Compilation of questionnaire responses for Expert Group 2

This compilation contains the responses received to the questionnaire transmitted to experts on 10 July 2024. The compilation contains all responses received by the extended deadline of 29 July 2024 for inclusion in the Co-Chair's Synthesis Document. The document has been amended to include two additional expert responses from China and the United Arab Emirates received by 12 August 2024. All responses are the expert opinions of the nominated experts only.

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Nominating Member	Part B. 4. What criteria, types of criteria or non criteria based approaches could be reflected in the ILBI for the identification/classification of plastic products? 4.a. Criteria or types of criteria 4.b. Non criteria based approaches
Portugal	4 a. Science and evidence based criteria based on hazard criteria to identify chemicals of concern. The restrictive measures associated to problematic plastics should be based on a risk management evaluation.
Suriname	4.a. Criteria or types of criteria 1. Chemical composition: - Based on primary polymer type (e.g., PE, PP, PVC) - Allows precise identification, informs recycling 2. Biodegradability: - Categories: Non-biodegradable, industrial biodegradable, home compostable, marine biodegradable - Addresses end-of-life concerns 3. Usage duration: - Single-use, short-term use, durable goods - Aligns with existing regulations 4. Recyclability: - Widely recyclable, limited recyclability, not recyclable - Encourages design for recycling 5. Hazard-based: - Non-hazardous, potentially hazardous, hazardous - Addresses health and environmental risks 4.b. Non-criteria based approaches 1. Lifecycle approach: - Considers entire product lifecycle - Allows comprehensive environmental assessment 2. Risk-based approach: - Assesses environmental and health risks - Focuses on most harmful products 3. Circular economy approach: - alignment with circular economy principles - Encourages sustainable design and production 4. Value chain mapping: - Identifies intervention points across the plastic value chain - Enables targeted policy interventions
Somalia	1. Criteria for identification/classification of plastic products: a. Material type (e.g., PET, HDPE, PVC) b. Recyclability (e.g., easily recyclable vs. complex materials) c. Durability (long-lasting vs. single-use) d. Environmental impact (Biodegradable, non biodegradable plastics)

	2. Non-criteria approaches: a. Life cycle analysis (High impact plastics, low impacts plastics) b. Circular Economy Principles (Reusable, recyclable, repairable plastics, and closed-loop plastics).
El Salvador	Carbon footprint to consider that a product can be withdrawn from the market, that the substitute product has the properties of improving the characteristics of the product to be replaced. Conversion of traditional production systems, Flexibility and adaptation, analysis of each individual product.
Oman	a. Criteria or types of criteria: Zero Option (no text in the instrument) b. non-criteria-based approaches: For identification of plastic products, the approach that provides for consideration of availability, accessibility, affordability and environmental impact of products made from alternative materials, as well as socio-economic effects of any regulatory measure regarding such plastic products, during the decision-making process.
Republic of Cuba	A criteria approach is needed to define the different classification of plastic products that have been using in relation to the ILBI: single-use, short-life, avoidable and problematic plastics. We favor the concept of "avoidable plastics" (according to their use) and "problematic" plastics (considering their environmental and health impact), as follows: Avoidable plastic: a single-use plastic for which there is availability, accessibility and affordability to alternatives; it is feasible and possible to change the consumption pattern of the product in society, there is availability of practices and technologies to increase reuse, recycling and remanufacturing. Problematic plastic: They cannot be reused or recyclable due to scientifically proven damage to health or the environment, and block or affect the ability to recycle other products or the capacity and quality of the final product of the recycling process. The ILBI may include general criteria such as those mentioned above, which serve as a basis of common understanding for all. Any additional or specific criteria can be adopted at the national level. Each Party will use those criteria to decide which products are going to be regulated at national level taking into account its circumstances and capabilities. The avoidable and problematic plastics identified al national level, as well as regulatory measures adopted by each Party will be included in the National Action Plans. Non-criteria based approaches for plastic products could include: 1. Identification of problematic and avoidable plastic products at national level. 2. A global list of banned or restricted plastic products. However, it is not an effective approach because identifying any plastic product subject to regulation requires taking into account the availability, accessibility, affordability and environmental impacts of alternatives, as well as the national circumstances and capabilities related to consumption patterns, waste management system, etc. A global list will be an unfair “one-size-fits-all” approach.
Japan	1) Problematic plastic products On the understanding that non-criteria-based approach is the way not to set global uniform criteria and rules, we share the concerns that it would lead to uncoordinated rules and regulations among countries, resulting in a lack of a level playing field. Meanwhile, we also understand the views that each country’s national circumstances may not be properly addressed in case of criteria-based approach. Therefore, as a way forward and in order to achieve a convergence, it is suggested that each Party’s respective circumstances be taken into account, when considering the establishment of possible rules/mechanisms related to problematic plastic products, even if we take criteria-based approach. It is important to clarify the assessments and decision-making processes on problematic plastic products. It is suggested that each Party make evaluation and take decisions based on the following elements, while taking into consideration national circumstances; - It has a high likelihood of becoming litter or ending up in the environment. - It has a high potential of adverse impacts on human health and the environment. - It is not reusable, recyclable, renewable or compostable in practice. Or, there is a possibility of redesigning its product life cycle in a more circular manner. On top of that, each Party should make decisions and take appropriate measures in identifying and addressing specific products to be reduced, taking into consideration technical feasibility, availability and accessibility of alternative plastics and plastic products, and socio-economic impacts. Also, it is suggested to make provisions in the ILBI that encourage Parties to promote product design and treatment of plastic products in a more circular manner. The following elements are suggested: - Products that are reusable, recyclable, renewable, compostable or can be redesigned using cyclical methods. - Treatments that prevent leakage of plastics into the environment as much as possible, through such effective measures as handling, collection, transportation, storage, recycling, recovery and final disposal of plastic waste in an environmentally sound manner. - Use of alternative plastics, such as bio-based plastics and biodegradable plastics, which significantly reduce adverse impacts on the environment compared to before replacement.

	Also, we need to pay due regards to the essential uses where there are no alternatives, in such cases as medical and welfare, food safety and hygiene, and disaster management uses. 2) Microplastics Addressing issues related to microplastics is crucial. Each Party needs to take necessary measures on microplastics, depending on the level of adverse impacts on human health and the environment. As for specific measures to prevent leakage of microplastics, it should be noted that appropriate measures could vary depending on each Party's situation, such as the level of infrastructure related to sewage system, as an example. Also, we need to distinguish between intentionally added microplastics, such as those for cosmetics and detergents, and unintentionally added microplastics, such as those from textiles and tires, as preventive measures differ. Therefore, as a way forward and towards achieving convergence, it is suggested that, even if we take criteria-based approach, the instrument should enable each country to conduct assessments and take decisions based on such elements as high potential risks of adverse impacts on human health and the environment and high potential of leakage into or ending up in the environment, while taking into consideration national circumstances. On top of that, each country should make a decision and take appropriate measures, taking into consideration technical feasibility, availability and accessibility of alternative plastics and plastic products including microplastics, and socio-economic impacts, as well as existing national regulations and practices of preventive measures to minimize the leakage of microplastics and the level of infrastructure development. Also, we need to pay due regards to the essential uses where there are no alternatives, in such cases as medical and hygiene uses.
New Zealand	4a. Criteria or types of criteria New Zealand has experience implementing domestic policy to phase out and ban certain plastic products. Based on this experience, we provide the following non-exhaustive list of criteria that could be considered in discussions on criteria-based approaches to identifying or classifying plastic products: - Whether the product is single-use, considering the setting the product is used, whether there is a system in place to reuse the product, how the product is marketed and dishwasher/reusability standards. - Whether the product is made from hard to recycle plastic types, for example PVC, polystyrene and multi-layer composite materials. - Whether the product is recyclable (in local/national settings). - Ability to prevent, reduce or reuse the item. - Whether the product is commonly littered (according to litter data). - Life cycle assessment of alternatives (to understand impacts of alternative products and the need to avoid any regrettable substitutions). - Socio-economic impact of bans (including any socio-economic impacts bans could have regionally). 4b. Non criteria based approaches The terms "criteria-based approaches" and "non-criteria-based approaches" need to be clarified prior to the in-person meeting in Bangkok. We would like to hear more from other experts to understand how a non-criteria based approach would work alongside legally binding provisions to address problematic and avoidable plastic products.
Russian Federation	4.a. The criteria approach is not supported by the Russian Federation, as it does not imply taking into account various national circumstances, and is practically not achievable during negotiations. 4.b. Non-criteria based approaches could include: 1) Zero Option (no text in the Instrument) 2) Identification of "problematic" plastic products on the national level, which provides for taking into account national circumstances, capacities and capabilities: • We are of the view that the best option for Section II.3 would be the deference of the issue of identification of "problematic" plastic products to the national level. • "Problematic" plastic products should be identified within national jurisdictions and in accordance with the relevant national parameters or criteria. The reason is clear – any attempts to reach a consensus on either global list of products or common global criteria for their identification would fail bearing in mind the wide range of national circumstances that could influence the choosing of products or criteria (available alternatives, consumption patterns, national waste management system, etc.). • For identification of plastic products a Member should use the approach that provides for consideration of availability, accessibility, affordability and environmental impact of products made from alternative materials, as well as socio-economic effects of any regulatory measure regarding such plastic products, during the decision-making process. Applying this approach would guarantee the implementation of Section II.3, which is realistic and harmless for the society and the economy.

	• Applying this approach Member shall also adhere to the WTO law: o After the negotiations are over and the Instrument comes into force, parties will have to develop a set of implementing measures on both national and international levels. At that stage, we need to ensure that this Instrument will not serve as an excuse for establishing trade protectionist measures to gain unjustified advantage for national producers. o The Instrument is expected to cover the full life cycle of plastic products, which accounts for approximately 5% of the global trade, according to various estimates. If measures implementing this Instrument do not comply with the rules and principles of the WTO, numerous industries using plastics as components for production will be jeopardized across the globe. Such industries include agriculture, fisheries, packaging, building and construction, textiles, consumer products, transportation, electronics, industrial machinery, and many others. o WTO rules in their entirety, including dispute settlement mechanism, should apply to all measures implementing the Instrument. • The approach should also provide the opportunity to improve the design of "problematic" plastic products to increase their circularity and material efficiency prior to the establishment of any restrictive measures. • As for the name of plastic products that could fall under Section II.3, we are of the view that the focus should be on "problematic" products only, because this generic term includes all other specific categories that are captured by the negotiation process, specifically "short-lived", "single-used", and "avoidable" products. The term "problematic" does not need any strict definition given the variety of national circumstances, which must be taken into account when defining such products. Abundance of different terms could only create confusion and uncertainties: o "Short-lived plastic products" would require harmonized definition of what could be the thresholds describing "short" and "long" terms of use. Reaching a common understanding of it at the global level seems impossible. o The term "single-use plastic products" is very ambiguous and needs hard-to-achieve clarifications, in particular, on the issues of exact number of allowed uses, or the ability of product to be recycled as well as the vague difference between "short-lived" and "single-used" products. o "Avoidability" of plastic products should be assessed together with the consideration of availability of efficient and sustainable alternatives to "problematic" plastic products. Position common for sections 4.a. and 4.b. Global listing of banned plastic products, which was chosen by certain delegations, with or without any criteria-based assessment for such actions, is not supported by the Russian Federation since it represents non-implementable and unfair "one-size-fits-all" approach, which deprives Members of the right to apply market-oriented solutions suitable for their particular economies and national social and environmental circumstances.
Cook Islands	4.a. Criteria or types of criteria A criteria is very important to be a part of the treaty agreement as it gives clarity on how chemicals, products and design will be assessed, in regards to their impact on the environment and human health. Scientific evidence is a key component of the assessment criteria, which will also identify an array of issues like hazard properties, chemical composition and profiles. The criteria will also be key in ensuring sustainability measures and transparency requirements can be met and implementable. Furthermore, sectoral approaches should also be recognized given the use and presence of plastics may vary across different sectors e.g. fishing gear, textiles, agriculture, healthcare, etc. The types of criteria can be focused on the articles of the treaty, relating to Chemicals of Concern, problematic and Avoidable Plastic Products including short-lived and single-use plastic products and intentionally added microplastics, and Product Design, Composition and Performance. In addition to the criteria, a list of Chemicals of Concern, Problematic and Avoidable Plastic Products including short-lived and single-use plastic products and intentionally added microplastics, should be present. The criteria should also take into consideration the following: 1. Sustainability criteria on plastic products – taking into account regenerative circularity, reusability, repairability, recyclability, and interlinkage with financial incentive mechanisms 2. Emissions criteria – focused on the release of plastic products into the environment, taking into account micro plastics, nano plastics, hazardous plastic chemicals 3. Hazard criteria on chemicals of concern – ensuring a clear set of criteria addresses chemicals of concern, what needs to be banned, phased out and phased down 4. Transparency & reporting – ensure mechanisms are in place to report on transparency and traceability measures. 4.b. Non-criteria based approaches The Non-criteria based approaches is unclear as to what it means. The member state who proposed a non-criteria based approach will need to explain what this means for the consideration of the parties. Our delegation is unable to comment further on non-criteria based approaches until it is clearly outlined and defined.
Tuvalu	4.a. Criteria or types of criteria Criteria can be used to: 1. Create global lists for problematic, unnecessary and avoidable plastic products and assign measures to the lists as appropriate. 2. Enable countries to go beyond the scope of the lists by integrating the criteria into national regulatory actions.

	For a list of criteria relating to problematic, unnecessary and avoidable plastic products, as well as a simple decision hierarchy, refer to report: Global criteria to address problematic, unnecessary and avoidable plastic products (https://www.norden.org/en/publication/global-criteria-address-problematic-unnecessary-and-avoidable-plastic-products). 4.b. Non criteria based approaches Global lists ban be created without the use of criteria – e.g. Rotterdam Convention mechanism for establishing global lists based on national regulatory action. Other non-criteria based approaches include: 1. Regulation of chemicals and polymers of concern (Draft plastics instrument, II.2) - Elimination of chemicals and polymers of concern will result in less problematic products. 2. Transparency and traceability (Draft plastics instrument, II.13) - Harmonised producer transparency. Global databases that are publicly available to provide product risk profile, risk assessment (based on standards) and risk management information. 3. Emissions and releases limits (Draft plastics instrument, II.8) - Zero tolerance of emissions and releases throughout the life cycle of chemicals, macroplastics, microplastics and nanoplastics 4. Sharing of information (Draft plastics instrument, II.6) - Global database of substances, sources, exposure pathways, risk management profiles and assessments, and reduction options 5. Trade (Draft plastics instrument, II.10, Rotterdam Convention) - Restrict import and export of known problematic products, possibly based on lists developed from final regulatory action at the national level or regional level. 6. Waste management (Draft plastics instrument, II.9) – All products must be collected and appropriately sorted, particularly those destined for reuse, refill and recycling. 7. Reporting (Draft plastics instrument, II.2) - Globally harmonised reporting on meaningful progress towards eliminating problematic products, based on global targets and indicators. 8. Statistical guidelines for plastic material flows (See UNEP/UNITAR project for the development of statistical guidelines) - Globally harmonised statistics, indicators and methodologies for tracking plastics and associated chemicals from the environment into the economy, within the economy, and from the economy to the environment (pollution). 9. Decision hierarchy based on global lists, instead of criteria. For a simple decision hierarchy that could be based on lists only (not criteria), refer to report: Global criteria to address problematic, unnecessary and avoidable plastic products (https://www.norden.org/en/publication/global-criteria-address-problematic-unnecessary-and-avoidable-plastic-products)
Republic of Korea	4.a. Criteria or types of criteria 1. Two Criteria-Based Approaches for Classifying Plastic Products A. Classification Based on the Type of Polymer (e.g., PET, PS, PE, PP, etc.) i. The environmental impact and recyclability vary depending on the type of polymer. ii. Also, national circumstances, such as recycling infrastructure and policy, vary among countries. Thus, classifying problematic plastic products by their polymer types could oversimplify the issue. For example, although the overall recycling rate of PS is considered to be very low (Global Plastics Outlook, OECD 2022), the recycling rate for PS in the Republic of Korea is high due to national policies, such as Extended Producer Responsibility scheme. B. Classification Based on Usage and Applications (e.g., packaging, construction, transportation, electronics and machinery, consumer products, textiles, tires, others): i. This approach closely interlinks with the lifespan of plastic products. Since the generation of plastic waste strongly relates to how plastics are used (Global Plastics Outlook, OECD 2022), this approach better focuses on reducing waste generation. ii. Packaging waste constitutes a large share of total plastic waste (Global Plastics Outlook, OECD 2022). 2. Possible Criteria for Identifying Problematic or Avoidable Plastic Products A. A product is problematic if it is likely to disrupt circularity and cause harm to the natural environment for one or more of the following reasons: i. It consists of unnecessary single-use and short-lived plastic products. ii. It is not reusable, recyclable, or compostable in practice and at scale. iii. It has a high likelihood of ending up in the natural environment. B. A product is avoidable while maintaining its utility for one or more of the following reasons: i. The product or its components are not essential considering the product's functionality and performance. ii. The product or its components can be replaced with other products or alternative materials that provide the same functionality and performance. iii. The product or its components can be improved by increasing durability, reusability, refillability, refurbishability, remanufacturability, recyclability, and compostability without significantly degrading functionality. 3. Further Research Needed: Considering the absence of globally established criteria, expert groups or scientific bodies must conduct further research to establish such criteria and standards. 4.b. Non criteria based approaches

	1. Establishing Life-Cycle Assessment of plastic products: Utilize life-cycle assessments to evaluate the environmental impact of each plastic product, considering substitutes and replacements. This enables each Party to determine which plastic products need further regulation.
Malaysia	As an overarching principle, we believe in the establishment of harmonised standards to drive transformation within the plastics industry towards the production of safe and circular plastics to address plastics pollution. Standards place all Parties on a level-playing field, having to comply to certain minimal requirements to, for an example, producing reusable and recyclable products. Criteria-based approach could be more limiting and restrictive, especially if certain pre-determined lists were developed, with the possibility of not being holistic and not taking into consideration the following: i.diversity of usage and applications of listed products across different industries; ii.potential alternatives of listed products; iii.socio-economic and environmental impacts of elimination of listed products and introduction of alternatives; iv.and more. Non-criteria-based approach is less prescriptive, providing Parties the opportunity and flexibility to conduct evaluation of above factors according to each Party's unique circumstances. ********** We would like to urge for clear definitions of "problematic" and "avoidable" to establish a common understanding between all Parties and experts in order to provide meaningful inputs. 4.a. Criteria or types of criteria A decision tree approach could help Parties better understand if certain plastics applications are essential for human or animal health as well as food and transport safety; if they play an important societal value, such as enabling the energy transition or climate goals; and if better alternatives are available. It is important that the decision tree is comprehensive enough, covering the whole life cycle of plastics and addresses critical aspects such as product design, waste management and exemptions. As Parties face different realities and needs, the decision tree could act as a global tool while allowing Governments the flexibility to assess and implement measures through national action plans. It shall consist of a ranked flow of questions based on the waste hierarchy (i.e. prevention, resource efficiency, reuse, recycling, recovery, including energy recovery, landfill, and controlled disposal). Our recommendation for the decision tree: https://plasticseurope.org/wp-content/uploads/2024/04/2110353_DecisionTreeInfographics_041524.pdf 4.b. Non-criteria-based approaches In applying the decision tree approach, the evaluation process should be based on local context depending on each Party's unique circumstances. Again, it should be a global tool with flexible implementation.
Monaco	4.a. Criteria or types of criteria We would recommend using a simplified typology to identify/classify plastic products, mixing the "problematic" and "avoidable" typology : Criteria used for listing (one or more criteria needed): i. the product itself poses a hazard to a hazard to human health, animal health or the environment ii. Its manufacturing requires chemicals that pose a hazard to human health, animal health or the environment, iii. the product is not reusable or recyclable in practice and at scale; iv. the products hinders and/or disrupts the recyclability of other items v. the product has a strong propensity for being littered or ending up in the environment vi. the product is made of/contains microplastics that were generated and/or added during production vii. the product is made of oxo-degradable plastics that easily break down into microplastics viii. the product can be avoided ix. the product can be replaced by a reuse model (or a sustainable substitution) while maintaining its utility 4.b. Non criteria based approaches We would not recommend a non-criteria based approach, and eiher strongly recommend a criteria-based approach.
Philippines	Criteria-based approaches support a common, normative framework for future decision-making in a consistent and efficient manner. Since criteria-based approaches are predicated on pre-determined standards or criteria, they provide a logic and clear basis for the interpretation of evidence while promoting consistency, reliability, and transparency. For these reasons, criteria-based approaches are used in Multilateral Environmental Agreements, such as in the list of mercury-added products subject to regulation under the Minamata Convention. Below are specific criteria-based approaches that should be reflected in the ILBI. 4.a. Criteria or types of criteria With regards to plastic products, the waste hierarchy can be utilized as an underlying framework for safe and sustainable production and consumption of plastic products. At the top of the hierarchy are actions to reduce primary plastic polymers thereby preventing the tripling of plastic waste going to the environment by 2060 while staying within the 1.5°C goal under the Paris Agreement. Also important at the top of the hierarchy are the safe and sustainable redesign of materials, products, and services, as well as reuse, repair, repurpose, and remanufacture.

	The essential use criteria, as defined in the Montreal Protocol, and sustainability criteria, which are necessary in addressing the Triple Planetary Crises of climate change, biodiversity loss, and pollution, should be part of criteria-based approaches for plastic products. In particular, social and economic sustainability, regenerative and restorative circularity, transparency, and traceability should play a role. Note that the criteria should apply not just to all plastics but to plastic alternatives (bio-based plastics, biodegradable plastics) and non-plastic substitutes as well. The criteria-based approach proposed by the Nordic Council of Ministers (Ref: K. Raubenheimer and N. Urho, Global criteria to address problematic, unnecessary and avoidable plastic products, Nordic Council of Ministers, Copenhagen, 2024) takes into consideration hazards (whether or not a product contains chemicals or polymers of concern), emission generation (including the generation of micro and nano plastic pollution), impediments to circularity, and lack of transparency, in addition to the availability of alternative practices and designs, and the availability of non-plastic substitutes. A simple decision hierarchy is also proposed, with the goals of reducing plastic production and sustainable and safe management of plastics. A life-cycle approach guided the selection of criteria, recognition of variations across countries, and the range of plastic products already banned or restricted by 141 countries, plus 33 countries that have banned or restricted one or more plastic polymers or monomers for particular applications. The criteria-based approach of the Ellen MacArthur Foundation's Global Commitment, adopted by many governments and businesses (Ref: Identification of chemicals and polymers of concern as well as problematic and avoidable plastic products: Policy briefing to inform the INC discussions on a Global Plastics Treaty, Business Coalition for a Global Plastics Treaty, January 17, 2023), incorporates health and environmental hazards; the inability of problematic plastic products to be reused, recycled, or composted in practice and at scale; hindrances or disruption posed by plastic products to recycling; products that can be "avoided" or replaced by a reuse model; and having a high likelihood of ending up in the natural environment. The Norwegian Research Council report (Ref: M. Wagner, L. Monclús, H.P.H. Arp et al. State of the science on plastic chemicals – identifying and addressing chemicals and polymers of concern, 2024; http://dx.doi.org/10.5281/zenodo.10701706) proposes a conceptual framework that combines hazards with sustainability and circularity criteria, including leachate toxicity, the release of micro- and nano-plastics, climate and resource use impacts, chemical and material complexity, the potential for reuse/repair/repurposing, etc., life span (durability and inertness), capacity for safe recycling, beneficial degradability in certain applications, waste generation, and emissions to nature. Yet another criteria-based approach is one where "problematic" and "avoidable" sets of criteria are separately defined. The "problematic" criteria involve the likelihood of causing harm to the environment, biodiversity, or human health during its lifecycle (i.e., the likelihood of emitting harmful by-products, emissions, or releases; likelihood of product, by-product, emissions, or releases from the product entering an environment where the environment and biodiversity are susceptible to harm, the latter consisting of ingestion by animals and organisms, animal entanglement, and being littered; and the product disrupting circularity) while the "avoidable" criteria entail non-essentiality and the ability of the product to be replaced or its design improved to increase durability, reusability, refillability, refurbishability, and capacity to be repurposed and recycled. (Ref: Proposal by the United Kingdom and Thailand, on problematic and avoidable plastic products, 2024). Last but not least, a criteria-based conceptual approach to identify polymers of concern involves evaluating a spectrum of plastic impacts on health and the environment across their life cycle, while considering feasibility, costs, environmental, social, and economic implications of alternative materials, as described by Suh et al. (Conceptual framework for identifying polymers of concern, Frontiers in Sustainability 5, 2024). 4.b. Non-criteria-based approaches Non-criteria-based approaches lack the clarity and rigor of a science-based framework and would lead to inconsistent, uneven, and even contradictory results. Because they are not linked to science-based criteria, they are open to broad interpretation and may lead to confusion. Moreover, non-criteria-based approaches would result in a rigid regulatory framework that hinders the use of updated scientific evidence as scientific knowledge and understanding advance with time. A possible non-criteria-based approach might be to define problematic plastic products according to their being subject to national regulations. However, plastic products regulated by national and regional regulations are inconsistent with each other. To prevent fragmented and contradictory regulation, science-based criteria-based approaches should be preferred. Another non-criteria-based approach would be creating Annex lists of polymers of concern or of problematic plastic products according to vaguely defined categories without reliance on any specific criteria. Lack of scientific criteria would subject the annex lists to conflicting perspectives revolving mostly around political expediency rather than scientific merit and robust scientific evidence. Such non-criteria-based approach would not permit flexibility and responsiveness of an ILBI to evolving scientific understanding, increased weight of evidence, new technical innovations, or emerging technologies. They would nullify the role of an independent science panel as a subsidiary body under the ILBI.
Singapore	a. Criteria or types of criteria It is good to have a common global understanding of what "problematic and avoidable" plastic products mean. That said, application of this common understanding has to be country specific, and nationally determined.

	This is because whether a plastic product fulfils the criteria to be “problematic” and/or “avoidable” would need to take into consideration the application of the product in local contexts rather than just based on its inherent characteristics alone. What would count as “problematic” and/or “avoidable” would differ from country to country, depending on national circumstances (e.g. waste management capabilities), and the availability of environmentally sound and economically viable alternatives that do not result in problem shifting between environmental crises along the supply chain. b. Non criteria based approaches An alternative to criteria based approaches would be to consider broad global guidelines. Guidelines can serve as guidance for countries to develop their own nationally determined criteria to assess whether products are “problematic and avoidable” within their national contexts. This can achieve the same goal of providing clarity in definition and ensuring some level of consistency, while leaving room for practical application in local contexts and national circumstances. Compared to global criteria, global guidelines are more practical as they can be tailored to suit local contexts.
Costa Rica	2.a. Criteria or types of criteria Material Composition o Type of Polymer: Classifying plastics based on the type of polymer (e.g., PET, HDPE, PVC, LDPE, PP, PS). This method helps in identifying the recycling potential and environmental impact of different types of plastics. o For problematic and avoidable plastics, Costa Rica suggests taking into account: In the EPS, PS, PVC, PVDC, PETG, Oxo- degradable products. o Additives: Identifying plastics based on the presence of additives such as plasticizers, stabilizers, and flame retardants, which can affect their recyclability and toxicity. Product Lifecycle o Single-Use vs. Durable: Differentiating between single-use plastics (e.g., straws, cutlery, packaging) and durable plastics (e.g., furniture, electronics). Single-use plastics are often targeted for reduction due to their high waste generation and environmental impact. o End-of-Life Pathways: Classifying plastics based on their end-of-life management options (e.g., recyclable, compostable, landfill, incineration). Environmental Impact o Degradability: Identifying plastics based on their ability to degrade in the environment (e.g., biodegradable, compostable, non-degradable). This criterion is crucial for assessing the long-term environmental impact of plastic products. o Fragmentability o Ecotoxicity: Classifying plastics based on their potential to release harmful substances into the environment during degradation. Usage and Functionality o Packaging vs. Non-Packaging: Differentiating plastics used for packaging from those used in other applications. Packaging plastics are often a major focus due to their prevalence in waste streams. o Food Contact vs. Non-Food Contact: Classifying plastics based on their suitability for food contact applications, considering potential health risks associated with plastic leaching. 2.b. Non criteria based approaches Regulatory Approaches o Bans and Restrictions: Implementing outright bans or restrictions on specific plastic products known to cause significant environmental harm (e.g., plastic bags, microbeads). o Extended Producer Responsibility (EPR): Requiring producers to take responsibility for the entire lifecycle of their products, including post-consumer waste management. Economic Instruments o Taxes and Levies: Imposing taxes or levies on certain plastic products to discourage their use and promote alternatives (e.g., plastic bag levies). o Subsidies for Alternatives: Providing financial incentives for the development and use of environmentally friendly alternatives to conventional plastics. Voluntary Agreements o Industry Commitments: Encouraging voluntary commitments from industry stakeholders to reduce plastic production, improve recycling rates, and develop sustainable products. o Public-Private Partnerships: Fostering collaborations between governments, businesses, and NGOs to address plastic pollution through innovative solutions and shared goals.
The European Union and its 27 Member States	4.a. Criteria or types of criteria: Regarding the rationale, for defining these criteria for the identification of plastic products, one should focus, in the context of the treaty, on those plastic products that have a negative impact on the environment or health on one side, or impedes the circularity on another. For the identification of products as problematic under the ILBI, we should use screening criteria, meaning simple criteria that should be fulfilled to identify the product as such. Those criteria should be non-cumulative (meaning the fulfillment of just one of those criteria is enough to identify the plastic product as problematic). Two sets of criteria could be defined.

	The first set of criteria should be used as a first filter, to identify the products considered as problematic, as such, a first sorting would be done and the products that would not be problematic would not be impacted by possible restrictive measures under this provision. They should be based on global evidence and existence of national or regional regulations with regards to these plastics, and notably linked to negative impacts on the environment (for example the likelihood of being littered in the environment or the propensity of products to rapidly break down into microplastics as well as disruption of circularity (for example products that are not reusable or hamper recyclability). A second set of criteria should be used as a second filter, and would define globally avoidability of problematic plastic products while allowing some exemptions at national level. It should be based on the availability of alternatives (like elimination, substitution ...). Alternatives should include alternative designe or products (such as reusable alternatives or products made from other materials), alternative practices (like new business models taking into account social acceptance). Those criteria have been developed based on several sources notably: - Proposal ("CRP") by the United Kingdom and Thailand, on problematic and avoidable plastic products - The 'Towards Ending Plastic Pollution by 2040' by the Nordic Council of Ministers - The business coalition ("Policy briefing on Identification of chemicals and polymers of concern as well as problematic and avoidable plastic products") - EU-Single Use Plastics Directive including the corresponding impact assessment 4.b. Non-criteria based approaches: We have some difficulties envisaging non criteria-based approaches for the identification or classification of plastic products, as it is not clear what is meant by 'Non-criteria based approaches'. If no criteria are established, it could be done in an arbitrary way. However, a non-scientific or non-evidence-based approach must be avoided. Not all plastic products can be addressed in this way under this instrument, this is why identification, classification, sorting of those is a must. It would allow all the Parties to implement suitable measures for each product/group of products. Without common agreed criteria, it is not possible to identify, at the global level, a plastic product as problematic and to assess its avoidability. Moreover, in the absence of global criteria or lists, no level playing field can be achieved for companies leading to market distortions, extra costs and providing no visibility to the industry to plan for required investments to develop circular economy and alternative business models and that will impede the scaling-up of such investments. Screening criteria and the resulting listing for plastic products are crucial as a first step for the implementation of the different provisions of the treaty but also for the possible future restrictive measures to put in place.
United Kingdom	4.a. Criteria or types of criteria Identification of a product as problematic and avoidable could be defined against criteria. This could include a list of criteria to assess whether a product is problematic and a further list to assess whether a product is avoidable. If a product meets one or more of the 'problematic criteria', such as negatively affecting the quality or safety of the end product of recycling, it would be defined as problematic. If a product meets one or more of the 'avoidable criteria', such as the problematic plastic component being removable from the product without significantly impeding its functionality, it would be defined as avoidable. This approach is designed to promote global alignment and direction, while retaining the flexibility to act against problematic items which may not be avoidable globally. Criteria for identifying problematic and avoidable plastic products, could draw on existing work including: • the informal technical dialogues co-led by Brazil and the UK (report available here); • the Nordic Council of Ministers report which suggests criteria for identifying plastic products by three distinct classifications1 • learnings from voluntary initiatives, including best practice and standards outlined in The Ellen MacArthur Foundation Global Commitment,2 work by the Business Coalition for a Global Plastics Treaty,3 and work by the Global Plastics Pact Network, which is convened by the Ellen MacArthur Foundation and WRAP and includes the UK Plastics Pact, the first Plastics Pact to be established.4 EMF has highlighted how a global set of criteria could provide businesses with more clarity and confidence to incentivise research and development efforts towards alternative solutions and to (re)direct public and private investments towards the establishment of recycling systems for the remaining plastics to work at scale. In conjunction with scaling up reuse models and recycling infrastructure for the remaining plastics, this would allow a systemic shift to a circular economy and reduce concerns about the safety and quality of recycled plastics. For Chemicals, establishing criteria based on the chemical and physical composition of plastic products to regulate the use of certain polymers, additives, or toxic substances. Any criteria or non-criteria approach should be informed by science and well evidenced using life cycle assessments to evaluate any environmental and health impacts of plastic products from production to disposal. For example, classify products based on their overall environmental footprint, including factors like energy use, greenhouse gas emissions, and waste generation. 4.b. Non criteria based approaches As a general comment it is unclear what is meant by non-criteria approaches. We look forward to understanding from members what non-criteria approaches could be considered in the ILBI. One example of a non-criteria-based approach could be a listing approach. We believe a criteria could be complementary to any listing approach. For example, a two-list approach could be used to promote global alignment and direction, while retaining the flexibility to recognise that some problematic items may not be avoidable globally. In this approach, one list would contain products that were problematic and avoidable, and the second list would contain products that were problematic but not globally avoidable.

	Both criteria and non-criteria approaches could be used to identify problematic and avoidable plastic products that parties could take measures to restrict - such as bans on the production, sale, distribution, import, or export of the products in the list of problematic and avoidable products. References: (1) Global Criteria to Address Problematic, Unnecessary, and Avoidable Plastic Products, Nordic Council of Ministers, (hereafter 'Nordic Council of Ministers Report'), available at https://norden.divaportal.org/smash/record.jsf?pid=diva2%3A1833207&dswid=-2708. (2) The Global Commitment 2022 (https://www.ellenmacarthurfoundation.org/global-commitment-2022/overview) (3) Identification of chemicals and polymers of concern as well as problematic and avoidable plastic products, Policy briefing to inform the INC discussions on a Global Plastics Treaty, Business Coalition for a Global Plastics Treaty, available at Business Coalition policy briefing - Restrictions and phase outs | Shared by New Plastics Economy (https://emf.thirdlight.com/link/f91ftilv95x-v9ppz/@/preview/1?o) (4) Eliminating Problem Plastics, The UK Plastics Pact, available at Eliminating-problem-plastics-v4.pdf (https://wrap.org.uk/sites/default/files/2022-02/Eliminating-problem-plastics-v4.pdf)
Federated States of Micronesia	Criteria, types of criteria, and/or non-criteria-based approaches for regulating plastic products under provision II.3 of the instrument include, but are not necessarily limited to: 1) whether the plastic products are single-use; 2) whether the plastic products are short-lived in their usage; 3) whether the plastic products: 4) whether the plastic products disproportionately contribute to plastic pollution in natural environments, especially in the marine environment; 5) whether the plastic products pose a high degree of environmental leakage; 6) whether the plastic products have properties that may hinder their safe and environmentally sound management; 7) whether the plastic products contain or could rapidly break down into microplastics; 8) whether the plastic products impede or have components that impede reusability, repairability, recyclability, and disposability; 9) whether there are alternative products that increase the avoidability of the plastic products; and 10) whether the plastic products are particularly prevalent among and/or harmful to Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories.
Saudi Arabia	Criteria or types of criteria: Saudi Arabia does not agree on criteria or any type of criteria with regards to plastic products. Non criteria based approach: 1- Saudi Arabia preferred option: Option Zero (No provision) 2- Saudi Arabia alternative option: Non-criteria-based approaches should be context-specific and implemented through national plans, allowing countries to tailor their strategies to their unique circumstances and capacities. Mainly focusing on the waste associated with plastic products and not the product itself, following the mandate of UNEA resolution 5/14, and limiting any deviations and unrelated additions. Parties should avoid the listing of products, without acting upon finding solutions and best practices related to all means of waste management, and recycling including advanced recycling. Parties should also promote improvement of product design allowing countries to take advantage of the contributions of plastics to human wellness and development. Member states should adopt a risk-based approach based on scientific and reliable references to determine/classify what constitutes a problematic plastic product, considering safety, sustainability, and national waste management context. Simplifying terminology in this manner will facilitate clearer, more productive agreements and support the implementation of effective solutions suitable to each country's national waste management context. Approach: National Waste Management Context • Rationale: The ILBI should ensure that national plans assess whether plastic products contribute to national waste management issues or require resources beyond their capacity. • Implementation: National plans should include evaluations of the impact of plastic products waste on local waste management systems, aligning with national priorities and capacities. • Reference: National waste management plans and strategies. By focusing on national waste management context, the ILBI can ensure that measures are contextually appropriate, and nationally controlled. This approach respects national sovereignty while promoting global consistency and sustainability in managing waste of plastic products.
United States	There are several multilateral environmental agreements (MEAs) that employ criteria and non-criteria based approaches that can inform the Expert Group's discussions about potential approaches that could be used to either identify products that are considered problematic and avoidable or to consider measures that can be taken to address such products. We see the Minamata Convention as a possible reference point for both of these approaches as Annex A, Part 1, identifies a list of products that Parties agree should not be allowed to be produced, imported, or exported after a certain date and Annex 2, Part 2, provides a list of measures that can be taken by a Party to address a product for which production, import, and export is allowed to be continued. Context is an important consideration that informs when to apply, and how to structure, such approaches. Criteria and non-criteria based approaches should be focused, specific, scientifically based, and easily implementable. Non-criteria based approaches can provide additional flexibility

	by being more easily adaptable to a range of national and local contexts and regulatory systems and can be applied to a broader range of products. It would be helpful to understand the context, diversity and effectiveness of such approaches that are applied across different MEAs.
Ecuador	2.a. Criteria or types of criteria Problematic Potential risk or hazard on human health and environment linked to the intrinsic properties by presence of chemicals of concern as well as its use or substances or hazardous emissions and releases on stages of life cycle. Ref. https://pubmed.ncbi.nlm.nih.gov/34030416/ Possibility of the product breaking down into microplastics. Ref. https://www.sciencedirect.com/science/article/pii/S2405844020311464 ; https://www.redalyc.org/journal/4263/426365043004/html/ It can't be reused, refilled, recyclable, in other words disrupts circularity. Ref. https://www.researchgate.net/publication/370110359_Post-Consumer_Plastic_Waste_Management_From_Collection_and_Sortation_to_Mechanical_Recycling Avoidable 1. The product's use is not essential. 2. The product can be replaced or there is a non-plastic alternative. 2.b. Non criteria based approaches It is considered that everything must be based on criteria and methodologies.
Ethiopia	A. Criteria or Types of Criteria Criteria-based approaches rely on specific measurable characteristics to identify and classify plastic products. Here are some potential criteria that could be reflected in the ILBI: 1. Chemical Composition and Structure: • Plastics polymer type (e.g., PET, HDPE, PVC). Because different types of plastics have different environmental impacts and degradation rates. • The chemical structure, which includes categories such as thermoplastics, thermosets, and elastomers. To understanding the behavior of plastics under different conditions, which is crucial for recycling and waste management strategies. https://www.aimplas.net/blog/plastics-identification-and-classification/ Rationale: Different types of plastics have varying impacts on marine ecosystems, depending on their durability, tendency to fragment, and potential for toxic chemical leaching (UNEP, 2016). 2. Physical Properties: • Density, color, transparency, and size can aid in identification and classification of plastic products. • The polarity of plastics, determined by the presence of electronegative atoms, influences their physical properties. Mechanical resistance, heat resistance, and chemical resistance, which are important factors in the lifecycle assessment of plastic products. Rationale: These properties help in understanding the transport, distribution, and impact of plastics in marine environments (Gewert et al., 2015). 3. Origin and Use: • the origin (e.g., packaging, fishing gear, consumer goods) and intended use of the plastic product can provide insights into its potential impacts and sources. Plastics applications, such as packaging, automotive, construction, and medical uses. This classification aids in identifying the most relevant regulatory measures for different sectors. • Rationale: Understanding the purpose of plastic products helps in devising targeted strategies for reduction, reuse, and recycling (Rochman et al., 2013). 4. Lifecycle Assessment (LCA) • a lifecycle assessment approach allows for the evaluation of environmental impacts from raw material extraction to disposal. This method can guide the classification of plastics based on their sustainability and environmental footprint, aligning with the ILBI's goals. https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100472.pdf B. Non-Criteria-Based Approaches Non-criteria-based approaches involve methods useful for identification and classification by: 1. Source Tracking: Using methods such as forensic analysis (e.g., chemical markers, isotopic signatures) to trace the origin of plastic products. Rationale: Source tracking helps in identifying responsibility and developing targeted measures for reducing plastic pollution (Geyer et al., 2017). 2. Modeling and Simulation: Utilizing modeling techniques (e.g., oceanographic models, transport simulations) to predict the behavior and distribution of plastic products. Rationale: Modeling provides insights into the movement and accumulation of plastics, aiding in effective management and mitigation strategies (Maximenko et al., 2012). 3. Impact Assessment: Assessing the environmental and socio-economic impacts of plastic products to prioritize the management actions. Rationale: Impact assessment guides decision-making by highlighting the most critical issues and areas for intervention (Galgani et al., 2013).

