Proposed response template on written submissions prior to INC-3 (part b)
Potential Areas Identified by the Contact Groups

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Input on the potential areas of intersessional work to inform the work of INC-3 (following the lists compiled by the co-facilitators of the two contact groups)

Contact Group 1:

- **Criteria on Chemicals and Polymers**

Several reports on potential criteria to ban, phase down, reduce or control plastics-related substances and precursors (monomers, polymers, additives, processing aids, and non-intentionally added substances (NIAs)) already exist.

Key to the success of the INC process and best possible use of resources, is the need to avoid duplicating work and use all information available. In this respect, we believe that most, if not all, relevant information in relation to the development of criteria for including chemicals and polymers

under the control of the future plastic treaty has already been generated, it is publicly available, and it should be built upon in future intersessional work.

Such intersessional work should take place in the form of a small **Expert Group** composed of government experts from each regional group. It should be transparent, allow observers' participation, and include the possibility to submit written inputs.

Below is a non-exhaustive overview of sources to inform areas of intersessional work on these issues. These considerations include proposals for priority groups of chemicals to ban, as well as criteria to control polymers and chemicals of concern by using hazard-based approaches, focusing on the intrinsic eco-toxicological properties of substances, and aligning with the precautionary principle.

- UNEP's Chemicals in Plastics - A Technical Report includes:
  - The identification of certain **monomers** as well as **10 groups of chemicals** considered of major concern because of their high toxicity and their potential to migrate or leach out of plastics ((certain flame retardants, PFAS, phthalates, bisphenols, alkylphenols, biocides, UV stabilizers, metals and metalloids, polyaromatic hydrocarbons (PAHs), and non-intentionally added substances (NIAs));
  - A **list** with more than 13,000 chemicals;
  - A list of **priority industry sectors and products for action**: toys and other children's products, packaging and food contact materials, electrical and electronic equipment, vehicles, synthetic textiles and related materials, furniture, building materials, medical devices, personal care and household products, agriculture, aquaculture and fisheries;
  - **Regulatory approaches**, such as:
    - Phasing out the use of internationally restricted chemicals;
    - Reducing the use of chemicals identified as emerging policy issues and issues of concern under SAICM (e.g. PFAS, endocrine disruptors);
    - Restricting chemicals of concern based on the concept of "essential use" (the phase out of plastics that are not essential for human health, safety, or the functioning of society), which is in alignment with the waste management hierarchy and has been applied in the Montreal Protocol;
    - Minimizing and controlling unavoidable hazardous chemicals in plastics through regulatory limits (e.g. PAHs in rubber), similarly to what the Stockholm Convention does for unintentional POPs (uPOPs);

        - Considering hazardous chemicals in regulatory frameworks for plastic recycling, similarly to what the Stockholm and Basel Conventions do for POPs-containing waste;
        - Building regulatory capacity for prioritization and restriction of hazardous chemicals;
        - Tracking and ensuring public availability of information on chemicals in plastics to enable a toxic-free circular economy;
        - Options for manufacturers and businesses to phase out chemicals of concern.
    - Other Considerations to be included:
        - **Hazard**: The hazards of a chemical (e.g., its toxicity) are related to its inherent properties. Many plastics chemicals have major data gaps on their properties and toxicity – plastic products can contain hundreds of substances that might migrate or leach out of a product, and many are unidentified or completely unknown;
        - The toxicity of **chemical mixtures**: plastic products can contain hundreds of substances, but testing of chemicals is focused on individual substances. Beyond the need to consider the toxicity of chemical mixtures, an adequate risk assessment would require a detailed understanding of all possible exposures, from the workers involved in the extraction of the fossil fuels, to the waste management stages, including recycling;
        - **Gender**: women workers dominate some professions directly linked to plastic production and use, and several factors — including biological factors — make women more vulnerable to chemical exposures.

- The BRS Global Governance of Plastics and Associated Chemicals report:
    - Proposes to identify and address chemicals and polymers of concern as follows:
        - Chemicals:
            - Following SAICM's definition of chemicals of concern in relation to their (eco)toxicological properties (hazard) and their use patterns (exposure), a **non-exhaustive list of criteria** can be used to assess hazardous properties of chemical substances (including persistence, bioaccumulation potential, endocrine disruption, carcinogenicity, mutagenicity, reproductive toxicity, respiratory sensitization, specific target organ toxicity upon repeated exposure, and chronic aquatic toxicity);
            - A **grouping** approach should be used;
        - Polymers:

- Polymers of concern could be identified and grouped based on chemical identities (e.g., molecular weight, reactive functional groups, presence of cationic groups, etc.), physico-chemical properties, and/or indication of hazard.

  - Includes possible **approaches** to controlling chemicals and polymers, all with different pros and cons detailed in the report:
    - Global negative list based on selection criteria;
    - Global negative list based on existing regulatory lists of chemicals of concern;
    - Global positive list based on chemicals deemed safe;
    - Hybrid approaches;
  - Proposes a **hierarchy of action for chemicals management**, starting from the minimization of the overall use of chemicals, the restriction of use of chemicals and polymers of concern (except for essential uses), safe management and substitution, reuse, recycling and recovering (including specific priority actions).

