chemicals and products due to their adverse effects on the environment or human health, taking into account the precautionary approach and considering their impact on circularity.

During Contact Group 1 discussions on problematic plastic products as well as chemicals and polymers of concern, numerous INC members expressed their support for exploring options for the treaty. The establishment of criteria for identifying problematic substances was recommended by some delegations, noting that such criteria might consider polymers and chemicals of concern, substances with the greatest adverse impacts on the environment or human health, those that can be easily substituted and those that cannot be recycled or reused. The need for establishing criteria to identify and prioritize problematic and avoidable plastic products was widely supported. Many members viewed this step as a prerequisite for subsequent measures aimed at banning, phasing out, restricting (phasing down), or controlling specific problematic products. The possibility of including criteria and lists of plastic products for elimination or restriction in annexes to the legally-binding instrument, using a similar approach as other MEAs, was considered, including considerations on how to account for differences in the environmental and health implications of different applications or uses of products or groups of products.

According to the outcome paper of Contact Group 1, many members expressed the need for intersessional work on polymers and chemicals of concern, as well as problematic and avoidable plastic products. However, no agreement was reached to launch intersessional work up to INC 3 on this matter. The INC decision regarding intersessional work invited members and observers to submit potential areas for intersessional work compiled by the co-facilitators of the two contact groups, to inform the committee's work at its third session.

Options Potential Criteria for a List of Polymers, Chemicals of Concern and Problematic and Avoidable Products in the Instrument

¹ See UNEP report UNEP/PP/INC.2/INF/5: Chemicals in Plastics - A Technical Report, <https://www.unep.org/resources/report/chemicals-plastics-technical-report>.

² Over 2,400 identified as substances of potential concern, see: Deep Dive into Plastic Monomers, Additives, and Processing Aids | Environmental Science & Technology (acs.org).

To frame the issue and inform forthcoming discussions, this section presents options and potential criteria for listing polymers, chemicals of concerns, and problematic and/or avoidable plastic products. Whether or not such criteria will be included in the treaty text. The COP may also develop further criteria for expanding the list over time, and may choose to do so in stages, focusing on particular polymers, groups of chemicals, products or groups of products considering the need for complementarity of criteria and processes decided under other MEAs.

This section also includes a brief discussion on how the issue of limits on production quantities might be approached, focusing initially on data collection and definitional work, to lay the foundation for consideration of potential measures.

This brief is not intended to address the important issue of how the legally binding provisions should be drafted in the instrument. By way of context, however, we recall the HAC Ministerial Statement to INC-2, which called for “binding provisions in the treaty to eliminate and restrict unnecessary, avoidable, or problematic plastics, as well as the plastic polymers, chemical constituents and plastic products that are of particular concern due to their adverse effects on the environment and human health, taking into account the precautionary principle and considering their impact on circularity.”

Similarly, the HAC does not address here related issues of enhancing transparency and traceability. On this point, the HAC Ministerial Statement to INC-2 called for “binding provisions in the treaty to ensure reporting and transparency in production quantities, material, chemical and product composition, traceability and labelling across plastics value chains to provide the production and product information necessary to ensure accountability throughout the value chain.” It called for options reporting requirements by parties on the production and trade of plastics, polymers, chemicals and plastic products listed for elimination or restriction. In addition, the submission called for options on non-party trade measures, where each Party should be required to apply the import and export requirements for listed polymers, chemicals and plastic products to Parties and non-Parties alike on a non-discriminatory basis.

1. Criteria for listing polymers and chemicals of concern, as well as problematic and avoidable plastic products

Criteria for elimination and restriction could be approached in a number of different ways (e.g., focused on polymers, chemicals and plastic products, or around health and/or environmental impacts, or around policy objectives such as durability, reusability and safe circularity). These approaches may be complementary, particularly when viewed as an ongoing process during the development of the treaty and after the treaty comes into force.

A number of potential mechanisms for operationalizing restrictions have been identified³, including:

- i. a global negative list based on selection criteria;
- ii. a global negative list based on existing regulatory lists, such as existing lists of chemicals of concern;
- iii. a global positive list based, such as of chemicals deemed safer (dependent on availability of data) and polymers deemed more suited for circularity;

³ UNEP/CHW.16/INF/58, Report on global governance of plastics and associated chemicals.

iv. hybrid options.

There may be different criteria for selecting polymers and chemicals of concern, as well as problematic and avoidable products. However, while these three groupings may be conceptually useful, an important first step would be agreement on an initial target list for elimination or restriction.