	4. Stakeholder Engagement: Involving stakeholders (e.g., industry, NGOs, local communities) in monitoring and reporting plastic pollution. Incorporating input from various stakeholders, including industry experts, environmental organizations, and policymakers, lead to a more holistic approach. This engagement ensures that the criteria reflect practical realities and challenges faced in the management of plastic products. Rationale: Collaborative efforts enhance data collection, awareness, and compliance with regulations, supporting effective implementation of policies (Jambeck et al., 2015). https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/ 5. ISO Standards: - The adoption of ISO standards provides a common vocabulary and framework for the classification of plastics. These standards are developed through a consensus process and are regularly updated to reflect current knowledge. https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100472.pdf 6. Technological Methods: - Advanced identification techniques, such as Near Infrared (NIR) spectroscopy, offer real-time, non-destructive analysis of plastic materials. This method allows for the classification and verification of plastics without extensive sample preparation, making it suitable for recycling processes and industrial applications. https://www.iris-eng.com/plastic-identification-and-classification/ 7. Data-Driven Approaches: - Utilizing machine learning algorithms for classification can enhance the accuracy of identifying polymer types, especially when dealing with spectrally similar materials. This approach can provide flexibility and adaptability in the identification process. https://www.iris-eng.com/plastic-identification-and-classification/ Conclusion • The identification and classification of plastic products under the ILBI can benefit from a combination of criteria-based and non-criteria-based approaches. By integrating chemical, physical, and application-based classifications with advanced technological methods and stakeholder input, the ILBI can effectively address the complexities of plastic pollution and promote sustainable practices
Uruguay	Criteria or types of criteria The criteria to establish if whether a plastic product could be considered problematic, unnecessary or avoidable should be based on a determination of a product's function or end-use, including the impacts on human health, and whether it is deemed essential or not. Also, they should permit the development of effective control measures to each classification. Below, the proposed criteria are grouped by key concerns: • Problematic products refer to products which have adverse impact across the life cycle of the products (environmental and human health): o The product contains chemicals or polymers of concern that represent a health or environmental hazard; o The product releases chemicals of concerns during its intended use; o The product is falsely promoted to be biodegradable; o The product is non-recyclable or disrupts recyclability as per established is mentioned in point 8a of this questionnaire ; o The product lacks data to determine safety to the environment and human health across the full life cycle. • Unnecessary plastic products refer to products with a function that is not essential because they do not provide significant added value to society: o Feasible and safe modified/alternate practices are available or possible that eliminate the need for the plastic product; • Avoidable plastic products refer to products with a function that is essential, but demand for the product can be reduced through non-plastic substitutes, alternate designs and alternate practices: o A feasible reuse or refill business model is available or can be developed; o A feasible remanufacture business model exists or can be developed; o The product can be produced using a non-plastic substitute material, taking into account a life cycle assessment; o Options for improved resource efficiency exist or can be developed, including extending the longevity of the product. The publication "Global criteria to address problematic, unnecessary and avoidable plastic products", published by the Nordic Council of Ministers 2024, is a good basis to take as a reference for the development of this type of criteria. Non criteria based approaches There is no clarity on the meaning of a non criteria based approach
Chile	*Disclaimer: This document does not represent the official position of Chile in this negotiation. The purpose is to provide a scientific-technical perspective that will serve as an input to the technical debate that will take place throughout the work between sessions. The entire document does not undermine or prejudge Chile's position in others International Forums. 2.a. Criteria or types of criteria Criteria-Based Approaches Chemical Composition and Additives:

The chemical makeup of plastic products is a fundamental criterion for classification. This involves identifying the presence of hazardous chemicals such as phthalates, bisphenol A (BPA), and heavy metals. Plastics containing more than 0.1% of these hazardous substances by weight should be classified as high-risk. Additionally, the use of recyclable additives is crucial, as certain additives can hinder the recycling process. Plastics that incorporate additives compatible with recycling processes are preferable, ensuring a closed-loop lifecycle for materials. Identifying and restricting hazardous chemicals, such as certain flame retardants, UV stabilizers, PFASs, phthalates, and bisphenols, which are prevalent in many plastic products. These chemicals are prioritized due to their toxicity and potential to migrate or be released during the product lifecycle.

By Polymer Type

o Thermoplastics: These plastics can be melted and re-molded multiple times. Examples include:

§ Polyethylene (PE): Used in plastic bags, bottles, and containers.

§ Polypropylene (PP): Found in automotive parts, textiles, and reusable containers.

§ Polyvinyl Chloride (PVC): Used in pipes, cable insulation, and clothing.

§ Polystyrene (PS): Common in disposable cutlery, containers, and packaging foam.

§ Polyethylene Terephthalate (PET): Widely used in beverage bottles and synthetic fibers.

o Thermosets: These plastics harden irreversibly after being molded once. Examples include:

§ Epoxy Resins: Used in coatings, adhesives, and composite materials.

§ Polyurethane (PU): Found in foam seating, insulation panels, and wheels.

§ Phenolic Resins: Used in electrical insulators and heat-resistant handles.

By Physical Properties

§ Flexible Plastics: Such as Low-Density Polyethylene (LDPE) used in films and bags.

§ Rigid Plastics: Like High-Density Polyethylene (HDPE) used in milk jugs and detergent bottles.

§ Elastic Plastics: Such as elastomers found in rubber bands and flexible seals.

By Chemical Composition

§ Polyolefins: Including polyethylene and polypropylene.

§ Vinyls: Like polyvinyl chloride.

§ Polyesters: Including PET and polybutylene terephthalate (PBT).

§ Acrylics: Such as polymethyl methacrylate (PMMA).

§ Polyamides: Known as nylons, used in textiles and engineering plastics.

By Application

§ Packaging Plastics: Such as PET for bottles, PE for bags, and PP for containers.

§ Building and Construction Plastics: Like PVC for pipes and fittings.

§ Automotive Plastics: Including various types used for dashboards, bumpers, and panels.

§ Medical Plastics: Such as polycarbonate and polyethylene used in medical devices and packaging.

§ Consumer Goods Plastics: Like PS in disposable items and toys.

By Environmental Impact

§ Biodegradable Plastics: Such as polylactic acid (PLA), which breaks down more quickly than conventional plastics.

§ Non-Biodegradable Plastics: Like most traditional thermoplastics and thermosets that do not easily decompose.

§ This criterion is related with wide presence in the environment.

By primary plastic polymers, which are widely used in various applications due to their versatile properties, include the following:

Polyethylene (PE)

• High-Density Polyethylene (HDPE): Known for its high strength-to-density ratio, HDPE is used in products like milk jugs, detergent bottles, and plastic bags.

• Low-Density Polyethylene (LDPE): Known for its flexibility, LDPE is used in applications like plastic films, bags, and squeezable bottles.

Polypropylene (PP): PP is known for its resistance to chemicals, elasticity, and toughness. It is commonly used in automotive parts, textiles, reusable containers, and various household products.

Polyvinyl Chloride (PVC): PVC is used in both flexible and rigid forms. Rigid PVC is used in construction for pipes and fittings, while flexible PVC is used in applications like cable insulation, inflatable products, and vinyl flooring.

Polystyrene (PS)

• Expanded Polystyrene (EPS): Commonly known as Styrofoam, EPS is used for insulation and packaging materials.
• General Purpose Polystyrene (GPPS): Used in disposable cutlery, CD cases, and various packaging applications.
Polyethylene Terephthalate (PET): PET is widely used in the manufacture of beverage bottles, food containers, and synthetic fibers for textiles.
Polycarbonate (PC): Known for its high impact resistance and transparency, polycarbonate is used in applications like eyewear lenses, medical devices, and compact discs.
Polyamide (Nylon):Nylon is used for its high strength and elasticity in applications like textiles, automotive components, and industrial parts.
Acrylonitrile Butadiene Styrene (ABS): ABS is valued for its toughness and impact resistance, making it suitable for products like LEGO bricks, automotive parts, and electronic housings.
Polylactic Acid (PLA): PLA is a biodegradable polymer derived from renewable resources like corn starch. It is used in packaging, disposable tableware, and biomedical applications.
Polyurethane (PU): PU is versatile, being used in foam seating, insulation panels, elastomeric wheels, and tires.
Sources:
• UNEP Chemicals in Plastics Technical Report: Provides comprehensive details on the various chemicals and polymers used in plastic products, highlighting their properties and applications (UNEP - UN Environment Programme).
• American Chemistry Council: Offers detailed information on the types and uses of various plastic polymers.
• Plastics Europe: An industry association providing extensive resources on the different types of plastics and their applications.
Presence of Hazardous Chemicals: Identify and classify plastics containing hazardous substances such as phthalates, BPA, and heavy metals.
Threshold: Plastics with more than 0.1% of these hazardous substances by weight.
Use of Recyclable Additives: Classify plastics based on the type and recyclability of additives used.
• Threshold: Preference for plastics with additives that do not hinder recycling processes.
Recyclability, Reusability and End-of-Life management: Recyclability is a key criterion in determining the sustainability of plastic products. This includes evaluating the actual recycling rates of different plastics in practice. Plastics with high recyclability rates (over 70%) are considered more sustainable, while those with low rates (below 30%) may need to be phased out or replaced. Moreover, biodegradability is an important factor, particularly for single-use plastics. Plastics that can biodegrade fully within a specified timeframe, such as six months in industrial composting conditions, are more environmentally friendly. Designing products with materials and structures that facilitate easy recycling and reuse. This includes the use of mono-materials or easily separable components, and ensuring that products are durable enough for multiple uses.
o Biodegradability: Assess the rate at which the plastic degrades in natural environments. Identify and classify plastics based on their biodegradability under industrial or natural conditions
§ Threshold: Non-biodegradable plastics or those that degrade into harmful microplastics should be prioritized for reduction or elimination. Fully biodegradable within a specified timeframe (e.g., 6 months in industrial composting).
o Recyclability and Recycling rate: Determine the ease and efficiency of recycling the plastic. Classify plastics based on their actual recycling rates in practice
§ Threshold: Plastics with low recyclability rates or those that contaminate recycling streams should be replaced with more recyclable alternatives. High (>70%), Moderate (30-70%), Low (<30%) recyclability
In this point, it is important to take into account general criteria such as Durability, Reparability and Essential uses.
Environmental Impact: The environmental footprint of plastic products spans their entire lifecycle, from production to disposal. One critical aspect is the carbon footprint, which measures the greenhouse gas emissions associated with the plastic. Plastics with a low carbon footprint (less than 1 kg CO_2 per kg of plastic) are preferred. Additionally, the potential for plastics to fragment into microplastics is a significant concern. Plastics with a high propensity to form microplastics pose risks to marine life and ecosystems and should be avoided or replaced with more stable alternatives. Assessing the overall environmental footprint of plastic products, from raw material extraction to end-of-life disposal. Products designed to minimize environmental impact through reduced resource use and lower emissions are favored.
o Carbon Footprint: Evaluate the carbon emissions associated with the lifecycle of the plastic.
§ Threshold: Low (<1 kg CO_2/kg plastic), Moderate (1-3 kg CO_2/kg), High (>3 kg CO_2/kg).
o Potential for Microplastic Formation: Classify plastics based on their propensity to fragment into microplastics.
§ Threshold: High, moderate, or low potential for microplastic formation. Human Health Impact: The impact of plastics on human health and safety is another crucial criterion. This involves assessing the toxicity of plastics and their potential to release harmful chemicals. Plastics that leach toxic substances, such as endocrine disruptors or carcinogens, pose significant health risks. Products should be tested for toxicity, with those exhibiting high levels of harmful chemicals being classified as hazardous. Furthermore, the exposure risk to humans, particularly through direct contact or ingestion, must be evaluated. Plastics used in food contact materials, medical devices, and children's products should meet stringent safety standards.
o Toxicity: Identify the presence and potential release of harmful chemicals during the lifecycle of the plastic (e.g., phthalates, BPA, heavy metals).
§ Threshold: Plastics containing or releasing toxic substances that pose significant health risks should be eliminated or replaced with safer options.
o Exposure Risks: Evaluate the potential for human exposure to harmful chemicals through direct contact, ingestion, or inhalation.
§ Threshold: High-exposure plastics, particularly those used in food contact materials, medical devices, and children's products, should be scrutinized and potentially replaced.

References for Criteria-Based Approaches
1. Material Durability and Safety

• European Commission. (2020). A European Strategy for Plastics in a Circular Economy.
• American Chemistry Council. (2021). Plastic Material Properties.
2. Design for Ease of Cleaning
• Food Packaging Forum. (2021). Design for Reuse.
• International Journal of Environmental Research and Public Health. (2018). Sanitization of Reusable Plastic Items.
3. Modularity and Repairability
• Ellen MacArthur Foundation. (2017). Circular Design Guide.
• Sustainable Packaging Coalition. (2020). Modular Design in Packaging.
4. Standardization of Components
• ISO. (2019). Standards for Sustainable Development.
• Journal of Cleaner Production. (2016). Standardization and Modularization in Product Design.

2.b. Non criteria based approaches

Non-Criteria Based Approaches
• Best Practices and Recommendations: Promoting general best practices for plastic product design and manufacturing without strict compliance requirements. This can include industry-led initiatives and voluntary standards.
o Promote industry-specific best practices for plastic use, focusing on reducing environmental impact without strict regulatory thresholds.
o Encourage voluntary commitments from industries to phase out harmful plastics and adopt sustainable alternatives.
o Industry-Specific Guidelines: Develop and promote best practices tailored to different industrial sectors. These guidelines can help industries minimize environmental impact and improve sustainability without the need for stringent regulations. For example:
o Packaging Industry: Encourage the use of lightweight and recyclable materials, reduce excessive packaging, and promote reusable packaging solutions.
o Healthcare Industry: Adopt practices to minimize single-use plastics and implement recycling programs for medical waste.
o Food and Beverage Industry: Encourage the use of biodegradable and compostable materials for single-use products.

• Lifecycle Assessments: Encouraging comprehensive full lifecycle assessments to understand the environmental impacts of plastic products and inform better design and material choices.
o Conduct comprehensive full lifecycle assessments to identify the environmental impacts of plastic products from production to disposal.
o Use these assessments to guide industry practices and inform consumers about the environmental footprint of different plastics.
o Comprehensive Environmental Impact Assessments: Conduct lifecycle assessments (LCAs) to evaluate the environmental impact of plastic products from production to disposal. LCAs can help identify areas for improvement and guide decision-making.
o Production: Assess the environmental footprint of raw material extraction, polymerization, and manufacturing processes.
o Usage: Evaluate the environmental impact during the product's use phase, including potential health risks and energy consumption.
o End-of-Life: Analyze disposal methods, including recycling, landfilling, and incineration, to determine the most sustainable options.
o Public Reporting and Transparency: Encourage companies to publish the results of their LCAs and be transparent about their environmental impact. This can foster accountability and encourage continuous improvement.

• Incentive Programs: Implementing programs that provide incentives for companies to innovate and adopt sustainable practices, such as tax breaks, subsidies, or recognition schemes for environmentally friendly products.
o Implement incentive programs to encourage the use of sustainable plastics and the development of recycling infrastructure.
o Provide tax breaks, subsidies, or recognition for companies that adopt environmentally friendly plastic products.
o Financial Incentives: Implement programs that provide financial benefits to companies adopting sustainable practices. These can include:
§ Tax Breaks and Subsidies: Offer tax reductions or subsidies for companies that use recyclable or biodegradable plastics, invest in recycling infrastructure, or develop innovative sustainable materials.
§ Grants and Funding: Provide grants or funding for research and development of new sustainable materials and technologies.
o Recognition and Awards: Establish awards and recognition programs to celebrate companies that demonstrate leadership in sustainability. This can include:
§ Eco-Labels and Certifications: Develop eco-labels or certifications for products that meet high environmental standards.
§ Sustainability Awards: Organize annual awards to recognize companies making significant contributions to reducing plastic waste and promoting sustainability.

• Economic Feasibility
o Cost of Alternatives: Assess the cost implications of replacing the plastic with more sustainable alternatives.
§ Threshold: Alternatives should be economically viable for producers and consumers, considering the potential for economies of scale and long-term cost savings.
o Impact on Industry and Jobs: Evaluate the economic impact on industries and employment.
§ Threshold: Replacement strategies should aim to minimize negative economic impacts and support a just transition for workers in affected industries.

• 4. Technical Performance
o Material Properties: Ensure the alternative material meets the required performance standards (e.g., strength, durability, flexibility).
§ Threshold: Alternatives should provide comparable or superior performance to ensure functionality and consumer acceptance.
o Innovation and Availability: Assess the availability and maturity of alternative technologies.
§ Threshold: Preference should be given to readily available and scalable alternatives that can be quickly adopted.
Material Properties and Performance: The physical properties and performance characteristics of plastics determine their suitability for various applications. Durability is a key factor, with plastics classified based on their expected lifespan and resistance to wear and tear. Long-lasting plastics (over five years) are generally preferred for durable goods, while short-lived plastics (less than one year) are more appropriate for single-use applications. Strength and flexibility are also important, ensuring that the plastic can meet the performance requirements of its intended use.
o Durability: Classify plastics based on their expected lifespan and resistance to wear and tear.
§ Threshold: Long-lasting (over 5 years), Medium (1-5 years), Short-lived (less than 1 year).
o Strength and Flexibility: Evaluate and classify plastics based on their mechanical properties.
§ Threshold: High, medium, or low strength and flexibility.

References for Non-Criteria Based Approaches
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2. Lifecycle Assessments (LCAs)
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• Journal of Industrial Ecology. (2018). LCA of Reusable Plastic Products.
3. Consumer Education and Engagement
• National Geographic. (2019). Consumer Guide to Reusable Plastics.
• GreenBlue. (2020). Engaging Consumers in Reuse.
4. Incentive Programs
• Ellen MacArthur Foundation. (2021). Incentive Systems for Reusable Products.
• Resource Recycling Systems. (2019). Deposit-Refund Systems and Reuse.

Additional References for Specific Applications and Interrelations
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• PlasticsEurope. (2020). Lightweight Packaging.
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• World Health Organization (WHO). (2016). Medical Device Regulations.
• Journal of Industrial Ecology. (2018). LCA of Medical Devices.
Consumer Electronics
• Ellen MacArthur Foundation. (2017). Circular Design Guide.
• GreenBlue. (2020). Engaging Consumers in Reuse.
Waste Management and Recycling Infrastructure
• UNEP. (2021). Global Waste Management Outlook.

	Extended Producer Responsibility (EPR) • OECD. (2016). Extended Producer Responsibility. Environmental Health and Safety • European Chemicals Agency (ECHA). (2020). Chemicals and Plastic Additives.
State of Kuwait	2.a. Criteria or types of criteria 1) Taking into consideration the existing international instruments: • Stockholm Convention on Persistent Organic Pollutants • Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade • Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal • Strategic Approach to International Chemicals Management (SAICM) • Inter-Organization Programme for the Sound Management of Chemicals (IOMC) • International Conference on Chemicals Management (ICCM) • Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste (GFC) 2) Risk based assessment approach 2.b. Non criteria based approaches Non-criteria based approaches could include: 1) Zero Option (no text in the instrument) 2) Identification of “problematic” plastic products at the national / domestic level 3) Not to have one criteria to distinguish plastic products, neither based on origin (synthetic or natural) nor degradation route (bio-based, non-degradable, etc.).
Peru	We believe we should base on the criteria set out by the Global Commitment. These criteria include: 1.It is not reusable, recyclable or compostable in practice and at scale (as per the Global Commitment definitions). 2.It contains, or its manufacturing requires, hazardous chemicals that pose a significant risk to human health or the environment (applying the precautionary principle). 3.It can be avoided (or replaced by a reuse model) while maintaining utility. 4.It hinders or disrupts the recyclability or compostability of other items. 5.It has a high likelihood of being littered or ending up in the natural environment In addition, others relevant criterias we should considered are: Biodiversity - If the product has a propensity to be ingested by animals and microorganisms and - If the product has a propensity to create entanglement Others consideratios: - When assessing the possibility of replacing it with an alternative material, the effects of switching to different materials, such as CO2 emissions and land use, should be taken into account.
India	2 a) The criteria based approaches has to be inclusive of all the significant and relevant factors in the life cycle of plastic products • Criteria or types of criteria for the identification/classification of plastic products It is not practical to have a common global list of criteria related to identification of problematic as well as avoidable plastics products. Such a list of criteria is context specific and is necessarily linked with national circumstances and capabilities of countries. Any listing of criteria has to be coupled with availability, accessibility and sustainability of alternatives as well as their social, economic, and environmental impacts. The scope of such an exercise is determined by UNEA 5/14 resolution. A global mandate on list of criteria is not feasible.

	Any classification of products and further regulation shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. The scientific body of the instrument can develop a guidance on the subject following due process which is inclusive, transparent and balanced based upon global experience and best practices. The Guidance needs to be adopted by parties to the instrument in the Governing Body of the instrument. The Guidance can be used by parties to the instrument, on a voluntary basis in a non- binding manner, based upon national circumstances and capabilities and national regulations. The implementation of any compliance provision needs to follow the principle of CBDR. Further, provision for exemptions on use of plastic products used in identified sectors such as health, defence, food and water security, agriculture where substitution with alternatives is not practicable, needs to be created based upon national circumstances. India has banned identified single use plastic products with effect from 1st July 2022 which high littering potential / adverse environmental impact and low utility based upon a comprehensive study and stakeholder engagement. The approach adopted is given below: A. Utility 1. Hygiene: This aspect is connected to conditions or practices that help to maintain health and prevent disease by preventing contamination. Both rigid and flexible packaging (i.e., film) are used for packing/delivering food and non-food items. For food and pharma packaging, barrier properties and aroma retention is also important. The level of hygiene required is dependent on end-use. 2. Product safety: The packaging is designed to ensure (a) integrity of the product, (b) protection of product against adulteration, counterfeiting, pilferage and spillage (c) safe delivery till it reaches the end user (d) retention of properties as required, reduction of wastage. 3. Essentiality: Whether product is essential for the intended use and whether affordable is available. 4. Social impact: It is the effect of products on the wellbeing of the society. It is related to lifestyle and/or fraction of population using the product. 5. Economic Impact: It is related to the plastic industry and therefore the consumption of plastics for the specific application. The influence of product on the total value chain is also considered. B. Environmental adverse impact 1. Collectability: It is related to ease of collection, and amount of waste being collected. If more waste is collected, less will be seen in litter. Scattered and contaminated waste, as well as small- size and light weight is difficult to be collected. 2. Recyclability: It is related to prevalent rate of recycling (mechanical, chemical and thermal). 3. End of Life (EoL) solutions: It is related to suitability and availability of technology for end of life solutions such as alternate use, use in bitumen road, use in cement-kiln, energy recovery etc. 4. Impact of alternative on the environment: This factor is related to availability, affordability and impact of any possible alternative on environment. Reference may be made to Life Cycle Assessment of alternatives. 5. Littering Propensity: This factor is related to litter caused by the product and found in public places, remote places, villages, tourist spots, seas, beaches, roads, rivers and water bodies, waste water streams etc. 2 b) Non criteria based approaches for the identification/classification of plastic products
State of Qatar	Section II.3 deals with the problematic, avoidable, and single use plastics along with intentionally added microplastics. 2.a. Criteria or types of criteria: The draft text of the ILBI suggests dealing with these plastics based on the national circumstances, therefore, each country should be allowed to develop its strategy to deal with these plastics. 2.b. Non criteria based approaches: Each Party should be able to identify and decide upon the problematic plastics according to their national circumstances, capacities and capabilities. The Parties should be allowed to evaluate the alternatives based on the criteria of availability, affordability, environmental impact and other socio-economic considerations etc. A prescriptive approach towards dealing with the problematic plastics would hamper economic growth and create unnecessary burden upon the developing economies. Manufacturers across the world have been forthcoming in avoiding 'avoidable plastics' for instance, the use of microbeads in cosmetics and personal hygiene products. However, the consideration for the alternatives to the problematic plastics should take precedence over the avoidable plastics when sustainable and efficient alternatives are being evaluated. What is required in dealing with single used plastics (SUPs) is a mind-set change of the public at large. If the demand exists there will be a supply and market for these products. Unless there is behavioral change among the people and plastic waste management is not fixed, little can be done for these plastic products. Moreover, a consensus-based definition for the SUPs is required to identify and deal with such plastics as what qualifies a SUP. There is ambiguity surrounding what could be termed as a SUP and this should be left to the Parties to define and deal with the SUPs according to their national circumstances.

Islamic Republic of Iran	Iran response: Before going to the substance and respond to the questionnaire, it is necessary to highlight some of the key findings of UNEP report of 2023 regarding the plastic pollution and the hazards attributed to the chemicals used in plastic products: • More than 13,000 chemicals have been identified as associated with plastics and plastic production across a wide range of applications. • Extensive scientific data on the potential adverse impacts of about 7,000 substances associated with plastics show that more than 3,200 of them have one or more hazardous properties of concern, (Iran: but it is not clear which of them are above the permissible levels). • In contrast, the other over 6,000 chemical substances associated with plastics, both for intentional and non-intentionally added ones, remain poorly characterized with large data gaps in the public domain regarding their potential adverse impacts on humans and ecosystems, or even their chemical identities. • Approximately 70% of all plastic waste exports were originating from high-income countries, mostly to low-income countries in East Asia and the Pacific. In the receiving countries, however, only a fraction of the imported plastic waste is recycled, whereas the majority is discarded in dumpsites or littered in the environment. • Testing chemicals for their various physicochemical and (eco) toxicological properties … requires substantial resources in terms of time, money, personnel and availability of adequate methods, as well as suitable test species. However, even under the EU REACH list, the problem of missing or highly uncertain data on the properties of many chemicals persists and has been identified as a major challenge to the successful implementation of the regulation (Page 36 of UNEP report). • Overall, the first important consequence of these testing difficulties and uncertainty is that for many chemicals no test data are available at all, and this in turn often leads to incorrect conclusions (Page 36 of UNEP report). Further, it is of critical importance to mention that countries circumstances in terms of climate, life patterns and the types of plastic products which they may use/consume as well as the possible impacts and the level of impacts of the plastic products, if any, on their environment and the health of their people varies significantly. These facts implies that there is no parity visa vi even the permissible level of impacts and the concerns related to possible hazardous of plastic pollution, the release of plastic wastes and migration of microplastics. Therefore, no single pathway to address plastic pollution could fit all across the world. Accordingly, each country should make its own science-based criteria, policies, decisions and arrangements. Iran Response: The Criteria and Non-Criteria based Approaches including: - Using the terms ‘problematic‘ and ‘avoidable’ to describe plastic products is not recommended, as these two adjectives are context-dependent and vary by location, circumstances and socio-economic factors in each country since. It is more accurate to specify the particular criteria that determine the concern regarding plastic products. Further, the Resolution UNEA 5/14, does not categorize plastic products as ‘problematic’ and/or ‘avoidable’. Therefore, in accordance with some other MEAs such as Basel Convention, when it comes to refer to plastic products and waste management, we prefer to use the term ‘concern’ in place of ‘problematic’ and ‘avoidable’. - In identification of the criteria for product design, it is essential to consider the differences in characteristics and methods of use and applications of plastic products in each country together with national circumstances, capacities and capabilities for recycling and waste management, the technologies for producing plastic products and the availability of recycling materials. Consequently, each country needs to set its own standards for designing, uses and applications of plastic products and take appropriate measures for the identification of relevant criteria. [RM1] - Similarly, defining single-use and short-live plastics products and identifying their alternatives must be nationally driven, based on unique national circumstances and socio-economic needs of each country. Furthermore, the impact of the alternatives on human health, environment and socio-economic life of countries must be thoroughly evaluated and assessed. Accordingly, there could not be a one-size-fits-all pathway including a global list of single-use and short-lived plastic products to be banned, instead advocating for a more nuanced approach that acknowledges the distinct requirements of each country. - In the Resolution UNEA 5/14, the primary objective is to reduce plastics pollution, which originates from mismanagement of plastics products waste. Therefore, the future instrument shall mobilize the world efforts to focus on increasing the recyclability and reusability rate which will play a vital role in substantially minimizing the pollution from plastic wastes. In this regard, utilizing diversified technologies such as Advanced Recycling/Chemical Recycling in the upper bound and Mechanical Recycling in downstream, aligned with product design improvement for better recyclability and reusability, shall be at the core of this instrument’s focus. - In addressing the concerns on plastics products, their application and the product value chain should be taken into consideration, as each product application should first prioritize increasing the recycling and reusing rate and secondly should consider and compare the alternatives impacts and national socio-economic circumstances for making the proper decisions. - In the decision-making process, members should take into account the following factors in order to avoid discrimination against plastic products vis-à-vis products made of alternative materials (i.e. not only alternative plastics, but also those products made of other materials such as paper, aluminum, glass, etc.): ü Availability: the technical and technological capacities and capabilities of countries and the relevant industry to produce alternatives in the required volumes, as well as the national climatic, resources and infrastructural circumstances in order to accommodate various types of alternatives. ü Accessibility: the ability of member states including the consumers to obtain the required volume of alternative materials and substances in the market in an unhindered manner, ü Affordability: which should be measured in terms of costs of the alternative materials and the consumers’ income and ability to pay for purchasing those materials, ü Environmental impact of the alternative, which should be considered throughout its full life cycle.

And finally, domestic regulators in setting necessary rules and regulations should take due account of the entire set of scientific data and evidences gathered through a national process of scienced based researches and studies and public consultations about the proposed measures and the socio-economic effects of the restrictive measures on the use of plastic products.

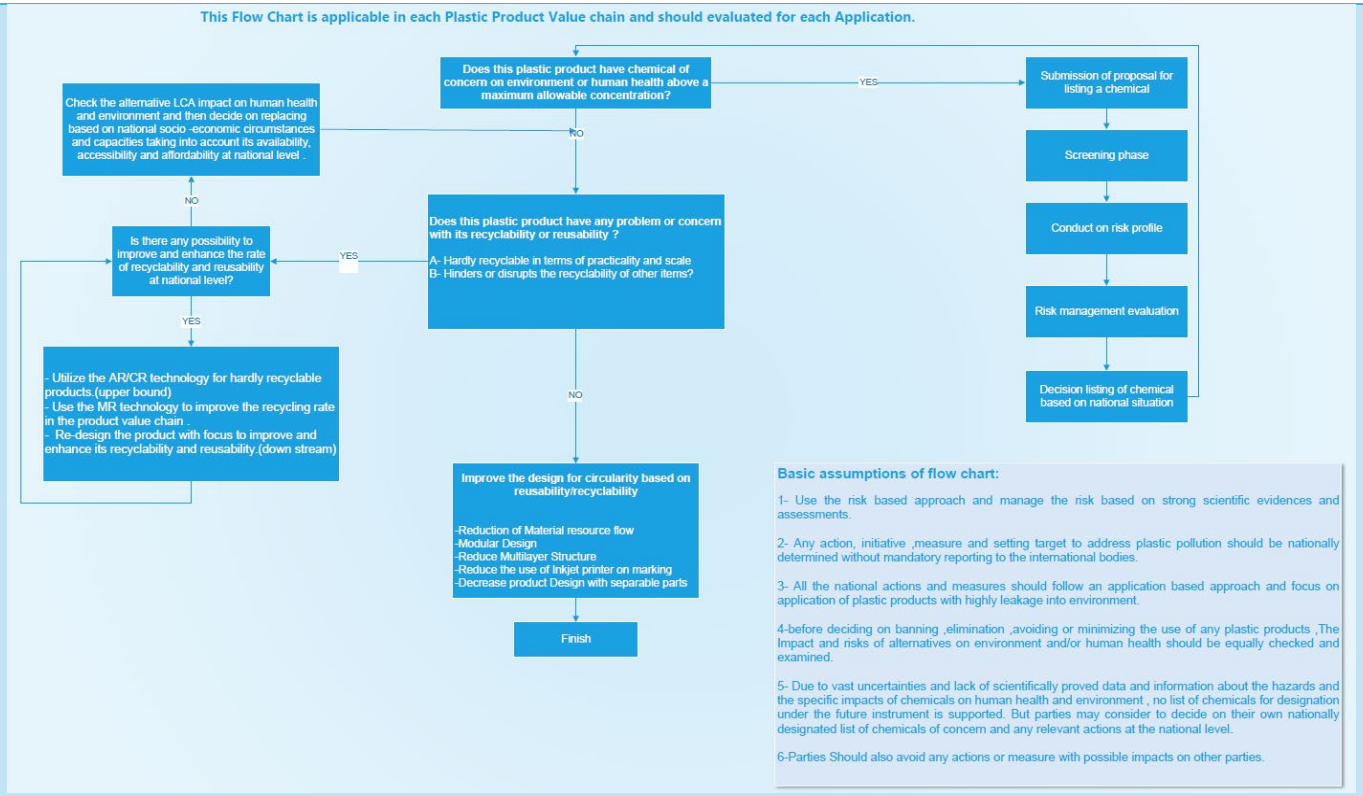
2.a. Criteria or types of criteria:

Iran Response:
For Criteria based Approaches, the first step is to identify concerns regarding plastic products based on the national circumstances, needs and challenges of each country and taking into account a risk based approach and strong scientific evidences. These criteria include:
- Being Hardly recyclable in terms of practicality and scale;
- Hinders or disrupts the recyclability of other items during the recycling process and reusing cycle;
- Oxo-degradable Plastic Products

Next, focus should shift to improving and enhancing the rate of recyclability and reusability of plastic products at the national level. This approach could be achieved by accelerating Advanced Recycling/Chemical Recycling in Upper bound and utilizing updated Mechanical Recycling technology in downstream processes. In parallel, it is recommended to optimize the design in order to better manage plastic uses and promoting their reusability, recyclability and functionality. If these actions reach maturity based on national capacities, capabilities and circumstances, the impact of the alternatives shall be compared with the existing plastic products using LCA analysis in order to make appropriate decisions.
- Having said that, regulating plastic products of concern must be nationally driven and in accordance with national circumstances, capacities and capabilities of each country. Accordingly, the decisions on the actions, initiatives, measures and plans of actions, setting targets and any respective control measures should all be nationally-determined.

2.b. non-criteria-based approaches:
Iran Response:
For non-criteria-based approaches, decision making process should involve the following steps:
- A risk assessment framework shall be formed at the national levels to enable decision makers to identify what hazards may possibly be present, assess potential exposures to that hazard, and determine the extent of the risks to health or the environment, while taking existing precautions and regulatory structures of the country into account.
- The cost of measures in transition to better management and regulating the possible concern related to some plastic products should be assessed by each country and financial and technical assistance together with technology transfer shall be made available through an independent dedicated fund to the developing countries based on the principle of common but differentiated responsibilities.
- Each Party taking into account its national circumstances, capacities and capabilities as well as its regulatory frameworks and development priority needs shall be encouraged to take measures, as appropriate, to implement the future Instrument in good will and takes into account the strong scientific evidences which present a highly demonstrated risk of concern by plastic products to human health or the environment;
- Any restriction on the use and application of plastic products shall assure that those restrictions have no impacts on other applications.
- In transition to better management and regulation of plastic products and the possible concerns, flexibility shall be considered in particular for each of the developing country Parties to pursue their own approaches, pathways and solutions taking into account their national circumstances, capacities and specific needs and challenges as well as the principle of common but differentiated responsibilities and respected capabilities;
- If a plastic product raises concern/s, the given country should first take the necessary measures to manage the pollution by increasing the recycling rate, either through upstream (AR/CR) or downstream MR. In parallel, efforts should be made to optimize the design of the product in order to manage and enhance plastic use, to promote better reusability, recyclability and functionality of the products. Upon maturity of these actions, and if a country decides to shift to any alternative plastic product or alternative materials to be used in production of plastic products, the decisions should be made nationally and based on the national capacities, capabilities and circumstances of each country supported by a comparison of the impact of those alternatives with the existing plastic product using LCA analysis.

Proposed decision Tree for all 3 subjects in Contact group 2:



Switzerland

It is not entirely clear to us what the difference is between a criteria-based approach and a non- criteria-based approach. For the purposes of this survey, we interpret a non-criteria based approach as one that does not require explicit criteria in the treaty text indicating how the listed problematic plastic products were identified for control measures in the treaty.

Under a non-criteria-based approach, an initial list (Annex) could be developed based on the activities and initiatives already undertaken in the public and/or private sector to move away from certain plastic products. Many initiatives globally have eliminated some plastic products or are restricting their use. Thus, building on what is already being done to start with initial lists of problematic plastic products to be further refined and included in the instrument when adopted could be an opportunity and a good starting point. Building upon this list, the INC can identify the best combination of approaches to ensure the effectiveness and efficiency of the instrument. To this end, an update mechanism must be defined in the instrument that enables the listing of problematic plastic products (see detailed information under 2b).
Recent efforts to develop criteria for identifying problematic plastic products demonstrate striking similarities, and thus, could inform an initial list, or be used to update and expand the initial list over time. These criteria for future additions could be developed for consideration at the first Conference of the Parties (COP). The key point here is that all these activities are moving in the same direction. It is not a question of whether the underlying rationales at national level or in the private sector for the existing regulatory landscape are fully consistent.

2.a. Criteria or types of criteria
If a criteria-based approach is applied, we need to find a set of criteria for identifying plastic products on a global level that are simple to apply. In the Conference Room Paper (CRP) on an initial list of problematic and avoidable plastic products submitted by Georgia, Peru, Rwanda, Switzerland and Thailand, criteria have been applied to outline an initial list of problematic and avoidable plastic products considered for

elimination (see initial_plastic_products_list_georgia_peru_rwanda_switzerland_thailand.pdf (unep.org). The criteria rely on the five slightly modified elimination criteria used by the Ellen MacArthur Foundation in the context of the Global Commitment1 with the addition of intentionally added microplastics as a sixth criterion as the starting point for developing an initial list of plastic products. The criteria need to be in a format so that they can evolve over time, as scientific knowledge increases. The COP should therefore have the opportunity to formalise the criteria at a later stage. Having the criteria in a COP decision and not as an integral part of the Treaty (such as an annex or the core text) will allow for flexibility to evolve the criteria over time and to decide on future work.

Other work conducted and evaluations undertaken (for example first and second UK-Brazil dialogue, see links below), differentiate between two categories of criteria: criteria for "problematic plastic products" and criteria for "avoidable plastic products". With regard to applicable control measures if, according to the criteria, a product is both problematic and avoidable, it should be phased out. If a product is problematic, but not avoidable, it should be redesigned.

Criteria for "problematic plastic products" describe products that have negative impacts on the environment or health (e.g. fragmentation into microplastics, animal entanglement, high likelihood for being littered) or disrupt circularity (e.g. not reusable or recyclable in practice and at scale, hinders the recyclability of other items). Criteria for "avoidable plastic products" indicate whether alternate practices or designs (e.g. reuse system, alternative materials or service2) are available for a product.

However, the discussions have shown that a large number of detailed criteria can lead to lengthy discussions and/or disagreements between the parties and can shift the focus from targeting to complicated criteria management. The focus should therefore be on the initial list of plastic products.

2.b. Non criteria based approaches
Non criteria-based approaches could build up on a criteria-based approach for an initial evaluation or be solely based on the non criteria-based approach.
As noted above, a non-criteria based approach would build on what is already being done. For the initial lists, we do not anticipate the need for detailed criteria development or underlying technical analyses. However, we do anticipate that consideration must be given to how additions to the list are made over time. This could take the form of a forward-looking mechanism in the text of the agreement that enables the listing of plastic products that are deemed problematic and/or avoidable. The mechanism might include:
• Mechanism for introducing criteria if needed, and updating the criteria and list over time;
• Ingredient disclosure requirements to assist future prioritization efforts; and
• Coordination with sector-specific programs of work (fishing gear, agriculture) which may identify problematic plastic products within these sectors.
• A time-limited exemption and process similar to Article 6 of the Minamata Convention on Mercury may be envisaged.

There are other more complicated approaches which could be considered:
• Conduct an assessment to compare alternatives (e.g. compare environmental impact of single-use versus reuse systems). Switzerland has for ex., conducted an assessment for beverage containers to find the best packaging option for each beverage.

• Systematic assessment process to evaluate applications, e.g., sector-by-sector, and find the best product/system options.
o Step 1: Identify the applications where plastic products create a significant negative environmental or health impact. Example application:
§ "Take-away of hot beverage" -> single use plastic cups are problematic as they often end up in the environment and lead to a high use of primary material.
o Step 2: For each significant application, identify alternative options for products and associated systems. Example options for the application "take-away of hot beverage":
§ plastic cup (single-use)
§ paper cup (single-use)
§ plastic cup (reuse system)
§ metal cup (reuse system)
o Step 3: Assess the environmental and socio-economic impacts of available options,
compare the results to find the best option.
o Step 4: Define measures (e.g. phase-out, redesign and sectoral harmonization, set reuse target) in order to promote the best option.

References:
1 The Global Commitment 2022 (ellenmacarthurfoundation.org)

	Report of the first UK-Brazil dialogue: Evaluation of potential criteria for identifying chemicals and polymers of concern and problematic plastic products | circulareconomy.earth | Chatham House Report of the second UK-Brazil dialogue: Criteria classification decision trees for problematic and avoidable plastic products | circulareconomy.earth | Chatham House Below graphic illustrates the application of the criteria and control measures.
Madagascar	Based on the search results, there are several potential criteria types and non-criteria based approaches that could be reflected in the ILBI for the identification and classification of plastic products: 4.a. Criteria or types of criteria Recyclability and reusability of plastic products Chemicals of concern in plastic products Avoidability of plastic products (i.e. whether alternatives exist) Necessity of plastic products (i.e. whether they are truly necessary or can be eliminated without replacement) 4.b. Non criteria based approaches Considering the entire life-cycle of plastic products, from production to waste management Adopting a "start and strengthen" approach, where products initially deemed avoidable could later be reclassified as unnecessary Focusing on sustainable production and consumption through product design, environmentally sound waste management, efficient use of resources, and circular economy approaches
The state of Israel	the criteria should lead to two types and lists of product groups: 1. Products to be managed and reduce 2. Products to be removed from the market. The criteria are: A. their existence in the open and public area (sea, coasts, streams, parks and city streets), based on local or regional analysis. B. The product can be replaced with a product with a reduced potential for reaching the open public space. C. Products that create an environmental hazard, for example the accumulation of wet wipes in sewage systems. The principle should include the replacement of replaceable products that harm the environment, or an optimal design and management of non-replaceable products. 4b List of non-criteria: The tool needs to develop criteria, by which on their basis a list of products should be initiated - such as first disposable plates, cutlery, straw and bags, which have already strict legislation in the EU.
Brazil	Brazil favours a criteria-based approach to tackling problematic and avoidable plastic products with a view to protecting the environment and human health. Besides agreed criteria, the ILBI needs to account for national and local circumstances.
Australia	General comments The approach taken to identify or classify plastic products under the ILBI should be practical and implementable internationally without lowering ambition. A criteria-based approach to identifying problematic and avoidable plastic products would provide greater policy and business certainty through a consistent regulatory framework. 4a. Criteria or types of criteria In determining the criteria applicable, the ILBI should: Aim to phase out or eliminate those plastic products that contribute most to plastic pollution. Single use plastic products with a high potential to be released into the environment should be prioritised under the ILBI. The rationale is that the majority of plastic waste comes from single-use plastic products, which often have adverse releases across the life cycle due to improper collection or disposal. Take a sectoral approach for determining criteria applicable to problematic plastics would allow for flexibility when addressing problematic plastics which have no viable alternatives. Enable a more circular economy through a criteria-based approach that identifies non-recyclable materials on a sector-by-sector basis, with exemptions applying to essential plastics where there is no viable alternative. Criteria will need to effectively identify: chemicals and groups of chemicals in plastic and plastic articles, and problematic and avoidable plastic articles that pose the highest risk of: - harm to human health; - harm to the environment; and/or

	- being unmanageable or hindering circularity at the end of life. There will also need to be criteria to determine the level of action required. In particular, whether the risks and mitigation options are such that: - management action options are insufficient to protect the global environment - provided the importing or producing country implements appropriate management action, the risks can be managed down to acceptable levels. Criteria could draw from criteria used to regulate products and articles that many countries have already established trade-related plastic measures for. The list could be built on through guidance to be adopted by the governing body. Plastic product priority phase out: For instance, in relation to criteria for problematic plastic products, the report produced by the Nordic Council of Ministers on 'Global criteria to address problematic, unnecessary and avoidable plastic products' (https://www.norden.org/en/publication/global-criteria-address-problematic-unnecessary-and-avoidable-plastic-products) provides useful guidance on plastic products that may be a priority for phase out or other solutions development. Best practice criteria such as those in the above report and the 'Guidelines to government signatories on target setting and progress reporting for Global Commitment area A' (https://emf.thirdlight.com/link/3r4wjvo55x9d-94pvat/@/#id=2) address environmental pollution, harmful chemicals, and impediments to circularity, such as product reuse and materials recovery. Australia's national experience is that while common criteria may apply, the degree to which a particular product is considered problematic can vary based on local factors (i.e. litter rates, ease of access to recycling services). Broader considerations: Similarly, these documents provide guidance on how to consider social, economic and environmental impacts when taking action on avoidable or unnecessary plastic products. Criteria for these plastic products can also consider availability of alternate practices, technologies or materials. Annex F [Information on socio-economic considerations] of the Stockholm Convention (https://chm.pops.int/TheConvention/Overview/TextoftheConvention/tabid/2232/Default.aspx) provides best practice in considering control measures, for instance, by extending consideration of alternatives to include socio-economic factors taking into account the capability and conditions of parties. While common criteria may apply, the degree to which a particular product is considered avoidable or unnecessary could vary based on local factors (i.e. viability, cost of alternatives, efficacy, risk). Scale of intervention: Establishing problematic and unnecessary criteria can support both national and collective international action. National action can extend beyond treaty obligations, but could usefully be supported by a common set of criteria. For example, Article 3 of the Stockholm Convention sets out certain expectations for how national systems will regulate chemicals with the characteristics of POPs (but not listed). Where it is agreed that a plastic product is globally problematic and unnecessary, it may be suitable for listing for application of global bans and trade measures. To enable both under a future treaty, there may need to be framework (or specific conditions) for when a plastic product is considered to meet the criteria on a global basis. 4b. Non criteria based approaches Although non criteria based approaches may be encompassed under the ILBI, the primary objective in regulating plastic products should be consistent with the overarching objective of the ILBI to protect human health and the environment from the adverse effects of plastic pollution. Non criteria based approaches, such as targets, have been found to be too vague or insufficient from the discrete actions required to effect change. High level targets not attributable to individual organisations can also lead to a loss of accountability; for instance, where an industry body is responsible for administering the scheme. Nonetheless, non-criteria based approaches such as incentives or education to achieve behavioural change, targeting both companies and consumers, could be useful to maximise the environmental benefits of action on problematic plastics. For instance, potentially unnecessary plastic products not otherwise considered problematic may be candidates for voluntary phase outs, contributing to objectives of reduced plastic consumption.
Guatemala	It is recommended that one of the inputs to consider as a starting point may be the document "BREAKING DOWN HIGH-RISK PLASTIC PRODUCTS, ASSESSING POLLUTION RISK AND ELIMINATION FEASIBILITY OF PLASTIC PRODUCTS", Published in May 2023 by WWF, which is found in the link: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://wwfint.awsassets.panda.org/downloads/wwf_breaking_down_high_risk_plastic_products.pdf
Indonesia	Integrating quantitative analysis with criteria based and non-criteria approach forms a broad set of classification guidelines that can be used to identify, sort and classify plastic products. The balanced approach guarantees that economic growth through the consumption of plastics is not made at the expense of environmental sustainability, which promotes inclusive and sustainable development. The following approach principles suggested by Nordic Councils of Ministers[1] can be followed: • Consider the full life cycle of products. • Includes a wide range of products.