- UNDP and HCWH report "Chemicals of Concern to Health and the Environment", which lists a Database of chemicals listed in Authoritative lists and Environmental conventions.
  While the report goes beyond plastics-associated chemicals, it describes a process of shortlisting the chemicals of concern, including:
    - Criteria for Hazard identification (Health effects linked to: Toxicity (such as Carcinogens, Mutagens, Reproductive hazards = CMR); Endocrine disrupting chemicals (EDCs); Neurotoxicity, developmental toxicity and immunotoxicity; Allergenicity / asthmagenicity; Sensitization; Skin and eye irritation;
      Environmental determinants linked to: Persistent, bioaccumulative and toxic substances in the products; Acute and chronic aquatic toxicity);
    - Authoritative Lists and Environmental Conventions (the WHO's International Agency for Research in Cancer (IARC); The European Union list of Substances of Very High Concern and Restricted Substance List as determined under the Registration Evaluation and Authorization of Chemical Substances (REACH) Regulation; The California Proposition 65: Safe Drinking Water and Toxic Enforcement Act of 1986; The Minamata Convention on Mercury; The Stockholm Convention on Persistent Organic Pollutants; The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade).

- The Scientists' Coalition for an Effective Plastics Treaty's Policy Brief: Role of Chemicals and Polymers of Concern in the Global Plastics Treaty:
    - Includes suggestions on how the treaty can address chemicals and polymers of concern, such as:
        - Creating a comprehensive, global inventory;
        - Avoiding loopholes in definitions and terms such as "additives" that do not comprise all plastics-chemicals;
        - Starting to use officially recognized **hazard criteria**, such as persistence, bioaccumulation, and toxicity, to prioritize groups of plastic chemicals.

- Furthermore, information is available on the health impacts and economic costs associated with certain groups of substances:
    - Based on the Second Scientific Statement on Endocrine Disrupting Chemicals (EDCs), the Endocrine's Society One Pager "Chemicals used in Plastic Materials Harm Human Health and the Economy" identifies groups of chemicals used in plastics that contribute to disease and disability — such as flame retardants, phthalates, bisphenols, and PFAS — and it includes a table with **estimated disease burden and associated economic costs** in the EU, US, and Canada;
    - The fact sheet "7 Harmful Chemical Types in Plastics" by IPEN and the Endocrine Society includes an overview of these 7 types of chemicals (bisphenols, alkylphenols, phthalates, PFAS, BFRs, dioxins, and UV stabilizers) and their **health impacts**;

- IPEN's brief, Troubling Toxics: Eliminating hazardous chemicals through the plastics treaty, includes information on:
    - Broad criteria to identify chemicals of concern (including lessons from the Stockholm Convention, such as the inclusion of the **precautionary principle**);
    - Possible **criteria** for identifying chemicals to be controlled under the Plastics Treaty:
        - Chemicals and classes of chemicals associated with plastics, either as plastic ingredients, processing aids, Non-Intentionally Added Substances (NIAS), and chemicals unintentionally produced during the plastics lifecycle;

        - Chemicals for which there is no available toxicity data;
        - Chemicals that increase barriers to circularity of plastics;
        - Chemicals for which there is evidence of known or potential adverse effects for human health or the environment, which may include:
            - Substances that are carcinogens, mutagens, or reproductive toxicants;
            - Substances that are endocrine disruptors;
            - Substances that affect the immune system, the neurological system, or a specific organ;
            - Substances that are persistent, bioaccumulative, and toxic in the environment;
            - Substances that are persistent, mobile, and toxic.
    - Examples of **groups** of chemicals that the treaty could start phasing out, unless proven safe: Bisphenols; Phthalates; Brominated flame retardants (BFRs); Chlorinated paraffins; Polyaromatic hydrocarbons (PAHs); Alkylphenols; Benzotriazole ultraviolet (UV) stabilizers; Per- and polyfluoroalkyl substances (PFAS); Brominated dioxins.

- **Criteria for Problematic Plastics:**

In considering intersessional work on this the design for circularity, delegates should build on the following approaches identified in the BRS Global Governance of Plastics and Associated Chemicals report in order to avoid duplication of work and build on the most advanced state of science. In particular, intersessional work should build on:

- Identifying problematic plastics based on the following non-exhaustive and preliminary list of qualities:
    - Toxicity (e.g., toxic monomers, flame retardants and plasticizers),
    - Chemical and polymer stability/integrity (e.g., phthalates and secondary microplastics),
    - Product longevity (e.g., single-use plastics and packaging),
    - Size (e.g., primary microplastics and nanoplastics),
    - Composition (e.g., multilayer plastics, colors), and
    - (Bio)degradability (e.g., oxo-degradable).
- Taking a sector-specific approach, focusing on the most plastic-intensive sectors and applications (e.g.: packaging (45%), building and construction (19%), consumer and institutional goods (12%), transportation (7%), electrical and electronic products (4%)).

- Considering essential and non-essential uses and items.