Given the time-frame for negotiation of the instrument, a phased approach may be most appropriate, starting with the establishment of an initial list suitable for short-term prioritization and inclusion as a possible annex to the treaty. For example, the initial treaty text may include an initial negative listing of priority products, polymers and/or chemicals of concern, supported by effective mechanisms to amend, adjust and strengthen the lists after the adoption of the instrument. Following adoption of the instrument, a priority for the COP would then be to develop a class or group approach to identifying and regulating polymers and chemicals of concern by a specified date. Scientists and regulators have applied this approach to PFAS, organophosphate flame retardants, halogenated flame retardants, and phthalates, among other classes of chemicals.⁴ The benefits of this approach include: a) eliminating the need to collect data on all chemicals in a class by extrapolating from data-rich to data-poor chemicals; b) avoiding regrettable substitutions with other similar chemicals in the class; and c) considering the combined effects of multiple similar chemicals.

For polymers and chemicals of concern, possible criteria for inclusion on the initial list may include:

1. Harmful to the environment and human health (*e.g.*, substances that have high environmental persistence, bioaccumulate and/or have long-term adverse toxic effects (*e.g.*, carcinogenic, mutagenic, reprotoxic, endocrine disruptors), risk of mobility in the environment, and significant greenhouse gas emissions);⁵
2. Impeding circularity (*e.g.*, substances that hinder recyclability or reuse) taking into account that exemptions may be required in some instances;
3. Availability of alternatives with a better environmental and safety profile;
4. Meaningful impacts on the overall scale of plastic production, in particular when it leads to pollution or it is beyond planetary constraints;
5. Potential to create an important foundation for future actions by the COP; and/or
6. Existence of national, regional or international precedents for targeting these polymers or associated chemicals.

⁴ Kwiatkowski CF, Andrews DQ, Birnbaum LS, Bruton TA, DeWitt JC, Knappe DRU, et al. Scientific Basis for Managing PFAS as a Chemical Class. *Environ Sci Technol Lett* [Internet]. 2020 Jun 30;0(0):acs.estlett.0c00255. Available from: <https://pubs.acs.org/doi/10.1021/acs.estlett.0c00255>

Blum A, Behl M, Birnbaum LS, Diamond ML, Phillips A, Singla V, et al. Organophosphate Ester Flame Retardants: Are They a Regrettable Substitution for Polybrominated Diphenyl Ethers? *Environ Sci Technol Lett* [Internet]. 2019 Nov 12 [cited 2019 Oct 23];6(11):638–49. Available from: <https://pubs.acs.org/doi/10.1021/acs.estlett.9b00582>

Commission Regulation (EU) 2019/2021 of 1 October 2019 laying down ecodesign requirements for electronic displays pursuant to Directive 2009/125/EC of the European Parliament and of the Council. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R2021>

⁵ This criterion of "toxicity" could be established based on either experimental toxicological research or observational human research, and established for either the chemical itself or its environmental breakdown products or biotransformation products. See also UNEP report UNEP/PP/INC.2/INF/5: Chemicals in Plastics - A Technical Report.

Regarding problematic and avoidable plastic products, these are not widely identified by particular polymer types. Instead, they are often identified by particular properties, uses, or impacts. Indicative criteria for selecting problematic and avoidable plastic products have been developed by a range of governments, partnerships, companies, and experts, a number of which were mentioned in submissions and statements in the context of INC-2. Criteria commonly mentioned include:

1. Single use products for which use is avoidable or replaceable with reusable options and items made from alternative materials with a less negative environmental impact (e.g., materials that are suitable for recycling and reduce the overall impact on the environment if leakage were to occur; or
2. Products that contain hazardous chemicals or their production, use, recycling or disposal poses risks to human health or the environment; or
3. Products that are not recyclable and/or hinder the recycling of other items and/or cannot safely be recycled having regard to hazardous content that is not a necessary use; or
4. Products that have a high risk of release to the environment, including the likelihood of becoming litter, such as single use or short-lived products;⁶ or
5. Products that include intentionally added microplastics or that easily degrade into microplastics.

2. Elaboration of lists of polymers and chemicals of concern and problematic and avoidable plastic products targeted for reduction / elimination

In regard to a list of plastic polymers, chemicals of concern and problematic plastic products for inclusion in an Annex to the treaty, this could be based upon the work already done in this area by governments and stakeholders. A key priority should be to build on and avoid duplication with already existing mechanisms, such as the Minamata Convention, the Basel, Rotterdam and Stockholm Conventions, and the Strategic Approach to International Chemicals Management. The treaty needs therefore to fill the gaps in existing MEAs. Following are some **suggestions for 'quick-win' items that could be included in an initial list.**

Polymers made from monomers of concern may be an appropriate short-term priority, since without such monomers of concern, the polymer cannot be manufactured. Examples of such polymers and associated monomer components are:

- Poly Vinyl Chloride – vinyl chloride
- Polystyrene – styrene
- Polycarbonate – bisphenols
- Polyurethane – diisocyanates

In the case of PVC, a number of stakeholder and public-private partnerships have targeted PVC use in packaging and cling film. Similarly, there has been a focus on polystyrene packaging and cups. In the case of polycarbonate, initial attention could be directed toward food-contact materials and skin-contact materials (i.e. toys). A staged sector-by-sector phase out approach may be required considering the distinction between those plastics where no alternatives are available and those who could be phased out imminently.