• Maintain flexibility to capture new products.
• Differentiate between the three classifications of problematic, unnecessary, and avoidable plastics.
• Avoid overlap with criteria for hazard/of concern and sustainable design.
• Not be limited by lack of information, technology, or economic feasibility.
• Stimulate innovation.
• Recognize variations in waste management and leakage rates.
• Act in isolation to foster focused and effective solutions.

4.a. In addition, the approaches should consider national capability including economic and technology level with qualitative and quantitative indicator

Proposed Criteria:
1. Usage and Functionality
• Single-Use vs. Multi-Use: Differentiate products intended for single use versus those designed for multiple uses including clear definition about “single-use” plastic.
• Product Life Span: Consider the expected duration of use and durability of the plastic product.
• Suggested Reference: Initial data from UNEP publication, "Single-Use Plastics: A Roadmap for Sustainability,"[2] can be used for further discussion.

2. End-of-Life Management
• Recyclability: Classify based on the recyclability of the plastic product, including existing recycling processes and infrastructure. The recyclability rank of plastic products and the recycling capability rank of country should be developed. This approach is necessary to develop a fair instrument for countries with different recycling capabilities.
Biodegradability: Classify plastics based on their biodegradability or compostability under specific conditions.
• Suggested References: [3][4]

3. Environmental and Health Impact
• Ecotoxicity: Assess the potential harm of plastic products on marine and terrestrial ecosystems.
• Carbon Footprint: Evaluate the lifecycle greenhouse gas emissions associated with the production, use, and disposal of the plastic product.
• Environmental and Health Risks: Classify based on the potential risks to human health and the environment, considering factors like toxicity, persistence, and bioaccumulation.
• Risk Management: Develop criteria for managing identified risks, including mitigation measures and safe disposal methods.
• Suggested References: [5] [6]

4. Economic Impact
• Employment Generation: Classify plastics based on their role in job creation, particularly in manufacturing, recycling, and waste management sectors.
• Market Value: Identify plastics that contribute significantly to the economy through their market value and demand.
• Added value chain: Identity the added value chain created from plastic products to other industries
• Suggested References: [7]

5. Local Industry Support
• SMEs: Highlight plastics essential for small and medium enterprises, which are crucial for economic growth and employment in developing countries.
• Local Production vs. Import (national/region level criteria): Differentiate between locally produced plastics and imported ones to encourage domestic production and reduce dependency on imports. Evaluations of economic and environmental impacts must be conducted fairly using quantitative data. While few attempts have been made so far, existing methodologies provide a robust foundation for further discussion and refinement [7], [8]. Accurate, data-driven assessments are crucial for informed decision-making and effective policy implementation.

4.b. Proposed non-criteria Approaches: The core idea is to empower each country to set its own priorities and timelines in alignment with existing national regulations and policy goals, such as reducing marine pollution, achieving zero waste, or transitioning to a circular economy. The global instrument should acknowledge the unique circumstances of each country. Providing sufficient time for internal consolidation with stakeholders ensures all relevant parties are engaged, leading to a smooth and effective transition. This tailored approach respects national contexts while promoting global environmental and economic sustainability.

	References [1] K. Raubenheimer and N. Urho, Global criteria to address problematic, unnecessary and avoidable plastic products. Nordic Council of Ministers, 2024. [2] United Nations Environment Programme, Single-use Plastic: A Roadmap for Sustainability.UNEP. 2018. [3] U. Salahuddin, J. Sun, C. Zhu, M. Wu, B. Zhao, and P. Gao, "Plastic Recycling: A Review on Life Cycle, Methods, Misconceptions, and Techno-Economic Analysis," Adv. Sustain. Syst., vol. 7, no. 7, Jul. 2023, doi: 10.1002/adsu.202200471. [4] G. Faraca and T. Astrup, "Plastic waste from recycling centres: Characterisation and evaluation of plastic recyclability," Waste Manag., vol. 95, pp. 388–398, Jul. 2019, doi: 10.1016/j.wasman.2019.06.038. [5] ECHA, Chapter R.7a Endpoint specific guidance, no. 4. 2017. [6] M. Mudersbach et al., "Life Cycle Assessment in a Nutshell—Best Practices and Status Quo for the Plastic Sector," Macromol. Rapid Commun., Nov. 2023, doi: 10.1002/marc.202300466. [7] A. Gambarin, MAPPING THE PLASTICS VALUE CHAIN A FRAMEWORK TO UNDERSTAND THE SOCIO- ECONOMIC IMPACTS OF A PRODUCTION CAP, no. April. Oxford Economics, 2024. [8] M. Cordier, T. Uehara, B. Jorgensen, and J. Baztan, "Reducing plastic production: Economic loss or environmental gain?," Cambridge Prism. Plast., vol. 2, p. e2, Jan. 2024, doi: 10.1017/plc.2024.3.
Iraq	2.a. Criteria or types of criteria The criteria should be built upon the following two factors: A. The lifespan of the plastic product, and it's associated impact on Environment B. Health impact of the plastic product depending on (uses , polymer type and additives) • It should not enter the human food chain for both food and drinks. • It has no health effects on humans in other ways, such as contact, inhalation, or others. C. Environmental degradability. Examples of plastic products to focuses on: • Packaging products Bags like: trays, containers, food packaging film. • Water and juice bottles. • Shampoo bottles, milk bottles, freezer bags, ice cream containers. • Cutlery, plates, cups • Protective packaging, hot drinks cups. Notes: A. That restricting of use should not be direct, but rather gradual and encouraging, after providing the alternative product. B. In addition, the life cycle of the plastic product must be studied, starting from production to the landfill process or the final fate of the product to diagnose any impact on health and the environment or any economic effect on people and on governments. 2.b. Non criteria based approaches No Answer
The Republic of BURUNDI	• temperature ; • the cohesion of the polymers; • the modification of the molecular mechanical properties of polymers; • their processing conditions. Other possible classifications: according to their origin (natural, artificial and synthetic polymers), their physico-chemical family (thermoplastics, thermosetting, thermostable, elastomers), their structure [linear (or one-dimensional) and three-dimensional polymers]
Germany	The identification and classification of plastic products under the International Legally Binding Instrument (ILBI) can be approached through various criteria-based and non-criteria-based methods. Each approach has its own set of advantages and challenges, which can significantly impact the effectiveness of plastic management strategies. Criteria-Based Approaches Criteria-based approaches rely on specific, measurable standards to classify plastic products. These criteria can include: 1. Material Composition

	Definition: This criterion focuses on the chemical makeup of plastic products, categorizing them based on their polymer types (e.g., polyethylene, polypropylene, polystyrene). Importance: Understanding material composition is crucial for recycling processes and environmental impact assessments. 2. Product Functionality Definition: Classification based on the intended use or functionality of plastic products (e.g., packaging, automotive parts, consumer goods). Importance: This helps in identifying products that may contribute significantly to pollution or waste generation. 3. Environmental Impact Assessment Definition: Evaluating plastics based on their lifecycle impacts, including production emissions, degradation rates, and toxicity. Importance: This approach aids in prioritizing materials that are more sustainable or pose lower risks to ecosystems. 4. Regulatory Compliance Definition: Classifying plastics according to compliance with existing regulations and standards (e.g., food safety regulations for packaging). Importance: Ensures that only compliant materials are used in sensitive applications, protecting public health. 5. Recyclability Definition: Assessing plastics based on their ability to be recycled effectively within existing systems. Importance: Promotes circular economy practices by encouraging the use of recyclable materials. Non-Criteria Based Approaches Non-criteria based approaches do not rely strictly on predefined metrics but rather consider broader contextual factors. These may include: 1. Stakeholder Engagement Definition: Involving various stakeholders such as manufacturers, consumers, and environmental organizations in the classification process. Importance: This participatory approach ensures diverse perspectives are considered, leading to more comprehensive classifications. 2. Market Trends Analysis Definition: Observing market dynamics and consumer behavior regarding plastic usage and disposal. Importance: Helps identify emerging trends that could influence future classifications and regulatory needs. 3. Innovation Tracking Definition: Monitoring advancements in material science that lead to new types of biodegradable or alternative plastics. Importance: Encourages adaptation of classification systems to incorporate innovative solutions that reduce reliance on traditional plastics. 4. Socioeconomic Factors Definition: Considering economic implications such as cost-effectiveness and accessibility when classifying plastic products. Importance: Ensures that classifications are practical for implementation across different regions with varying economic capabilities. 5. Cultural Contexts Definition: Recognizing how cultural attitudes towards plastic usage influence classification systems. Importance: Acknowledges that perceptions of sustainability vary globally; thus classifications should be adaptable to local contexts. Conclusion In summary, both criteria-based and non-criteria based approaches play vital roles in the identification and classification of plastic products under the ILBI framework. The integration of these approaches can enhance understanding and management strategies related to plastic pollution while promoting sustainable practices across industries.
The Government of Canada	Clear, consistent and shared global criteria to identify and address problematic and avoidable plastic products and chemicals of concern in plastic products and to enable circular design of plastics will play an important role in ending plastic pollution. This preventative approach will improve sustainable consumption and production and reduce plastic waste and pollution from the start. A harmonized and consistent approach in these areas will protect the environment and human health from plastic pollution, as well as support the enjoyment of a clean, healthy and sustainable environment. It will also help to level the playing field, trigger the market signals to guide investments and spur innovation, and bridge the current patchwork of approaches at the sub-national, national, and regional levels. The following proposals reflect science and research and build on approaches adopted by existing multilateral environmental agreements and other initiatives. 4a. Criteria or types of criteria Approach:

	• The international legally binding instrument on plastic pollution (ILBI) would benefit from establishing clear criteria to identify "problematic" and "avoidable" (or "unnecessary") plastic products. The criteria would help to tailor ILBI measures to different types of plastic products (e.g., eliminate, phase-out or restrict certain plastic products identified through the established criteria). Potential Process: • As with other multilateral environmental agreements (MEAs), such as the Rotterdam and Stockholm Conventions, assessments of candidate products against the ILBI's criteria could be carried out by an expert body created as a subsidiary body to the ILBI's governing body. The expert body could then recommend the listing of assessed products to the governing body, which would make the final decision on each listing. The ILBI could also set out the process for a Party to submit a proposal to the governing or expert body to review a plastic product or category of plastic products in accordance with the established criteria and within the mandate of the treaty (e.g., building on a similar approach to that under the Stockholm Convention). The expert body could also recommend changes to the ILBI's criteria for adoption by the governing body, to ensure the criteria remain relevant and evidence and science-based over time, taking into account scientific knowledge, including Indigenous knowledge, and uses and applications. • As with other MEAs, the ILBI should include exemptions for certain uses or applications (e.g., to address a lack of suitable environmentally sound and viable alternatives, meet accessibility needs for people with disabilities and medical needs, and enable continued use in certain justified cases). Potential criteria for problematic and avoidable plastic products could include: • The product is harmful or poses a risk/threat to the environment (including living organisms) or biological diversity; • The product is harmful or poses a risk/threat to human health; • The product is commonly found in or may enter the environment (e.g., prevalence in the environment); • The product hinders or disrupts circularity (e.g., it cannot be reused or recycled in practice and at scale). • The product is avoidable or unnecessary as it does not fulfil an essential use; * or it can be avoided or replaced with available environmentally sound and viable alternatives. *Following the approach of the Montreal Protocol on substances that deplete the ozone layer, a product could qualify as "essential" only if: • it is necessary for the health, safety or functioning of society; and • there are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of the environment and human health. Reference: Decision IV/25: Essential Uses, Meeting of the Parties to the Montreal Protocol Additional sources: • Government of Canada. 2019. Discussion Paper: A proposed integrated management approach to plastic products to prevent waste and pollution. • Canadian Council of Ministers of the Environment. 2022. A Roadmap to Strengthen the Management of Single-use and Disposable Plastics. • Canada Plastics Pact. 2024. Guidance Document: Supporting the elimination of unnecessary & problematic plastics. 4b. Non criteria based approaches A criteria-based approach is recommended as the preferred path forward to ensure an evidence and science-based process, as well as clarity, certainty, consistency, and transparency for all Parties, partners and stakeholders: • Specific pre-defined evidence and science-based criteria, such as precise traits or characteristics that a plastic product category should meet to be considered problematic and/or avoidable, will provide a shared and consistent understanding and application of the terminology. • Only a set of pre-defined criteria will ensure a consistent, transparent and evidence and science-based process, by ensuring that an expert body assesses specific product categories against a set of pre-determined elements clearly specified in the ILBI. The criteria should be exhaustive and amendable in the light of new scientific evidence, upon recommendation by an established expert body under the ILBI. • A criteria-based approach will ensure that all Parties, as well as industry actors and other stakeholders, know in advance which specific characteristics could make a plastic product problematic and avoidable and merit possible action under the ILBI. • A criteria-based approach will also be important to level the playing field, encourage innovation, and inform behaviour change, as policy makers, businesses and consumers will have a shared understanding of what is deemed to be a problematic and/or avoidable plastic product.
Armenia	There are 3 important criteria for plastic products: problematic plastic products, unsuitable plastic products and preventable plastic products. Potential criteria for problematic plastic products — Problematic plastic products are products that have negative impacts throughout the product life cycle (environmental and human health).

	Potential criteria for unnecessary plastic products — Unnecessary plastic products are products with a function that is not essential because they do not provide significant added value to society Potential criteria for avoidable plastic products — Avoidable plastic products are products that perform an essential function, but demand for them can be reduced through the use of non-plastic substitutes, alternative designs and alternative methods.
Malawi	Problematic criteria will determine whether a product should be banned or can be managed in other ways
Palau	4.a. Criteria or types of criteria At the outset, Palau fully support having criteria on plastic products to identify what products to ban, what products to limit, and what products to regulate. There are already some fairly well-established criteria that the INC process could build on. Many of which are already reflected in the current compilation, in particular in "Proposed annexes relating to elements II.3 and 3bis" of the compilation of draft text of the international legally binding instrument on plastic pollution, including in the marine environment that are worth considering and could serve as the basis of our engagement during the intersessional process. However, we do not consider that options 0 are among them. Palau supports the objective of the instrument to be to end plastic pollution, including in the marine environment, and to protect human health. This implies that the Agreement will need to target products that contribute to pollution and to harming human health. In our work in selecting criteria, we must ensure that we have a set of criteria that can determine what products to ban, phase out, and regulate. For example, some single-use products are not essential and are avoidable. Therefore, these should be ban or at the minimum phased out. For other single-use products, there might need to be provisions for efforts to find adequate alternatives. This is why, annexes need to be reviewed and revised frequently. Lastly, we could go along with considering the following criteria as basis for our discussions: - Products manufactured with chemicals that pose a hazard to the environment, including the marine environment, and to human health - Products that pose a hazard to the environment, including the marine environment, and to human health. Such hazard could be caused by emission of harmful by-products, or has likelihood to break down rapidly into micro and/or nano plastics - Products that are not reusable or recyclable in practice and at scale - Products that can be avoided while maintaining its utility. Specific criteria to determine the avoidability of a product can include non-essentiality, possibility for the product to be replaced or the design improved - Products that hinder or disrupt the recyclability of other items - Products that have a high likelihood of ending in the natural environment, including in the marine environment, through direct or indirect application. When entering the environment, including the marine environment, such products that have a likelihood to be ingested by animals or organisms, create entanglement, or becoming littered could be considered as part of the criteria. 4.b. Non criteria based approaches Seeking clarification on non-criteria based approaches. Any list of products that are banned or to be eliminated or whose application is to be regulated must be regularly reviewed and updated. Palau suggests that this work be conducted by COP at regular intervals, starting with COP 1 for the elaboration of the first list based on the criteria with the support of the STEPs.
Panama	4.a. Criteria or types of criteria 1. Degree of hazard to health and the environment of plastic products, including plastic replacement alternatives. The regulated plastic products would be those containing chemicals of concern (in combination with obligation II.2). 2. Evaluation of the plastic product's usage time, for example, considering single-use, short duration defined as less than 3 years. 3. Criteria for the classification of plastic products based on their composition: Plastics or Synthetic Plastics; Recycled Plastics; Bioplastics, encompassing bio-based and biodegradable plastics. To structure these criteria, it is essential to differentiate the following concepts: • Plastics: solid materials containing one or more high molecular weight polymers as a natural ingredient, which are formed by temperature and/or pressure during the manufacture of the polymer or the fabrication of a finished product. • Recycled Plastic: plastic prepared from waste items that have been previously cleaned and shredded. • Bioplastics: plastics that are bio-based (for example, made from raw materials from renewable sources such as corn and sugar cane) or are biodegradable (for example, microbial conversion into CO2, methane, biomass, and mineral salts).

	4. Sustainability criteria are required to assess the ability of plastic products to be reused, repaired, and recycled, especially single-use items. This measure seeks to keep materials in economic circulation for as long as possible and promote efficient waste management. Additionally, eco modulation is contemplated: less sustainable products could face higher tax rates, while more essential and sustainable ones could receive tariff reductions as an incentive. Considering this group of criteria, classifications can be developed as stipulated in the draft treaty, considering some products as: Problematic; Unnecessary and Avoidable. 5. Criteria for identifying products that contain microplastics. This could be regulated through microscopic and spectroscopic techniques of raw materials used and finished plastic products. Therefore, it is essential to differentiate the following concepts: • Microplastics: plastic particles with diameters smaller than 5 mm. • Additives: chemical compounds added during the formulation of plastic to fulfill specific functional properties desired in the production process or the final plastic product. Taking into account these definitions, based on the technical report on Chemical Substances in Plastics (prepared by the Industry and Economy Division of the United Nations Environment Programme), the differences between a microplastic and an additive can be understood. A microplastic is termed as such because its particle size is in the millimeter range. These plastics are more challenging to identify since they can be of any type, regardless of composition, and require analytical techniques to determine the particle size. In contrast, additives are chemical substances added to the plastic, which must be declared by the manufacturer; thus, a thorough evaluation of the corresponding technical sheets could replace analytical techniques to determine the chemical composition of the plastic, adhering to good manufacturing practices. That said, microplastics are more difficult to identify and are not classified. Conversely, additives can be classified according to their functionality within the plastic formulation: • UV light stabilizers • Antistatic agents • Antioxidants • Flame retardants • Expansion agents • Catalysts • Crosslinking agents • Pigments • Heat stabilizers • Plasticizers • Biocides • Dispersing agents • Curing agents • Lubricants • Slip agents • Fragrances 4.b. Non criteria based approaches Existing national regulations on certain plastic chemicals and polymers used in the manufacture of plastic products could be explored, including categories such as "single-use plastics," "short-lived plastics," and "intentionally added microplastics," all widely recognized as problematic due to their sustainability risks or lack of necessity. In the absence of specific criteria, it would be necessary to establish a mechanism to expand these categories through the nomination of products by member states.
México	Probability that a product or a part of it has dangerous additives among its constituents. Probability of emissions of harmful substances (or releases) at any stage of your lifecycle. Probability of the product or a part of it to degrade to microplastics. It is important to highlight the importance of applying the precautionary principle in the absence of scientific evidence.
Egypt	Introduction and general comments in this regard as follows: - There is an urgent need for more clarification regarding the criteria and non-criteria aspect with regard to the convention. - At the same time, setting criteria or types of criteria in relation to draft provision II.3 requires clear descriptions and definitions of the used terminologies. - Identifying, classifying, or grouping plastic products based on a set of criteria or no-criteria measures is completely linked to the national circumstances of each country in terms of consumer behaviour, product consumption profiles, and means of plastic waste management and treatment.

	Criteria or types of criteria Egypt supports the principle of standardizing the terms “Problematic plastic products”, “Avoidable plastic products”, “Short-lived plastic products” and “Single-use plastic products” under a single term “Problematic plastic products”, which can be defined as (Plastic products that have adverse effects on humans, society and/or the environment throughout their lifecycles). Some suggested criteria for most of the pre-mentioned plastic products in order to reduce the negative impact of their usage to the environment: 1. The product has adverse impact to human health or the environment; 2. The product hinders circuare economy processes (reusable, remanufacturing, or recyclable); 3. The likelihood of ending up in the natural environment (especially marine environment) 4. Availability of Adequate national collection and recycling infrastructure, particularly for developing countries compared to developed countries. Not to mention that it is a country-driven approach. Non-criteria based approaches 1. Production and consumption standards and patterns that prevent and minimize human exposure or release into the environment throughout the life cycle of the plastic product and fosters the safe and environmentally sound management, including the recyclability and disposal, of plastic products containing them (Sustainable Production and Consumption) 2. Based on the national circumstances, Flexible implementation measures and mechanisms should be guaranteed in order to to accommodate various national circumstances regarding waste management regulations, taking into account that developing countries will definitely require technical support. National regulations regarding some plastic product According to the Egyptian National Waste Management law and the National Strategy for banning single use plastic bags, there are some restrictions and measures had been taken regarding single use plastic bags considering the following criteria: 1- Adverse impact on human health and environment (micro plastic release – littering in the marine environment) 2- Sustainability of production and consumption 3- Recyclability 4- Availability of feasible alternatives 5- Social and economic assessment.
Colombia	Criteria based on best available science should be used to identify the hazardous nature of chemicals of concern in plastic products, both to human health, but also to the environment, on the basis of progressivity.
Vanuatu	4a: Criteria 1: The plastic product has properties which is harmful to the environment and human health globally. Example, plastic products containing vinyl chloride which is said to be a carcinogen. Criteria 2: The plastic product does not meet recyclability standards globally. Example, PET bottles which are opaque or have been pigmented. Criteria 3: The plastic product is avoidable, alternatives more safer can be made made to replace it. Example; Natural fibres like paper bags and woven baskets can be made to replace large plastic shopping bags
Thailand	2.a. Criteria or types of criteria 1. Recyclability and Material Efficiency • Recyclability • Excessive uses of plastics • Reliance on plastics from primary sources 2. Microplastic and Environmental Impact • Microplastic release potential • Environmental impacts 3. Usage Patterns • Single-use plastics or those frequently found as litter 4. Material Composition and Additives • Material Composition

- Additives
- Toxicity

Criteria	Primary Concern	Impact	Contextual consideration
Recyclability:	Difficulty in recycling due to mixed materials or contamination, making it challenging to recover and reuse these plastics, leading to increased waste generation.	Improving recyclability can significantly reduce plastic waste, lower overall waste generation, and promote circular economy practices.	Areas with advanced recycling infrastructure may handle these plastics better, reducing their problematic nature.
Excessive uses of plastics	Products that use an excessive amount of plastic materials, leading to resource intensity, increased waste generation, and plastic pollution.	Reducing excessive plastic use can lower overall plastic consumption and waste, mitigating plastic pollution.	Design innovations and regulations promoting material efficiency can reduce this concern.
Reliance on plastics from primary sources	Products made entirely from virgin plastics without incorporating recycled materials, contributing to waste generation and resource depletion.	Promoting the use of recycled content supports the circular economy, reduces reliance on virgin materials, and decreases waste generation.	Policies mandating recycled content can support the circular economy and reduce reliance on virgin materials.
Microplastic release potential	Plastics that have a high potential to release or cause the release of microplastics throughout their lifecycle, contributing to plastic pollution	Reducing microplastic release can significantly decrease risks of environmental and health impacts associated with plastic pollution	Effective management and reduction strategies can minimize the release of microplastics
Environmental Impact	Plastics that persist in the environment, fragment into microplastics, or cause significant ecological harm, contributing to long-term plastic pollution	Addressing environmental impact directly reduces long-term ecological damage and mitigates plastic pollution	Effective waste management and environmental protection measures can mitigate some these impacts
Usage Patterns	Single-use plastics or those frequently found as litter, contributing to plastic pollution and increased waste generation	Reducing single-use plastics can significantly decrease plastic pollution and waste generation	Policies promoting reuse and recycling can mitigate their impact but it will also depend on existing infrastructure and materials management ecosystem (such as reuse and refill scheme)
Material Composition	Plastics containing certain polymers known to be problematic (if there is no provision in place to handle properly them), such as PVC, polystyrene, and fluoropolymers, contributing to plastic pollution and waste management challenges	Substituting problematic polymers with more sustainable alternatives can reduce environmental harm, plastic pollution, and waste generation.	The risks associated with these materials depend on local infrastructure and management measures in place.
Additives	Presence of harmful additives contributing to environmental contamination and plastic pollution	Eliminating harmful additives can reduce health risks, environmental contamination, and plastic pollution.	Risks can be mitigated with proper containment, usage guidelines, and disposal methods.
Toxicity	Plastics that release toxic substances during production, use, or disposal, contributing to environmental and health risks.	Reducing toxic additives can improve human and environmental health, reducing plastic pollution and waste.	Proper management and disposal systems can reduce exposure and environmental contamination.

2.b. Non criteria based approaches

Lifecycle Analysis and Evidence-based Methods

Non criteria	Primary approach	Impact	Contextual consideration
Life-cycle Analysis	Consider the entire lifecycle of plastic products, from production to disposal, to assess their environmental and health impacts.	Provides a holistic view of the impacts of plastics, leading to more comprehensive and effective management strategies.	• Requires detailed data collection and analysis, which can be resource- intensive. • Needs to be audited to confirm the representativeness and reliability of the analysis

				results
	Evidence-based Methods	Utilize data on the amount of waste generated or found in the environment to identify and classify problematic plastics	Provides concrete evidence of the environmental burden of specific plastics, supporting targeted interventions.	Requires reliable data collection and monitoring systems to ensure accuracy and representativeness

Solomon Islands

Safe and sustainable production and consumption of plastic products including plastic chemicals and product design, is dependent on significant primary plastic polymer (PPP) reduction. Ambitious global and national primary plastic polymer production reduction targets are key to reducing emissions of harmful nano and micro-sized plastic fragments and plastics chemicals into the environment, reducing human exposure, and to incentivising the shift to safer and more sustainable alternatives and substitutes. PPP reduction should prioritize the most hazardous polymers. Primary plastic polymer reduction reflects zero waste responses to the global plastics crisis at the **top of the waste hierarchy. Other top of waste hierarchy sustainable plastic production and consumption responses including the safe and sustainable redesign of materials, products and services, reuse, repair, repurpose, and remanufacture.**

The following **principles should guide the future Internationally Legally Binding Instrument (ILBI): toward the safer and more sustainable production and consumption of plastics:**
1. Sustainability
2. Essentiality
3. Precautionary principle
4. Transparency
5. Just transition
6. Waste hierarchy

Essential products are defined as such if they are necessary for the health, safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and there are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health, as defined in the Montreal Protocol 1 **Sustainability** assessments must be considered broadly, addressing all three of the Triple Planetary Crises2 including climate change, biodiversity loss and pollution, as well as human health impacts, human rights, social and economic stability.

A hazard-based approach to the regulation of plastics products and chemicals is far superior to a risk-based approach. A *hazard* is the potential to cause harm, and in the case of plastic materials, products and chemicals, this includes both toxicity of the chemicals and micro- and nanoplastics, as well as physical harms such as entanglement, injury, and damage to infrastructure from larger plastic items. A risk-based approach, in contrast, incorporates hazard potential together with exposure to determine acceptable levels of pollution. As data regarding exposure of both humans and the environment to products, particles and chemicals is in many cases lacking, these assessments become much more uncertain, time consuming and expensive and will therefore be unfeasible within an appropriate timeline. There is however more than enough data on the risks associated with plastic pollution to adopt a precautionary approach without delay. Therefore, a hazard-based approach represents a pragmatic and feasible way to address plastic chemicals, polymers, and products that are known to be harmful without the delays and costs associated with generating the complex data required for risk assessment frameworks.

Criteria-based approaches are preferable **to non-criteria based approaches.** This is because 'non-criteria-based approaches' as a term lacks scientific rationale and explicit reference to the term in existing Multilateral Environmental Agreements (MEAs). The lack of clarity on non-criteria based approaches will result in broad interpretations and in the compilation of regrettable fixed and finite lists for the annexes of the treaty, resulting in a vague definition with an inflexible regulatory framework that would complicate implementation and prevent updates to lists in line with science progress on harmful plastic products and chemicals as well as design. Therefore, criteria and the initial lists should be the focus of deliberation and be included in annexes, and not the main body of the treaty, to allow for updates by the conference of parties (COP), as new science, knowledge and technologies emerge. The initial lists should be built from plastic chemicals and polymers already regulated under existing MEAs as well as those assessed and found hazardous by a dedicated independent science panel as a subsidiary body under the future instrument.

Part B. Criteria and non-criteria based approaches with regard to plastic products, in relation to draft provision II.3 of the Compilation text, considering their uses and applications.
2. What criteria, types of criteria or non-criteria based approaches could be reflected in the ILBI for the identification/classification of plastic products? Please detail them, providing references and/or explaining the rationale.

2.a. Criteria or types of criteria
Products should be assessed for their potential impact on human and environmental health, based on their hazard properties, potential for pollution, and essentiality, transparency, and sustainability (circularity, social and economic sustainability). Assessments should be based on the most current robust scientific evidence. Existing frameworks for such assessments should be considered, such as the Nordic Council report "Global criteria to address problematic, unnecessary and avoidable plastic products."3

	Sectoral approaches could be applied to products (particularly in the implementation phase of the treaty), including plastics used in packaging, food contact materials, personal care products, fishing gear, healthcare, agriculture, textiles, construction/building, transportation, household/consumer goods (including toys particularly due to a high exposure potential and the vulnerability of children). Types of criteria should include: 1. Hazard criteria addressing the safety of plastic products (including plastic alternatives). Regulated plastic products would be ones containing chemicals of concern (in combination with obligation II.2) and those known to cause physical and indirect harms (e.g., entanglement, damage to infrastructure). 2. Emission criteria in terms of the potential of a plastic product to be released into the environment as well as to generate micro- and nanoplastics and release hazardous plastic chemicals throughout the full life cycle. Products prone to end up in nature or to release plastic chemicals and particles available for uptake by organisms and humans would be regulated to promote innovation and re-design via innovative polymer chemistry while also promoting and incentivising other options at the top of the waste hierarchy including non-plastic delivery systems and plastic free substitutes. 3. Sustainability criteria are needed in terms of the compatibility of a plastic product with regenerative and restorative circularity. Regulated products would be those that lack reusability, repairability and recyclability, in particular single-use products. This would promote keeping materials and products in circulation in the economy as long as possible, prioritizing the top of the waste hierarchy. Products assessed as non-essential and less sustainable/circular would be subject to a higher rate of where ecomodulation is applied as a financial incentive mechanism, whereas essential, safe, sustainable products would be rewarded with fee reductions. 4. Without data disclosure, supply chain actors cannot comply with safety and sustainability standards and cannot know which materials are technically feasible in innovation planning. Transparency, traceability and reporting mechanisms are needed. Products that do not meet data disclosure standards would include, need to be regulated. Note that harmonized, definitions, criteria, monitoring, reporting, and end-of-life management for all plastics, plastic alternatives (incl. bio-based plastics and biodegradable plastics) and non-plastic substitutes (e.g. glass, aluminum) should be developed during the implementation of the ILBI. 2.b. Non-criteria based approaches Noting the major drawbacks compared to a criteria-based approach (see general remarks), it could be possible to build lists in annexes based on existing national or supra-national regulation of certain plastic chemicals (see below) and polymers used in the design and manufacture of plastic products, and plastic products such as on ”single use plastics”, “short-lived plastics”, and 'intentionally added microplastics' (the specific plastics highlighted in II.3 of the compilation), on the understanding that these are widely acknowledged as “problematic” (i.e. hazardous and/or unsustainable) or unnecessary (non-essential)). In the absence of specific criteria, there would need to be a mechanism for adding further categories of plastics, such as the nomination of items by member states. However, the non-criteria based approach alone is not preferable and certainly as a stand-alone option, it would significantly weaken the treaty. References: 1 Montreal Protocol on Substances that Deplete the Ozone Layer UNTC ; The Essential Use Concept for the Global Plastics Treaty - Ikhapp . 2 Fact Sheet: Plastics and the Triple Planetary Crisis - Ikhapp 3 www.norden.org/en/publication/global-criteria-address-problematic-unnecessary-and-avoidable-plastic-products
Bahrain	2.a. Criteria or types of criteria Bahrain does not agree on establishing criteria or any type of criteria with regards to plastic products. 2.b. Non criteria based approaches Bahrain preferred option: Option Zero (No provision) Bahrain views that the mismanagement of plastic waste is the primary driver of plastic pollutions. Therefore, we advocate for a strategic emphasis on enhancing waste management systems and developing national action plans as core elements of the treaty taking into account the national circumstances and capabilities. Parties should avoid the listing of products, without acting upon finding solutions and best practices related to all means of waste management, and recycling including advanced recycling. Parties should also promote improvement of product design allowing countries to take advantage of the contributions of plastics to human wellness and development. We believe the treaty should focus on the following approaches: 1. National Action Plans: Parties develop and implement comprehensive national action plans that prioritize the management of plastic waste. These plans should include measures for plastic waste recycling, improve plastic products recyclability and the promotion of circular economy principles tailored to each country's specific context. 2. Promoting Waste Management Infrastructure: Investing in and improving waste management infrastructure is crucial for mitigating plastic pollution. The developed countries shall provide capacity building and technical assistance to developing countries to enhance their waste management systems. 3. Encouraging Public Awareness and Education: Addressing plastic pollution requires a collective effort from all sectors of society. The treaty should include provisions for public awareness campaigns and educational initiatives that promote responsible consumption and waste disposal practices.

	4. Facilitating Technology Transfer: To effectively manage plastic waste, particularly in developing countries, there is a need for access to innovative technologies and best practices. The treaty should promote cooperation and technology transfer to support developing nations in their waste management efforts.
Algeria	2.a. Criteria or types of criteria: Based on classification criteria like for chemical products based on origin, nature, composition, components, etc. the reference to the classification and the annexes of the Basel convention on the illicit trafficking of hazardous waste is more than necessary as well as the reference to the methodology taken into consideration of the stockholm convention for the registration with a view to the elimination of certain Pop's products. 2.b. Non criteria based approaches
China	Approaches and measures on plastic products should focus on the items that easily leak into the environment after consumption. For criteria-based approach, wholistic consideration should be given to factors such as recyclability and leakage risk. It can also specifically stipulate the specifications of the products, including size, thickness, material composition, etc. For example, ultra-thin plastic bags with a thickness of less than 0.025 millimeters are particularly prone to leaking into the environment due to their fragility and difficulty in recycling. It is recommended to adopt a criteria-based approach, where each country, based on its national conditions, policies, applications of plastics, and consumer demands, determines the most suitable products and application scenarios for applying control policies, and decides the scope and tools. For non-criteria approaches, technical guidelines, voluntary industry initiatives, and public education could be considered, as follows: (1) Technical guidelines could be formulated for Countries' reference while identifying and controlling problematic and avoidable plastic products according to national circumstances. It can be considered to formulate methodological guidelines for the research and assessment of plastic wastes, considering the differences in national conditions, stages of development, levels of production and consumption habits (by e.g. a scientific subsidiary group established under the authority of the governing body of the instrument). Each country, in accordance with the methodological guidelines, can carry out sampling, research and studies to determine the scope and targets of problematic and avoidable products that need to be regulated and controlled within their own countries. Control measures should be taken in a phase-by-phase, science-based and nationally determined manner. Based on the results of studies and research, countries should be allowed to dynamically adjust the scope and measures at different stages, also considering the development of their national recycling systems. Rationale: Plastic pollution is caused by the environmental leakage and accumulation of plastic wastes due to mismanagement of plastic wastes, therefore, it is crucial to develop a unified methodology to identify the types of plastic wastes that are prone to leakage into the environment after consumption, so as to take effective control measures for the prevention and control of plastic pollution globally. (2) The industry can be encouraged to identify problematic and avoidable plastic products based on facts and with reference to industry practices and to take actions on their own initiative. For example, in 2018, EMF and UNEP launched the Global Commitment and Plastic Pact, which have mobilized more than 1,000 institutions and organizations, of which 250 large corporations account for about 20% of global packaging use, across all segments of the plastics value chain and in different regions of the world and have taken actions on all five continents according to local concerns and priorities. (3) Conduct public education and communication: Improve public awareness of the impacts of plastic pollution
United Arab Emirates	2.a. Criteria or types of criteria UAE does not agree on establishing criteria or any type of criteria with regards to plastic products. 2.b. Non criteria based approaches UAE preferred option: Option Zero (No provision) UAE views that the mismanagement of plastic waste is the primary driver of plastic pollutions. Therefore, we advocate for a strategic emphasis on enhancing waste management systems and developing national action plans as core elements of the treaty taking into account the national circumstances and capabilities. Parties should avoid the listing of products, without acting upon finding solutions and best practices related to all means of waste management, and recycling including advanced recycling. Parties should also promote improvement of product design allowing countries to take advantage of the contributions of plastics to human wellness and development. UAE believe that the treaty should focus on the following approaches: 1. National Action Plans: Parties develop and implement comprehensive national action plans that prioritize the management of plastic waste. These plans should include measures for plastic waste recycling, improve plastic products recyclability and the promotion of circular economy principles tailored to each country's specific context. 2. Promoting Waste Management Infrastructure: Investing in and improving waste management infrastructure is crucial for mitigating plastic pollution. The developed countries shall provide capacity building and technical assistance to developing countries to enhance their waste management systems.

	3. Encouraging Public Awareness and Education: Addressing plastic pollution requires a collective effort from all sectors of society. The treaty should include provisions for public awareness campaigns and educational initiatives that promote responsible consumption and waste disposal practices. 4. Facilitating Technology Transfer: To effectively manage plastic waste, particularly in developing countries, there is a need for access to innovative technologies and best practices. The treaty should promote cooperation and technology transfer to support developing nations in their waste management efforts.