- **Criteria for Design for Circularity:**

In considering intersessional work on this the design for circularity, delegates should build on the following approaches and sources to avoid duplication of work and take advantage of existing information:

- The BRS Global Governance of Plastics and Associated Chemicals report, which includes examples of existing design principles and criteria, as well as a proposal for sustainability criteria for plastics and associated chemicals such as:
  - Performance criteria to minimize harm to human health and the environment, and
  - Transparency criteria to ensure information flow.

- The scientific opinion on The Need for **Chemical Simplification** As a Logical Consequence of Ever-Increasing Chemical Pollution, which describes the need to:
  - Reduce the number of chemicals used in products to reduce human and environmental exposure on a large scale and design for circularity, and
  - Include grouping approaches as an integral part of chemicals assessments.

- The Missing Piece: **Transparency** in the Plastics Treaty, which details why transparency of chemicals in plastics is needed as a core obligation of the plastics treaty, As chemicals interfere with recycling processes, transparency on chemicals included in products is essential to ensure true circularity, including for waste sorters and recyclers.

- **Criteria for Alternatives and Substitutes to Plastics**:

In considering intersessional work on alternatives and substitutes to plastics, delegates should acknowledge that safety and sustainability criteria related to the assessment of plastic alternatives and substitutes do not currently exist. For this reason:

- Criteria should be determined by a body of independent scientific experts to ensure any alternatives and substitutes to existing plastics or plastic products prevent plastic pollution, are safe and sustainable, and do not have negative impact on the environment, human health, and human rights;
- This determination would need to consider the international nature of supply chains to prevent unintended negative externalities – for example, in the countries that supply or

produce the products or raw materials; or those where the products are ultimately consumed, managed, or disposed of;

- If a list of substitutes or alternatives is drafted, it should not be comprehensive or exhaustive, and it should mention the need to be revisited and updated once the INC or the future plastics treaty establish criteria or obligations applicable to alternatives and substitutes to plastics.

- **Potential Sources of Release of Microplastics**:

In considering intersessional work on microplastics, delegates should build upon existing work and include the following approaches:

- As suggested in the BRS Global Governance of Plastics and Associated Chemicals report:
  - Follow a precautionary approach and eliminate primary microplastics;
  - Further reduce losses of secondary microplastics into the environment through design standards and improved mitigative activities;

- As recommended in the Addressing Microplastics under the Global Agreement to End Plastic Pollution report:
  - Define microplastics in a manner that enables the diversity of microplastics to be captured, including nanoplastics, as well as biodegradable, and water-soluble polymers;
  - Regulate plastic pellets, flakes and powders through global measures across the value chain to prevent losses – for instance, by:
    - Setting requirements for the safe production, transport, handling and storage of plastic pellets, flakes and powders, including measures addressing the chemical content of these materials;
    - Considering restrictions on trade of pellets, flakes and powders, which could be supported by Harmonized System (HS) codes;
  - Address intentionally added primary microplastics through an essential use approach. This would include:
    - Establishing a dedicated ad-hoc expert group to identify key global sources of intentionally added microplastics, develop criteria for restrictions, and create a shortlist of essential and non-essential uses of microplastics;
  - Address use-phase secondary microplastics through measures addressing reduction, product design, use and maintenance. This would include

- Establishing global product standards or design criteria, as well as minimum requirements to prevent releases from abrasion and other forms of fragmentation.

- Include other strategies for the plastics treaty to address microplastic pollution, such as:
  - Following EIA's Essential Elements: Microplastics, which details the problems associated with microplastics (pollution from plastic pellets, intentionally added microplastics, use-based microplastics, and degradation-based microplastics), consider to address microplastics through:
    - The elimination of intentionally added microplastics;
    - Control measures to reduce microplastic pollution from plastic pellets;
    - Dedicated programs of work for microfibers and tire dust to reduce loss from shedding of microplastics.

- Address specific sectors that use microplastics, such as agricultural uses.
  - CIEL's Sowing a Plastic Planet finds that the agricultural sector, through the application of fertilizers and pesticides encapsulated in plastics, is one of the greatest users of intentionally added microplastics and contributors to microplastic pollution. Adding these plastics to agrochemicals compounds their already significant threats to the environment and human health.

- Addressing the sources of microplastics pollution in a holistic way, including microplastics in the air.
  - CIEL's Breathing Plastic: The Health Impacts of Invisible Plastics in the Air analyzes the implications of micro- and nanoplastics moving through the air and entering the human body via inhalation and their adverse effects on human health.
    The brief recommends:
    - Applying the precautionary principle and addressing multiple exposures to microplastics and other pollutants (the combined "cocktail" effect);
    - Banning intentionally added microplastics and reducing the production and release of plastics and their associated compounds; and
    - Addressing the full lifecycle of plastics — starting from the sourcing phase and the fossil fuel extraction — in order to decrease microplastics releases;

Contact Group 2:

- **Science and technical body**

To consider the potential role, responsibilities and composition of a science and technical body to support negotiation and/or implementation of the agreement, the intersessional work could include, as a starting point, a request to the Secretariat to prepare a comparison document with the existing scientific and technical bodies to the most relevant MEAs, including common features and lessons learned.