⁶ As applied by those entities which developed these criteria, it is sufficient for the problematic plastics to meet any of these criteria, thus not all these criteria will be applicable to any individual listing.

In terms of list(s) of chemicals of concern (additives) for immediate action, examples for consideration include:

- Bisphenols
- Per- and polyfluoroalkyl substances (PFASs)
- Brominated flame retardants (BFRs)

Notably, some of these substances are already regulated under the Stockholm Convention on persistent organic pollutants (POPs), which should be taken into account.

Illustrative examples of problematic and avoidable plastic products, as identified already through a diversity of submissions to the INC process, include:

- Plastic products (polymer microbeads) containing intentionally added microplastics, such as microbeads in cosmetics or other personal care products;
- Plastic products made from oxo-degradable plastics;
- Plastic products containing pigments, which make them difficult to recycle (e.g., carbon black that is difficult to detect in the sorting process);
- Single-use or short-lived plastic products of various types and uses.

3. Mechanisms to update annexes and monitoring and communication framework

To be globally effective, Annexes to the treaty must be clear in their scope and descriptions, would optimally apply to design, production, retail, trade and disposal of the listed items, and would become effective by a specified date. Drafting considerations include whether listings are broadly written with exclusions or more narrowly identified without exclusions; whether and how long exemptions to delay the effective dates are available to Parties; and the process associated with those exemption requests. For example, under the Minamata Convention on Mercury, there are two time-limited exemptions for mercury-added products and processes, with the second exemption requiring COP approval (see Article 6 of the Minamata Convention).

Another important treaty drafting consideration relates to the process for amending the annexes over time (e.g., revising, updating, or expanding lists), including accounting for new technologies and alternative substances. Since annex revisions can be reasonably anticipated (see below), it may be necessary to draft the treaty so that annexes can be amended more easily than the treaty text and so amendments can be operational in a timely and efficient manner.

Regarding revisions of the annexes, the treaty should include one or more mechanisms for revising, updating, and/or expanding the annexes via decision without the need for additional ratification. This will help ensure an adaptive instrument that can evolve easily over time in response to scientific understandings or emerging threats. There are various options for such enabling mechanisms, and the INC could consider more than one of these mechanisms:

1. Specify the process for Parties to submit proposed annex amendments;

2. Request the COP to periodically review the annexes within a specific timeframe and develop annex revisions as appropriate;
3. Request the COP to develop a class or group approach to identifying and regulating chemicals of concern in plastic production by a specified date;
4. Require the COP to develop an approach for determining sustainable levels of production for specific polymers or groups of polymers of concern by a specified date. Production limits on specific polymers or groups of polymers could be established using a Montreal Protocol type approach, and could be combined with temporary measures to limit growth of production, until the COP establishes the production targets, following advice from an expert technical working group;
5. Request the COP to periodically review data reported by members on production and trade in listed polymers and chemicals of concern and problematic and avoidable plastic products. Authorize the COP to create subsidiary bodies, such as a scientific and technical group or expert panels as needed to assist in the above activities.

The treaty should also recognize the importance of a complementary monitoring and reporting framework that produces information on *inter alia* production and use of polymers and chemicals as well as the manufacture of plastic products and chemicals of concern, coupled with measures / obligations to ensure transparency across the supply chain, such as mandatory disclosure, labeling, communication, etc. Reporting obligations from existing MEAs should be assessed and considered.

Intersessional Work Between INC-3 and 4

The concrete work and content in the intersessional period will depend on the discussions and outcomes of INC-3 related to the restriction and elimination of plastic polymers and chemicals of concern, and problematic and avoidable plastic products. The following points should be discussed and elaborated at the INC-3 to provide a basis for intersessional work up to INC-4:

- **Setting-up an Expert Group**
 - Consider the establishment of an expert group to assist with developing lists or annexes; the composition of the Group; and conflict of interest policy.
 - Consideration of an expert group to work on baseline estimates of plastic production and other matters related to frameworks for monitoring.
- **Mandate & Scope of Work** for such expert groups and other intersessional activities
- **Working Modalities** (including coordination)
- **Coordination and Communication of the Outcomes**
- **Timeline for work for the duration of the INC process in this issue area**

Supporting deliverables from the Secretariat may include a compilation of information regarding existing regulations, criteria, and lists as well as planned restrictions on monomers, polymers, chemicals, and products, based on submissions by Parties and Observers, and the work of existing MEAs.

The Secretariat may also propose relevant definitions, including of polymers and chemicals of concern, and problematic and avoidable plastic products, to support the development of common understandings and terminologies. In order to maximize effectiveness and avoid duplication, the Secretariat could also be asked to prepare a brief to show which chemicals of concern related to plastic products, materials and production are covered by other MEAs, and where there are gaps.