Nominating Member	Part B. 5. Are there specific uses and applications for which specific criteria and non criteria based approaches for these plastic products are particularly applicable/relevant?
Portugal	The criteria should be applicable to all uses and applications but we should have a mechanism allowing specific exemptions. Packaging and plastic products identified in SUP Directive should be tackled as a priority
Suriname	Yes, there are specific uses and applications where certain criteria or non-criteria based approaches are particularly relevant for plastic products. Here's a overview: 1. Food packaging Relevant approaches: - Chemical composition - Biodegradability - Hazard-based classification Rationale: Food safety is paramount, requiring strict control over chemical composition and potential hazards. Biodegradability is increasingly important for reducing environmental impact. Reference: European Food Safety Authority. (2016). Recent developments in the risk assessment of chemicals in food and their potential impact on the safety assessment of substances used in food contact materials. 2. Medical devices Relevant approaches: - Chemical composition - Hazard-based classification - Lifecycle approach Rationale: Medical applications require precise material specifications and safety assessments. The lifecycle approach is crucial due to the specialized disposal needs of medical waste. Reference: Gurram, R., et al. (2022). Plastic medical devices: Challenges and opportunities in the circular economy. Journal of Cleaner Production, 330, 129696. 3. Agricultural plastics Relevant approaches: - Biodegradability - Risk-based approach - Value chain mapping Rationale: Biodegradability is crucial for products left in the environment. The risk-based approach helps assess soil and water contamination risks. Reference: Briassoulis, D., et al. (2019). Review, mapping and analysis of the agricultural plastic waste generation and consolidation in Europe. Waste Management & Research, 37(1), 30-51. 4. Electronics Relevant approaches: - Recyclability - Hazard-based classification - Circular economy approach Rationale: Electronics often contain hazardous materials and are challenging to recycle, making these approaches particularly relevant. Reference: Parajuly, K., et al. (2020). Future e-waste scenarios. StEP Initiative, UNU ViE-SCYCLE, and UNEP IETC. 5. Automotive plastics

	Relevant approaches: - Recyclability - Lifecycle approach - Circular economy approach Rationale: The long lifespan and complex composition of automotive parts make these approaches valuable for reducing environmental impact. Reference: Plastics Europe. (2021). Plastics - the Facts 2021. 6. Fishing gear Relevant approaches: - Risk-based approach - Value chain mapping - Biodegradability (for certain components) Rationale: Lost fishing gear is a significant source of marine plastic pollution, making risk assessment and value chain interventions crucial. Reference: FAO. (2021). Abandoned, lost or otherwise discarded fishing gear. 7. Textiles Relevant approaches: - Chemical composition (focus on microfibers) - Lifecycle approach - Circular economy approach Rationale: Microfiber shedding is a major environmental concern, while the fast fashion industry necessitates a focus on circularity. Reference: Sandin, G., & Peters, G. M. (2018). Environmental impact of textile reuse and recycling – A review. Journal of Cleaner Production, 184, 353-365.
Somalia	1. Relevant uses and applications: a. Packaging (food, consumer goods) b. Single-use items (bags, cutlery) c. Construction materials d. Medical devices e. Electronics (cases, components) 2. Rationale: Different uses have varying environmental impacts and recycling potential.
El Salvador	Yes, food and Beverage Industry, with high demand for food, forces us to resort to different techniques to preserve fresh food. And taking into account the cost of the basic basket, the cost passed on to the producer must be taken into account.
Oman	Applications related to medical, pharmaceutical, sanitary and hygienic purposes could be considered as specific in terms of use of plastic products. This is due to undisputable necessity of using such products, the absence of alternative solutions and potential disastrous consequences for the humanity in case of applying prohibitions and restrictions with respect to such products.
Republic of Cuba	Some plastic products shall be excluded from the scope of the new Treaty. In this case are applications related to medical, pharmaceutical and sanitary purposes in which alternative solutions cannot be used or are not available. Products necessary to ensure food and water security (to maintaining the safety and quality), especially in developing countries, as well as products used in cases of emergencies and natural disasters should also be excluded.
New Zealand	New Zealand has implemented bans on single-use and hard-to-recycle plastics. The plastic phase-outs in New Zealand focused on food and beverage products, as these make up the largest proportion of plastic that is littered and this type of packaging frequently contaminates recycling systems. The food and beverage sector has been transitioning to alternative plastic types and other material types over recent years. New Zealand's product bans have targeted hard-to-recycle plastic products (polymer-based), single-use plastic products or both. New Zealand ran a public consultation process to understand support and industry readiness to phase out selected products and availability of practicable alternatives to switch to. From 1 October 2022, New Zealand banned PVC food trays and containers, polystyrene and expanded polystyrene takeaway food and drink packaging, plastics with pro-degradant additives, plastic drink stirrers, and cotton buds with plastic stems. From 1 July 2023, New Zealand also banned plastic produce bags, plastic straws, and plastic plates, bowls and cutlery, and began a transition towards fully home compostable product labels. Exemptions and extensions were essential in implementing this product ban policy. For example, the banning of plastic drinking straws required: - An exemption for health and disability requirements, and

	- A 2.5-year extension for drinking straws that form an integral part of the packaging to enable industry to switch to a suitable alternative. Drawing from our domestic experience, we have learnt that regulations need to take a nuanced and sector-specific approach. We therefore consider that an exemptions process should be considered as part of discussions on criteria and non-criteria based approaches. It is important to note that our domestic phase outs targeted one sector only, based on industry readiness, which may support the need for the plastics treaty to take a sector-specific approach to addressing problematic and avoidable plastic products.
Russian Federation	Applications related to medical, pharmaceutical, sanitary and hygienic purposes could be considered as specific in terms of use of plastic products. This is due to undisputable necessity of using such products, the absence of alternative solutions and potential disastrous consequences for the humanity in case of applying prohibitions and restrictions with respect to such products. The Russian Federation is of the view that plastic products related to humanitarian purposes, including medical, pharmaceutical, sanitary and hygienic products, products necessary to ensure food and water security, especially in least developed countries, products used in cases of emergencies and natural disasters, shall be excluded from the scope of the agreement. We are also of the view that paints and coatings, and products made of elastomers shall not be considered as plastic products.
Cook Islands	Sustainability, safety and essentiality are key areas that products should be assessed. Blanket exemptions should not be permitted as a clear set of criteria should identify the specific conditions of approval, and where possible, a pathway towards redesigning of the product for sustainability.
Tuvalu	See 4a above for products and applications related to criteria-based approaches. The non-criteria based approaches listed in Table 2.b should apply to all plastic products (made from primary and/or secondary materials, as well as alternatives).
Republic of Korea	1. Many countries identify single-use plastics through legislative acts such as the EU Single-use Plastic Directive, the Act on the Promotion of Saving and Recycling of Resources, Act on Promotion of Transition To Circular Economy And Society and in the Republic of Korea. 2. In the Republic of Korea, the Ministry of Environment implements the following measures for reduction of identified single-use plastics or problematic plastics: A. Reducing Use of Single-Use Products i. Prohibit providing single-use products free of charge. ii. Replace single-use products (e.g., cups, food containers, plastic bags) with multi-use products. iii. Implement any other market- and price-based measures to support this objective (e.g. providing incentives to service providers and consumers of multi-us products, removing subsidies for single-use products etc.) B. Ensuring Products Are Less Problematic i. Ensure products can be reused, recycled, or composted. ii. Include designs that improve the capacity for recycling and safe, environmentally sound disposal. iii. Obligate manufacturers or importers to recycle their products. iv. Evaluate the reusability, recyclability, and compostability of products, and label or notify the results. v. Substitute or replace materials to those with less environmental impact in products, or improve the design to those less likely to end up in the environment.
Malaysia	The decision tree approach is essential in the evaluation of products used for food contact, storage and transportation of potable water, medical equipment and products, toys, hygiene and personal care products, amongst others – based on the critical role of these products in serving the communities of each Party.
Monaco	Yes : - Single Use Plastic items - Packaging
Philippines	Yes. As a general rule, all uses and applications of plastic products should be addressed under the ILBI. However, plastic product groupings according to uses and applications are useful in developing initial Annex lists for highly problematic products. Such lists could include, for example, polystyrene and expanded polystyrene packaging, PVC packaging, oxo-degradable products, intentionally added microplastics, etc. These specific products were based on criteria modified from the Global Commitment criteria of Ellen MacArthur Foundation (q.v.); documentation in support of the aforementioned Annex list is provided elsewhere (Ref: Attachment 2, Conference Room Paper on an Initial List of Problematic and Avoidable Plastic Products Considered for Elimination, submitted by Georgia, Peru, Rwanda, Switzerland and Thailand). Similarly, plastic products with a high likelihood of human or environmental exposures to plastic chemicals, such as food-contact plastics, children's toys and childcare products, and agricultural plastics could be prioritized. Under the essential use concept, a product that may be non-essential in one country may be essential in another. This is especially true for developing countries where alternative materials or systems may not be readily available. Under a just transition, financial assistance, capacity building, and technical support could be provided for the development of viable alternatives in specific sectors or applications. In developing criteria, however, it is important to avoid over-broad exclusions or exemptions. A case in point is exemptions for "medical uses where no feasible alternative is available." An open letter to INC-4, signed by about a thousand medical and public health individuals and organizations representing over 6 million health professionals, expresses the health sector's opposition to a blanket exemption as this would counter

	global efforts for sustainable health care and inhibit innovation and momentum for plastic reduction, reuse and redesign. Many non-essential uses in the health sector can be eliminated and even essential-use plastics in medicine can be detoxified and designed for reuse (Open Letter from medical and public health professionals on the Plastics Treaty 4th Negotiation Meeting (INC-4), April 2024; https://resolutions.unep.org/incres/uploads/open_letter_inc4_hcwh.pdf).
Singapore	Nil.
Costa Rica	Beverage Packaging: • Application: Containers, bottles, • Relevance: Materials need to prevent contamination. It must be ensured that the additives used to achieve these criteria are not dangerous and allow their recycling. Automotive Industry: • Application: Interior and exterior components, fuel system parts. • Relevance: Durability, heat resistance, and crash safety standards are critical. Materials often need to meet industry-specific specifications (e.g., ISO, ASTM). Construction Materials: • Application: Pipes, insulation, window frames. • Relevance: Must meet building codes and standards for strength, thermal insulation, and fire resistance (e.g., ASTM, ISO). Electronics: • Application: Housings, connectors, circuit boards. • Relevance: Electrical insulating properties, flame retardancy, and durability are essential. Compliance with industry standards (e.g., UL, RoHS) is often required.
The European Union and its 27 Member States	These criteria should be applicable for all uses and applications, while allowing exemptions, for example for some specific products in the medical or military sector, where some products could be difficult to replace or avoid. A mechanism allowing specific exemptions on the request of Parties should be established. We recognize there is a need for prioritization of the listed problematic products and their assessment to define possible restrictive measures, but for the criteria themselves that would be used to identify such entries, those would apply and screen every proposed product (no specific uses and applications). In another hand, if the screening process is for some reason too long, then we could envisage prioritizing specific products going through that process. This prioritization should be evidence- and science-based and can also be guided by existing national or regional regulations. Relevant uses, applications, references: Packaging represents around 40% of the plastic product market but around 2/3 of plastic waste, given the fact that it is mostly single use. As such it is the most priority sector to target. A comprehensive impact assessment , which served as a basis for the EU-Single Use Plastics Directive , identified single use plastics (such as packaging, disposable cups, straws or cutlery) and fishing gear as main sources of marine litter in Europe. Together, these constituted 84% of plastic marine litter items, among them the most environmentally harmful items in the marine environment. Furthermore, the placing on the market of products made from oxo-degradable plastic is prohibited in the EU, as that type of plastic does not properly biodegrade and thus contributes to microplastic pollution in the environment, negatively affects the recycling of conventional plastic and fails to deliver a proven environmental benefit. Work has also been done by the Ellen Mac Arthur foundation on the packaging products to target for elimination or reduction as well as by the Consumer Goods Forum (CGF) with their Golden Design Rules (GDR). The WWF report “Regulating high-risk plastic products: global measures to eliminate, reduce, circulate and safely manage high-risk plastic products” provides a complementary framework, identifying and listing plastic applications other than packaging that are at high risk of ending up in nature and could be prioritized for global phase-outs.
United Kingdom	Assessing whether a plastic product is problematic and avoidable requires a lot of factors to be considered, including socioeconomic factors and the likelihood of the product causing environmental harm. Therefore, the use of specific criteria would be helpful to provide a framework for making this assessment and ensure consistency. Additionally, the consistency of approach that criteria would provide could also help businesses. For example, the Business Coalition for a Global Plastics Treaty have stated that aligned global criteria “would provide businesses with more clarity and confidence to accelerate their efforts towards promoting alternative solutions.” Criteria can also be helpful when the evidence base informing a decision is likely to change, as the decision-making framework they provide can easily be adjusted to factor in that new evidence. Finally, criteria are useful when a range of potential outcomes for a decision are possible. This is the case when assessing whether a plastic product is problematic and avoidable and also the potential decisions that might arise from such an assessment. E.g., a plastic product may be found to be problematic but unavoidable, in which case there are several potential options, including introducing measures, such as extended producer responsibility schemes, to reduce the use of the product where possible and encouraging research and development into substitutes or alternative designs. Different sectors require different approaches. For example, in the UK within the plastic packaging sector we have taken different approaches for different types of plastic packaging: • Banned Extruded and Expanded Polystyrene food and drink containers.

	• Introduced a tax on plastic packaging with less than 30% recycled content. • Will introduce a deposit return scheme for plastic bottles and an extended producer responsibility scheme for plastic packaging. • The UK Plastics Pact Roadmap for film and flexible packaging5. Additionally, many observers and other interested organisations have published reports on this topic, which could support intersessional discussions: The Waste and Resources Action Programme (WRAP) together with the UK Plastics Pact have worked to drive voluntary actions towards ambitious targets to reduce or eliminate problematic plastic products. They have published a report6 which identifies actions for common problematic plastic products. As part of the New Plastics Economy Global Commitment, led by the Ellen MacArthur Foundation in collaboration with UNEP, there is already significant alignment regarding the material combinations and product designs which are most frequently identified as unnecessary (or avoidable) or problematic plastic packaging: At least 30% of Global Commitment Signatories or at least 4 Plastics Pacts have already phased out these items on a voluntary basis. In addition, most of these items have also been included in the recommendations for elimination as part of the Golden Design Rules (GDR) from the Consumer Goods Forum (CGF). The criteria applied and the lists of identified items can be found in this document on pages 4 (criteria) and 8 (list) . This provides some examples of items members could take national or global action on. The WWF report "*Regulating high-risk plastic products: global measures to eliminate, reduce, circulate and safely manage high-risk plastic products*" provides a complementary framework, identifying and listing plastic applications other than packaging that are at high risk of ending up in nature which can also be used to inform discussions. [5] Film and flexible roadmap - July 2024.pdf (wrap.ngo) [6] https://www.wrap.ngo/sites/default/files/2022-02/Eliminating-problem-plastics-v4.pdf
Saudi Arabia	We emphasize that application and use identification should be subjected to country's national circumstance, natural resources, and capabilities taking into account national waste management context. We strongly believe that applications such as single use plastics are used in many critical sectors such as medical and food applications. Plastic in such sectors provide high quality products that adhere with already established regulations ensuring hygiene and food security and sustainability and drastically limits food waste. The role of plastics, including single use plastics, in crisis such as COVID-19 should be acknowledged. We encourage focusing on waste management solutions and being constructive instead of banning or restricting any list of plastic products for any applications, which will have unintended consequences.
United States	We can see value in considering approaches that are broadly applicable to different contexts and that address plastic products that, for example, present a high risk of being littered or otherwise ending up in the environment and that impede circularity (e.g., difficult to recycle).
Ecuador	Food and Beverage Packaging: Examples: Bottles, food contact materials containers, wraps, and films. Pharmaceutical or medical: Medicine wrappers, and medical examination devices, biomedical plastics Construction materials Electric and Electronic components Automotive parts: such as bumpers, interiors Other industrial or domestic uses: heat-resistant materials
Ethiopia	• Specific criteria and non-criteria-based approaches for plastic products are applicable in various contexts, particularly concerning their environmental impact, recyclability, and the potential for alternatives. These approaches can be categorized based on their relevance to different types of plastic products and their applications. Criteria-Based Approaches 1. Problematic Plastic Products: -These products are often associated with significant environmental harm and difficulty in disposal. include: • Non-PET Plastic Caps on PET Bottles: These caps are not easily recyclable and often end up in landfills or the environment. The EU Regulation 2019/2024 mandates that caps must remain attached to bottles during recycling to prevent contamination and loss of materials. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html • Compost Contaminants: Items like non-compostable fruit stickers and certain tea bags can contaminate compost. Regulations and initiatives aim to eliminate these products to enhance compost quality and reduce waste. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html 2. Unnecessary Plastic Products: - These are products that do not have a clear functional necessity and can be eliminated without replacement. include: • Excessive Packaging: Products with excessive headspace or unnecessary components can be classified as unnecessary. Proposed revisions to EU packaging regulations aim to limit such practices, thereby reducing plastic waste. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html

https://static.resourcetrade.earth/INC-4-informal-technical-dialogue-Final.pdf
• Helium-Filled Balloons for Release: These are deemed unnecessary due to their environmental impact when released into the atmosphere.
https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html

3. Food Packaging: -Packaging materials for food products, where safety and regulatory compliance are critical.
Rationale: Criteria-based approaches ensure that materials used meet stringent safety standards (e.g., FDA regulations in the US, EU regulations) to prevent contamination and ensure consumer safety.
References: Regulatory guidelines from FDA, EFSA (European Food Safety Authority).

4. Medical Devices: - Plastic components in medical devices such as syringes, catheters, and surgical instruments.
Rationale: Criteria-based approaches focus on biocompatibility, sterilization compatibility, and material durability under specific medical environment conditions.
References: ISO standards (e.g., ISO 10993 for biological evaluation of medical devices).

5. Automotive Components: - Plastics used in automotive interiors, exteriors, and under-the-hood components.
Rationale: Criteria-based approaches ensure materials meet performance criteria related to mechanical strength, durability, thermal stability, and resistance to chemicals (e.g., fuels, oils).
References: Industry standards and specifications from automotive manufacturers (e.g., SAE standards).

Non-Criteria Based Approaches
1. Reuse and Refill Models:
- focus on reducing the need for new plastic products through sustainable practices. For instance:
• Reusable Packaging: Implementing a system where groceries are delivered in reusable containers can significantly reduce single-use plastic consumption. This model has shown success in various countries and aligns with sustainability goals.
https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html

2. Alternative Materials: - The development and adoption of sustainable alternatives can mitigate reliance on problematic plastics.
For example:
• Biodegradable Fertilizers: The EU Fertilizing Products Regulation 2019/1009 aims to phase out plastic-coated fertilizers, promoting the use of biodegradable alternatives to enhance soil health and reduce plastic pollution. https://pub.norden.org/temanord2024-508/2-methodology-and-basis-for-selection-of-criteria.html

Rationale
• The rationale for these classifications lies in the need to address the growing plastic pollution crisis. By identifying and regulating problematic and unnecessary plastic products, policymakers can promote more sustainable practices and encourage innovation in material alternatives. This is crucial for achieving circular economy objectives and minimizing environmental impacts associated with plastic waste.
• The development of criteria and non-criteria-based approaches is supported by various stakeholders, including governments, NGOs, and industry leaders, who recognize the necessity for coordinated action to combat plastic pollution effectively. The ongoing dialogues and initiatives, such as the Geneva Beat Plastic Pollution Dialogues, aim to enhance understanding and implementation of these approaches globally.
https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/

Non-Criteria-Based Approaches
1. Consumer Electronics:
- Casings, housings, and components in electronic devices.
Rationale:
- Emphasize factors like aesthetic appeal, lightweight design, ease of manufacturing (e.g., injection molding), and cost-effectiveness.
References: Consumer electronics industry practices and manufacturer specifications.
2. Toys and Recreational Products:
- Plastic materials in toys, sporting goods, and recreational equipment.
Rationale: Non-criteria-based approaches may focus on factors like color variety, impact resistance, tactile feel, and child safety (e.g., absence of sharp edges).
References: ASTM International standards (e.g., ASTM F963 for toy safety).
3. Furniture and Home Goods: - Plastic components in furniture, household items, and appliances.

	Rationale: - Non-criteria-based approaches could prioritize factors such as design flexibility, ease of cleaning, UV resistance (for outdoor use), and recyclability. References: - Industry standards and manufacturer specifications for durability and safety.
Uruguay	There is evidence that a lot of countries already established bans or restrictions to problematic, unnecessary and avoidable plastic . In particular the single-use unnecessary plastics (with exception of medical use plastics) are products that those criteria could be easily applicable as well as packaging at a first phase of the application of the instrument. In future COPs, the list of products could be reviewed.
Chile	Packaging Industry: In the packaging industry, high recyclability and low carbon footprint are essential criteria. The use of hazardous chemicals should be minimized, and alternatives that are easy to recycle and have a lower environmental impact should be prioritized. • Criteria-Based: High recyclability, low carbon footprint, absence of hazardous chemicals. • Non-Criteria-Based: Adoption of best practices for lightweighting and reducing packaging waste. • Relevant Uses and Applications: o Polyethylene (PE): Used in plastic bags, shrink wrap, stretch film, and containers. o Polypropylene (PP): Employed in single-use containers, straws, and food packaging. o Polyethylene Terephthalate (PET): Used for beverage bottles, food containers, and clamshell packaging. o Polystyrene (PS): Utilized for disposable cups, plates, and foam packaging materials (EPS). • Rationale: o Lightweight: Reduces transportation costs and carbon footprint. o Versatile: Can be molded into various shapes and sizes. o Barrier Properties: Provides excellent moisture and gas barriers, preserving food quality and extending shelf life. o References: o European Plastics Converters (EuPC). (2020). Plastics packaging. o American Chemistry Council. (2021). Plastics in packaging. Food and Beverage Industry: For the food and beverage industry, food-grade safety and low toxicity are paramount. Plastics used in this sector should be highly recyclable and should not leach harmful substances into food and beverages. • Criteria-Based: Food-grade safety, low toxicity, high recyclability. • Non-Criteria-Based: Lifecycle assessments to optimize packaging design for minimal environmental impact. • Relevant Uses and Applications: o Polyethylene (PE): Cling film, plastic bags for food storage. o Polypropylene (PP): Disposable cutlery, cups, lids, food containers. o Polystyrene (PS): Foam takeout containers, disposable plates and cups. o Polyethylene Terephthalate (PET): Single-use water and soda bottles. • Rationale: o Safety: Approved for food contact, ensuring consumer safety. o Hygiene: Single-use plastics reduce contamination and foodborne illnesses. o Convenience: Lightweight and durable, suitable for on-the-go consumption. • References: o Food Packaging Forum. (2022). Food packaging materials. o PlasticsEurope. (2020). Plastics in food packaging. Healthcare Industry: In the healthcare industry, the focus is on sterility and non-toxicity. Durable plastics that can withstand sterilization processes and do not release harmful chemicals are crucial. • Criteria-Based: Sterility, non-toxic, durable under medical conditions. • Non-Criteria-Based: Incentives for developing biodegradable medical plastics. • Relevant Uses and Applications: o Polyvinyl Chloride (PVC): Medical tubing, blood bags, IV containers.

o Polypropylene (PP): Syringes, pill bottles, disposable masks.
o Polyethylene (PE): Disposable gloves, single-use medical aprons.
• Rationale:
o Sterility: Essential for maintaining sterile conditions in medical settings.
o Durability: Strong and resistant to breaking, crucial for medical applications.
o Safety: Approved for medical use, ensuring patient safety.
• References:
o World Health Organization (WHO). (2016). Medical device regulations.
o Medical Plastics News. (2021). Plastics in healthcare.

Personal Care Industry: In the personal care industry, plastics should be non-toxic and safe for skin contact. High recyclability and the use of biodegradable materials are also important to reduce environmental impact.
• Criteria-Based: Non-toxic, safe for skin contact, recyclable.
• Non-Criteria-Based: Education on the environmental impact of single-use personal care plastics.
• Relevant Uses and Applications:
o Polyethylene (PE): Cosmetic packaging, single-use sachets.
o Polypropylene (PP): Toothbrushes, disposable razors.
o Polyethylene Terephthalate (PET): Shampoo bottles, liquid soap containers.
• Rationale:
o Aesthetics: Provides clear and attractive packaging for personal care products.
o Durability: Resistant to moisture and chemicals, protecting the product.
o Convenience: Lightweight and easy to handle, suitable for everyday use.
• References:
o Cosmetics Europe. (2020). Plastics in personal care.
o International Journal of Cosmetic Science. (2018). Sustainable packaging in cosmetics.

Retail Industry: The retail industry should prioritize high recyclability and low environmental impact plastics. Durable plastics that can be reused or recycled are preferred.
• Criteria-Based: High recyclability, low environmental impact, durable for intended use.
• Non-Criteria-Based: Best practices for reducing single-use plastics and promoting reusable alternatives.
• Relevant Uses and Applications:
o Polyethylene (PE): Shopping bags, garment bags.
o Polypropylene (PP): Single-use promotional items, hangers.
• Rationale:
o Cost-Effective: Inexpensive to produce and distribute.
o Durable: Strong and capable of carrying heavy loads.
o Versatile: Can be used for a wide range of products and purposes.
• References:
o National Retail Federation. (2021). Plastic packaging in retail.
o Retail Industry Leaders Association (RILA). (2020). Sustainability in retail.

Hospitality Industry: In the hospitality industry, biodegradable and non-toxic plastics are essential for single-use items. Encouraging the use of compostable plastics can significantly reduce environmental impact.
• Criteria-Based: Biodegradable, non-toxic, durable for short-term use.
• Non-Criteria-Based: Incentives for switching to sustainable, compostable plastic products.
• Relevant Uses and Applications:
o Polyethylene (PE): Single-use toiletries packaging.
o Polypropylene (PP): Disposable utensils, cups, and plates.

	o Polystyrene (PS): Takeout containers, disposable cutlery. • Rationale: o Hygiene: Single-use items ensure cleanliness and reduce cross-contamination. o Convenience: Easy to use and dispose of, suitable for high-turnover environments. o Cost-Effective: Affordable for large-scale use in hotels, restaurants, and events. • References: o Hospitality Net. (2020). Sustainable practices in hospitality. o National Restaurant Association. (2021). Plastic use in hospitality. For essential uses in medical field, transport, communications, emergency transportation and delivery of water and food.
State of Kuwait	Applications which are identified by the country to be contributing to its waste issue, difficult to be managed, and containing chemicals of concern based on risk assessment.
Peru	Packaging and single-use products. The packaging sector is the biggest contributor to plastic waste, generating 46% of it, with 32% of this waste directly entering the environment. Source: UNEP (2024). Plastic Pollution Science. Microsoft Word - UNEP_PP_INC.4_INF_1_FINAL
Government of India.	The Guidance can be used by parties to the instrument, on a voluntary basis in a non- binding manner, based upon national circumstances and capabilities and national regulations. The implementation of any compliance provision needs to follow principle of CBDR.
The State of Qatar	Plastics play an important role in the betterment of human lives. It is an undeniable fact that sectors like medical rely on the use of plastics in some form or the other. The use of plastics in pharmaceuticals and medical has saved human lives. Moreover, the State of Qatar is eager to ensure food security for its citizens and residents. The sector of agriculture, in Qatar and elsewhere in the developing world, relies on the use of plastics to ensure food security. Any compromise in these sectors would entail serious setbacks and disastrous repercussions for human lives. Therefore, products in sectors such as medical and agriculture must be excluded from the scope of the ILBI.
The Islamic Republic of IRAN	Iran Response: - Some plastic products shall be excluded from the scope of the future Instrument. In this respect, applications related to medical, pharmaceutical, sanitary and hygienic purposes could be considered as specific in terms of use of plastic products. This is due to undisputable necessity of using such products, the absence of alternative solutions and potential disastrous consequences for the humanity in case of applying prohibitions and restrictions with respect to such products. - Accordingly, products necessary to ensure humanitarian purposes including medical, pharmaceutical, sanitary and hygienic products and food and water security especially in developing countries should also be excluded from the scope of the agreement. - It is strongly viewed that paints and coatings, and products made of elastomers shall not be considered as plastic products. Additionally, any alternative to plastic products might be encouraged only if they are available, accessible and affordable, scientifically proved to be viable with no hazards and impacts, and consistent with the national capacities, priorities and socio-economic circumstances of the interested countries.
Switzerland	We think this question misses the point. The main conceptual driver is timing, not specific product categories. Depending on the state of the negotiations, a non-criteria based approach, based on the existing legal and civil society framework, may be necessary and appropriate for an initial list. We further note addressing intentionally-added microplastics may be much easier using a non-criteria approach, since the objective should be elimination wherever possible, and the question of recyclability does not arise. We would also like to refer to the CRP submitted by Switzerland on behalf of Georgia, Peru, Rwanda, Switzerland and Thailand with a proposal for an Initial List of Problematic and Avoidable Plastic Products. This initial list on products is based on existing regulations and initiatives and focuses on packaging. It is a non- exhaustive list, which could be reviewed and expanded over time. initial_plastic_products_list_georgia_peru_rwanda_switzerland_thailand.pdf (unep.org)
Madagascar	Based on the search results, there are a few key points regarding the specific uses and applications of criteria and non-criteria based approaches for plastic products in the ILBI: - This suggests that the ILBI negotiators see value in exploring both criteria-based and non-criteria-based approaches to addressing plastic products, with a particular focus on ensuring the recyclability and reusability of plastic products based on their specific uses and applications. - the ILBI may focus more on approaches related to recyclability, reusability, and waste management for specific plastic product applications, rather than broader restrictions on primary plastic production. - the ILBI should see value in exploring both criteria-based and non-criteria-based approaches for plastic products, with a particular focus on ensuring recyclability and reusability based on the specific uses and applications of different plastic products. The development of investment analysis tools could help inform these approaches. The World Bank article further elaborates on this, noting that the Bank is "developing – in collaboration with other partners –an investment toolkit, which will provide countries with a clear and science-based estimation of how much capital investment will be required to deliver their national action plans to deal with plastic pollution, broken down by types of investments, by year and by asset class." This toolkit could help inform the criteria and non-criteria based approaches by providing data-driven analysis of the specific investment needs for different plastic product types and applications.

	- Addressing the linkages between trade and plastic pollution, such as the global trade of harmful plastics and plastic products, and the need for increased transparency of trade flows including import and export data . This could inform provisions in the ILBI related to trade measures. - Incorporating biodiversity-specific language and terms into the ILBI, given the significant impacts of plastic pollution on ecosystems and biodiversity . This would help ensure the ILBI is aligned with and complementary to other multilateral environmental agreements like the Kunming-Montreal Global Biodiversity Framework. -
The state of Israel	Emphasis on disposable items. The rationale is that essentially single-use products aiming for a cheap price are prone to be difficult to recycle, collect and handle and ends in the open and public space in the largest amount.
Brazil	Specific uses and applications are to be considered as control measures are put in place.
Australia	Yes: In plastics recovery and waste streams. There is an increased risk of human and environmental exposure when problematic plastics are mismanaged at their end of life (for example, incineration of PVCs, or certain chemicals/polymers contaminating otherwise recyclable material streams). Criteria approaches are essential to avoiding these risks.
Guatemala	It is recommended that one of the inputs to consider as a starting point may be the document “BREAKING DOWN HIGH-RISK PLASTIC PRODUCTS, ASSESSING POLLUTION RISK AND ELIMINATION FEASIBILITY OF PLASTIC PRODUCTS”
Iraq	No answer
The Republic of BURUNDI	• food grade plastics, for example: polypropylene (PP), HDPE (high density polyethylene), LDPE (low density polyethylene), PS (polystyrene) and PET (polyethylene terephthalate); • plastics used in the manufacture of cosmetic and chemical products: poly(ethylene oxide) – PEG, sodium polyacrylate; • technical and construction materials, for example: polyvinyl chloride (PVC), polyamide (PA), polycarbonate (PC); • materials used for the production of clothing, such as: polyester (PES), acrylic (AC). Plastics can therefore take multiple shapes, resistances, colors, properties but also and above all they are materials adaptable to a large number of environments, hence their wide use. This is why they have continued to be used in art since their creation. Many sectors of activity use plastic materials: • agriculture ; • furniture, office items; • household items and appliances; • packaging and handling; • industries: wood • chemical • electrical and electronic • metal and metallurgical • paper • paints, varnishes and adhesives (coatings, sealants, sound-absorbing, etc.) • textile - clothing and accessories (helmets, etc.); • toys, hobbies and sports; • leather goods, shoes and travel items; • medicine, pharmacy and hygiene; • optics; • advertising (signs, panels); • transport (automobile, rail, marine, aeronautics, aerospace); • public works, civil engineering and building; • etc.

Germany	The increasing prevalence of plastic products in various industries has led to the development of different approaches for evaluating their environmental impact and sustainability. Among these approaches, criteria-based and non-criteria-based methods are commonly employed. Understanding the specific uses and applications for which these approaches are particularly relevant can help stakeholders make informed decisions regarding plastic product design, manufacturing, and disposal. Criteria-Based Approaches Criteria-based approaches involve the use of specific metrics or standards to evaluate the performance and impact of plastic products. These criteria often include environmental, economic, and social factors that provide a comprehensive assessment of a product's lifecycle. Life Cycle Assessment (LCA): Application: LCA is a widely used criteria-based approach that evaluates the environmental impacts associated with all stages of a product's life, from raw material extraction through production, use, and disposal. Relevance: This method is particularly applicable in industries where understanding the full environmental footprint is crucial, such as packaging, automotive, and consumer goods. For example, companies may use LCA to compare biodegradable plastics against traditional petroleum-based plastics to determine which option offers lower overall environmental impacts. Eco-labeling Standards: Application: Eco-labels provide consumers with information about the environmental performance of products based on predefined criteria. Relevance: These labels are especially relevant in consumer markets where sustainability is a key purchasing factor. Products like food packaging or household items often carry eco-labels that indicate compliance with specific environmental standards. Regulatory Compliance: Application: Many regions have regulations governing plastic use (e.g., restrictions on single-use plastics). Relevance: Criteria-based approaches ensure compliance with these regulations by providing clear benchmarks that manufacturers must meet. This is critical in sectors such as food service or retail where regulatory scrutiny is high. Non-Criteria Based Approaches Non-criteria based approaches do not rely on predefined metrics but instead focus on qualitative assessments or broader principles guiding decision-making regarding plastic products. Material Innovation and Design Thinking: Application: This approach emphasizes creativity in developing new materials or redesigning existing products without strict adherence to specific criteria. Relevance: It is particularly applicable in industries like fashion or consumer electronics where aesthetic appeal and functionality are paramount. Designers may explore alternative materials that reduce reliance on conventional plastics without being bound by rigid standards. Stakeholder Engagement and Public Perception Analysis: Application: Engaging with stakeholders (consumers, NGOs, etc.) to understand perceptions around plastic usage can inform product development. Relevance: This approach is relevant for brands looking to enhance their image or align with consumer values regarding sustainability. For instance, companies may conduct surveys to gauge public sentiment about certain types of plastics before launching new products. Circular Economy Principles: Application: Emphasizing reuse, recycling, and sustainable practices rather than adhering strictly to quantitative metrics. Relevance: Non-criteria based circular economy strategies are particularly applicable in industries focused on waste reduction and resource efficiency—such as construction or automotive—where innovative reuse of materials can significantly reduce overall plastic consumption.
The Government of Canada	The application of specific evidence and science-based criteria would help to identify specific uses and applications that would merit action under the ILBI. Packaging and other short-lived applications could be priority candidates for early action, taking into account their disproportionate contribution to global plastic waste generation and plastic pollution. For instance, packaging waste constitutes a large share (42%) of total plastic waste generated, followed by consumer products and textiles. References: • UNEP, 2024. Plastic pollution science. UN doc. UNEP/PP/INC.4/INF/1 • OECD, 2022. Global Plastics Outlook. Paris.

<table>
<tr><td>Armenia</td><td>I find it difficult to answer</td></tr>
<tr><td>Malawi</td><td>Yes. Packaging and plastic waste management are relevant and should be maintained in the text.</td></tr>
<tr><td>Panama</td><td>Based on the criteria or types of criteria mentioned above, non-criteria based on approximations could be applied. In other words, depending on the composition of plastic products (whether they are synthetic plastics, recycled plastics, or bioplastics) and their physical properties and chemical structure, the previously mentioned additives can be used, depending on the functionality desired for the plastic products. The use of microplastics would be unnecessary if the design of plastic products is managed responsibly based on the abovementioned criteria and non-criteria. This information is based on the technical report prepared by the Industry and Economy Division of the United Nations Environment Programme (UNEP).
• Products should be evaluated according to their essentiality, safety, and sustainability, applying specific assessments for each sector and global context.
• It is crucial to avoid general exemptions for entire sectors, such as healthcare, to promote the development of viable alternatives for both essential and non-essential items used in that sector.
• If a product is considered non-essential in one country but essential in another, financial support should be provided to develop capacities and facilitate a just transition to safe and sustainable products. This approach has a conceptual precedent in the Minamata Convention.</td></tr>
<tr><td>México</td><td>It is important to highlight that some uses of plastics at health sector could be considered at restricted use, depending on the characteristics for which there are still no economically feasible alternatives.</td></tr>
<tr><td>Egypt</td><td>In relation to draft provision II.3 of the compilation text, there are plastic products and plastic product groups that should not be considered in the scope of this treaty, such as, but not limited to, medical, pharmaceutical, and sanitary plastic products, plastics products used for infrastructure, buildings material , etc.</td></tr>
<tr><td>Thailand</td><td>
<table>
<tr><th>Criteria</th><th>Relevant Uses and Applications</th><th>Rationale</th></tr>
<tr><td>Recyclability:</td><td>Packaging materials, consumer goods, electrical and electronic equipment (EEE), automotive parts, and construction products.</td><td>These sectors produce high volumes of waste. Improving recyclability can significantly reduce waste generation and promote circular economy practices.</td></tr>
<tr><td>Excessive uses of plastics</td><td>Single-use packaging, disposable items, bulky consumer products, and over-designed construction products.</td><td>Reducing the excessive use of plastics in these applications can lower resource intensity and waste generation, addressing plastic pollution at its source.</td></tr>
<tr><td>Reliance on plastics from primary sources</td><td>High-demand sectors such as electronics, automotive, packaging, and construction.</td><td>Encouraging the use of recycled content in these sectors can reduce reliance on virgin materials, supporting sustainable resource management.</td></tr>
<tr><td>Microplastic release potential</td><td>Intentionally added microplastics, Personal care products, Synthetic textiles and other Products with additives that cause plastics to be easily disintegrated and create plastic fragments</td><td>These products are significant sources of microplastic pollution. Addressing their potential to release microplastics can mitigate environmental and health risks.</td></tr>
<tr><td>Environmental Impact</td><td>Agriculture (plastic mulching), marine applications (fishing gear), outdoor recreational equipment, automotive components, and construction materials.</td><td>Products used in these applications often end up in natural environments, where they can cause significant ecological harm. Managing their environmental impact is crucial.</td></tr>
<tr><td>Usage Patterns</td><td>Single-use plastics in food packaging, disposable medical supplies, convenience products, and short-lived construction materials.</td><td>Reducing single-use plastics in these applications can significantly decrease plastic pollution and waste generation</td></tr>
<tr><td>Material Composition</td><td>Construction materials, consumer electronics, automotive components, and over-designed products.</td><td>Substituting problematic polymers in these high-volume applications can reduce environmental harm and waste management challenges.</td></tr>
<tr><td>Additives</td><td>Packaging, children's toys, EEE, automotive components and construction products.</td><td>Eliminating harmful additives in products that have direct contact with humans and food can reduce health risks and environmental contamination.</td></tr>
<tr><td>Toxicity</td><td>Consumer products, agricultural films, automotive parts, EEE, and construction materials.</td><td>Reducing toxic substances in these applications can improve human and environmental health, reducing plastic pollution and waste.</td></tr>
</table>
</td></tr>
<tr><td>Solomon Islands</td><td>1. Products should be assessed according to essentiality, safety and sustainability. Evaluations may be sector and context specific as mentioned above (see response in section 2) but should be applied globally.
2. Care should be taken to not allow overarching exemptions to whole sectors, such as health care, as this would prevent the development of viable alternatives for essential and non-essential items used by the sector.
3. A product that is deemed non-essential in one country, but essential in another (e.g. plastic bags for drinking water) could trigger financial, capacity building and technical support just transition away from unsafe and unsustainable products (e.g., by improving drinking water infrastructure). There is conceptual precedent for such an approach in the Minamata Convention.4

Reference:
4 Annex B Part II see p60 https://minamataconvention.org/sites/default/files/documents/information_document/Minamata-Convention-booklet-Oct2023-EN.pdf)</td></tr>
<tr><td>Bahrain</td><td>Plastic products serve vital functions across various sectors, including healthcare, construction, packaging, and technology. The diversity of applications highlights the essential role that plastics play in modern life and underscores the need to focus on waste management solutions and being constructive instead of banning or restricting any list of plastic products for any applications, which will have unintended consequences</td></tr>
<tr><td>Algeria</td><td>Special attention must be given to the position of countries that give importance in their development process to the promotion of the polymer and plastics industry through petroleum refining and the field of specific uses of</td></tr>
</table>

	certain plastic products. National development strategies in the field of production of plastic or plastic-based elements as inputs for certain products must be considered in a section dedicated to exemptions.
China	Yes. In particular, the determination of leakage-prone plastics should be based on science, methodologies and through a phased decision-making processes, considering the actual situation in each country, with full consideration of the availability, accessibility and affordability of alternatives.
United Arab Emirates	Plastic products serve vital functions across various sectors, including healthcare, construction, packaging, and technology. The diversity of applications highlights the essential role that plastics play in modern life and underscores the need to focus on waste management solutions and being constructive instead of banning or restricting any list of plastic products for any applications, which will have unintended consequences.

Nominating Member	Part B. 6. Are there any important interrelations to other draft provisions of the instrument?
Suriname	1. Scope and definitions: Classification directly informs the instrument's scope. 2. National action plans and reporting: Forms basis for reporting requirements. 3. Product design standards: Influences eco-design requirements. 4. Extended Producer Responsibility schemes: Determines obligations for different plastic categories. 5. Waste management and recycling targets: Informs targets based on recyclability or biodegradability. 6. Restrictions and phase-outs: May guide bans on certain products or additives. 7. Monitoring and assessment: Needs to align with classification for consistent measurement. 8. Technical and financial assistance: Complexity may affect capacity building needs. 9. Research and innovation: May focus efforts on problematic plastic categories. 10. Trade-related measures: Classification must consider international trade rules. 11. Marine litter and microplastics: Relevant for provisions addressing these specific issues. 12. Circular economy provisions: Classification should support broader economic model changes.
Somalia	Yes, there are significant interrelations between the criteria that we have mentioned above in the classification of plastic products and other provisions of the draft ILBI, particularly those criteria related to waste management and recycling standards (Section III.2), and regulations on hazardous chemicals (Section II.2). The classification criteria help inform waste management activity by identifying which plastics can be recycled effectively and which plastics require more specific handling due to their chemical composition. Additionally, the criteria directly impact the regulatory measures for hazardous materials, ensuring that plastics containing toxic harmful chemicals are properly addressed and managed to protect human life and the environment health. These interrelations are crucial for the effective implementation and enforcement of the ILBI, promoting a holistic approach to plastic pollution management.
El Salvador	Yes, Law on Integrated Waste Management and Promotion of Recycling and its Regulations.
Oman	The identification of “problematic” plastic products could relate to Section II.5 in ways that producers of “problematic” plastic products should have the opportunity to improve the design of such products that could increase their recyclability, reusability, and material efficiency, thereby, transforming the products from “problematic” to those having more desirable properties in terms of reaching the goals of the Instrument – combatting plastic pollution. Section II.3 also correlates with Section I.3 (Definitions) and Section I.5 (Scope).
Republic of Cuba	Yes. Problematic and avoidable plastic products may be treated in provisions related to Product design (Section II.5 where alternatives shall also be included).
Japan	As applications of plastic products are diverse, it is practical and effective for each Party to take measures according to each application and specific situation of each plastic product type. For this reason, sectoral approach, as elaborated in 4bis “Dedicated Programme of work”, is useful. In particular, specific and practical measures are required for those plastic products used for agriculture and fisheries industries, taking into account the unique circumstances of the primary industry, and such measures should be discussed and decided with due regard to the contents of the voluntary guidelines that are being developed in the Food and Agriculture Organization of the United Nations (FAO).
New Zealand	Part II.3 interrelates with Part II.5 on product design. Criteria for both parts II.3 and II.5 could be considered together, given that products or industries with problematic plastic products not yet ready for a ban or phase out should instead look to improve product design. Part II.3 interrelates with Part II.2 on chemicals and polymers of concern. Products containing chemicals and polymers of concern could be considered as problematic plastics, depending on the criteria agreed upon, and dealt with in this same Part. We are open to these sections being combined and other experts' advice on this.

	Part II.3 interrelates with Part II.1 on primary plastic polymers. The reduction in problematic and avoidable plastic products will lead to a reduction in plastic use and demand for plastic production overall. The implementation of Part II.3 should be considered alongside direction under Part II.1. The draft provisions in Part II.3 on microplastics on their own and/or intentionally added microplastics relate to Part II.8 on emissions and releases of plastic throughout its lifecycle, particularly for the environmental leakage of microplastics. Where products meet the requirement for exemption under Part II.3, there should be a linkage provided under Part II.8 to ensure measures are taken to reduce the risk of environmental leakage of these microplastics or intentionally added microplastics.
Russian Federation	The identification of "problematic" plastic products could relate to Section II.5 in ways that producers of "problematic" plastic products should have the opportunity to improve the design of such products that could increase their recyclability, reusability, and material efficiency, thereby, transforming the products from "problematic" to those having more desirable properties in terms of reaching the goals of the Instrument – combatting plastic pollution. Section II.3 also correlates with Section I.3 (Definitions) and Section I.5 (Scope).
Cook Islands	Part II Provision 1 Primary Plastic Polymers Provision 2 (chemicals [and polymers] of concern) Provision 5 - product design, composition, performance Provision 6 - non-plastic substitutes, e.g. aluminum, glass, paper Provision 9 - waste management Provision 10 - trade Provision 13 - Transparency, tracking, monitoring and labeling Part III Provision 2/3 - Capacity-building, technical assistance and technology transfer Part IV Provision 5 - International Cooperation Provision 6 - Information exchange especially on the point above regarding essentiality at a country level.
Tuvalu	See 4.b
Republic of Korea	1. Draft Provision Ⅱ.5 Product Design, composition and performance: They are closely interconnected with each other and form a mutually reinforcing relationship within their implementation. 2. Draft Provision II. 8. (Emissions and Releases): Regulating and improving products that are highly likelihood of ending up in the natural environment are crucial to implement draft provision ii.8. 3. Draft Provision II. 9 (Waste Management): The product's recyclability must be closely interlinked with waste management to ensure practical and scalable implementation.
Malaysia	Yes. Similar decision tree approach can be applied to most draft provisions especially provision II.1, 2, 3, 5, and 6 as evaluation of products/substances/materials is applicable for these provisions.
Monaco	Yes, II.5 ; II.8
Philippines	Yes. Part II: II.2 Chemicals and polymers of concern; II.3 Problematic plastic products; II.4 Exemptions available to a party upon request and Dedicated programmes of work; II.5 Product design, composition and performance; II.6 Non-plastic substitutes; II.8 Emissions and releases of plastic throughout its life cycle; II.9 Waste management; II.10 Trade; II.13 Transparency, tracking,, monitoring and labelling Part III: III.1 Financing; III.2 Capacity building, technical assistance and technology transfer; III.3 Technology Part IV: IV.1 National plans; IV.2 Implementation compliance and cooperation; IV.5 International Cooperation; IV.6 Information exchange; IV.7 Awareness-raising, education and research, IV.8 Stakeholder engagement Part V: V.2 Subsidiary bodies Possible Annexes: Annex A, B, C
Singapore	Linkages to Part II Provision 5 (Product design, composition, and performance) should be considered, given that increased circularity of plastic products from product design guidelines or requirements would reduce the eventual leakage and negative impacts of plastics on human health and environment (i.e. less 'problematic' plastics). Discussions and outcome of Part II Provision 10 (Trade in listed chemicals, polymers, and products in plastic waste) would also largely depend on the eventual annexes/approaches agreed upon under this provision.
Costa Rica	Yes: waste management, microplastics, fishing gear and emissions and releases.

The European Union and its 27 Member States	This draft provision is directly linked to provision (5) on the product design. With the goal of having a clear process, the link between these provisions should be clear. Furthermore, the products not restricted or derogated/exempted, identified as problematic or not, should be covered by the provision on product design, with the aim to increase their safety, limiting their impact on the environment and increasing their circularity. This provision is also linked to provision (10) on trade, where equivalent trade measures should be established for listed products and provision (13) with transparency and labelling requirements for these products.
United Kingdom	Any guidance should be developed in consideration with any guidance under provision 5) [Product design, composition, and performance] and 6 [non-plastic substitutes].
Federated States of Micronesia	Regulating plastic products under provision II.3 of the instrument is without prejudice to provisions in the instrument regulating the production and consumption of plastic polymers, including in provision II.1 of the instrument, which must be a priority objective of the instrument. Additionally, to the extent that the regulation of plastic products under provision II.3 of the instrument involves recourse to traditional knowledge, knowledge of Indigenous Peoples, and local knowledge systems, including in terms of harmful impacts of such products on Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories as well as in terms of suitable alternatives for such plastic products, there must also be recourse to the safeguards in the instrument pertaining to such types of knowledge and their holders, including the free, prior, and informed consent and other internationally recognized rights of such holders. Such safeguards must be reflected in, at a minimum, the Preamble of the instrument as well as in a standalone Principles article/provision of the instrument.
Saudi Arabia	• We suggest linking and merging Part 2.3 Section with Part 2.5 from the revised zero-draft related to plastic products design to improve reusability, recyclability, and material efficiency in one single section. • A link and a reference for this section in section 9 related to waste management.
United States.	While there are interrelations to most of the draft provisions, linkages to the draft provisions on polymers, chemicals, product design, non-plastic substitutes, trade, and transparency should be particularly considered.
Ecuador	It has to do with the provisions related to: 2.4 exemptions 2.5 Product design, composition and performance 2.8 Emissions and releases of plastic throughout its life cycle 2.10 Trade in listed chemicals, polymers and products 2.13 Transparency, tracking, monitoring and labeling 3.2 Capacity-building, technical assistance and technology transfer Part IV. National Plans Annex A regarding to primary plastic polymers, and chemicals and polymers of concern Annex E regarding emissions and releases of plastic through its life cycle Annex [X] regarding effective measures at each stage of plastic lifecycle
Ethiopia	Interrelations with Other Draft Provisions include: • Definitions (e.g., of 'plastic products', 'biodegradability'): Clarifying terms used throughout the document to ensure consistency and understanding. • Implementation Timelines: Setting deadlines for when specific measures must be implemented by member states or parties. • Financial Mechanisms: Provision of funding or financial incentives to support the transition to more sustainable plastics. • Capacity Building: Assistance to developing countries or regions in implementing the provisions effectively. Uses and Applications • The criteria-based approach directly affects the manufacturing and design of plastic products, influencing how they are produced and used. • Non-criteria-based approaches, such as bans, impact the market demand and consumer behavior, pushing towards alternatives or more sustainable practices. In summary, the interrelation between draft provision II.3 and other provisions lies in creating a comprehensive framework that addresses both the technical specifications of plastic products and broader environmental and health goals. The criteria-based and non-criteria-based approaches work in tandem to regulate and reduce the environmental impact of plastic products across their lifecycle.
Uruguay	Yes, the most important interrelation is with Part I 5, the scope. In the draft text there are a lot of proposed exclusions that make that the IBLI lost its real task of ending plastic pollution. Additionally, provision II 3 is related to provision II 5 because one of the control measures needed whether at global or national level, will be the redesign of problematic products to be safer according to criteria for sustainable and safe product design. Also, provision II 3 it could be related to provision II 6, because other of the control measures to reduce avoidable plastic products could be the substitution using non-plastic materials.

State of Kuwait	It is related to Part II.5 (Product design and performance) as the mandate is not against the plastic product by itself (i.e., pollution not plastics).
Peru	II.2 (Chemicals / Polymers of concern): There is a risk of duplication because containing hazardous chemicals is a criteria to identify a plastic product as problematic but also some criteria considered in the identification of Polymers of concern may be the same as criteria for problematic and avoidable plastics. II.5 (design): When establishing design criteria for recyclability, it should be consistent with the list of problematic and avoidable plastic products, ensuring these plastics are excluded from the design. II.7 (Extended producer responsibility- EPR): EPR (Extended Producer Responsibility) is an additional measure to bans and phase-outs, so there should be coordination when determining the most effective strategy for various plastic products and applications.
Government of India.	Categorization of plastic products based upon criteria or non-criteria based approaches is linked to scope of the instrument, product design and trade provisions. Any classification of products and further regulation shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. It is also inextricably linked with availability, accessibility, affordability and environmental sustainability of alternatives and Means of Implementation including cost of transition and setting up of dedicated financial mechanism for meeting compliance obligation by developing countries based upon CBDR.
The Islamic Republic of IRAN	Depending on the results of the ongoing negotiations and without prejudice to outcomes of the INC-5, there could be some inter-relation with some sections such as Scope, Definitions (glossary), Principles, Waste management and Product Design.
Switzerland	There are interrelations to draft provisions of the Draft Text Part II.2 (Chemicals), Part II.4bis (Dedicated programmes of work) Part II.5 (Design), Part II.6 (Non-plastic substitutes), Part II.7 (EPR), Part II.10a (Trade) and Part II.13 (Transparency, tracking, monitoring and labelling), final provisions in Part VI.2 (Amendments to the instrument) and Part VI.3 (Adoption and amendments of annexes), and the "possible annexes to the Instrument" where the plastic products could be listed. Trade is also relevant if initial lists are adopted. Ideally, the design and innovation driving provisions will be coordinated with these control measures over time, but the design and innovation elements of the treaty are likely to require more development and implementation time.
Madagascar	Based on the search results, there are several important interrelations to other draft provisions of the ILBI for plastic products identification and classification: The ILBI should address the full lifecycle of plastics, including measures to reduce the production and supply of virgin plastic. This could include trade provisions to restrict the trade of primary plastic polymers between non-parties and parties to the agreement, as well as removing subsidies and fiscal incentives for the production of primary plastic polymers and their chemical feedstocks. The ILBI should include binding measures to address different sources of microplastic pollution, such as adopting abrasion limits for tires and outlining specific measures for the handling, storage, and transport of plastic pellets, flakes, and powders . The ILBI should mandate corporate disclosure and reporting of plastic-related metrics to enable tracking of progress and monitoring of implementation . The ILBI should take a comprehensive, system-change approach that addresses environmental and human health considerations, and ensures a just transition for impacted populations . The ILBI should include both legally binding and voluntary measures to address the full lifecycle of plastics, including provisions to reduce production and demand, restrict chemicals of concern, ban problematic products, improve product design, promote reuse systems, and address microplastic emissions .
The state of Israel	There is a built-in connection between the products criteria and the materials criteria, as well as the producers that put them on the market and finally the responsibility to close the circle and manage the end of life of these products (extended manufacturer's and producer's responsibility).
Brazil	This topic should be linked to the provision of product design as well as to provisions on financing, capacity building, technical assistance, technology transfer and international cooperation.
Australia	Part II. 2 [Cooperation and coordination with relevant MEAs on] [[Chemicals [and polymers] of concern [in [plastics and] plastic products]] - Understanding the interplay between plastic products and chemical/polymers of concern is crucial for assessing and mitigating the environmental and human health impacts associated with plastic use globally. Part II. 5 Product design, [composition] and performance - Product criteria that address chemicals and polymers of concern will ensure that stakeholders can better manage the lifecycle impacts of plastics, aiming for safer and more sustainable solutions. Part II. 8 Emissions and releases of plastic throughout its life cycle Part II. 9 Waste management Part II.10 – Trade [in listed chemicals[, polymers] and products, and in plastic waste] [related measures] - Applying a set of common criteria to develop a global list of regulated items will simplify the trade environment, reduce compliance costs and support achievement of common global goals to effectively reduce plastic pollution.

	Part II.13 – Transparency, tracking, monitoring and labelling - Transparency is pivotal for understanding and managing the risks posed by chemical/polymers of concern found in plastic products. By enhancing transparency, member-states and other key stakeholders can: - foster greater accountability by creatin visibility of the chemicals used in plastic products they are importing or exporting; and - advance environmental and human health objectives by ensuring plastic products contain safe chemicals.
Guatemala	Like the previous It is recommended that one of the inputs to consider as a starting point may be the document "BREAKING DOWN HIGH-RISK PLASTIC PRODUCTS, ASSESSING POLLUTION RISK AND ELIMINATION FEASIBILITY OF PLASTIC PRODUCTS", Published in May 2023 by WWF.
Indonesia	The criteria for identifying and classifying plastic products are closely connected to several other key areas within the instrument. For example: 1. Waste Management and Recycling: o Enhanced waste management and recycling infrastructure are essential to effectively classify and manage recyclable and biodegradable plastics. 2. Extended Producer Responsibility (EPR): o EPR requires producers to consider the lifecycle of their products, aligning closely with criteria on material composition and end-of-life management. 3. Public Awareness and Education: o Educating the public on sustainable practices supports the goals of proper plastic classification and management. 4. Research and Innovation: o Encouraging research into sustainable materials and recycling technologies aligns with criteria for innovation and adaptability in plastic classification. 5. International Cooperation and Support: o International cooperation, including technology transfer and financial aid, is crucial for all countries to meet their classification and management goals effectively.
Iraq	No answer
The Republic of BURUNDI	Yes.
Germany	There are significant interrelations among various draft provisions of the ILBI concerning conservation measures, area-based management tools, environmental impact assessments, capacity building, stakeholder engagement, and monitoring mechanisms. Recognizing these interconnections is essential for creating a cohesive legal framework that effectively addresses marine biodiversity challenges in areas beyond national jurisdiction while respecting existing international obligations.
The Government of Canada	Yes. As per the mandate established by UNEA resolution 5/14, the ILBI must be comprehensive and take a life cycle approach. As such, this requires a holistic approach with complementarity across the provisions to ensure solutions are working synergistically across the plastics value chain and in complementarity with existing multilateral environmental agreements. The provisions on plastic products, chemicals of concern in plastic products and product design are connected and should work in tandem towards the goal of preventing and reducing plastic pollution. • For instance, through provisions related to chemicals, the ILBI could ensure elimination, phase-out or restriction of certain harmful chemicals used in plastic manufacturing, plastic materials or products, while the provision on products could ensure that certain problematic and avoidable/unnecessary plastic products are eliminated or phased out from the global marketplace, or their manufacture or use is restricted (e.g., to certain applications only). Targeted plastic product categories identified as problematic or avoidable, or product categories identified under design criteria could also be considered under extended producer responsibility programs. • Design criteria and requirements, in turn, can help promote more sustainable and circular plastic products, taking into account a wider range of issues, such as sustainable production and use of allowed chemicals and materials (e.g., promoting chemical and material simplification to improve protection of environmental and human health and boost recyclability) and to enable value retention processes (e.g., reuse, repair, remanufacture). • Product and chemicals of concern criteria and design provisions must also consider and work in tandem with downstream solutions such as plastic waste management and consider how the materials will be managed at end-of-life and how they may interact with the natural environment or wildlife if released or emitted (e.g., life cycle analysis and consideration of plastic alternatives). • In addition, there is an important link with provisions on greater transparency, which could be included in obligations related to reporting and labelling, as well as design criteria or requirements (e.g., to ensure product labelling towards environmentally sound management). • Provisions in the compiled draft of the treaty on emissions and releases of plastics and associated pollutants to the environment across the plastic life cycle are also linked with upstream provisions on products, chemicals of concern and design, as these materials, items or substances emitted to the environment may be addressed through established criteria in these areas. • Efforts to address problematic and avoidable plastic products, chemicals of concern and product design should also take precautions to avoid regrettable substitutions and unintended consequences of alternatives.

Malawi	Recyclability and usability
Palau	Palau believes that all parts of the Agreement are interrealted. Some particular important provisions for plastic products include the composition of the products with regards to chemicals used, the design of the product and its ability to be reused, recyclable, compostable. For countries like Palau who are small island developing states, it is important that provisions take into account the special circumstances of SIDS and that the Agreement provides for adequate for SIDS to implement the future instrument. Strong provisions on transparency on the composition of products is crucial. Specific sectors may need specific provisions or measures.
Panama	• Products containing intentionally added microplastics Specifically, paragraph 2 of Option 2 states the following: Each Party, within its respective regulations, shall share information on the measures adopted under paragraph 1, through the online register established under Part IV.6 on information exchange, with the aim of promoting transparency. OP2 ter Alt 2. The cost of complying with control measures shall be assessed for each country, and funding shall be facilitated through the specific fund, according to the procedure decided by the governing body, to enable compliance with control measures. These points are important, as the technological and socio-economic capacity of each country must be considered for implementing control measures concerning the identification of microplastics and additives present in plastic products, as well as for designing more environmentally and human health-friendly plastic products. This ranges from the gradual replacement of synthetic plastics with recycled plastics to the progressive inclusion of bioplastics containing only non-concerning additives. Therefore, developing countries could receive funding to comply with these measures. Part II Provision 2 (chemicals [and polymers] of interest) Provision 5: product design, composition, and performance Provision 6: non-plastic substitutes, such as aluminum, glass, paper Provision 9 - waste management Provision 10 - trade Provision 13 - Transparency, monitoring, tracking, and labeling Part III on Capacity building, technical assistance, and technology transfer Part IV Provision 5 - International Cooperation Provision 6 - Information exchange, especially regarding the previous point related to essentiality at the country level.
México	It is considered that the following are also susceptible to being integrated as criteria: a. carcinogenic, mutagenic or reprotoxic (CMRs category 1A or 1B) b. persistent, bioaccumulative and toxic (PBTs) c. very persistent and very bioaccumulative (vPvBs) d. persistent, mobile and toxic (PMTs) e. very persistent and very mobile (vPvMs) f. endocrine disrupting chemicals (EDCs) g. immunotoxicants h. neurotoxicants i. respiratory sensitisers j. specific organ toxicity with chronic effects
Egypt	Yes, it is linked to the entire text of the Revised Zero Draft, as it is the main starting point of the issue under discussion. It is interrelated to all the parts of the text, among them, for example: I.3 Definition I.5 Scope I.4 Exemption II.5 Product Design

Thailand	Provision	Criteria	Interrelations
	II.1 – Primary polymer plastics	Material Composition	• Understanding the types of problematic polymers (e.g., PVC, polystyrene, fluoropolymers) aids in drafting regulations on primary plastic polymers to prioritize sustainable alternatives. • Lifecycle analysis of primary plastic polymers can help identify stages where interventions can minimize environmental impact and promote sustainability.
	II.2 - Chemicals of Concern	Additives and Toxicity	Identifying harmful additives aligns with managing chemicals and polymers of concern to ensure safer plastic products.
	II.5 – Products Design	Recyclability, Microplastic Release Potential	Incorporating criteria into product design standards can enhance recyclability and reduce microplastic release from products.
	II.6 - Non-Plastic Substitutes	Environmental Impact	• Evaluating the environmental impact of plastics supports the development and adoption of sustainable non-plastic substitutes • Lifecycle analysis can compare the impacts of plastic versus non-plastic materials, guiding the transition to more sustainable alternatives.
	II.7. Extended Producer Responsibility	Usage Patterns, Recyclability	Implementing extended producer responsibility (EPR) schemes based on these criteria ensures that producers are accountable for the full lifecycle of their products, promoting sustainability and waste reduction.
	II. 8. Emissions and Releases of Plastic Throughout its Life-Cycle	Toxicity, Environmental Impact	• Managing emissions and releases of plastics based on these criteria helps mitigate their adverse effects on health and the environment. • Monitoring and data collection on emissions throughout the lifecycle support targeted interventions and policy-making.
	II. 9. Waste Management	Recyclability, Excessive Amount of Plastics	• Effective waste management strategies must address the recyclability of plastics and reduce the generation of excessive plastic waste. • Analyzing the lifecycle of plastic products informs waste management practices, ensuring they are efficient and sustainable.
	II. 10. Trade in Listed Chemicals, Polymers, or Products	Material Composition, Additives	• Regulating trade based on the composition and additives in plastics helps control the movement of hazardous materials. • Using trade data and impact assessments informs policies that manage the import and export of problematic plastics.
	II. 11. Existing Plastic Pollution	Environmental Impact, Microplastic Release Potential	• Addressing existing plastic pollution requires understanding the environmental impact and potential for microplastic release from current plastic waste. • Learning from existing pollution scenarios and clean-up efforts informs strategies to tackle current and prevent future pollution.
	II.12. Just Transition	Reliance on Plastics from Primary Sources	• Ensuring a just transition requires supporting industries and workers in shifting from primary plastics to recycled materials. • Engaging affected communities and industries in the transition process ensures fair and equitable outcomes.
	II. 13. Transparency, Tracking, Monitoring and Labelling	Recyclability, Additives	• Transparency and labelling based on these criteria help consumers make informed choices and support tracking and monitoring efforts. • Ensures that products are easily identifiable for safe and efficient recycling at the end-of-life. Proper labelling can provide information on the presence of harmful additives, ensuring they are handled correctly during recycling processes. • Clear labelling and tracking mechanisms can facilitate the circulation of materials within the circular economy, helping to retain their value and reduce plastic pollution.

Solomon Islands	Part II Provision 2 (chemicals [and polymers] of concern) Provision 5 - product design, composition, performance Provision 6 - non-plastic substitutes, e.g. aluminum, glass, paper Provision 9 - waste management Provision 10 - trade Provision 13 - Transparency, tracking, monitoring and labeling Part III Provision 2/3 - Capacity-building, technical assistance and technology transfer Part IV 5 Provision 5 - International Cooperation Provision 6 - Information exchange especially on the point above regarding essentiality at a country level.
Bahrain	• We suggest linking and merging Part 2.3 Section with Part 2.5 from the revised zero-draft related to plastic products design to improve reusability, recyclability, and material efficiency in one single section. • A link and a reference for this section in section 9 related to waste management.
Algeria	Need for in-depth review of the final text: without prejudice to the content of the final text, there may be certain interconnections especially at the level of everything relating to definitions, management principles, the principle of 'exit status' from waste to recyclable and reusable product, etc.
China	Yes, and duplication with other control measures should be avoided to reduce difficulteis in implementation. In addition, consideration should be given to alternatives, national capacity, etc., and therefore this provision is also highly relevant to the issues of finance, technology transfer, and capacity building, especially noting the implementation difficulties of developing countries.
United Arab Emirates	• UAE suggest linking and merging Part 2.3 Section with Part 2.5 from the revised zero-draft related to plastic products design to improve reusability, recyclability, and material efficiency in one single section. • A link and a reference for this section in section 9 related to waste management

Nominating Member	Part C.7. What criteria, types of criteria or non criteria based approaches could be reflected in the ILBI for the identification/classification for chemicals of concern in plastic products? a. Criteria or types of criteria b. Non criteria based approaches
Portugal	7a
Suriname	7.a. Criteria or types of criteria 1. Hazard-based criteria: - Carcinogenicity - Mutagenicity - Reproductive toxicity - Endocrine disruption - Persistence in the environment - Bioaccumulation potential Rationale: These criteria focus on inherent properties of chemicals that pose risks to human health and the environment. Reference: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 2. Exposure-based criteria:

- Likelihood of leaching from plastics
- Potential for environmental release
- Human exposure routes (e.g., dermal contact, ingestion)
Rationale: Considers the likelihood of chemicals coming into contact with humans or the environment.
Reference: OECD. (2019). Guiding Principles and Key Elements for Establishing a Weight of Evidence for Chemical Assessment.

3. Regulatory status criteria:
- Chemicals already restricted or banned in certain jurisdictions
- Chemicals on various "watch lists" or "substances of very high concern" lists
Rationale: Leverages existing regulatory frameworks and assessments.
Reference: European Chemicals Agency (ECHA) Candidate List of Substances of Very High Concern

4. Functional use criteria:
- Plasticizers
- Flame retardants
- UV stabilizers
- Colorants
Rationale: Focuses on chemicals with specific functions in plastics that may pose risks.
Reference: Hahladakis, J. N., et al. (2018). An overview of chemical additives present in plastics: Migration, release, fate and environmental impact during their use, disposal and recycling. Journal of Hazardous Materials, 344, 179-199.

5. Concentration-based criteria:
- Threshold levels for specific chemicals or chemical groups
Rationale: Recognizes that risk often depends on concentration.
Reference: EU Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

7.b. Non-criteria based approaches
1. Lifecycle assessment approach: Evaluates chemicals throughout the entire lifecycle of plastic products, from production to disposal.
Rationale: Provides a comprehensive view of potential impacts at different stages.
Reference: Potting, J., et al. (2018). Circular Economy: Measuring innovation in product chains. PBL Netherlands Environmental Assessment Agency.

2. Alternatives assessment approach: Focuses on identifying safer alternatives to chemicals of concern rather than solely on hazard identification.
Rationale: Promotes substitution with safer alternatives.
Reference: National Research Council. (2014). A Framework to Guide Selection of Chemical Alternatives.

3. Green chemistry approach: Emphasizes the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances.
Rationale: Promotes prevention rather than end-of-pipe solutions.
Reference: Anastas, P. T., & Warner, J. C. (1998). Green Chemistry: Theory and Practice. Oxford University Press.

4. Precautionary principle approach: When evidence about a chemical's harm is not conclusive, err on the side of caution and treat it as potentially harmful.
Rationale: Addresses uncertainty in scientific knowledge.
Reference: United Nations. (1992). Rio Declaration on Environment and Development.

5. Adaptive management approach: Continuously monitor and reassess chemicals based on new scientific evidence and emerging concerns.
Rationale: Allows for flexibility as new information becomes available. Reference: Linkov, I., et al. (2006). From comparative risk assessment to multi-criteria decision analysis and adaptive management: Recent developments and applications. Environment International, 32(8), 1072-1093.

Somalia	Criteria might include toxicity, persistence, and bioaccumulation. Non-criteria approaches: hazard-based assessments, life cycle analysis, and circular economic principles.
El Salvador	According to their uses and application, plastic products should be identified between the criteria of common use and industrial use, which due to their characteristics and applications must be exclusive for controlled industrial use, such as dioctyl phthalate, being a very difficult compound to recycle, its production and waste generate harmful substances, which can be used exclusively for industrial applications, and can be removed from use in doors, windows, furniture and others. based on suitability for exclusive use for specific uses, textiles, automotive, electronics, medicine. Based on its life cycle, taking into account the useful life of the product's use
Oman	Chemicals of concern are outside the mandate that was set out in UNEA Resolution 5/14, which is to develop an instrument on plastic pollution, including in the marine environment. The resolution proves that the main objective for the majority of countries is to tackle plastic pollution, and not going to the stages of production of chemicals or polymers. Moreover, the resolution contains no reference to the need to introduce any restrictive measures with regards to chemicals of concern. In fact, preamble of the resolution reaffirms the importance of cooperation, coordination and complementarity among relevant regional and international conventions and instruments dealing with chemicals and their waste, and specifically gives due regard to the respective mandate of these existing arrangements. The reason for that is clear: chemicals as such were not intended to be part of the future Instrument on plastic pollution, and we consider extensive discussions on that matter, which are carried out by the INC, a significant deviation from the mandate. a. Criteria or types of criteria: Criteria for hazard class identification already exist and are applied within the relevant existing international mechanisms specialized on chemicals, such as Stockholm Convention and GHS. Both instruments have almost global coverage in terms of production, apply to major world producers and are already implemented at the national level. Therefore, additional regulation is redundant because the existing mechanisms already cover these issues. b. non-criteria-based approaches Oman preferable option is Zero Option since regulation of chemicals of concern as such were never in the mandate for these negotiations Ensuring that concentration of chemicals of concern in end-use plastic products does not exceed maximum permissible concentration levels • Under this approach, circulation of an end-use plastic product on the market would be restricted if chemical residue contained in this product exceeds the maximum allowable concentration level. Such level should be established quantitatively with respect to different applications based on a demonstrated risk of adverse effects on human health and the environment.
Republic of Cuba	We strongly believe that chemicals are best regulated under comprehensive national risk-based chemicals management systems, and that the newly adopted Global Framework on Chemicals (GFC) serves to support the development and implementation of these systems. Then, the ILBI should not include any criteria or lists for chemicals of concern. On the other hand, we do not agree with using the term chemicals of concern. Most chemicals have intrinsic hazardous characteristics. But that characteristic should be associated with a risk profile, management and assessment. Hazard-based lists often lack nuance and consideration of actual exposures to hazardous chemicals in various applications. The mere presence of a chemical does not have a direct correlation to adversely affecting human health or the environment. In all uses, exposure is the key. The inclusion of real-world exposure is essential to give regulators and the public a complete picture about the hazards and risks of chemicals throughout their lifecycle. For many existing conventions (i.e. Stockholm Convention, Rotterdam Convention, Minamata Convention, and the Montreal Protocol), the building of the “lists” of chemicals is a multi-step process that occurs after chemicals have undergone a robust nomination process and a global risk assessment that looks at all uses, including considerations of alternatives. Part of why global action is impactful for the other Conventions is because they address the chemicals comprehensively, rather than for one specific use, as would be the case under the ILBI. Chemicals are used in a variety of applications beyond plastics, and building a list based on hazard, with no consideration of viable alternatives will lead to market deselection, and potential regrettable substitutions. When “ban lists” are based on a single toxicological hazard attribute, they are inherently incomplete assessments of the safe use of a chemical. “Ban lists” often stigmatize chemicals that often have uses that are safe and beneficial in their respective applications. Chemicals in plastics are best addressed under comprehensive chemicals management programs, where countries are enabled to conduct risk assessments and make management decisions in line with their national priorities. Any kind of regulation in those national programs shall be based on scientific evidences and maximum permissible concentration levels of chemicals identified. Chemicals management for specific chemicals and uses are best implemented and adopted via a country-driven legal frameworks, ensuring that countries have the resources and legal authorities to prioritize the uses and risks that they deem notable to protect human health and the environment. Comprehensive chemicals management must be based on scientific principles and risk-based approaches. Risk assessment allows for continued safe use of chemistries in certain applications to drive innovation, especially in sustainability, while protecting health and the environment. A robust risk assessment across the full lifecycle should be the first step, followed by risk management measures when risk is found, to protect workers, the public, and those potential susceptible subpopulations.

	Last year the Global Framework on Chemicals (GFC) was adopted. It is an overarching framework built to drive the sound management of chemicals and waste globally. Though the GFC is voluntary, the framework deploys resources and tools to encourage each country to adopt legally binding chemical management regulations. It also included a high-level commitment from countries to achieve key chemicals and waste objectives. We believe that the vital role of the GFC in building towards comprehensive chemicals management globally should not be ignored. We note that the International Council of Chemical Associations (ICCA) conducted a review of UNEP's Chemicals in Plastics database. They identified that 88.3% (11,646) of UNEP's catalogue of 13,186 chemicals are already referenced and indexed on one or more chemical inventory , implying that comprehensive country driven chemicals management (as described by the GFC) can work to meet the goals of protecting human health and the environment.
Japan	Above all, in order to protect human health and the environment from adverse impacts of hazardous chemicals in plastic products throughout the life cycle of plastics, each Party shall take appropriate measures according to the level of the risk concerning the respective chemicals, identified by its risk assessments based on the information such as its toxicity and the exposure level upon specified exposure scenario, while taking into account national circumstances. On the understanding that non-criteria-based approach is the way not to set uniform criteria, we share the concerns that it would lead each Party to make its own regulations without international harmonization, resulting in a lack of a level playing field. Meanwhile, we also understand the views that each Party's circumstances may not be properly addressed in case of criteria-based approach. Therefore, as a way forward and in order to achieve a convergence, it is suggested that each Party's respective circumstances be taken into account, when considering the establishment of possible rules/mechanisms related to chemicals of concern in plastic products, even if we take criteria-based approach. In addition, we should pay due regard to the fact that we have already established GHS（Globally Harmonized System of Classification and Labelling of Chemicals） that addresses classification of chemicals by types of hazard and proposes harmonized hazard communication elements. Also, some countries have already adopted their own criteria, in addition to those in GHS, and classify chemicals according to those criteria (eg: vPvM, vPvB and ED are introduced in some countries, while other countries apply different criteria). Such existing global, regional or national rules and practices should be properly taken into account. Therefore, it is suggested that the Annex of the ILBI sets out the general elements that should be considered when making hazard assessment on chemicals of concern, based on international frameworks and classifications such as Global Framework on Chemicals (GFC) and GHS. Each Party should conduct assessment and take decisions, taking into consideration these elements and its national circumstances. Also, each Party should conduct risk assessments by developing a risk profile, taking into consideration the results of hazard assessments and information gathered through utilizing existing databases and others so that each Party will be able to identify appropriate risk management measures according to the level of the risks concerning the respective chemicals. Appropriate guidance and assistance tools could be made available by experts for Parties when making risk profile and evaluation on chemicals. On top of those, each Party should make decisions and take appropriate measures, according to its national circumstances and necessities including such as technical feasibility, availability and accessibility of alternative chemicals, and socio-economic impacts.
New Zealand	(Please note that references to other MEAs or concepts such as the EU essential use concept should not be taken as NZ's formal position, but rather the intent is for these to be used as examples to support the advancement of discussions). The United Nations Globally Harmonised System of Classification and Labelling of Chemicals (GHS) could be used as a guide or starting point for specific criteria for classification of chemicals of concern to support any legally binding requirements in the instrument, including; (https://unece.org/transport/dangerous-goods/ghs-rev10-2023) - Carcinogenicity Category 1A and 1B - Mutagenicity Category 1A and 1B - Reproductive/developmental toxicity Category 1A and 1B - Respiratory sensitisation Category 1 - Specific target organ toxicity – repeated exposure (STOT-RE) Category 1 - Hazardous to the aquatic environment Category Chronic 1 and Category Chronic 2 (including substances that are Persistent, Bioaccumulative and Toxic (PBT) and very Persistent and very Bioaccumulative (vPvB)) The GHS is recognised as the globally accepted framework for the classification of hazardous chemicals and is adopted by a large number of countries. In addition, it is a key element of the Global Framework on Chemicals (Target B6), it is required to be implemented by OECD members, and is increasingly being used under international chemicals programmes (Rotterdam Convention, FAO/WHO pesticides programmes, etc). It is also used to underpin the EU's Essential Use Concept. The above hazard-based criteria could be used as screening criteria (similar to Annex D of the Stockholm Convention) with chemicals meeting the criteria being subject to further risk assessment and risk management evaluation. The terms "criteria-based approaches" and "non-criteria-based approaches" need to be clarified prior to the in-person meeting in Bangkok. We would like to hear more from other experts to understand how a non-criteria based approach would work alongside legally binding provisions to address problematic and avoidable plastic products.

Russian Federation	Position common for sections 7.a. and 7.b. Chemicals of concern are outside the mandate of the plastic negotiations that was set out in the UNEA Resolution 5/14, which is to develop an Instrument on plastic pollution, including in the marine environment. The text of the Resolution and the history of its adoption by UNEA-5.2 serves to prove that the main objective for the majority of States is to tackle plastic pollution, without extending the scope of the Instrument to cover stages of production of chemicals or polymers. Chemicals and polymers were added unilaterally by some delegations at later stages. Moreover, the Resolution contains no reference to the need to introduce any restrictive measures with regards to chemicals of concern. In fact, the preamble reaffirms the importance of cooperation, coordination and complementarity among relevant regional and international conventions and instruments dealing with chemicals and their waste, and specifically gives due regard to the respective mandate of these existing arrangements. The reason for that is clear: chemicals as such were not intended to be part of the future Instrument on plastic pollution, and we consider extensive discussions on that matter, which are carried out by the INC, a significant deviation from the mandate. 7.a. Criteria or types of criteria. Criteria for hazard class identification already exist and are applied within the relevant existing international mechanisms specialized on chemicals, such as Stockholm Convention and GHS (Globally Harmonized System of Classification and Labelling of Chemicals). Both instruments have almost global coverage in terms of production, apply to major world producers and are already implemented at the national level. Therefore, additional regulation is redundant because the existing mechanisms already cover these issues. 7.b. Non criteria based approaches. Non-criteria based approaches could include: 1) Zero Option (no text in the instrument; preferred option for the Russian Federation) • For the Russian Federation, the preferable option is the Zero Option since regulation of chemicals of concern as such were not in the mandate for these negotiations. • An additional rationale in support of this position is that plastic production typically is not the only application of those chemicals, and prohibiting or restricting a chemical itself could cause serious damage to other industries where this chemical is essential and indispensable. For instance, most metals and metal compounds, which can be used in plastic production, are also used in the production of chemical reagents or catalysts for organic synthesis, in metallurgy (as a component of steels and alloys), in automotive and aerospace industries, in electronics and semiconductors, in glass manufacturing, etc. • Furthermore, the existing international system of chemical management already covers the variety of processes related to safe production, trade, transportation, labelling and disposal of chemicals and their waste. 2) Ensuring that concentration of chemicals of concern in end-use plastic products does not exceed maximum permissible concentration levels (less preferable option for Russia) • The resolution 5/14 indicates that future instrument should promote sustainable production and consumption of plastic products. We are of the view that this goal could be achieved by addressing residues of hazardous chemicals in end-use plastic products using quantitative measurements. Implementation of this approach would guarantee the safety of plastic products, on the one hand, and minimization of issues related to management of plastic waste, on the other hand. • Under this approach, circulation of an end-use plastic product on the market would be restricted if chemical residue contained in this product exceeds the maximum allowable concentration level. Such level should be established quantitatively with respect to different applications based on a demonstrated risk of adverse effects on human health and the environment. • Many countries in the world already apply this approach. For instance, policy on restrictions of hazardous substances (RoHS) in certain applications (such as toys or electrical and electronic equipment) provides a ban, if concentrations of certain hazardous substances is above certain levels (e.g. 0.1 % w/w). • This approach should also ensure that non-intentionally added substances, being chemicals that are present in a material but have not been added for a technical reason during the production process, are not regulated under this instrument for the following reasons: o The process of appearing of such substances in a material may not be fully understood as it depends on manufacturing conditions, operations, storage, disposal, etc. They may be present in plastic products because some impurities or unreacted substances may remain in the product, side products may be formed during the production process, or breakdown products may be unintentionally formed during manufacturing or use of a product. o The methods of identification of such substances are not well developed and are not available in the majority countries.
Cook Islands	7.a. Criteria or types of criteria 1. Hazard criteria – determine (i) toxicity OR (ii) persistence OR (iii) bioaccumulation OR (iv) mobility in combination with i and ii or ii and iii. 2. Circularity criteria 3. Transparency criteria for chemicals and products 4. Lists for chemicals of concern, avoidable and problematic plastic products, and microplastics 7.b. Non-criteria based approaches The Non-criteria based approaches is unclear as to what it means. The member state who proposed a non-criteria based approach will need to explain what this means for the consideration of the parties. Our delegation is unable to comment further on non-criteria based approaches until it is clearly outlined and defined.

Tuvalu	7.a. Criteria or types of criteria Existing criteria sets can be considered, but must not include criteria that would exclude many chemicals associated with plastics, e.g. long-range environmental transport, or must not be cumulative (i.e. if a chemical meets one criteria, the appropriate measures for elimination, restriction, and/or reduction of emissions applies). Existing criteria sets include, but are not limited to: 1. Stockholm Convention 2. EU REACH 3. China REACH 4. Montreal Protocol A mechanism for updating the lists, based on other MEAs, could include: 1. Proposal made by any Party based on a required set of information, e.g. risk assessment. 2. Proposal forwarded to technical review committee. 3. Proposal and recommendation made to COP. 4. Decision made by COP by two-thirds majority. 5. Decision binding on all Parties, unless a time-bound exemption has been approved by the Parties. 7.b. Non-criteria based approaches Appropriate measures for elimination, restriction and reduction of emissions can be applied to global lists of chemicals and groups of chemicals based on existing lists at the global, regional and national levels. A mechanism for updating the lists, based on other MEAs, could include: 1. Proposal made by any Party based on a required set of information, e.g. risk assessment. 2. Proposal forwarded to technical review committee. 3. Proposal and recommendation made to COP. 4. Decision made by COP by two-thirds majority. 5. Decision binding on all Parties, unless a time-bound exemption has been approved by the Parties. Other non-criteria based approaches can be identified, while noting that without agreeing on any attribute/characteristics of materials and products, it may be difficult to determine priorities, thus severely limiting the efficiency and efficacy of a global agreement. Non-criteria based approaches may consist of other control measures and supporting measures listed below: 1. Regulation of problematic and avoidable plastic products (Draft plastics instrument, II.3) - Elimination of chemicals and polymers of concern will result in less problematic products. 2. Transparency and traceability (Draft plastics instrument, II.13) - Harmonised producer transparency. Global databases that are publicly available to provide product risk profile, risk assessment (based on standards) and risk management information. 3. Emissions and releases limits (Draft plastics instrument, II.8) - Zero tolerance of emissions and releases throughout the life cycle of chemicals, macroplastics, microplastics and nanoplastics 5. Sharing of information (Draft plastics instrument, II.6, UNECE PRTR Protocol) - Global database of substances, sources, exposure pathways, risk management profiles and assessments, and reduction options 4. Trade (Draft plastics instrument, II.10, Rotterdam Convention) - Restrict import and export of known problematic products, possibly based on lists developed from final regulatory action at the national level or regional level. 5. Waste management (Draft plastics instrument, II.9) – All products must be collected and appropriately sorted, particularly those destined for reuse, refill and recycling. Recycling of products containing chemicals of concern may need to be sorted into a separate waste stream while transitioning to safe products through implementation of II.2, II.3 and II.5. 6. Reporting (Draft plastics instrument, II.2) - Globally harmonised reporting on meaningful progress towards eliminating problematic products, based on global targets and indicators. 7. Statistical guidelines for plastic material flows (See UNEP/UNITAR project for the development of statistical guidelines) - Globally harmonised statistics, indicators and methodologies for tracking plastics and associated chemicals from the environment into the economy, within the economy, and from the economy to the environment (pollution). 8. Decision hierarchy based on global lists, instead of criteria.
Republic of Korea	7.a. Criteria or types of criteria 1. There are international procedures like the annexing process under the Stockholm Convention and the Minamata Convention. These two MEAs may serve as useful references to the ILBI. 2. Proving the hazard of certain chemicals can be difficult with current technology, so supplementary criteria such as persistence in human body or long-lange transport should also be included, as in other ILBIs. 3. A wide number of countries implement regulations for the registration, evaluation, authorization, and restriction of chemicals, commonly known as REACH. Under the REACH regulation, authorities identify substances of high concern using the following screening criteria: CMR, ED, PBT, vPvBs, STOT, etc.

	4. Possible references for such criteria include Stockholm Convention Annex D (Information Requirements and Screening Criteria) and others. 7.b. Non criteria based approaches 1. National regulations in many countries restrict the use of chemicals in products. 2. Some countries restrict the use of chemicals in products based on risk assessments, considering hazards, risks, volume of domestic distribution, alternatives, and applications (MOE KOR, Enforcement Decree of the Act on Registration and Evaluation of Chemical Substances). 3. Although countries around the world consider PBTs, vPvBs, and EDs hazardous, they vary in their specific criteria for identification. i. Regarding P&B, the US TSCA, EU REACH, and K-Reach have different criteria and levels for ranking substances based on factors like half-life, bio-concentration factor (BCF), and bio-accumulation factor (BAF). ii. Also, an appropriate management plan for handling monomers released from certain polymers should be established at all stages of the lifecycle.
Malaysia	7.a. Criteria or types of criteria Chemicals cover an extremely broad range of substances and its usage cuts across multitude industries and sectors. We believe that chemicals management and regulations should be pursued at the country level first, and Parties should be empowered to make decisions that work best to their local environment according to consistent scientifically-based criteria and harmonised classification/methods. The Global Framework on Chemicals (GFC) provides a comprehensive chemicals management regulation and promotes the development of comprehensive risk-based, chemical management structures and tools. In relation to plastics, the scope of chemicals can be narrowed down to additives used in polymer production. Additives are added to impart critical performance properties to products, which are essential for plastics to execute their functions and improve the performance of products that our modern society relies on. A few examples are as follows: i.Antioxidants are critical to prevent degradation from heat and extend the lifecycle of plastics; ii.Light-stabilizers, for example, enhance durability of materials; and iii.Flame retardants are critically important to reduce flammability. Plastics additives are instrumental in enabling polymers to execute these functions. Addition and usage of additives in polymer production must comply to relevant regulations/directives such as Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) EU, US Food and Drug Administration (FDA), EU directive for food-contact applications (EFSA) and more. These regulations/directives provide comprehensive evaluation of additives, covering registration of additives with the chemicals management agency, hazard information (potential persistency, bioaccumulation and toxicity (PBT), endocrine disruption, or carcinogenicity, mutagenicity and toxicity to reproduction (CMR)), exposure information including exposure potential based on uses, and total registered volumes. 7.b. Non-criteria-based approaches As a non-criteria-based approach, Parties should be encouraged to establish national chemicals management system (if they have yet to have one) and establish close collaboration with the industry to enhance transparency on additives usage in plastics. The International Council of Chemical Associations (ICCA) Plastic Additives Database (https://plasticscircularity.org/additives/) is a good starting point for Parties to access information related to additives in plastics and to utilise the database in the evaluation of additives in their respective country.
Monaco	7a. Criteria or types of criteria We woud recommend a danger based approach : Chemicals of concern could be identified and listed on (proven or potential) dangers to human health, animal health or environmental effects when they meet one or more criteria : x. Carcinogenic, mutagenic or reprotoxic (CMRs category 1A or 1B) xi. Endocrine disrupting chemicals (EDCs HH and/or ENV) xii. Specific Target Organ Toxicity – repeat exposure (STOT RE) xiii. Persistent, Bioaccumulative and Toxic (PBTs) xiv. Persistent, Mobile and Toxic (PMTs) xv. very Persistent and very Bioaccumulative (vPvBs) xvi. Long Range Transport potential (LRT) xvii. Respiratory, skin sensitization Concerning chemicals of concern, the precautionary principle should apply to chemical products with the same chemical composition that have been shown in in vitro and in vivo studies to have the same effects on human or veterinary health or the environment. For example Bisphenol A (BPA), Bisphenol S (BPS) and bisphenol F (BPF) that are chemically similar to Bisphenol A (BPA) and are possessing similar endocrine disruptive effects should be addressed in the same way as BPA. 7.b. Non criteria based approaches We would not recommend a non-criteria based approach, and eiher strongly recommend a criteria-based approach.

Philippines	As mentioned earlier, non-criteria-based approaches lack the clarity and rigor of a science-based framework and would lead to inconsistent, uneven, and even contradictory results. Because they are not linked to science-based criteria, they are open to broad interpretation and may lead to confusion. Moreover, non-criteria-based approaches would result in a rigid regulatory framework that hinders the use of updated scientific evidence as scientific knowledge and understanding advance. Criteria-based approaches that should be reflected in the ILBI are described below. The criteria should be included in the Annexes to allow for periodic review by the independent science panel and for regular updating by the Conference of the Parties as scientific knowledge evolves. 7.a. Criteria or types of criteria For chemicals of concern, a widely accepted practice, as applied in the Stockholm Convention, is the use of a combination of four hazard criteria: namely, persistence, bioaccumulation, mobility, and toxicity. Toxicity, in particular, should be based on health and environmental hazards, namely, carcinogenicity, mutagenicity, reproductive toxicity, specific target organ toxicity, and other hazard traits defined in the Globally Harmonized System of Classification and Labelling of Chemicals (Ref: Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Tenth revised edition, United Nations, New York and Geneva, 2023). The GHS is a worldwide system for classifying hazardous properties of industrial and consumer chemicals implemented at the international level (e.g., UN Recommendations on the Transport of Dangerous Goods, FAO Guidelines, WHO Recommended Classification, ILO Instruments on Chemical Safety, Basel Convention, UNECE Convention on the Transboundary Effects of Industrial Accidents, and OECD Legal Instruments), by various regional bodies, and adopted by more than 80 countries. For decades, the body of evidence has been mounting on the impacts of plastics, endocrine disruption, and health (see, for examples, J. Flaws et al., Plastics, EDCs & Health: A Guide for Public Interest Organizations and Policy-Makers on Endocrine Disrupting Chemicals & Plastics, Endocrine Society and IPEN, December 2020). In 2015, more than 100 countries acknowledged the need for policy action on endocrine disruption (4th International Conference on Chemicals Management, ICCM4, Geneva, UNEP, 28 September – 2 October 2015). Thus, the addition of endocrine disruption as an additional hazard criterion is essential. An example incorporating endocrine disruption as a new hazard class can be found in the adoption of Commission Delegated Regulation (EU) 2023/707 amending Regulation (EC) No 1272/2008 (Ref: Official Journal of the European Union L 93, 31.3.2023, p. 7-39 as regards hazard classes and criteria for the classification, labelling and packaging of substances and mixtures). Consideration should also be given to the inclusion of terrestrial and aquatic toxicities in determining chemicals of concern, given the impacts of plastic chemicals on aquatic and terrestrial ecosystems (see for example: I.E. Napper and R.C. Thompson, Plastics and the Environment, Annual Review of Environment and Resources 48:55-79, 2023; and J. Beaman and C. Bergeron, A Summary of Literature on the Chemical Toxicity of Plastic Pollution to Aquatic Life and Aquatic-Dependent Wildlife: State of the Science White Paper, EPA-822-R-16-009, United States Environmental Protection Agency, December 2016). A few have claimed that existing MEAs are sufficient to regulate chemicals of concern but, in response to Resolution 4/8 by UNEA, the International Conference of Chemicals Management under the Strategic Approach to International Chemicals Management (SAICM) concluded, that while chemicals for which there is pressing need for international concerted action including many chemicals found in plastics have been addressed by some MEAs, “these instruments and actions are as yet inadequate to solve these issues at a global scale.” (Ref: United Nations Environment Programme, An Assessment Report on Issues of Concern: Chemicals and Waste Issues Posing Risks to Human Health and the Environment, September 2020). Building on nearly two decades of work of SAICM, the new Global Framework on Chemicals outlines principles and approaches, strategic objectives and targets, and implementation mechanisms that could also inform the work on the ILBI with regard to chemicals of concern. The inadequacy of existing global instruments, specifically, the Stockholm Convention, Minamata Convention, Montreal Protocol, and Basel Convention, is further highlighted by the fact that only 980 individual chemicals in plastics are subject to regulation under existing MEAs, a mere 6% of all chemicals in plastics. The Norwegian Research Council report points out that 16,325 chemicals are present in plastics, of which more than 4,200 chemicals are known to be hazardous to human health and the environment and half of those are hazardous under at least two hazard classifications (Ref: M. Wagner, L. Monclús, H.P.H. Arp et al. State of the science on plastic chemicals – identifying and addressing chemicals and polymers of concern, 2024; http://dx.doi.org/10.5281/zenodo.10701706). Hundreds of studies have shown that most plastic chemicals can and are released from plastics into water, soil, food, and air throughout the plastic lifecycle including during use and end-of-life (see for example: P.J. Landrigan et al. The Minderoo-Monaco Commission on Plastics and Human Health. Annals of Global Health 89(1), 23, 2023; https://doi.org/10.5334/aogh.4056). The Norwegian Research Council report on Plastic Chemicals (q.v.) notes that of the 16,000+ chemicals, 10,726 chemicals lack hazard data underscoring the urgent need for transparency. This large gap in information points to the need for other criteria-based approaches to address the myriad chemicals in plastics in an efficient and effective way. Of high priority would be the thousands of chemicals used in plastics that are already classified as hazardous by one or more well-established hazard criteria, while confirming their presence, use, or release from specific polymer types. Evaluating chemicals for toxicity characteristics, such as carcinogenicity or specific target organ toxicity, requires significant technical and financial resources lacking in most developing countries. An alternative to chemical-by-chemical evaluation is to group chemicals based on similarities of chemical structure related to hazard properties. The Norwegian Research Council’s State of the Science on Plastic Chemicals presents fifteen such groupings of plastic chemicals of concern. This approach brings added benefits of avoiding regrettable substitutions and promoting chemical simplification in innovative design. In the case of mixtures of unknown chemicals released from plastics, the potential for bioassays of leachate toxicity should be considered. Finally, a note on hazard-based versus risk-based approaches. The hazard-based approach offers an efficient and pragmatic way to address chemicals of concern consistent with the precautionary principle. On the other hand, a quantitative risk-based approach requires information to identify specific hazards, which due to a lack of transparency, is non-existent for many specific plastic chemicals. There is also a scarcity of information on reactions and degradation by-products (non-intentionally added substances in plastics) during manufacturing, use, and recycling, and the leaching from plastics often involves mixtures of unknown chemicals.

	Importantly, risk assessments require data on the exposure of biota and humans to each of the many chemicals in plastics under multiple exposure scenarios, data that are hard to come by. Moreover, there are no dose-response relationships for the vast majority of plastic chemicals. The risk characterization process assumes a safe or acceptable risk level, as reflected in a Reference Dose or "acceptable daily intake" but such thresholds do not exist for carcinogenic and mutagenic chemicals, nor for chemicals exhibiting non-monotonic dose-response. Furthermore, risk-based approaches generally do not account for exposures to chemical mixtures or multiple sources of exposure to the same chemical (Ref: J. Muncke et al., Impacts of food contact chemicals on human health: a consensus statement, Environmental Health 19:25, 2020). Given the uncertainty, lack of exposure data and dose-response relationships, the large amount of time needed, and costs associated with the risk assessment of a single chemical, the hazard-based approach is better and more feasible. 7.b. Non-criteria-based approaches As noted above, since criteria-based approaches are predicated on pre-determined standards or criteria, they provide a logic and clear basis for the interpretation of evidence while promoting consistency, reliability, and transparency. For these reasons, criteria-based approaches are used in Multilateral Environmental Agreements, such as in the ozone-depletion potential criteria in the Annexes of the Montreal Protocol, or the Annex D criteria (persistence, bioaccumulation, potential for long-range transport, adverse health and environmental impacts, etc.) of the Stockholm Convention. Hence, they are preferred over non-criteria-based approaches. A possible non-criteria-based approach might be to define chemicals of concern according to their being subject to national regulations. However, the 1,021 chemicals used in plastics that are regulated by national and regional regulations are inconsistent with each other, with some chemicals of concern banned in some countries and approved in others. Science-based criteria-based approaches would avoid inconsistencies, fragmentation, and contradictory regulation. Another non-criteria-based approach might be to create Annex lists of chemicals of concern according to vaguely defined categories without reliance on any specific criteria. Lack of scientific criteria would subject the annex lists to conflicting perspectives revolving mostly around political expediency rather than scientific merit and robust scientific evidence. Such non-criteria-based approach would not permit flexibility and responsiveness of an ILBI to evolving scientific understanding, stronger weight of evidence, new technical innovations, or emerging technologies. They would nullify the role of an independent science panel as a subsidiary body under the ILBI.
Singapore	a. Criteria or types of criteria It is important to base any global criteria to shortlist chemicals of concern in plastic products on well-established science and widely used international standards/ frameworks, viz the Global Harmonised System of Classification and Labelling of Chemicals. We note that some countries have put forth proposals to shortlist chemicals of concern in plastic products based on how many countries have banned or regulated the chemical. This should not be a criteria for deciding whether there should be global controls for a chemical, since the reasons that countries ban chemicals would be context-specific. b. Non criteria based approaches Instead of a criteria, the ILBI could include a set of guidelines on how countries could classify or identify their respective lists of chemicals of concern in plastic products domestically. The guidelines could take a risk-based assessment to include not only hazards of the chemical, but also the exposure of humans and the environment to the chemical, based on its use and application in local contexts and risk management strategies in place.
Costa Rica	5.a. Criteria-Based Approaches Hazard-Based Criteria o Toxicity: Chemicals that pose significant risks to human health or the environment based on toxicity data, such as carcinogens, mutagens, reproductive toxins (CMRs), endocrine disruptors, and persistent, bioaccumulative, and toxic substances (PBTs) . o Persistence and Bioaccumulation: Chemicals that persist in the environment and accumulate in living organisms, such as per- and polyfluoroalkyl substances (PFAS) . o Exposure Potential: Chemicals with high potential for human or environmental exposure, considering factors such as production volume, usage patterns, and environmental release . Risk-Based Criteria o Risk Assessment: Evaluation of the likelihood of adverse effects occurring due to exposure to a chemical, combining hazard and exposure data . o Risk Management: Measures implemented to control or mitigate risks identified in the risk assessment process, including restrictions or bans on certain chemicals in plastics . Regulatory and Policy-Based Criteria o Compliance with International Agreements: Alignment with existing international treaties and regulations, such as the Stockholm Convention on Persistent Organic Pollutants (POPs) and the REACH regulation (Registration, Evaluation, Authorisation and Restriction of Chemicals) in the European Union . o Adoption of National Standards: Incorporating standards and criteria from leading national regulations, such as those from the United States Environmental Protection Agency (EPA) or the European Chemicals Agency (ECHA) . 5.b. Non-Criteria-Based Approaches

	Precautionary Principle o Preventative Action: Taking action to prevent potential harm when scientific evidence about a chemical's risks is uncertain but indicates possible significant harm . o Case-by-Case Assessment: Evaluating chemicals individually based on the best available scientific data, considering both known and potential risks . Stakeholder and Expert Consultation o Multistakeholder Involvement: Engaging a diverse range of stakeholders, including scientists, industry representatives, NGOs, and policymakers, to gather broad perspectives and expertise in identifying chemicals of concern . o Scientific Advisory Panels: Establishing panels of experts to review and assess the latest scientific evidence on chemicals in plastics . 2. Lifecycle Analysis o Comprehensive Evaluation: Assessing the environmental and health impacts of chemicals throughout the lifecycle of plastic products, from production to disposal . o Circular Economy Principles: Promoting the design of plastic products that minimize the use of hazardous chemicals and facilitate recycling and safe disposal .
The European Union and its 27 Member States	7.a. Criteria or types of criteria Similarly to plastic products, identification of chemicals 'of concern' should be done through screening process, implying the necessity to define global agreed criteria. As it is already set under other MEAs (e.g. POP criteria), screening criteria is a suitable and sound way to identify as a first step chemicals that are hazardous for human health or the environment in order to define the control area. As those criteria would be hazard- and science-based, the identification of such chemicals for their intrinsic harmful properties would be undeniable at a global level. For the identification of chemicals as of concern under the ILBI, a criteria based approach is supported and we should use appropriate criteria, meaning criteria that should be fulfilled to identify the chemicals as chemicals of concern. Those criteria should be non-cumulative (meaning the fulfillment of just one of those criteria is enough to identify chemicals as of concern). Once chemicals are identified as of concern, the governing body would decide to list them. As such, this listing would not lead to any restrictive measure but would trigger the application of other provisions likely to be contained in the treaty (such as provisions (5) on product design, (8) on emissions and releases, (10) on trade, (13) on transparency and labelling, and monitoring requirements). Several Hazard criteria can be used to identify a chemical as of concern, as for example: • Carcinogenic, mutagenic, or toxic for reproduction (CMR), • Persistent, Bioaccumulative and Toxic (PBT), • Very persistent and very accumulative (vPvB), In addition, other hazard classes that are of equivalent Level of Concern to the above criteria could be used. However, the possible hazard criteria (CMR, PBT,...) need to be further checked and developed carefully as there is, for most of these categories , currently no harmonized basis on international level . A preferable approach could be to start with such categories that are already internationally harmonized and accepted, as in UN GHS. The relationship with existing UN-Conventions should be further explored and duplication between MEAs should be avoided. A first limited list of chemicals of concern, similar to approach followed for the dirty dozen under the Stockholm convention, could be established and included in the treaty. Those criteria have been developed based on several sources notably: • Globally Harmonized System of Classification and Labelling of Chemicals (GHS) • United Nations Environment Programme and Secretariat of the Basel, Rotterdam and Stockholm Conventions (2023). Chemicals in plastics: a technical report. Geneva. • REACH Regulation For the recommendation of the possible restrictive measures, a risk profile and risk management evaluation would have been conducted for the listed chemicals that would have been prioritised beforehand. This step would allow to establish the most suitable restriction in all plastic materials, plastic products, or in specific plastic products. This step should consider the socio-economic impacts and availability of alternatives as well. This step would be quite similar to the Stockholm convention process. 7.b. Non-criteria-based approaches Similar to our comments towards plastic products under 2.b. we have difficulties envisaging non-criteria-based approaches for the identification, classification or any regulation of substances of concern. To select chemicals of concern in an arbitrary way woud neither be science- nor evidence-based.

United Kingdom	7. a. Criteria or types of criteria Any criteria should focus on hazards within chemicals which could cause a significant negative impact to human health and the environment based on agreed existing scientific consensus. Chemicals that are identified through any criteria should be subject to risk assessments and risk management arrangements, including data reporting. Informal intersessional work, conducted between the United Kingdom and Brazil, highlighted key areas of possible criteria focus, with Carcinogenic, Mutagenic, or toxic for Reproduction (CMR) having high levels of consensus. There are further examples which could be considered when taking a criteria-based approach. For example, within the UK domestic chemicals regime, criteria are used within, GB CLP, UKREACH Substances of Very High Concern (SVHC) and GB Prior Informed Consent (GB PIC). Furthermore, at the international level, the United Nations Globally Harmonised System (UN GHS) for classifying and communicating the hazardous properties of chemicals (which GB CLP adopts) also offers a good starting point for discussions. We would also like to express the importance of criteria founded on quantitative values, to minimise misinterpretation Other potential criteria which could be discussed for identifying Chemicals of Concern could include: • Substances meeting the criteria for classification as carcinogenic, mutagenic or toxic for reproduction (CMR) (categories 1a and 1b) • Respiratory and skin sensitizer • Specific target organ toxitcity (STOT) • Equivalent Level of Concern to CMR, PBT,vPvB (or any wording referring to the same concept) Criteria considered SVHC under criteria in Annex 13 of UKREACH: • Persistent, bioaccumulative and toxic (PBT) • Very persistent and very acculautive (vPvB) 7.b. Non criteria based approaches We are unclear as to how a non-criteria-based approach could work within the chemical's treaty, and we will be interested to listen to other delegates thoughts and view on this, however we are of the opinion that a criteria-based approach is the most sensible way forward.
Federated States of Micronesia	Criteria, types of criteria, and/or non-criteria-based approaches for regulating chemicals of concern in plastic products under provision II.2 of the instrument include, but are not necessarily limited to: 1) carcinogenicity; 2) high degree of persistency and/or accumulativeness in humans and/or natural environments, including the marine environment; 3) high degree of mobility among human populations and/or natural environments, including the marine environment; 4) toxicity for human organs, particularly if with chronic effects; 5) disruptiveness to human endocrine; and 6) disproportionate degree of impacts of such chemicals of concern (in and of themselves as well as in terms of their development/production) on Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories.
Saudi Arabia	Chemicals of Concerns are not included in the mandate of UNEA resolution 5/14. The original and agreed upon mandate focuses on managing plastic product waste and addressing plastic pollution, including its impact on the marine environment. The primary goal of UNEA resolution 5/14 and the position of most countries is to combat plastic pollution, without targeting the production stages of chemicals or polymers, to make sure critical sectors such as health and food are not unintentionally affected. Additionally, the resolution does not mandate the development or discussion of restrictive measures regarding chemicals of concern. Therefore, Saudi Arabia does not accept discussions on this topic by the INC and views it as a clear deviation away from the mandate. Criteria or types of criteria: 1. Saudi Arabia preferred option: Option Zero (No provision) Reasoning: Criteria for hazard class identification are already established and applied through existing international mechanisms specialized in chemicals, such as the Stockholm Convention, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and the risk-based approaches from the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Additionally, the Basel Convention has maintained a list since 1989. These instruments provide global coverage, encompassing major world producers and are implemented at the national level. Therefore, additional regulation is unnecessary, as the current mechanisms already address these issues comprehensively. 2. Saudi Arabia alternative option: The identification and classification of chemicals in plastic products in national plans implemented through the International Legally Binding Instrument (ILBI) should be aligned with existing processes and frameworks established by the Basel, Rotterdam, and Stockholm (BRS) Conventions. The ILBI should emphasize the role of national plans in implementing these criteria to ensure that the approaches are contextually relevant and nationally controlled.

	Approach 1: BRS Convention Alignment • Rationale: The ILBI should mandate that national plans adhere to the established criteria of the BRS Conventions for classifying hazardous waste, chemicals, and persistent organic pollutants (POPs). This ensures that national efforts are consistent with international standards and leverage existing scientific assessments. • Implementation: National plans should integrate BRS criteria into their regulatory frameworks, ensuring that identification and classification efforts are harmonized with international guidelines. • Reference: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Stockholm Convention on Persistent Organic Pollutants. Non criteria-based approaches: 3. Saudi Arabia preferred option: Option Zero (No provision) Reasoning: A. Regulation of chemicals of concern is not the mandate of UNEA resolution 5/14 B. The petrochemical industry is heavily regulated, ensuring that no chemical exceeds the established threshold limits. C. International chemical management systems already encompass various processes related to the safe production, handling, trade, transportation, labeling, and disposal of chemicals and their waste. D. Plastic production is not the sole application for these chemicals. Restricting or banning certain chemicals would significantly impact other industries where these chemicals are essential and irreplaceable (e.g., automotive, electronics, aerospace, pharmaceutical, etc.).
United States.	The United States recognizes that there are meaningful differences between chemicals of concern and plastic products and that the future agreement may handle them differently. For the purpose of the intersessional process, however, we are of the view that the same considerations presented in the response to Part A, question 1, are applicable to this question as well.
Ecuador	5. a. Criteria or types of criteria It could be useful criteria based on: Globally Harmonized System: Health hazards in terms of germ cell mutagenicity, carcinogenicity, reproductive toxicity, specific target organ toxicity (single exposure or repeated exposures), and hazards to the aquatic environment. Ref. https://unece.org/DAM/trans/danger/publi/ghs/ghs_rev04/Spanish/ST-SG-AC10-30-Rev4sp.pdf Stockholm Convention on persistent organic pollutants: Annex D Information requeriments and selection criteria, Guidance for drafters of risk profiles on consideration of toxicological interactions when evaluating chemicals proposed for listing - Qualitative literature-based approach to assessing mixture toxicity under Annex E. Ref. https://chm.pops.int/TheConvention/POPsReviewCommittee/Guidance/tabid/345/Default.aspx Methods for identification or evaluation of endocrine disruptors. Ref. https://www.efsa.europa.eu/en/publications 5.b. Non criteria based approaches It is considered that everything must be based on criteria and methodologies.
Ethiopia	In the context of the International legally binding instrument (ILBI) for the identification and classification of chemicals of concern in plastic products, the criteria for identifying and classifying these chemicals can be broadly categorized into criteria-based and non-criteria-based approaches. Here's a detailed breakdown: A. Criteria or Types of Criteria: 1. Hazard-based criteria • The product contains chemicals or polymers that are known to be hazardous, such as carcinogens, mutagens, reproductive toxicants, persistent, bioaccumulate and toxic substances (PBTs), or very persistent and very bioaccumulate substances (vPvBs) ü Toxicity: Chemicals that exhibit acute or chronic toxicity to humans, animals, or the environment. ü Persistence: Chemicals that are resistant to degradation and persist in the environment for long periods. ü Bioaccumulation: Chemicals that accumulate in the tissues of organisms and biomagnified through food chains. ü Endocrine Disruption: Chemicals that interfere with the hormonal systems of organisms. ü Carcinogenicity: Chemicals that are known or suspected to cause cancer in humans or animals. https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/ https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html • Chemicals of concern could be identified based on a separate set of criteria developed under the plastics instrument. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html

Rationale: These criteria are based on the inherent properties of chemicals that pose risks to human health and the environment. They are widely recognized in regulatory frameworks such as those of the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Rotterdam Convention on Prior Informed Consent.

2. Risk-Based Criteria:
• Exposure: Chemicals that are likely to be present in plastic products and to which humans or ecosystems may be exposed. Products with high potential for human exposure, such as toys and food contact plastics, should be prioritized due to the risk of chemicals migrating into the human body
https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html
• Likelihood of Release: Chemicals that are likely to be released from plastic products during their lifecycle, leading to potential exposure. Products that release chemicals of concern during their intended use or disposal, leading to environmental exposure, should also be prioritized.
https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html
Rationale: Risk-based criteria take into account not only the inherent hazards of chemicals but also the likelihood and extent of exposure, thereby focusing regulatory efforts on chemicals that pose the greatest risk.
3. Functional Criteria: Chemicals used in plastic products for specific functionalities (e.g., plasticizers, flame retardants, colorants).
• Alternatives: Chemicals used as alternatives to substances of concern, but which may themselves pose risks.
Rationale: Functional criteria consider the role of chemicals in plastic products and aim to identify safer alternatives or regulate the use of hazardous substances in specific applications.
4. Life cycle-based criteria
• Chemicals of concern should be identified at all stages of the product life cycle, from raw material extraction to end-of-life management
• The entire life cycle should be considered to prevent regrettable substitutions, where a hazardous chemical is replaced with another substance that is later found to be problematic.
• https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100472.pdf

B. Non-Criteria Based Approaches:
1. Effectiveness of Alternatives:
• Substitution: - Identifying and promoting safer alternatives to chemicals of concern.
• Design for Environment: Encouraging the design of plastic products with reduced hazardous chemical content.
Rationale: This approach focuses on achieving the desired outcome (reduced risk) without necessarily adhering strictly to predefined hazard or risk criteria, emphasizing the feasibility and effectiveness of alternative solutions.
2. Life Cycle Considerations:
• Environmental Fate: Assessing the potential for chemicals to persist, bioaccumulate, and undergo long-range transport during the lifecycle of plastic products.
• Exposure Pathways: Evaluating pathways through which chemicals of concern may enter the environment or human bodies during the lifecycle of plastic products.
Rationale: Non-criteria-based approaches consider the broader context of chemical use in plastic products, including environmental and human health impacts throughout their lifecycle, which can inform regulatory decisions beyond hazard-based assessments alone.
Rationale:
• Stockholm Convention on Persistent Organic Pollutants: Provides a framework for identifying and regulating chemicals based on their persistence, bioaccumulation, potential for long-range transport, and adverse effects on human health and the environment.
• Rotterdam Convention on Prior Informed Consent: Emphasizes information exchange and risk assessment for hazardous chemicals in international trade, focusing on chemicals banned or severely restricted in certain countries.
• REACH Regulation (EC) No 1907/2006: Requires manufacturers and importers of chemicals to assess and manage risks arising from their use and to provide safety information throughout the supply chain, demonstrating a risk-based approach to chemical management.
• Design for Environment (DfE) principles: Encourage the reduction or elimination of hazardous substances in products through informed design and material selection, promoting safer alternatives and processes.

3. Grouping of chemicals
• Chemicals can be grouped based on structural similarity or mode of action to assess and regulate them as a class, rather than individually.
• Help to address data gaps and prevent unfortunate substitutions, as entire classes of chemicals can be restricted or phased out.
https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/
https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html
4. Transparency and traceability

	• Requiring manufacturers to disclose the chemicals used in plastic products, including their identities and quantities, can help identify chemicals of concern. https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/ https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary • Traceability measures, such as unique identifiers for chemicals and products, can facilitate the tracking of chemicals throughout the supply chain and product life cycle. https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary 5. Alternatives assessment • Evaluating the availability and feasibility of safer alternatives to chemicals of concern in plastic products; can help drive the development and adoption of less hazardous options. This approach incentivizes innovation and the substitution of hazardous chemicals with safer alternatives. https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/ https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html 6. Precautionary principle • In the absence of scientific consensus on the safety of a chemical, the precautionary principle can be applied to restrict or phase out its use in plastic products to protect human health and the environment. • This approach acknowledges the potential for harm and shifts the burden of proof to manufacturers to demonstrate the safety of a chemical before it can be used. https://www.genevaenvironmentnetwork.org/events/road-to-busan-potential-approaches-to-plastic-products-and-chemicals-of-concern-in-the-plastics-treaty/ https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html These criteria and non-criteria-based approaches provide a comprehensive framework for identifying and classifying chemicals of concern in plastic products under an ILBI, ensuring protection of human health and the environment while promoting sustainable plastic management practices.
Uruguay	The election of the chemicals of concern should be based on a hazard-based approach taking into account the following criteria: - Toxicity (according to GHS as an example) - Persistence - Bioaccumulation - Mobility in the environment (air, water, biota, etc.) As we specified in the point 2a, those criteria should avoid the overlap with other existing MEA, on the contrary, they should be complementary.
Chile	Part A: Criteria for Identifying Chemicals of Concern in Plastics Carcinogenic, Mutagenic, or Reprotoxic (CMRs Category 1A or 1B): Carcinogenic, mutagenic, or reprotoxic (CMR) chemicals are substances that pose severe risks to human health, causing cancer, genetic mutations, or reproductive harm. In plastic products, common CMRs include certain phthalates like Di(2-Ethylhexyl)Phthalate (DEHP), Dibutyl phthalate (DBP), Benzyl butyl phthalate (BBP), and Diisobutylphthalate (DIBP). These chemicals are often used as plasticizers to increase flexibility but have been linked to serious health issues. Establishing stringent criteria to limit their presence in plastics, such as setting a threshold of less than 0.1% by weight, is crucial to minimize exposure and protect human health. • Rationale: Limiting CMRs in plastics reduces the incidence of cancer, genetic mutations, and reproductive health issues, ensuring safer consumer products. • Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA). Specific Organ Toxicity with Chronic Effects (STOT RE): Specific organ toxicity with chronic effects (STOT RE) refers to chemicals that cause long-term damage to specific organs following repeated exposure. Examples include certain flame retardants and heavy metals like cadmium and lead. Plastic products containing these substances must be rigorously tested for chronic toxicity. Establishing criteria to limit their concentration ensures that the risks of long-term health effects, such as liver or kidney damage, are minimized. This is especially critical for products that come into frequent contact with humans, such as electronics and household items. • Rationale: Reducing the concentration of STOT RE chemicals in plastics prevents chronic health issues, ensuring safer consumer products. • Sources: National Institute for Occupational Safety and Health (NIOSH), World Health Organization (WHO). Endocrine Disrupting Chemicals (EDCs HH and/or ENV): Endocrine disrupting chemicals (EDCs) interfere with hormonal systems, leading to adverse developmental, reproductive, neurological, and immune effects. Plastics often contain EDCs such as Bisphenol A (BPA), Nonylphenol (NP), and 4-tert-Octylphenol (4t-OP). These chemicals can leach into the environment or come into direct contact with humans, causing significant health risks. Criteria for identifying and restricting EDCs in plastics should focus on eliminating or significantly reducing their presence, particularly in products like food containers, children's toys, and medical devices. • Rationale: Limiting EDCs in plastics safeguards hormonal health and prevents ecological disruptions caused by these chemicals in wildlife. • Sources: Endocrine Society, European Commission on Endocrine Disruptors.

Persistent, Bioaccumulative, and Toxic (PBTs): Persistent, bioaccumulative, and toxic (PBT) chemicals remain in the environment for long periods, accumulate in living organisms, and pose significant health risks. Plastics containing PBTs, such as certain brominated flame retardants and heavy metals like cadmium, should be phased out due to their long-term environmental and health impacts. Criteria for identifying and regulating PBTs in plastics should include stringent testing for persistence, bioaccumulation, and toxicity. Regulatory frameworks should prioritize replacing PBTs with safer alternatives in all plastic products.
• Rationale: Phasing out PBTs reduces the long-term ecological and health impacts of these chemicals, promoting a healthier environment.
• Sources: Stockholm Convention on Persistent Organic Pollutants, Environmental Protection Agency (EPA).

Very Persistent and Very Bioaccumulative (vPvBs): Very persistent and very bioaccumulative (vPvB) chemicals present even greater risks due to their extreme longevity in the environment and high potential for accumulation in living organisms. Plastics that contain vPvBs should be subject to rigorous scrutiny, and their use should be heavily restricted. Criteria for identifying vPvBs should involve advanced testing methods to detect long-term environmental persistence and bioaccumulation. Limiting the use of vPvBs in plastics can significantly reduce their environmental footprint and prevent adverse health effects in both humans and wildlife.
• Rationale: Restricting vPvBs mitigates severe, long-term environmental and health risks, ensuring a safer and more sustainable use of plastics.
• Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).

Part B: Chemicals of Concern in Plastics for Ban or Elimination Under the Instrument
Phthalates: Phthalates such as Di(2-Ethylhexyl)Phthalate (DEHP), Dibutyl phthalate (DBP), Benzyl butyl phthalate (BBP), and Diisobutylphthalate (DIBP) are commonly used as plasticizers to increase the flexibility of plastics. However, these chemicals are known to be carcinogenic, mutagenic, or reprotoxic (CMRs), and they can cause significant health issues, including hormonal disruptions and reproductive harm. Due to their widespread use and associated risks, these phthalates should be prioritized for ban or elimination under the instrument. This is particularly important for products like children's toys, food packaging, and medical devices, where exposure risks are high.
• Rationale: Banning or eliminating hazardous phthalates from plastics reduces exposure to toxic chemicals, protecting human health and ensuring safer consumer products.
• Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

The phase-out of materials containing or emitting hazardous substances which may harm the health of waste pickers, recyclers and local communities; and mandated testing of new technologies and materials to ensure their safety.

Bisphenols: Bisphenol A (BPA) is widely used in the production of polycarbonate plastics and epoxy resins. BPA is an endocrine disruptor that can interfere with hormonal systems, causing developmental and reproductive issues. Given its widespread use and significant health risks, BPA should be targeted for ban or elimination in plastic products, especially those that come into contact with food or are used by children. Alternatives to BPA should be explored and implemented to ensure safer plastic products.
• Rationale: Eliminating BPA from plastics prevents hormonal disruptions and protects vulnerable populations, such as children and pregnant women.
• Sources: Endocrine Society, European Commission on Endocrine Disruptors.

Alkylphenols: Alkylphenols, including Nonylphenol (NP) and 4-tert-Octylphenol (4t-OP), are used in various plastic applications for their surfactant properties. These chemicals are known endocrine disruptors and can have long-lasting environmental impacts. Due to their persistence and bioaccumulative nature, alkylphenols pose long-term environmental and health risks. Therefore, they should be prioritized for ban or elimination under the instrument, particularly in products that have high environmental release potential, such as industrial plastics and consumer goods.
• Rationale: Banning alkylphenols from plastics reduces environmental contamination and protects ecological and human health from endocrine-disrupting effects.
• Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).

Flame Retardants: Flame retardants like Tris(2-carboxyethyl)phosphine hydrochloride (TCEP) are used in plastics to reduce flammability. However, TCEP is known to cause specific organ toxicity with chronic effects (STOT RE), including potential neurotoxic and carcinogenic effects. Due to these health risks, TCEP and similar flame retardants should be eliminated from plastic products. Safer alternatives that do not compromise fire safety should be identified and adopted.
• Rationale: Eliminating hazardous flame retardants like TCEP from plastics protects human health from chronic toxicity and ensures safer consumer products.
• Sources: National Institute for Occupational Safety and Health (NIOSH), World Health Organization (WHO).

Metals and Metal Compounds: Cadmium and cadmium compounds, as well as lead and lead compounds, are used in plastics for their stabilizing and pigment properties. These metals are highly toxic, causing various health issues, including organ damage, developmental problems, and cancer. Due to their persistence and bioaccumulative nature, cadmium and lead pose significant environmental and health risks. Thus, these metals and their compounds should be banned or eliminated from plastic products, particularly in consumer goods, electronics, and food contact materials.
• Rationale: Banning cadmium and lead from plastics prevents exposure to toxic metals, protecting public health and reducing environmental contamination.

• Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

Part C: Groups of Chemicals of Concern in Plastics to Avoid and Minimize Under the Instrument
Phthalates: Phthalates are commonly used as plasticizers to enhance flexibility in a wide range of plastic products. However, certain phthalates like DEHP, DBP, BBP, and DIBP have been linked to adverse health effects, including endocrine disruption, reproductive toxicity, and developmental issues. To minimize and avoid the use of harmful phthalates, criteria-based approaches should set stringent limits on their allowable concentrations in plastics, especially in products such as toys, food packaging, and medical devices. Non-criteria based approaches can include promoting the use of safer alternatives and educating manufacturers and consumers about the risks associated with phthalates.
• Rationale: Reducing the use of hazardous phthalates in plastics protects human health, particularly in vulnerable populations such as children.
• Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

Bisphenols: Bisphenols, particularly Bisphenol A (BPA), are used in the production of polycarbonate plastics

a. Criteria or types of criteria

Criteria-Based Approaches

Toxicological Criteria
• Carcinogenic, Mutagenic, or Reprotoxic (CMRs Category 1A or 1B): Chemicals classified as CMRs pose significant health risks, including cancer, genetic mutations, and reproductive harm. The ILBI should set specific concentration limits for these chemicals in plastic products, typically less than 0.1% by weight.
o Rationale: Protects human health by reducing exposure to highly hazardous substances.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

• Specific Organ Toxicity with Chronic Effects (STOT RE): Chemicals causing chronic damage to specific organs over prolonged exposure should be strictly regulated. Limits should be based on comprehensive toxicological data.
o Rationale: Prevents long-term health effects such as liver or kidney damage.
o Sources: National Institute for Occupational Safety and Health (NIOSH), World Health Organization (WHO).

Environmental Criteria

• Persistent, Bioaccumulative, and Toxic (PBTs): PBT chemicals remain in the environment, accumulate in living organisms, and pose long-term ecological and health risks. The ILBI should include criteria for persistence, bioaccumulation, and toxicity to identify and restrict these substances.
o Rationale: Reduces environmental contamination and protects ecosystems.
o Sources: Stockholm Convention on Persistent Organic Pollutants, Environmental Protection Agency (EPA).

• Very Persistent and Very Bioaccumulative (vPvBs): Chemicals with extreme persistence and bioaccumulative properties should be heavily restricted. The criteria should include advanced testing for long-term environmental presence and bioaccumulation.
o Rationale: Mitigates severe, long-term environmental and health risks.
o Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).

Endocrine Disruption Criteria

• Endocrine Disrupting Chemicals (EDCs): EDCs interfere with hormonal systems, leading to adverse health effects in humans and wildlife. The ILBI should set strict thresholds for these substances, particularly in products like food containers, children's toys, and medical devices.
o Rationale: Protects hormonal health and prevents ecological disruptions.
o Sources: Endocrine Society, European Commission on Endocrine Disruptors.

	b. Non- Criteria or types of criteria Best Practices and Recommendations • Industry-Specific Guidelines: Develop and promote best practices tailored to different industrial sectors. These guidelines should include recommendations for safer chemical substitutes, safer production processes, and end-of-life management. o Rationale: Encourages voluntary adoption of safer practices, enhancing overall safety and sustainability. o Sources: UNEP, Plastics Industry Association. Lifecycle Assessments (LCAs) • Comprehensive LCAs: Conduct LCAs to evaluate the environmental and health impacts of chemicals throughout the lifecycle of plastic products. This helps identify critical stages where harmful chemicals can be minimized or replaced. o Rationale: Provides detailed insights into the full environmental footprint and guides informed decision-making. o Sources: Environmental Protection Agency (EPA), Journal of Industrial Ecology. Consumer Education and Engagement • Public Awareness Campaigns: Educate consumers about the risks associated with hazardous chemicals in plastics and promote the benefits of safer alternatives. This can include labeling schemes and educational materials. o Rationale: Informed consumers are more likely to choose safer products and support regulatory measures. o Sources: National Geographic, GreenBlue. Incentive Programs • Financial and Regulatory Incentives: Implement programs that provide financial benefits or regulatory incentives for companies reducing or eliminating hazardous chemicals in their products. This can include tax breaks, subsidies, or grants for research and development of safer materials. o Rationale: Encourages innovation and adoption of safer materials, driving industry-wide improvements. o Sources: Ellen MacArthur Foundation, Resource Recycling Systems.
State of Kuwait	Chemicals of concern are beyond the mandate of UNEA Resolution 5/14, where the main objective is to address plastic pollution. As the plastic pollution is related to the final plastic product, the chemicals that are used during polymerization are out of the scope. 5.a. Criteria or types of criteria Existing international instruments: • Stockholm Convention on Persistent Organic Pollutants • Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade • Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal • Strategic Approach to International Chemicals Management (SAICM) • Inter-Organization Programme for the Sound Management of Chemicals (IOMC) • International Conference on Chemicals Management (ICCM) • Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste (GFC) 5.b. Non criteria based approaches 1) Zero Option (No text) 2) National levels approaches
Peru	1. Risk to human health, prioritising chemicals that contain the following: a.Carcinogenic (C): Substances that can cause cancer. b.Mutagenic (M): Substances that can cause genetic mutations. c.Reproductive Toxicants (R): Substances that can negatively affect reproductive capabilities or cause developmental harm. 2. Persistence: The potential of a chemical to remain in the environment over a long period, making it difficult to degrade. 3. Bioaccumulation: The ability of a chemical to accumulate in the tissues of living organisms, leading to higher concentrations over time.

	4. Toxicity: The potential of a chemical to cause harm to living organisms, including humans, through various toxicological effects. 5. Mobility/Migration: The potential of a chemical to migrate from the polymer to people or the environment and the potential to spread through the environment, particularly in water systems, thereby increasing exposure risks.
India.	5 a. Criteria or types of criteria for the identification/classification for chemicals of concern in plastic products Any criteria or non-criteria based regulation of chemicals should be based upon national circumstances and capabilities and national regulations and policies, tailored to each country's specific circumstances and capabilities. Chemicals of concern should be identified based on agreed scientific criteria that are risk- based and not hazard based through a process that is both transparent, inclusive and balanced. The scope of such an exercise is determined by UNEA 5/14 resolution. The implementation of any compliance provision needs to follow principle of CBDR. The risk based approach under Stockholm Convention may be the guiding approach. There should be no duplication of mandates with other relevant Multilateral Environmental Agreements (MEAs) and Global Chemicals Framework. The costs of compliance and transition for control measures should be evaluated for each country, with financial and technical assistance, including technology transfer, provided to developing countries. This should be based on the principle of common but differentiated responsibilities. The scientific body of the instrument can develop a criteria based approaches following due process which is inclusive, transparent and balanced based upon global experience and best practices. The approaches need to be adopted by the Governing Body of the instrument. The approaches can be used by parties to the instrument, on a voluntary basis in a non- binding manner, based upon national circumstances and capabilities and national regulations. The implementation of any compliance provision needs to follow principle of CBDR. Any classification and further regulation of chemicals of concern in products shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. The Instrument must deal with only those Chemicals which are used in plastics only and not in other applications or sectors. Regulation of chemicals which are used in variety of sectors can be effective only if these are dealt in comprehensive framework for the chemicals. Comprehensive risk-based evaluations on the use of a Chemical intended for a particular application Life Cycle Analysis driven approach in respect of plastic pollution considering a robust nomination process and global risk assessment interfacing with all uses & considering the alternatives. Chemicals in plastics products may be addressed under Comprehensive Chemical Management Programmes where countries may be enabled to conduct risk assessments and make management decisions in line with the National priorities in phase-wise manner. Socio-economic impact should be carefully considered while recommending any chemical of concern for inclusion in the regulation list. 5b. Non criteria based approaches for the identification/classification for chemicals of concern in plastic products
The State of Qatar	Section II.2 explains the hazardous chemicals in plastic and plastic products. According to the UNEA Resolution 5/14, the directive was to curb plastic pollution. The focus was not the chemicals of concern. There are already internationally legally binding conventions in place of which the majority of countries are members. 5. a. Criteria or types of criteria: International conventions and instruments such as the Basel, Rotterdam, and Stockholm Conventions already are in place and being implemented across countries. A list of chemicals of concern would be duplication of the efforts. It's relevant to improve upon the existing mechanisms rather than to prescribe new ones. The purpose of new regulations is unclear when existing regulations serve a similar purpose. 5.b. Non criteria based approaches: Zero Option (no text in the instrument) is the preferred option for the State of Qatar. The reason is that there are chemicals that are used in the production of plastic that are also used in other sectors of the country such as steel. Moreover, there is the existence of an international system of chemical management that covers and regulates the entire life cycle of the chemicals used to produce various other products. Moreover, as mentioned there are mechanisms such as the international system of chemicals management that deals with the safe production, transport, use, and end of life management of the chemicals. Plastic is an international trade and numerous sectors are at risk if the WTO principles are not adhered to.

	There are regulations regarding the maximum allowable limit for the chemicals in plastics products especially for the products such as toys, food packaging etc. These regulations are to ensure the safe human health and environment. It must be ensured that arbitrary and unilateral measures are not adopted by Parties that may hinder the international trade by implementing protectionists policies.
The Islamic Republic of IRAN	Iran response on Criteria and Non-Criteria based Approaches: - Iran is strongly believed that chemicals are best regulated under a comprehensive national risk-based management system and some current global frameworks and international agreements such as Basel, Rotterdam and Stockholm Conventions which are widely covering of chemicals could serve to support the development and implementation of these national systems. - Furthermore, we do not agree with using the term chemicals of concern, since, any chemical can be "dangerous" when used in excessive and unsustainable manner. Chemicals in their raw form have categories or classes of hazard, which explains existing differentiated strong requirements for chemicals production facilities, processes, transportation, storage, use and disposal. But such requirements already exist and are applied in countries having chemical industries in their economy specifically in order to ensure safe working conditions and minimize any releases of harmful substances into the environment. - For these purposes, in production processes, chemical substances are used in a "closed loop" without any direct contact with humans and/or the environment. They are stored, handled, mixed, and allowed to react only in closed and sealed containers, tanks, reservoirs, and reactors. All additives, separately and when added to the polymer, undergo sanitary, hygienic and toxicological studies. - In addition, this very important fact should be highlighted that at least for 70 years a well-functioning system of international and national standards and technical regulations has been aimed at ensuring safe and quality plastic products and production processes. - Technical regulations always lays down product characteristics or their related processes and production methods, including applicable administrative provisions, with which compliance is mandatory (WTO Agreement on Technical Barriers to Trade). Standards, meanwhile, are voluntary mechanisms. Generally, these instruments relate to product characteristics, production processes, management, storage, transport, sale and disposal of products. Domestic producers and foreign suppliers must comply with the requirements set out in technical regulations. Competent national authorities must assess products for their compliance with technical regulations and standards (many of them adopted or endorsed by ISO) before they will be released on market. Such control measures are provided by relevant conformity assessment procedures. If a product does not comply with these requirements, it either cannot be placed on the market or shall be removed from it. Technical regulations, among other things, also set out maximum allowable concentrations with regard to chemical substances in plastic products. It was done specifically to regulate the residues in final products that can pose harm to human health or the environment, and especially with respect to sensitive products such as toys or food packaging, in order to ensure their safe consumption. To sum up, there is an operational system of regulating the use of chemicals in production processes as well as their residues in final plastic products. The reasons of abandoning the existing system for such regulation and establishing a new one, which is proposed by certain delegations, remains unclear. It is always better to improve something that already exists than create something new that can only complicate the process by creating parallel mechanisms. Furthermore, the maximum allowable concentration of chemicals in plastic product should be determined by research and scientific panels based on strong science and risk-based evidences and assessments with due attention to technological and socio-economic needs of each country. Without this, it is difficult to verify the authenticity of the reports and to make proper decisions on chemicals. Such a risk-based approach with clear steps have already been in place and applied under the Stockholm Convention, as the following: 1. Submission of a proposal for listing a chemical 2. Screening phase 3. Conducting a risk profile 4. Risk management evaluation 5. Decision-making regarding listing of chemicals based on national circumstances Having said the above and due to the vast uncertainties and lack of scientifically proven data and information about the hazards and specific impacts of chemicals on human health and the environment, Iran is strongly of the view that no list of chemicals (for banning or any kind of restriction) is supported under the future instrument. However, parties may consider developing their own nationally designated list of chemicals and taking relevant actions at the national level. Furthermore, parties Should also avoid any unilateral actions or measures that could have restrictive impacts on other parties. Such unilateral measures should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade; Based on these findings, it is evident that there are some paradoxical and unclear data available for using a hazard-based approach for Chemicals of concern. The governing body of the future Instrument may consider to establish an advisory scientific, technological and economic panel (ASTEP) to study upon a risk-based approach concentration of chemicals of concern in plastic products and their possible risks and hazards for human health and environment.

Switzerland	We repeat our discussion above regarding problematic plastic products, because it is equally applicable here. It is not entirely clear to us what the difference is between a criteria-based approach and a non- criteria-based approach. For the purposes of this survey, we interpret a non-criteria based approach as one that does not requiring explicit criteria in the treaty text indicating how the listed chemicals of concern in plastic products were identified for control measures in the treaty. Under a non-criteria-based approach, an initial list (Annex) could be developed based on the activities and initiatives already undertaken in the public and/or private sector to move away from certain chemicals of concern in plastic products. There are also a Similarly, to the plastic product, if a criteria-based approach is applied, we need to find a set of criteria for identifying chemicals of concern in plastic products on a global level that are simple to apply. Such a simplified, pragmatic approach is crucial when identifying additional chemicals of concern in plastics. In order to complement and update the initial list of chemicals of concern. The UK-Brazil dialogue showed that a large number of detailed criteria can lead to lengthy discussions and/or disagreements between the parties and can shift the focus from targeting to complicated criteria management. It is suggested to start with identifying chemicals of concern used in plastics which are already subject to restrictions at the supranational or national level in a number of jurisdictions. These chemicals could be listed in an Annex to the treaty as a starting point as outlined in the CRP submitted by Norway on behalf of Norway, Cook Islands, Rwanda during INC-4 (chemicals_of_concern_in_plastics_proposal_by_cook_islands_rwanda_and_norway.pdf (unep.org)). This would facilitate a harmonized regulatory approach. The criteria need to be in a format so that they can evolve over time, as scientific knowledge increases. The COP should therefore have the opportunity to formalise the criteria at a later stage. As suggested in the above mentioned CRP, hazard-based identification could be carried out using existing hazard classes, such as the EU CLP hazard classes, as a starting point. As shown in the PlastChem report, most plastics and/or plastic products contain a high number of (non)intentionally added known and unknown chemicals simultaneously, which cannot be measured using any single chemical analytical techniques. Nevertheless, it is possible to evaluate their physicochemical and hazardous properties. In addressing these issues, and when it comes to technical assessments, effect-based methods and structure or function-based in silico, computational grouping (such as the OECD's QSAR tools) can help to deal with the variety and mixture of chemicals that may be present in plastics. 5.b. Non criteria based approaches Non criteria-based approaches could build up on a criteria-based approach for an initial evaluation or be solely based on the non criteria-based approach. Such approaches could include: • Development of an Initial Chemicals List for phase-out of chemicals of concern in plastic products that are already regulated regionally/nationally or that are subject to voluntary. Examples are given in the CRP by NOR. • Specifying chemicals of interest in plastic products, and require manufacturers, importers and exporters to make this ingredient information available, and for it to be shared with the public and with other Parties. This will help to implement the treaty as better information on what is in plastic products will be available (see Concept Paper submitted by Switzerland at INC-4: concept_paper_on_plastic_products_and_chemicals_of_concern.pdf (unep.org). • Restrictive measures, exemptions: Elimination of certain chemicals in certain plastic products and definition of exemptions where necessary for certain uses. Good examples are given in the EU proposal (Webinar slides, June 2024). • Consider other lists of chemicals in other jurisdictions / conventions to avoid duplication. Also discuss how to deal with such shortlisted chemicals in the initial list that are already listed in other chemical conventions. • Disseminate practical examples, including practices that are already working in other countries. For example, the recent ban on microplastics intentionally added to products in the EU (Commission Regulation (EU) 2023/2055) which will soon be followed by a similar provision in the Swiss legislation on chemicals. • Achieving clarity on definitions and terms is needed for common understanding.
Madagascar	Based on the search results, there are several potential criteria and non-criteria-based approaches that could be reflected in the International Legally Binding Instrument (ILBI) for the identification and classification of chemicals of concern in plastic products: - Hazard-based criteria: The ILBI could establish criteria to identify chemicals of concern based on their hazardous properties, such as carcinogenicity, mutagenicity, reproductive toxicity, and persistence in the environment. This could involve developing a separate set of criteria to determine elements of concern, as mentioned in the search results. - Risk-based criteria: In addition to hazard-based criteria, the ILBI could also consider risk-based approaches that take into account the exposure and potential risks posed by chemicals in plastic products throughout their lifecycle. This could include evaluating the potential for chemicals to be released during production, use, and disposal of plastic products. -Grouping of chemicals: The ILBI could adopt a grouping approach to identify and classify chemicals of concern, where chemicals with similar structures or properties are assessed and regulated as a group, rather than individually. This can help address the large number of chemicals associated with plastics and streamline the identification and management process. -Transparency and traceability: The ILBI could require increased transparency and traceability of chemicals used in plastic products, including the disclosure of chemical information and the establishment of inventories or registries. This would help identify and track chemicals of concern throughout the supply chain. - Non-criteria-based approaches: The ILBI could also consider non-criteria-based approaches, such as the precautionary principle, which would shift the burden of proof to manufacturers to demonstrate the safety of chemicals used in plastic products, rather than relying solely on pre-defined criteria. This could help address the potential for unknown or emerging chemicals of concern. - Consideration of product use and application: The ILBI could take into account the specific uses and applications of plastic products when identifying and classifying chemicals of concern. For example, products intended for sensitive applications, such as toys and food contact materials, may warrant stricter criteria due to higher exposure potential. -By incorporating these criteria and non-criteria-based approaches, the ILBI can establish a comprehensive and protective framework for the identification and classification of chemicals of concern in plastic products, ultimately contributing to a safer and more sustainable plastics economy.

The state of Israel	Three lists of criteria should be set: 1. Substances that may pose a health hazard 2. Substances that harm the reliability of the recycling 3. Materials that have been tested and proven to be harmless - to advance positive momentum for the examination of the materials (the groups can be divided according to level of damage - safe to reasonable).
Brazil	The ILBI could draw inspiration from existing Multilateral Environment Agreements on chemicals to establish criteria and a science-based process for the identification of chemicals that pose risks to human health and/or the environment. The chemicals should be linked to specific plastic products/applications. The ILBI needs to account for national circumstances and needs.
Australia	General comments: It will be important to identify/classify chemicals of concern in plastics with the goal of identifying plastic products that harm human health or the environment due to their chemical content. Criteria based approaches Criteria will need to effectively identify: - chemicals and groups of chemicals in plastic and plastic articles, and problematic and avoidable plastic articles that pose the highest risk of: - harm to human health; and/or - harm to the environment; and/or - being unmanageable or hindering circularity at the end of life. There will also need to be criteria to determine the level of action required. In particular, whether the risks and mitigation options are such that: - management action options are insufficient to protect the global environment - provided the importing or producing country implements appropriate management action, the risks can be managed down to acceptable levels. - Any resulting management obligations under the ILBI should be consistent with a risk-based approach grounded in sound scientific evidence, and consistent with existing approaches under chemicals-focused multilateral environmental agreements (MEAs). Obligations under the ILBI should not duplicate or appropriate the functions of existing chemicals-focused MEAs, but rather seek to fill gaps that are outside of scope of those existing MEAs, and/or otherwise provide for effective coordination with them. Different approaches to regulation: The 2023 paper 'Global governance of plastics and associated chemicals' commissioned by the Secretariat of the Basel, Rotterdam and Stockholm Conventions1 provides a source of examples of criteria-based approaches regarding chemicals of concern in plastic products, particularly section 4.2 'Identifying and addressing chemicals and polymers of concern'. The most viable criteria-based approaches worth noting are: - Chemicals - Global negative list based on criteria: this could also draw on existing regulatory lists of chemicals of concern. - Polymers – a potential sector-specific global positive list: this could comprise polymers deemed easiest to safely use, reuse, repair, refurbish, recycle and dispose of in order to facilitate recyclability and circularity. There are several successful models of chemicals management operating in other Conventions with a criteria-based listing approach. These models include an expert subsidiary or advisory bodies with strong terms of reference including risk-based principles and strong governance procedures. Examples include the Chemicals Review Committee to the Rotterdam Convention and the Persistent Organic Pollutants Review Committee to the Stockholm Convention. These bodies provide a tried and tested model for providing science- and evidence-based recommendations and advice to the respective COPs of these Conventions. Examples of successful Australian approaches for chemicals regulation include: - Australian Industrial Chemicals Introduction Scheme (https://www.industrialchemicals.gov.au/) - Australian Chemicals Environmental Management Standard (https://www.dcceew.gov.au/environment/protection/chemicals-management/national-standard) - Australian Poisons Standard (regulated by Therapeutic Goods Administration) https://www.tga.gov.au/how-we-regulate/ingredients-and-scheduling-medicines-and-chemicals/poisons-standard-and-scheduling-medicines-and-chemicals/poisons-standard-susmp) b. Non criteria based approaches

<table>
<tr><td></td><td>The concept of ‘non-criteria based approach’ should be clarified as part of this intersessional workstream. Although non-criteria approaches may complement regulatory action under the ILBI, the purpose of such non-criteria approaches should be consistent with the objective of the ILBI to protect the environment and human health from the adverse effects of plastic pollution, and may be used by Members as a means to supporting implementation of criteria-based approaches.
An example of potential non-criteria approaches is provided in the 2023 paper ‘Global governance of plastics and associated chemicals’ commissioned by the Secretariat of the Basel, Rotterdam and Stockholm Conventions (https://www.basel.int/Portals/4/download.aspx?d=UNEP-FAO-CHW-RC-POPS-PUB-GlobalGovernancePlastics-2023.pdf). For instance, section 4.3 ‘Other possible mechanisms for closing the governance gaps’ lists possible non-criteria approaches as:
- Developing a hierarchy of action for chemicals management
- Harmonising methodologies for hazard and risk assessment
- Developing a global knowledge hub.</td></tr>
<tr><td>Guatemala</td><td>It will be very important to find replacements for bisphenols, phtalates, flame retardants and heavy metals, since these are very dangerous for health and the environment.</td></tr>
<tr><td>Indonesia</td><td>7.a. When addressing chemicals of concern in plastic products, it's crucial to incorporate transparency criteria into both criteria-based and non-criteria-based approaches. These approaches should also align with other Multilateral Environmental Agreements (MEAs) and avoid regulatory overlap.

Proposed Criteria:
1. Transparency
• Disclosure Requirements: Mandate comprehensive disclosure of all monomers, additives and processing aids used in plastic products.
• Labeling Standards: Develop labeling standards to inform consumers about the presence of chemicals of concern.
2. Toxicity
• Human Health Impact: Classify chemicals based on their known or potential toxic effects on human health, including monomers, additives and processing aids.
• Environmental Toxicity: Assess the environmental impact of monomers, additives, and processing aids, including bioaccumulation and persistence.
3. Exposure Risk
• Usage Patterns: Consider how and where chemicals in plastic products are used to determine exposure risks.
• Release Potential: Evaluate the likelihood of chemicals being released during the product’s lifecycle, including use and disposal.
4. Regulatory Status
• Compliance with Existing Laws: Classify chemicals based on their regulatory status in major markets (e.g., REACH in the EU, TSCA in the US).
• Global Standards: Align classification with international agreements and standards.

5. Functional Use
• Essential vs. Non-Essential Uses: Determine whether the chemical’s function, including additives and processing aids, is essential and if safer alternatives exist.
• Performance Requirements: Assess if the chemical is necessary for meeting product performance standards.
6. Safer Chemical Substitution Availability
• Identification of Safer Alternatives: Promote the identification and use of safer chemicals as substitutes for harmful monomers, additives and processing aids.
• Substitution Guidelines: Establish guidelines for evaluating and implementing safer chemical alternatives.

7.b. Proposed Non-criteria Approach:
In principle, the proposed non-criteria approach mirrors the approach suggested for plastic products. It should provide sufficient time for internal consolidation with stakeholders, ensuring all relevant parties are engaged with objective to achieve a smooth and effective transition. This tailored approach respects national contexts while promoting global environmental and economic sustainability.</td></tr>
<tr><td>Iraq</td><td>Criteria should consider the following:
The table below show the GHS hazard class and the categories and the GHS hazard statement code and the limit that must not be exceed in mixture (plastic product).
Health hazardous
<table>
<tr><th>No.</th><th>GHS hazard class</th><th>Category</th><th>GHS hazard code</th><th>Limit not exceed in mixture</th></tr>
<tr><td>1</td><td>Acute toxicity</td><td>Category 1
Category 2</td><td>H 300
H 310</td><td>Prohibited</td></tr>
</table></td></tr>
</table>

			H 330	
2	Acute toxicity	Category 3	H 301 H 311 H 331	1 wt %
3	Germ cell mutagenicity	Category 1A Category 1B	H 340	0.1 wt %
4	Carcinogenicity	Category 1A Category 1B	H 350	0.1 wt %
5	Reproductive toxicity.	Category 1A Category 1B	H 360	0.1 wt %
6	Specific target organ toxicity single exposure	Category 1 Category 2	H 370 H 371	1 wt %
7	Specific target organ toxicity repeated exposure	Category 1 Category 2	H 372 H 373	1 wt %

Environmental Hazardous

No.	GHS hazard class	Category	GHS hazard code
1	Hazardous to aquatic environment short term	Acute 1	H 400
2	Hazardous to aquatic environment short term	Acute 1	H 401
3	Hazardous to aquatic environment long term	Chronic 1	H 410
4	Hazardous to aquatic environment long term	Chronic 1	H 411

A. Any chemical prohibited or limited by any other international chemicals conventions (Stockholm, Rotterdam, Minamata, Montreal Protocol).
B. Sufficient evidence that these chemicals migrate or degredate or soluble or bio accumulate to the environment or food chain, and had concern impact to public health.
C. Alternatives Assessment: Identifying and assessing safer alternatives to hazardous chemicals used in plastic products.
D. Type of use: if the natural of use of the plastic product is far from health and environment and don't produce wastes.

6.b. Non criteria based approaches : No answer

The Republic of BURUNDI	• Persistence • Bioaccumulation • Long distance transportation • Harmful effects • Examples: • Polycyclic aromatic hydrocarbons (PAHs) • Polybrominated dibenzo-p-dioxins (PBDD), dibenzofurans (PBDF) • Linear alkylbenzenes (LAB); Alkylphenols, including nonylphenol (NP), octylphenol (OP) • PFAS • Bisphenols, including bisphenol A (BPA); Phthalates.
Germany	The identification and classification of chemicals of concern in plastic products can be approached through various criteria and methodologies. The International Legislation on Biocides and Industrial Chemicals (ILBI) framework provides a structured approach to assess the potential risks associated with chemical substances. Below are the key criteria and approaches that could be reflected in the ILBI for this purpose. 1. Hazard-Based Criteria Hazard-based criteria focus on the intrinsic properties of chemicals that may pose risks to human health or the environment. This includes:

	Toxicity: Assessment of acute and chronic toxicity, including carcinogenicity, mutagenicity, and reproductive toxicity. Persistence: Evaluation of how long a chemical remains in the environment without breaking down. Bioaccumulation Potential: Analysis of how readily a substance accumulates in living organisms over time. Ecotoxicity: Examination of the effects on aquatic and terrestrial organisms, including impacts on biodiversity. 2. Exposure-Based Criteria Exposure-based criteria consider the likelihood that humans or ecosystems will come into contact with hazardous chemicals. Key factors include: Use Patterns: Understanding how plastic products are used, which can influence exposure levels (e.g., food contact materials). Release Mechanisms: Identifying how chemicals may leach from plastics into the environment or human bodies during their lifecycle. Population Vulnerability: Assessing exposure risks for sensitive groups such as children, pregnant women, or individuals with pre-existing health conditions. 3. Risk Assessment Frameworks Risk assessment frameworks integrate both hazard and exposure information to evaluate overall risk levels associated with specific chemicals. This includes: Quantitative Risk Assessment: Utilizing mathematical models to estimate risk based on dose-response relationships. Qualitative Risk Assessment: Employing expert judgment to categorize risks when quantitative data is lacking. 4. Regulatory Compliance Criteria Regulatory compliance criteria ensure that chemicals used in plastic products meet established safety standards set by governing bodies. This involves: Existing Regulations: Adherence to existing regulations such as REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) in Europe or TSCA (Toxic Substances Control Act) in the United States. Substance Lists: Inclusion on lists such as those maintained by agencies like ECHA (European Chemicals Agency) or EPA (Environmental Protection Agency), which identify substances of very high concern. 5. Non-Criteria Based Approaches Non-criteria based approaches may also play a role in identifying chemicals of concern through alternative methodologies: Green Chemistry Principles: Emphasizing design strategies that minimize hazardous substances and promote safer alternatives. Life Cycle Assessment (LCA): Evaluating environmental impacts throughout a product's lifecycle—from raw material extraction through production, use, and disposal—to identify harmful substances at any stage. 6. Stakeholder Engagement Incorporating stakeholder perspectives is crucial for comprehensive assessments: Public Health Advocacy Groups: Engaging with organizations focused on public health can provide insights into community concerns regarding specific chemicals. Industry Collaboration: Working with manufacturers to understand practical implications and feasibility for substituting harmful substances. 7. Emerging Technologies Utilizing advancements in technology can enhance identification processes: Analytical Methods Development: Implementing sophisticated analytical techniques like mass spectrometry or chromatography to detect trace levels of hazardous substances more effectively. By integrating these diverse criteria and approaches within the ILBI framework, regulators can better identify and classify chemicals of concern in plastic products, ultimately leading to improved safety standards for consumers and reduced environmental impact.
The Government of Canada	7.a. Criteria or types of criteria Approach: • The ILBI should adopt evidence and science-based criteria for the identification of "chemicals of concern" in plastic products that complement existing multilateral environmental agreements (MEAs), providing clarity, certainty, consistency, and transparency for all Parties, partners and stakeholders. • The scope of the application of criteria would be focused on chemicals contained in or used in the manufacturing or processing of plastic products, without duplicating existing MEAs. Potential Process: • As with other MEAs, such as the Rotterdam and Stockholm Conventions, assessments of candidate chemicals or groups of chemicals of concern against the ILBI's criteria could be carried out by an expert body created as a subsidiary body to the ILBI's governing body. The expert body could then recommend the listing of assessed chemicals or groups of chemicals of concern in plastic products to the governing body, which would make the final decision on each listing. The ILBI could also set out the process for a Party to submit a proposal to the governing or expert body to review a chemical or group of chemicals in accordance with the criteria and treaty mandate (e.g., building on a similar approach to that of the Stockholm Convention). The expert body could also recommend changes to the ILBI's criteria for adoption by the governing body, to ensure the criteria remain relevant and science-based over time, taking into account scientific knowledge, including Indigenous knowledge, and uses and applications (e.g., for consideration of exemptions).

	• As with other MEAs, the ILBI should include exemptions for certain uses or applications (e.g., to address a lack of suitable environmentally sound and viable alternatives and enable continued use in certain justified cases). Potential criteria for chemicals of concern in plastic products: • The chemical presents or may present a risk to the environment or its biological diversity; • The chemical presents or may present a risk to human health; • The chemical is in plastic products that are commonly found or may enter the environment (e.g., prevalent in the environment); • The chemical hinders or disrupts the circularity of a plastic product or products (e.g., making the product(s) unable to be reused or recycled in practice and at scale) in ways that protect the environment and human health). The scientific evaluation of the risk posed by the chemical or group of chemicals of concern in plastic products should consider the hazardous properties of the substance (e.g., toxicity to organisms or cancer-causing properties) and the nature and extent of the exposure by people or the environment (e.g., likelihood of release from plastic across the product's life cycle). Consideration must also be given to existing MEAs, in particular the Stockholm Convention on Persistent Organic Pollutants, to avoid duplication of effort and ensure consistency, including by ensuring close cooperation and collaboration between the Convention and the ILBI. This is especially important if hazardous characteristics set out in the Stockholm Convention (e.g., persistence, bioaccumulation and toxicity, long-range transport) are reflected in the text of the ILBI. Inherent hazardous properties could include: • carcinogenic, mutagenic or reprotoxic (Category 1A or 1B) • endocrine disruptor • persistent, bioaccumulative and toxic (PBTs) Additional sources of information: • Canada's Chemicals Management Plan 7.b. Non criteria based approaches A criteria-based approach is recommended as the preferred path forward to ensure an evidence and science-based process, as well as clarity, certainty, consistency, and transparency for all Parties, partners and stakeholders: • Specific pre-defined evidence and science-based criteria, such as precise traits or characteristics that a chemical should meet to be identified as a "chemical of concern in plastic products", will provide a shared and consistent understanding and application of the terminology. • Only a set of pre-defined criteria will ensure a consistent, transparent and evidence and science-based process, by ensuring that an expert body assesses specific chemicals or groups of chemicals against a set of pre-determined elements clearly specified in the ILBI. The criteria should be exhaustive and amendable in the light of new scientific evidence, upon recommendation by an established expert body under the ILBI. • A criteria-based approach will ensure that all Parties, as well as industry actors and other stakeholders, know in advance which specific traits or characteristics could lead to a chemical being defined as a chemical of concern and merit possible action under the ILBI. • A criteria-based approach will also be important to level the playing field, encourage innovation, and inform behaviour change, as policy makers, businesses and consumers will have a shared understanding of what is deemed to be a chemical of concern in a plastic product, focusing on impacts or risk of impacts to the environment or human health.
Armenia	Hazards The product contains chemicals or polymers of concern, including those derived from secondary plastics, or represents a health or environmental hazard. Emissions generation The product releases nano-, micro- and macroplastics during its production, intended use or end-of-life. Impediment of circularity The product is non-recyclable as per established recyclability criteria. Lack of transparency The product lacks data to determine safety for the environment and human health across the full life cycle. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html

Malawi	Impact on human health and the environment
Palau	7.a. Criteria or types of criteria As Palau is committed to an instrument to end plastic pollution, including in the marine environment, and protect human health, we are strongly supportive of robust criteria to identify chemicals to ban, phase out, and regulate. Any set of criteria needs to be accompanied with robust provisions on transparency and traceability. There are already some fairly well-established criteria that the INC process could build on. Many of which are already reflected in the current compilation, in particular in "Proposed annexes relating to element II.2" of the compilation of draft text of the international legally binding instrument on plastic pollution, including in the marine environment that are worth considering and could serve as the basis of our engagement during the intersessional process. However, we do not consider that options 0 are among them. Palau agrees that criteria can be organized in categories covering impacts on human health, on the environment, and on the marine environment. These categories would also be populated by sub-categories of criteria, which would include relevant thresholds to determine whether a chemical and or group of chemicals should be banned, phase out, regulated. Palau see that as the basis, the following categories of criteria should be the starting point for our consideration: - Persistence, characterized by long-term presence of a chemical in air, water, soil, or organism - Bio-accumulation, which is the potential of a chemical to stay and accumulate in wildlife and humans - Mobility, or the potential of a chemical to spread in water systems (which can include the marine environment) - Toxicity, which is the potential of a chemical to cause harm to organisms and humans, and which includes whether the chemical has potential to be carcinogenic, mutagenic, reprotix, toxic for a specific target organ, endocrine disruptive. The criteria can be associated with a certain threshold to determine whether they must be banned, elimination, their use restricted, avoided and/or minimized. 7.b. Non criteria based approaches Seeking clarification on non-criteria based approaches. Any list of chemicals of concerns that are banned or to be eliminated or whose application is to be regulated must be regularly reviewed and updated. Palau suggests that this work be conducted by COP at regular intervals, starting with COP 1 for the elaboration of the first list based on the criteria with the support of the STEPs.
Panama	7.a. Criteria or types of criteria To identify chemicals and polymers of concern, a verified list with relevant and peer-validated information is required. Accurate definitions of what will be included as hazardous chemicals are necessary so that additives, chemicals used in processing, polymers, oligomers, monomers, and non-international additives are not excluded. • Criteria to evaluate the hazard of chemicals, considering as an example the criteria applied in the Stockholm Convention and certain toxicity criteria from the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), considering toxicity, persistence, and bioaccumulation in substances. 7.b. Non criteria based approaches In the case of Panama, Law 187 of December 2, 2020, regulates the reduction and gradual replacement of single-use plastics, establishing the following synthetic polymers as problematic or to be avoided: • Polyethylene (PE) • Polypropylene (PP) • Polystyrene (PS) • Polymethyl methacrylate (PMMA) • Polyvinyl chloride (PVC) • Polyethylene terephthalate (PET) • Nylon or Polyamide (PA) • Polycarbonate (PC) • Polybutylene terephthalate (PBT) • Acrylonitrile butadiene styrene (ABS) On the other hand, the technical report prepared by the Industry and Economy Division of the United Nations Environment Programme (UNEP) correlates the following chemicals with carcinogenic, mutagenic, and reproductive toxic effects: • UV stabilizers: phenolic benzotriazoles (UV-328), cadmium compounds (CdO), Pb and lead compounds. • Antistatic agents: long-chain alkylphenols (nonylphenol, 4-ter-octylphenol), ethoxylated amines. • Antioxidants: phenolic antioxidants (bisphenol A, bisphenol S, bisphenol F).

	• Flame retardants: polybrominated diphenyl ethers (PBDEs), tetrabromobisphenol A (TBBPA), tris(2-butoxyethyl) phosphate (TBOEP), tris(1,3-dichloro-2-propyl) phosphate (TDCPP), triphenyl phosphate (TPhP), decabromodiphenyl ethane (DBDPE), hexabromocyclododecane (HBCDD). • Blowing agents: perfluorocarbons (PFCs), sulfur hexafluoride (SF6). • Catalysts: Cr and chromium compounds (CrO3), Hg and mercury compounds. • Crosslinking agents: bisphenol A (BPA). • Pigments: cadmium compounds (CdS), chromium compounds, lead chromates. • Heat stabilizers: cadmium compounds, lead compounds, nonylphenol. • Plasticizers: phthalates (di-2-ethylhexyl phthalate) (DEHP). • Biocides: organotin compounds, arsenic compounds, triclosan. • Dispersants: perfluorooctanoic acid (PFOA) and similar compounds (perfluorooctane sulfonate, PFOS). • Curing agents: 2,2'-dichloro-4,4'-methylenedianiline. As can be seen, all problematic polymers are synthetic polymers present in synthetic plastics. Therefore, the classification of plastic products based on composition, discussed in point III.2, should be repeated in point II.2. Similarly, the non-criteria classification of plastic products based on the present additive is repeated in this point II.2. While it is true that additives can be classified according to their functionality, plastic products containing them cannot be classified this way. However, it is useful to make this classification of additives since it is much easier to substitute or eliminate these chemicals from plastic product formulations if their function is known.
México	Those chemically dangerous substances previously identified in other international conventions, as well as substances that, although not integrated into said instruments, have been identified as being of concern. : It is important to highlight the importance of applying the principles of non-regression and progressiveness, pro-person, prevention, precaution and pro-nature, which establish that the most protective resolution must be issued to human beings and the environment, to avoid significant or serious damage, whenever Ecosystems provide goods and conditions necessary for the development of human beings at the regional, national or international level.
Egypt	Introduction and general comment in this regard as follows: - Egypt adopts a list of chemicals that are used in different industries and include some chemicals used in plastic production. The list includes restrictions on the consumption of these s chemicals without license. - The license demonstrates the amount of chemical used according to the factory capacity and sets conditions for factories storage capacity for the used chemicals. - For exporting measures most of companies that are registered at REACH regulation (EC) No 1907/2006 stipulates that chemical substances that exceed 1 tonne per year per company must be registered with ECHA (European Chemicals Agency). In this process, companies must identify the risks linked to the substances they handle and indicate how they manage them. This obligation applies to both substances and mixtures. - POPs and contaminated plastic waste are addressed by other MEA's such as Basel and Stockholm Conventions. 5-a Criteria or types of criteria Dealing with chemicals must be subject to a science-based criteria and risk-based approach and regarding the recommended criteria with reference to Stockholm convention criteria, we can consider the following: Chemical identity: (i) Names, including trade name or names, commercial name or names and synonyms, Chemical Abstracts Service (CAS) Registry number, International Union of Pure and Applied Chemistry (IUPAC) name; and (ii) Structure, including specification of isomers, where applicable, and the structure of the chemical class; Persistence: (i) Evidence that the half-life of the chemical in water is greater than two months, or that its half-life in soil is greater than six months, or that its half-life in sediment is greater than six months; or (ii) Evidence that the chemical is otherwise sufficiently persistent to justify its consideration within the scope of this Convention; Potential for long-range environmental transport: (i) Measured levels of the chemical in locations distant from the sources of its release that are of potential concern; (ii) Monitoring data showing that long-range environmental transport of the chemical, with the potential for transfer to a receiving environment, may have occurred via air, water or migratory species; (iii) Environmental fate properties and/or model results that demonstrate that the chemical has a potential for long-range environmental transport through air, water or migratory species, with the potential for transfer to a receiving environment in locations distant from the sources of its release. For a chemical that migrates significantly through the air, its half-life in air should be greater than two days; and

	Adverse effects: (i) Evidence of adverse effects to human health or to the environment that justifies consideration of the chemical within the scope of this Convention; or (ii) (ii) Toxicity or Eco toxicity data that indicate the potential for damage to human health or to the environment. General criteria: (i) Sustainable production and consumption that prevents and minimizes human exposure or release into the environment throughout the life cycle of the plastic product and fosters the safe and environmentally sound management, including the recyclability and disposal, of plastic products containing them (ii) Relevant measures that ensure that all such chemicals, groups of chemicals, and plastic products containing them, are used in an environmentally sound manner throughout their life cycle, including for their reusability, repairability, recyclability and final disposal; (iii) labelling the relevant chemicals of concern and plastic products based on the international harmonized requirements to allow their environmentally sound use and handling throughout their life cycle. National regulations regarding dealing with hazardous substance According to the National Law for Regulation and Management of Waste No. 202 of 202 and Article No. 53, a technical committee was established headed by WMRA (waste Management Regulatory Authority) and the competent administrative authorities for hazardous materials and waste, and the controls and requirements for the handling and integrated management of hazardous materials and waste shall be set, and the method of reducing their generation shall be determined. The committee has a technical secretariat comprises of experienced persons, and the executive regulations of the law shall determine the formation of the committee and its jurisdiction. According to the executive regulations, the committee is responsible for the following: 1- Adopting a method for classifying hazardous materials according to any of the systems in force globally and applicable locally 2- Approving lists of hazardous materials 3- Reviewing the requirements and controls for licenses for trading hazardous materials issued by the ministries and relevant authorities and approving the controls and technical requirements that must be taken into consideration when issuing licenses for trading these hazardous materials by those authorities The Technical Secretariat is responsible for the following: 1- Preparing a draft of the topics to be raised and discussed 2- Communicating with the ministries and relevant authorities and following up on the implementation of the committee's decisions and publishing them on WMRA website 3- Preparing a periodic report on technical and technological developments in the field of sound management of hazardous substance and waste 4- Preparing a periodic report on Egypt's position and commitments to international environmental agreements related to hazardous materials and waste 6- Preparing reports on topics closely related to the system of sound environmental management of hazardous materials and waste Other Regulations governing Handling of Industrial Chemicals: Decree No. 151/1999 of the Ministry of Industry that covers hazardous industrial chemicals and lists chemicals which cannot be used without a license. 5-b Non criteria based approaches A non-criteria-based approach is not an option when it comes to the assessment of chemicals.
Colombia	Criteria based on the best available science should be used to identify the hazardous nature of chemicals of concern in plastic products, both to human health, but also to the environment, on the basis of progressivity. It is important to consider the classifications of chemicals and concentrations that have already been agreed in other MEA's in the chemicals and waste cluster, including but not limited to, the Basel Convention, the Rotterdam Convention, the Stockholm Convention and the Minamata Convention; in crafting the classification of chemicals of concern in plastic products. As a general rule, I believe it is necessary to include all relevant chemicals of Annex III of the Rotterdam Convention, and Annexes A, B and C of the Stockholm Convention, as well as as mercury, in the identification of chemicals of concern in plastic products. In addition to this, it is my opinion that such a classification should be further developed on the basis of restrictive or prohibitive regulatory measures at the domestic level that have met a threshold of scientific evidence. Evidently, this does not cover the entire breadth of chemicals of concern in plastic products. As such, it is my opinion that a set of criteria should be used to identify and classify further chemicals of concern in plastic products, namely: - Reprotoxic, carcinogenic and mutagenic chemicals - Endocrine disruptors - Chemicals that are bioaccumulative, persistent and toxic - Ozone depleting chemicals

- Chemicals with clear global warming potential

Vanuatu

The following criterias are just a few for chemicals of concern in terms of their negative impact to human health and their eoctoxicity to the environment as confirmed through research by recognised scientific organisations;
1, carcinogenic
2. interferes with fertilisation and development of foetus
3. interferes with human endocrine system
4. Persistent and Bioaccumulates through the food-chain
5. Toxic to plant and animal life

Thailand

5. a. Criteria or types of criteria
1. Intrinsic Properties of the Chemical
- Toxicity
- Persistence
- Bioaccumulation
2. Impact on Waste Management and Resource Circulation in the Circular Economy
- Recyclability Impact
- Environmental and Human Health Impact.

Criteria	Primary Concern	Impact	Rationale
Toxicity	Chemicals that pose acute or chronic health risks to humans or wildlife, such as endocrine disruptors, carcinogens, or neurotoxins.	Identifying and regulating toxic chemicals can prevent health issues and environmental contamination.	Reducing exposure to toxic substances is crucial for protecting public health and ecosystems.
Persistence	Chemicals that do not break down easily in the environment and can accumulate over time, leading to long-term ecological harm.	Addressing persistent chemicals helps prevent long- term environmental damage and bioaccumulation in the food chain.	Persistent chemicals remain in the environment for extended periods, posing ongoing risks to health and biodiversity.
Bioaccumulation	Chemicals that accumulate in the tissues of living organisms, potentially causing harmful effects up the food chain.	Regulating bioaccumulative substances helps protect wildlife and human health from exposure to high levels of hazardous chemicals.	Bioaccumulation can lead to higher concentrations of toxic chemicals in predators, including humans, leading to serious health risks.
Recyclability Impact	Chemicals that interfere with the recycling process of plastics, making it difficult to recover and reuse materials safely.	Ensuring that plastic products are free from problematic chemicals enhances the efficiency and safety of recycling processes, supporting a circular economy.	Contaminants in plastics can hinder recycling efforts and result in hazardous waste, impeding resource circulation.
Environmental and Human Health Impact	Overall impact of chemicals on ecosystems and human health, including potential for environmental release and exposure.	Comprehensive evaluation of environmental and health impacts ensures safer use and disposal of plastic products, promoting sustainable resource management.	A holistic view of impacts is necessary to effectively manage chemical risks in plastic products and support a circular economy.

5.b. Non criteria based approaches
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Solomon Islands	5. a. Criteria or types of criteria 1. Hazard criteria should include (i) toxicity OR (ii) persistence OR (iii) bioaccumulation OR (iv) mobility in combination with i and ii or ii and iii. Criteria i-iii are applied in the Stockholm Convention and certain toxicity criteria are part of the Globally Harmonized System for Classification and Labeling of Chemicals (GHS).5 The specific properties constituting toxicity could be specified by the COP, keeping in mind that existing GHS criteria should be extended to cover additional harms to the environment and human health, such as endocrine disruption and terrestrial toxicity. 2. Circularity criteria to ensure plastic chemicals do not hamper the reuse, repair, or recycling of plastic products, such as chlorinated chemicals (e.g. dioxins) which damage recycling infrastructure. 3. Transparency criteria for chemicals to ensure adequate hazard information. Note that these criteria should be applied to all plastic chemicals used or generated throughout the full life cycle, in particular to chemical emissions during feedstock extraction and plastics manufacture, as well as non-intentionally added substances in plastic products and produced and emitted as a result of manufacturing and waste processing. Here, it will be key to follow a group-based approach that addresses groups of chemicals with similar structure and, hence, harmful properties. The benefits of such an approach are its effectiveness over chemical-by-chemical approaches (there are 16 000 chemicals used or present in plastics; more than 4 200 plastic chemicals are of concern due to their hazardous properties; and hazard information is lacking for over 10 000 chemicals6). In addition, regulating groups of chemicals will prevent regrettable substitutions and promote innovation and chemical simplification 5.b. Non-criteria based approaches Noting the major drawbacks compared to a criteria-based approach (see general remarks), a non-criteria based approach could be built by automatically listing chemicals under the ILIB that are of such high concern that they are already regulated by other MEAs or a number of member states. Accordingly, the specific scope of existing MEAs (e.g., waste in the Basel Convention) could be extended to regulate these chemicals in plastics. Along the same line of reasoning, existing national or supra-national regulation of plastics chemicals could be extended to a global level. As for products, a mechanism would be needed to list new chemicals in the absence of criteria. Given the complexity and ambiguity of non-criteria, we strongly advocate a criteria-based approach References: 5 https://www.pops.int/UNECE, 2023, ST/SG/AC.10/30/Rev.10 6 PlastChem – State-of-the-science of hazardous chemicals in plastic (plastchem-project.org)
Bahrain	5.a. Criteria or types of criteria Bahrain does not agree on establishing criteria or any type of criteria with regards to chemicals of concern in plastic products. Therefore, we prefer Option Zero (No provision). Rationale: Criteria for hazard class identification are already established and applied through existing international mechanisms specialized in chemicals, such as the Stockholm Convention, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and the risk-based approaches from the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Additionally, the Basel Convention has maintained a list since 1989. These instruments provide global coverage, encompassing major world producers and are implemented at the national level. Therefore, additional regulation is unnecessary, as the current mechanisms already address these issues comprehensively. Alternative option: The identification and classification of chemicals in plastic products in national plans implemented through the International Legally Binding Instrument (ILBI) should be aligned with existing processes and frameworks established by the Basel, Rotterdam, and Stockholm (BRS) Conventions. The ILBI should emphasize the role of national plans in implementing these criteria to ensure that the approaches are contextually relevant and nationally controlled. Approach 1: BRS Convention Alignment • Rationale: The ILBI should mandate that national plans adhere to the established criteria of the BRS Conventions for classifying hazardous waste, chemicals, and persistent organic pollutants (POPs). This ensures that national efforts are consistent with international standards and leverage existing scientific assessments. • Implementation: National plans should integrate BRS criteria into their regulatory frameworks, ensuring that identification and classification efforts are harmonized with international guidelines. • Reference: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Stockholm Convention on Persistent Organic Pollutants. 5.b. Non criteria based approaches Bahrain prefers option 0 (no provision).

	Reasoning: A. Regulation of chemicals of concern is not the mandate of UNEA resolution 5/14 B. The petrochemical industry is heavily regulated, ensuring that no chemical exceeds the established threshold limits. C. International chemical management systems already encompass various processes related to the safe production, handling, trade, transportation, labeling, and disposal of chemicals and their waste. D. Plastic production is not the sole application for these chemicals. Restricting or banning certain chemicals would significantly impact other industries where these chemicals are essential and irreplaceable (e.g., automotive, electronics, aerospace, pharmaceutical, etc.).
Algeria	5.a. Criteria or types of criteria: The importance of the production process and use in the development mode must be taken into consideration. This part must take into consideration all the aspects relating to the technical aspects linked to the different production processes as well as the aspects linked to normalization and production standards and therefore everything which has a link with trade procedures and therefore everything which relates to the export and import of this type of product, hence the importance of addressing this issue in customs procedures. 5.b. Non criteria based approaches
China	Existing chemicals-related conventions, such as the Stockholm Convention on Persistent Organic Pollutants (POPs), have applied the hazard criteria as a scientific reference to cover the specific context in which chemicals are used in plastics and plastics products, and have established sound science-based and rigorous assessment processes and decision-making steps for the management and control of chemicals that take into account alternatives and national circumstance. The Global Framework for Chemicals, adopted in September 2023, could guide the sound management of chemicals and wastes globally and could further inform national management of chemicals in plastics and plastic products. Therefore, it is recommended that the Expert Group discuss scientific advice on risk management of chemicals in plastics and plastic products under existing chemicals conventions or frameworks. The following non-criteria approach could be considered to provide reference for countries to identify environmental and health hazards, exposure of chemical substances in plastics and plastic products, as well as to find out whether there are unreasonable environmental and health risks and to develop risk management measures. 1. determining that the object of research and study is the use and application of chemicals in plastics and plastic products, and ensuring that any methodology should only addresses the use of chemicals in plastics or plastic products. 2. environmental and health hazard assessment methods. 3. environmental and health exposure assessment methods. 4. environmental and health risk assessment methods. 5. methods for assessing the availability, accessibility, affordability, and environmental friendliness of alternatives/alternative technologies. 6. methods for assessing the socio-economic impacts of risk management tools (considering the industrial chain and economics in each country). 7. Hazard criteria that cannot be measured and determined by globally standardized means, e.g., endocrine disruptors (EDCs), mobility or high mobility of chemicals in plastics and plastic products.
United Arab Emirates	5. a. Criteria or types of criteria UAE does not agree on establishing criteria or any type of criteria with regards to chemicals of concern in plastic products. Therefore, we prefer Option Zero (No provision). Rationale: Criteria for hazard class identification are already established and applied through existing international mechanisms specialized in chemicals, such as the Stockholm Convention, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and the risk-based approaches from the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Additionally, the Basel Convention has maintained a list since 1989. These instruments provide global coverage, encompassing major world producers and are implemented at the national level. Therefore, additional regulation is unnecessary, as the current mechanisms already address these issues comprehensively. Alternative option: The identification and classification of chemicals in plastic products in national plans implemented through the International Legally Binding Instrument (ILBI) should be aligned with existing processes and frameworks established by the Basel, Rotterdam, and Stockholm (BRS) Conventions. The ILBI should emphasize the role of national plans in implementing these criteria to ensure that the approaches are contextually relevant and nationally controlled. Approach 1: BRS Convention Alignment • Rationale: The ILBI should mandate that national plans adhere to the established criteria of the BRS Conventions for classifying hazardous waste, chemicals, and persistent organic pollutants (POPs). This ensures that national efforts are consistent with international standards and leverage existing scientific assessments.

	• Implementation: National plans should integrate BRS criteria into their regulatory frameworks, ensuring that identification and classification efforts are harmonized with international guidelines. • Reference: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Stockholm Convention on Persistent Organic Pollutants. 5.b. Non criteria based approaches UAE prefers option 0 (no provision). Reasoning: A. Regulation of chemicals of concern is not the mandate of UNEA resolution 5/14 B. The petrochemical industry is heavily regulated, ensuring that no chemical exceeds the established threshold limits. C. International chemical management systems already encompass various processes related to the safe production, handling, trade, transportation, labeling, and disposal of chemicals and their waste. D. Plastic production is not the sole application for these chemicals. Restricting or banning certain chemicals would significantly impact other industries where these chemicals are essential and irreplaceable (e.g., automotive, electronics, aerospace, pharmaceutical, etc.).

Nominating Member	Part C. 8. Are there specific uses and applications where criteria and non criteria based approaches for chemicals of concern in plastic products are particularly applicable/relevant?
Portugal	Packaging and plastic products identified in SUP Directive should be tackled as a priority
Suriname	Yes, there are specific uses and applications where certain criteria and non-criteria based approaches for chemicals of concern in plastic products are particularly relevant. Here's a overview: 1. Food packaging Relevant approaches: - Hazard-based criteria - Exposure-based criteria - Concentration-based criteria Rationale: Food safety is paramount, requiring strict control over chemical migration into food. Reference: European Food Safety Authority. (2016). Recent developments in the risk assessment of chemicals in food and their potential impact on the safety assessment of substances used in food contact materials. 2. Children's toys and childcare articles Relevant approaches: - Hazard-based criteria (focus on reproductive toxicity and endocrine disruption) - Regulatory status criteria - Precautionary principle approach Rationale: Children are particularly vulnerable to chemical exposures, necessitating stringent safety measures. Reference: Ionas, A. C., et al. (2014). Downsides of the recycling process: Harmful organic chemicals in children's toys. Environment International, 65, 54-62. 3. Medical devices Relevant approaches: - Functional use criteria - Lifecycle assessment approach - Alternatives assessment approach Rationale: Balance between necessary functionality and minimizing patient exposure to harmful chemicals. Reference: Genay, S., et al. (2011). Experimental study on infusion devices containing polyvinyl chloride: To what extent are they di(2-ethylhexyl)phthalate-free? International Journal of Pharmaceutics, 412(1-2), 47-51. 4. Electronics

	Relevant approaches: - Hazard-based criteria (focus on flame retardants) - Green chemistry approach - Regulatory status criteria Rationale: Many electronics contain hazardous flame retardants; focus on safer alternatives is crucial. Reference: Pivnenko, K., et al. (2017). Waste electrical and electronic equipment (WEEE) plastics containing brominated flame retardants — from legislation to separate treatment — thermal processes. Waste Management, 58, 341-350. 5. Automotive plastics Relevant approaches: - Functional use criteria - Lifecycle assessment approach - Adaptive management approach Rationale: Long product lifespan and diverse chemical additives require comprehensive, adaptable assessment. Reference: Geuke, A. D., et al. (2019). Chemicals of concern in plastic products. Greenpeace Research Laboratories Technical Report (Review) 10-2019. 6. Agricultural plastics Relevant approaches: - Exposure-based criteria - Persistence and bioaccumulation criteria - Precautionary principle approach Rationale: Direct environmental exposure necessitates focus on long-term environmental impacts. Reference: Steinmetz, Z., et al. (2016). Plastic mulching in agriculture. Trading short-term agronomic benefits for long-term soil degradation? Science of The Total Environment, 550, 690-705. 7. Textiles and clothing Relevant approaches: - Hazard-based criteria (focus on skin sensitizers) - Alternatives assessment approach - Green chemistry approach Rationale: Direct skin contact and frequent washing require focus on safe alternatives and reduced chemical use. Reference: Rovira, J., & Domingo, J. L. (2019). Human health risks due to exposure to inorganic and organic chemicals from textiles: A review. Environmental Research, 168, 62-69. 8. Recycled plastics Relevant approaches: - Concentration-based criteria - Lifecycle assessment approach - Adaptive management approach Rationale: Recycling can concentrate or introduce chemicals of concern, requiring ongoing monitoring and assessment. Reference: Leslie, H. A., et al. (2016). Propelling plastics into the circular economy — weeding out the toxics first. Environment International, 94, 230-234.
Somalia	food packaging, toys, medical devices.
El Salvador	PVC pipes, for example, have properties with many advantages such as durability, chemical resistance, flexibility and low cost. These have made it possible to bring drinking water to the population and the installation of sanitary systems.
Oman	Many countries apply special treatment with respect to such sensitive applications of plastic products as toys, food packaging, medical devices, pharmaceuticals, etc.

Republic of Cuba	non
New Zealand	Yes, some uses are more critical for the functioning of society or for health or safety, and for some uses there may be no acceptable alternatives. Other uses exist mainly because of convenience only and alternatives are available. When addressing specific uses and applications of chemicals of concern, the EU essential use concept could be considered. For example, the EU essential use concept defines 'necessary for health or safety' as: "The use and the technical function of the substance in that use are necessary in order to: - Prevent, monitor or treat illness and similar health conditions - Sustain basic conditions for human or animal life and health - Manage health crises and emergencies - Ensure personal safety - Ensure public safety" Another example in the EU Essential Use Concept is the definition of 'acceptable alternatives' which could also be considered. This is defined as "substances, materials, technologies, processes or products, which, from a societal point of view: (i) are capable of providing the function and the level of performance that society can accept as sufficiently delivering the expected service; AND (ii) are safer (their overall chemical risks to human or animal health and the environment throughout the whole life-cycle are lower in comparison to the most harmful substance)." For chemicals meeting hazard-based screening criteria, there could also be further risk assessment for specific uses and applications (similar to Annex E and Annex F of the Stockholm Convention) including to determine if the chemical meets a threshold of 'essential use.' Under this risk assessment stage, an exposure assessment could be conducted considering production data, uses, releases to the environment, including during disposal, and environmental fate, and exposures to people (including children) across the lifecycle. Socio-economic considerations could also be evaluated to determine possible control measures for the chemicals. These considerations would include whether any uses meet the test of 'essential use' or not, and whether alternatives are available, feasible and accessible. Control measures could include complete elimination of all uses, restrictions to certain specific uses, or no use restrictions but advisory measures such as labelling or public education.
Russian Federation	Many countries apply special regulation with respect to such sensitive applications of plastic products as toys, food packaging, medical devices, pharmaceuticals, etc.
Cook Islands	No, all uses and applications of plastics should be addressed.
Tuvalu	All uses and applications should be subject to measures that ensure safety to human health and the environment, unless a risk assessment has been made publicly available proving no harm from associated chemicals and micro- and nano-plastics.
Republic of Korea	1. Chemical substances with high hazards or risks can be identified and controlled. For example, the Republic of Korea designates and regulates (i) substances with priority control, (ii) restricted substances, and (iii) prohibited substances under the Enforcement Decree of the Act on Registration and Evaluation of Chemical Substances. 2. Criteria-based approaches can be applied in specific areas such as children's products and food containers. A. Children's Products: Many countries implement control measures for children's products, such as mandating dissolution tests (Sb, As, Cd, Cr, Pb, Ba, etc.) and restricting specific chemical content in products. i. e.g. Cd ≤ 75mg/kg, total phthalates ≤ 0.1% (The Safety Standards for Children's Products Subject to Safety Verification, MOTIE Republic of Korea) B. Food Containers: Many countries have also established standards for food containers, especially for those with recycled plastic content. i. e.g., standards for foreign substances and adhesive content, and criteria for the removal of artificial contaminants. (Standards and Specifications concerning Apparatus, Containers and Packages, MFDS, Republic of Korea, etc.) a. For metals used in the manufacturing or repair of food contact surfaces, lead must be 0.10% or below, and antimony must be 5.0% or below. b. Lead in tin plating for food contact must also be 0.10% or lower. c. The leaching amount of artificial contaminants from PET must be 0.01 mg/L or lower, and the residual amount of artificial contaminants in PET must be 0.22 mg/kg or lower
Malaysia	In general, evaluation of additives in polymer production is applicable to all plastics products without impacting the functionality and performance of the products and adhere to permissible limits as per the relevant regulations/directives.

	Similar to Question 5, products in the food contact applications, storage and transportation of potable water, medical equipment and products, toys, hygiene and personal care products, amongst others, could be the critical areas to ensure compliance with chemicals regulations/directives and governed by a chemical management system.
Monaco	Yes : -Food and drinks containers (human use AND animal use) -Toys -Clothes, in particular clothes for infants and kids
Philippines	Yes. In general, the ILBI should address all chemicals of concern regardless of specific uses and applications in keeping with the "full life cycle approach" mandated by UNEA Resolution 5/14.
Singapore	The Global Harmonised System of Classification and Labelling of Chemicals has been a useful system for countries to assess and classify chemicals by types of hazards. It is widely used by industry and is currently already implemented by over 80 countries including Singapore. The framework is comprehensive and is particularly relevant given that it was developed by Committee of Experts under the United Nations Conference of Environment and Development. We are of the view that chemicals of concern in plastic products should be classified using this existing harmonised system (i.e. no new criteria/system should be created) to avoid having multiple sets of rules and regulations for chemicals which may complicate the implementation of regulations.
Costa Rica	Criteria-Based Approaches Applications: Regulatory Compliance: o REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) in the EU: Criteria-based approaches help in identifying Substances of Very High Concern (SVHC) and restricting their use. o TSCA (Toxic Substances Control Act) in the US: Ensures chemicals meet safety standards before entering the market. Certification and Eco-Labels Consumer Safety: o Ensures that products like toys, food packaging, and medical devices do not contain harmful chemicals, protecting vulnerable populations like children and patients. Sustainable Product Design: o Guides manufacturers in selecting safer alternatives during the design phase, promoting the development of greener products. Non-Criteria-Based Approaches Applications: Research and Innovation: o Facilitates the exploration of new materials and chemicals that may not yet have comprehensive data but show potential benefits. Risk Assessment and Management: o Used when there is insufficient data to apply strict criteria, allowing for a more holistic assessment of potential risks and benefits. o Can be particularly useful in emerging fields where new chemicals or applications are constantly being developed. Industry-Specific Applications: o Tailored approaches in sectors like aerospace, electronics, and automotive, where unique material properties are required, and standard criteria may not be applicable. Rapid Response to Emerging Concerns: o Enables swift action when new scientific evidence suggests a chemical may pose a risk, even if it hasn't yet been formally evaluated against specific criteria.
The European Union and its 27 Member States	In general, these criteria should be applicable for all uses and applications, while allowing exemptions, for example in some specific products (e.g., the medical or military sector), where some chemicals could be difficult to replace or in order to avoid regrettable substitution. A mechanism allowing specific exemptions on the justified request of Parties should be established. Only application in plastics and plastic products should be targeted by the instrument, focusing on the presence of chemicals of concern.
United Kingdom	Criteria approaches to chemicals form a crucial aspect of identifying Chemicals to be listed as Substances of Very High Concern (SVHC) under UKREACH, which identifies chemicals which exhibit certain hazardous proprieties. This ensures transparency and consistency when identifying concerns. Furthermore, there are examples of existing MEAs which employ criteria for identifying chemicals. For example, the listing process specified in the Stockholm Convention follows a stringent criteria approach for identifying and listing POPs, such a process could be used as a basis when assessing possible criteria options for Chemicals of concern in plastics.

Saudi Arabia	Many countries apply special treatment with respect to such sensitive applications of plastic products - toys, food packaging, pharma, and medical uses are heavily regulated, and plastics are free from chemicals of concern (e.g., LEGO shifted from ABS to PP.)
the United States.	We can see value in approaches that are broadly applicable to different contexts and that address chemicals that have been prioritized for evaluation based on their potential for significant risk to human health or the environment.
Ecuador	Food and Beverage Packaging Pharmaceutical or medical: Medicine wrappers, and medical examination devices, biomedical plastics Construction materials Electric and Electronic components Automotive parts Waste management industries: presorting, operations of disposal (recycling, among others) Other industrial or domestic uses: heat-resistant materials
Ethiopia	1. Criteria-Based Approaches: • Regulatory Compliance: These approaches are typically used when governments or regulatory bodies set specific limits or criteria for certain chemicals in plastic products. This can include limits on substances like phthalates, heavy metals, or specific monomers used in plastics. • Risk Management: Criteria-based approaches are effective for managing risks associated with known hazardous substances. They provide clear guidelines and thresholds that manufacturers and regulators can follow to ensure product safety. • Consumer Protection: By adhering to criteria-based regulations, manufacturers can assure consumers that their products meet established safety standards, enhancing consumer confidence and trust. 2. Non-Criteria-Based Approaches: • Emerging Contaminants: These approaches are particularly relevant when dealing with chemicals for which comprehensive toxicity data or regulatory limits may not yet exist. Examples include newly identified contaminants or substances undergoing evaluation for potential health or environmental impacts. • Precautionary Principle: Non-criteria-based approaches often align with the precautionary principle, where action is taken in the face of uncertainty about potential risks. This can involve restricting or monitoring substances based on emerging scientific evidence or concerns raised by stakeholders. • Innovative Materials: As new types of plastics and additives are developed, non-criteria-based approaches help identify and address potential risks early in their lifecycle, before comprehensive criteria can be established. Criteria-Based Approaches 1. Regulatory Standards and Compliance: • Example: The European Union's REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation sets criteria and limits for certain substances in products, including plastics. • Rationale: Criteria-based approaches provide clear guidelines and limits based on scientific evidence and risk assessment, ensuring consistency in regulatory compliance and protecting public health and the environment. • Reference: European Chemicals Agency (ECHA) on REACH regulations. 2. Industry Standards and Certifications: • Example: Certifications like the Blue Angel eco-label in Germany for low-emission products, including plastics. • Rationale: Standards based on criteria help consumers and businesses identify products that meet specific environmental or health criteria, promoting sustainable consumption and production practices. • Reference: Blue Angel eco-label criteria. 3. Risk Assessment Frameworks: • Example: Evaluating chemicals for their potential risks based on toxicity, exposure pathways, and environmental persistence. • Rationale: Criteria-based risk assessments guide decisions on the safe use and management of chemicals in plastics, supporting risk management strategies and regulatory decision-making. • Reference: Environmental Protection Agency (EPA) risk assessment frameworks. Non-Criteria-Based Approaches 1. Precautionary Principle in Emerging Contaminants:

	• Example: Addressing chemicals with emerging evidence of harm but lacking well-established criteria. • Rationale: Non-criteria-based approaches apply precaution in the absence of conclusive evidence, aiming to prevent potential harm and promote safer alternatives early in product development or regulatory processes. • Reference: Application of the precautionary principle in environmental law. 2. Green Chemistry and Sustainable Product Design: • Example: Designing plastics with reduced toxicity or environmental impact using alternative chemicals or processes. • Rationale: Non-criteria-based approaches encourage innovation and proactive measures to avoid hazardous substances altogether, fostering sustainable product design and circular economy principles. • Reference: Principles of green chemistry and sustainable materials design. 3. Public Health and Community Advocacy: • Example: Community-driven initiatives to reduce exposure to chemicals in plastics based on local concerns. • Rationale: Non-criteria-based approaches respond to community preferences and concerns, empowering local action and promoting awareness of chemical risks beyond regulatory frameworks. • Reference: Community-based environmental health advocacy. 3. Toys and food contact plastics • Toys and food contact plastics are of particular concern due to high exposure to chemicals of concern. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html • Artificial turf Artificial turf contains almost 200 possible carcinogenic chemicals, including Per- and Polyfluoroalkyl Substances (PFAS). https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html • Cosmetics and personal care products: - Products containing intentionally added nano- and microplastics, such as microbeads in cosmetics and personal care products, are a concern. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html • Tyers: - generate significant microplastics releases due to wear and tear from road friction. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html
Uruguay	Yes, for those plastic products on which the human exposure is high to them. For example packaging in contact direct with food or plastic pipes to transport water.
Chile	Specific Uses and Applications for Criteria and Non-Criteria Based Approaches for Chemicals of Concern in Plastic Products Part A: Criteria for Identifying Chemicals of Concern in Plastics Carcinogenic, Mutagenic, or Reprotoxic (CMRs Category 1A or 1B) Relevant Uses and Applications: Food and Beverage Packaging, Children's Toys, Medical Devices • Rationale: Carcinogenic, mutagenic, or reprotoxic (CMR) chemicals pose severe health risks, including cancer, genetic mutations, and reproductive harm. These risks are particularly concerning in products that come into direct contact with food, children, or medical patients, where exposure can lead to serious health consequences. • Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA). Example Chemicals: DEHP, DBP, BBP, DIBP Specific Organ Toxicity with Chronic Effects (STOT RE) Relevant Uses and Applications: Consumer Electronics, Household Goods, Construction Materials • Rationale: Chemicals causing specific organ toxicity with chronic effects can lead to long-term health issues such as liver or kidney damage. Products that are frequently handled or used in household and construction settings pose a risk of prolonged exposure, making it essential to regulate these chemicals strictly. • Sources: National Institute for Occupational Safety and Health (NIOSH), World Health Organization (WHO). Example Chemicals: Cadmium and cadmium compounds, Lead and lead compounds Endocrine Disrupting Chemicals (EDCs HH and/or ENV) Relevant Uses and Applications: Food and Beverage Packaging, Personal Care Products, Agricultural Plastics • Rationale: Endocrine disrupting chemicals (EDCs) interfere with hormonal systems, causing developmental, reproductive, neurological, and immune effects. Products that interact with food, personal care items, or agricultural environments can facilitate widespread exposure to EDCs, impacting both human health and ecosystems. • Sources: Endocrine Society, European Commission on Endocrine Disruptors. Example Chemicals: Bisphenol A (BPA), Nonylphenol (NP), 4-tert-Octylphenol (4t-OP)

Persistent, Bioaccumulative, and Toxic (PBTs)
Relevant Uses and Applications: Industrial Plastics, Consumer Goods, Marine Equipment
• Rationale: PBT chemicals remain in the environment for long periods, accumulate in living organisms, and pose significant health risks. Products used in industrial settings, consumer goods, and marine applications contribute to the persistence and bioaccumulation of these toxic substances in the environment.
• Sources: Stockholm Convention on Persistent Organic Pollutants, Environmental Protection Agency (EPA).
Example Chemicals: Brominated flame retardants, Chlorinated flame retardants

Very Persistent and Very Bioaccumulative (vPvBs)
Relevant Uses and Applications: Long-Life Consumer Products, Medical Devices, Construction Materials
• Rationale: vPvB chemicals present extreme longevity in the environment and high potential for accumulation in living organisms, posing long-term risks to both human health and wildlife. Products designed for long-term use, such as medical devices and construction materials, can introduce significant amounts of vPvB substances into the environment.
• Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).
Example Chemicals: PFASs, Organophosphorus flame retardants

Part B: Chemicals of Concern in Plastics for Ban or Elimination Under the Instrument
Relevant Uses and Applications: All categories where chemicals are used in significant amounts, particularly in consumer-facing products such as toys, packaging, and medical devices.

Example Chemicals and Rationale:
• Phthalates (DEHP, DBP, BBP, DIBP): Commonly used as plasticizers, these chemicals are associated with CMR properties and endocrine disruption. Banning them from products like toys and food packaging can prevent exposure to vulnerable populations. o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).
• Bisphenol A (BPA): Used in polycarbonate plastics and epoxy resins, BPA is an endocrine disruptor. Eliminating BPA from food contact materials and children's products reduces hormonal health risks.
o Sources: Endocrine Society, European Commission on Endocrine Disruptors.
• Alkylphenols (NP, 4t-OP): Used for their surfactant properties, these chemicals are endocrine disruptors. Banning them in industrial and consumer applications reduces environmental and health impacts.
o Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).
• Flame Retardants (TCEP): Used to reduce flammability, TCEP causes specific organ toxicity. Eliminating TCEP from consumer electronics and construction materials protects human health from chronic toxicity.
o Sources: National Institute for Occupational Safety and Health (NIOSH), World Health Organization (WHO).
• Metals and Metal Compounds (Cadmium and cadmium compounds, Lead and lead compounds): Used in stabilizers and pigments, these metals are highly toxic. Banning them from plastics prevents severe health issues and environmental contamination.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

Part C: Groups of Chemicals of Concern in Plastics to Avoid and Minimize Under the Instrument
Relevant Uses and Applications: Widely used across multiple sectors, including consumer products, industrial applications, and packaging.
Example Groups and Rationale:
• Phthalates and Bisphenols: To avoid and minimize their use due to their CMR and endocrine-disrupting properties. Alternative plasticizers and bisphenol-free materials should be promoted.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).
• UV-Stabilizers (Benzotriazoles): Persistent chemicals that pose environmental risks. Encouraging safer alternatives reduces long-term environmental impact.
o Sources: International Union of Pure and Applied Chemistry (IUPAC), Environmental Protection Agency (EPA).
• PFASs: Known for their persistence and bioaccumulation. Alternatives should be identified to minimize environmental and health impacts.
o Sources: Stockholm Convention on Persistent Organic Pollutants, U.S. Environmental Protection Agency (EPA).
• Alkylphenols and Flame Retardants (Brominated, Chlorinated, Organophosphorus): To avoid and minimize due to their endocrine-disrupting, PBT, and vPvB properties. Safer alternatives and design innovations should be encouraged.
o Sources: European Chemicals Agency (ECHA), United Nations Environment Programme (UNEP).
• Metals, Metalloids, and Metal Compounds: To minimize use due to their toxicity and persistence. Promoting non-toxic alternatives reduces health and environmental risks.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

State of Kuwait	Electrical and electronic equipment applications they follow RoHS (Restriction of Hazardous Substances) directive (as an example including but not limited to)
Government of India.	Any proposal for consideration of chemicals of concern in plastic products has to be within the scope of UNEA 5/14 resolution and subject to national circumstances and capabilities and national regulations of countries. • Plasticisers such as: Phthalates –are essentially used in PVC (polyvinyl chloride) products such as flooring, toys, and medical devices to impart flexibility in the products. • Stabilizers UV-350 is used in plastics and coatings to protect against the degradation caused by exposure to UV radiation from sunlight where as UV 320 & 327 reduces UV-induced degradation and extends the material's lifespan such as color fading, embrittlement, and loss of mechanical properties.. • Flame Retardants: Chemicals added to plastics, textiles, and electronics to reduce flammability • Bisphenols: is used in the production of polycarbonate plastics and epoxy resins, which are found in food and beverage containers, dental sealants, and coatings inside metal cans. • Water repellents: Perfluorinated Compounds (PFCs): PFCs are used to impart water and oil repellent properties to plastics and are found in products such as food packaging, carpets, and outdoor gear. • Metal Compounds: Lead and Cadmium- Lead and cadmium compounds have been used as pigments to impart specific colors to plastics. Lead stabilizers help to improve the heat and light stability of PVC, making it more durable. Similarly, cadmium compounds have been used as stabilizers in certain types of plastics. Additionally, lead-based additives also aids in improving the electrical performance of certain plastic formulations.
The State of Qatar	As mentioned earlier, UNEA Resolution 5/14 has the mandate to curb plastic pollution. Any kind of restrictive measure on chemicals of concern were never in the mandate for the development of ILBI on plastic pollution. The State of Qatar considers this a divergence from the core issue for the purpose of the ILBI.
IRAN	Iran response: As we understand, the issue of chemicals in particular chemicals of concern has not been mentioned in UNEA 5/14 and therefore it is not recognized to be part of the current instrument's mandate. Therefore, there is no interrelation with other draft provisions of this instrument.
Switzerland	We think this question misses the point. The main conceptual driver is timing, not specific product categories. Depending on the state of the negotiations, a non-criteria based approach, based on the existing legal and civil society framework, may be necessary and appropriate for an initial list. Priority could be given to those approaches that are already working in other jurisdictions (e.g., general ban of intentionally added microplastics in every day products like detergents, cosmetics, make up etc... or in artificial football turfs, and to those plastic products that may have direct human and/or environmental contact, e.g. food packaging, children's toys.
Madagascar	Based on the search results, there are several specific uses and applications where criteria and non-criteria based approaches for chemicals of concern in plastic products are particularly relevant: - Hazardous chemicals in plastic products: Criteria can be developed to identify plastic products that contain chemicals or polymers of concern, such as PFAS in artificial turf or carcinogenic chemicals in some plastic products. This can inform regulations to restrict or ban the use of these hazardous chemicals. -Plastic products with a high likelihood of improper disposal: Criteria can be used to identify plastic products that are small, easily dispersed, or unlikely to be properly collected and disposed of, such as plastic closures, fruit stickers, and tea/coffee bags. Regulations can then be developed to restrict or ban these problematic products - Plastic products lacking transparency: non-criteria based approaches can be used to address plastic products where there is a lack of data on their safety for the environment and human health across the full life cycle. Regulations may require more comprehensive disclosure and assessment of these products The quality of recycled plastic products is an important consideration when it comes to the ILBI (International Legally Binding Instrument) on plastic pollution. Here are some key points regarding the criteria and non-criteria for quality of recycled plastic products: Criteria for Quality of Recycled Plastic Products: - Recyclability: The product should be designed to be easily recyclable, with minimal use of problematic materials or components that can impede the recycling process. This includes avoiding opaque or pigmented plastics, problematic label constructions, and non-PET plastic caps on PET bottles - Transparency: The product should have clear labeling and data available to determine its safety for the environment and human health across the full life cycle - Compliance with Existing Labeling Schemes: The product should comply with labeling schemes that guide correct end-of-life treatment, such as the Australasian Recycling Label (ARL) program, to improve sorting and - Avoidance of Hazardous Chemicals: The product should not contain chemicals or polymers of concern that could pose hazards during its production, use, or disposal Non-Criteria for Quality of Recycled Plastic Products: - Upstream Value Chain Measures: There are differing opinions on whether the ILBI should include measures around primary plastic polymer production, which could impact the quality of recycled plastics - Mandatory vs. Voluntary Measures: There is strong disagreement on how to balance mandatory and voluntary measures in the ILBI, which could affect the consistency and quality of recycled plastic products

	- Inclusion of Avoidable Plastics: It is unclear whether the ILBI will address the issue of avoidable plastics, which could have implications for the overall quality and circularity of plastic products
The state of Israel	Products worth starting with are products whose legislation is already advanced in the world - such as packaging, bags and textiles.
Brazil	The evaluation of chemicals used in plastics should be application/product-based following risk assessments.
Australia	Recovery Facilities and Recycling Streams: Yes, in plastics recovery/reprocessing facilities. There is an increased potential for human and environmental exposure from chemicals contained in plastics at these locations. Measures to reduce the harm caused by exposure to chemicals used in plastic products at these sites would be beneficial, given these sites can be disproportionately exposed to chemicals used in plastics. Similarly, the potential for plastic in recycling streams to be contaminated by chemicals is also an application where it is particularly relevant to identify problematic chemicals. Such chemicals can significantly impede circularity of plastic products and interfere with the transition to a more safe circular economy. Established methods to identify chemicals in plastic that may present risks to human health or the environment when used in recycling streams will assist in mitigating the adverse impacts of such material uses. Food Contact material Use of plastic for food contact materials is another specific area where identifying chemicals of concern is particularly relevant. The heightened human exposure to plastics used for food packaging and storage increases the imperative for the identification of those chemicals that may present a risk in such applications.
Guatemala	The products mentioned above some of them and are basically those that cause damage to health and the environment.
Iraq	No answer
The Republic of BURUNDI	Alkylphenols, including: nonylphenols and nonylphenol ethoxylates Octylphenols and octylphenol exthoxylates • Detergents • the paintings • Pesticides • Personal care products • Plastic materials Chlorinated paraffins, including: short-chain chlorinated paraffins Medium chain chlorinated paraffins • Plasticizers for polyvinyl chloride • Metalworking fluids as extreme pressure additives • Additives to paints, coatings and sealants to improve their resistance to chemicals and water • Flame retardants for plastics, fabrics, paints and coatings.
Germany	Both criteria-based and non-criteria based approaches play significant roles in managing chemicals of concern within plastic products. The choice between these methods depends largely on the specific context—whether it be regulatory compliance, product safety testing, environmental impact assessments, or broader sustainability initiatives. Understanding when to apply each approach is essential for effective risk management and ensuring public health protection while fostering innovation within the industry.
The Government of Canada	Yes, the application of specific evidence and science-based criteria would help to identify specific uses and applications of identified chemicals or groups of chemicals of concern, in particular those with high exposure and high risk, that would merit action under the ILBI. This process can also be extended to polymers, based on specific applications and uses and in complementarity with criteria on problematic and avoidable plastic products and design criteria.
Armenia	I find it difficult to answer

<table>
<tr><td>Malawi</td><td>As proposed in the compilation text</td></tr>
<tr><td>Panama</td><td>It is necessary to understand the distinction between synthetic plastics, recycled plastics, and bioplastics, concepts already defined earlier. Additionally, it is important to know the concerning additives in plastic products, as well as the functionality of each, topics also previously discussed. Knowing this, a better design of environmentally and human health-friendly plastic products can be achieved, either from recycled plastics or bioplastics, without the addition of carcinogenic, mutagenic, and reproductive toxic additives.

If prioritization is required, all uses and applications with a high probability of resulting in human or environmental exposure to plastic chemicals, or microplastics, such as materials in contact with food, children's products, medical and healthcare products, agricultural plastics, and outdoor materials should be considered. Construction materials and furniture, as well as emissions from industrial sites, should also be considered.</td></tr>
<tr><td>México</td><td>It is considered of special importance to consider the electrical and electronic products sector, in which the plastics used and their additives, including flame retardants, confer a significant risk. Likewise, consider in the last stage of the life cycle of these plastics, the synergy between this instrument and the Basel Convention on transboundary movements of hazardous waste and its elimination, as well as its co-operation with the Stockholm Convention</td></tr>
<tr><td>Egypt</td><td>Yes, there are specific uses and applications where criteria based approaches for chemicals of concern in plastic products are particularly applicable such as:
The relevant international conventions and The National and international standards on product quality are applied to many plastic products, such as plastic food packaging, plastic medical devices, and plastic toys, to monitor product quality and reduce hazardous materials such as heavy metals.
Also, chemicals added to plastics products used for infrastructure, buildings, etc.</td></tr>
<tr><td>Vanuatu</td><td></td></tr>
<tr><td>Thailand</td><td>
<table>
<tr><th>Criteria</th><th>Relevant Uses and Applications</th><th>Rationale</th></tr>
<tr><td>Toxicity, Persistence, Bioaccumulation</td><td>Food contact materials, children’s toys and products, packaging materials, electrical and electronic equipment (EEE), automotive parts, and construction materials.</td><td>Chemicals that accumulate in the tissues of living organisms can cause harmful effects up the food chain.</td></tr>
<tr><td>Recyclability Impact</td><td>Packaging materials, consumer goods, electrical and electronic equipment (EEE), automotive parts, and construction products.</td><td>Chemicals that interfere with the recycling process of plastics make it difficult to recover and reuse materials safely. Ensuring that plastic products are free from problematic chemicals enhances the efficiency and safety of recycling processes, supporting a circular economy.</td></tr>
<tr><td>Environmental and Human Health Impact</td><td>All plastic products, with a focus on those used in high-exposure scenarios like food contact materials, children’s toys, medical devices, and packaging.</td><td>The overall impact of chemicals on ecosystems and human health, including potential for environmental release and exposure, is significant. Comprehensive evaluation of environmental and health impacts ensures safer use and disposal of plastic products, promoting sustainable resource management</td></tr>
</table>
</td></tr>
<tr><td>Solomon Islands</td><td>No, a regulation should address all uses and applications of plastics rather than specific uses and applications. This is because human and environmental exposure to plastic chemicals originates from various types of plastic uses and applications making it difficult to pinpoint one specific origin.7 Accordingly, chemicals of concern should be removed from all materials and products. Doing so would adhere to the “full life cycle approach” mandated by UNEA Resolution 5/14.
If prioritization is required, all uses and applications that have a high likelihood of resulting in human or environmental exposures to plastic chemicals, or micro and nanoplastics, such as, food contact materials, children’s products, medical and health care products, agricultural plastics, plastics used outdoors, building materials and furniture, and emissions from industrial sites, should be considered.</td></tr>
<tr><td>Bahrain</td><td>Many countries apply special treatment with respect to such sensitive applications of plastic products - toys, food packaging, pharma, and medical uses are heavily regulated, and plastics are free from chemicals of concern (e.g., LEGO shifted from ABS to PP.)</td></tr>
<tr><td>Algeria</td><td>Firstly, it should be noted that the chemical aspects are not mentioned by UNEA decision No. 5/14, however the aspects inherent in the following points must be taken into account: there are specific industries such as the industry using plastic components such as:

- the oil refining industry

- the electronics industry</td></tr>
</table>

	- the automobile industry....
China	Yes, it should be up to each country to identify chemicals in plastics and plastic products that require further exposure and risk assessment based on hazard criteria and hazard assessment methodology, and to determine the priority uses and application scenarios for which measures should be taken for that (class/group of) chemicals based on the process of risk assessment, assessment of alternatives/alternative technologies, socio-economic impact assessment, etc. In addition, we believe that this provision should not include chemicals in plastics and plastic products used in the following scope: • Medical and public health protection • Military, national security and public safety • Affordable clean energy, clean water, food security and sanitation • For emergencies and natural disasters • Chemicals that achieve close-loop management through its life cycle
United Arab Emirates	Many countries apply special treatment with respect to such sensitive applications of plastic products - toys, food packaging, pharma, and medical uses are heavily regulated, and plastics are free from chemicals of concern (e.g., LEGO shifted from ABS to PP.)

Nominating Member	Part C. 9. Are there any important interrelations to other draft provisions of the instrument?
Suriname	Yes, there are important interrelations between the approaches for identifying and classifying chemicals of concern in plastic products and other potential provisions of the ILBI. Here's a overview of key interrelations: 1. Scope and definitions: The classification of chemicals of concern will directly inform the scope of regulated substances within the instrument. 2. Product design and standards: Criteria for chemicals of concern will likely influence eco-design requirements and product safety standards. 3. Reporting and transparency: Classification systems will form the basis for reporting requirements on chemical content in plastics. 4. Restrictions and phase-outs: Hazard-based criteria may inform provisions on restrictions or phase-outs of certain chemicals in plastic products. 5. Recycling and circular economy: Approaches for identifying chemicals of concern will impact recycling standards and circular economy provisions. 6. Waste management: Classification will influence how plastic waste containing chemicals of concern is managed and disposed of. 7. Monitoring and compliance: The chosen approaches will need to align with monitoring and compliance mechanisms to ensure effective implementation. 8. Research and innovation: Identification of chemicals of concern may drive provisions promoting research into safer alternatives. 9. Capacity building and technology transfer: The complexity of chemical assessment may influence provisions on technical assistance, especially for developing countries. 10. Human health and environmental protection: Approaches for identifying chemicals of concern directly support overall health and environmental objectives of the instrument. 11. Trade measures: Any trade-related provisions will need to consider how chemicals of concern are classified to ensure consistency with international trade rules. 12. Precautionary principle: The approach to chemicals of concern may embody or relate to provisions on applying the precautionary principle. 13. Alternatives assessment: Provisions encouraging the use of safer alternatives will be closely linked to how chemicals of concern are identified. 14. Data sharing and information exchange: Classification systems will inform what chemical data needs to be shared between parties and stakeholders.
Somalia	Linkages to provisions on product design and recyclability
El Salvador	Yes, National Plan on Marine Litter of El Salvador.

Oman	There are no important interrelations to other draft provisions of the instrument.
Republic of Cuba	There is no important interrelations to other draft provisions of the instrument.
New Zealand	Part II.2 and the issue of chemicals of concern in plastic products is strongly interrelated with Part II.5 on design of products including reusability and recyclability, and Part II.2 on problematic and avoidable plastic products. Part II.2 also relates to Part II.14 transparency, tracking, monitoring and labelling. Part II.2 contains a text proposal for disclosure requirements. We support harmonised requirements for disclosure, marking and labeling chemicals and polymers of concern that cannot be prohibited. We consider that the detail of these harmonised requirements should have input from technical experts and stakeholders to ensure they are practicable and implementable.
Russian Federation	There is no important interrelations to other draft provisions of the Instrument.
Cook Islands	Part II Provision 1 – primary plastic polymers Provision 2 – chemicals of concern Provision 3 – problematic and avoidable plastic products, and microplastics Provision 5 - product design, composition, performance Provision 6 - non-plastic substitutes and alternatives Provision 8 - emissions Provision 9 - waste management Provision 13 - transparency Part III Provision 2+/-[3] -Capacity-building, technical assistance and technology transfer Part IV Provision 5 - International Cooperation Provision 6 - Information exchange
Tuvalu	See 4b and 7b.
Republic of Korea	1. Draft provision II.5 Product design, composition and performance c. Use of recycled plastic contents A. There may be a connection in terms of managing the hazards of chemicals contained in recycled plastics.
Malaysia	Yes. This approach is applicable to most provisions when evaluation of plastics products is involved.
Monaco	Yes, II.5 ; II.8 ; II.10 ; II.13
Philippines	Yes. Part II: II.2 Chemicals and polymers of concern; II.3 Problematic plastic products; II.4 Exemptions available to a party upon request and Dedicated programmes of work; II.5 Product design, composition and performance; II.6 Non-plastic substitutes; II.8 Emissions and releases of plastic throughout its life cycle;

	II.9 Waste management; II.10 trade; II.13 Transparency, tracking, monitoring and labeling Part III: III.1 Financing; III.2 Capacity building, technical assistance and technology transfer; III.3 Technology Part IV: IV.1 National plans; IV.2 Implementation compliance and cooperation; IV.5 International Cooperation; IV.6 Information exchange; IV.7 Awareness-raising, education and research, IV.8 Stakeholder engagement Part V: V.2 Subsidiary bodies Possible Annexes: Annex A, B, C
Singapore	Discussions and outcome of Part II Provision 10 (Trade in listed chemicals, polymers, and products in plastic waste) would depend on the eventual annexes/approaches agreed upon under this provision.
The European Union and its 27 Member States	This provision should be dedicated to chemicals and address the concern related to them. However, similarly to plastic products, this provision is also linked to provisions 5, 8, 10 and 13.
United Kingdom	The Chemicals of Concern provision has linkages to several other aspects of the Treaty, notably Primary Plastic Polymers, Problematic Plastic Products, Product Design, Emissions and Releases, Trade & Transparency
Federated States of Micronesia	Regulating chemicals of concern in plastic products is without prejudice to provisions in the instrument regulating the production and consumption of plastic polymers, including in provision II.1 of the instrument, which must be a priority objective of the instrument. Additionally, to the extent that the regulation of chemicals of concern in plastic products under provision II.2 of the instrument involves recourse to traditional knowledge, knowledge of Indigenous Peoples, and local knowledge systems, including in terms of harmful impacts of such chemicals on concern on Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories, there must also be recourse to the safeguards in the instrument pertaining to such types of knowledge and their holders, including the free, prior, and informed consent and other internationally recognized rights of such holders. Such safeguards must be reflected in, at a minimum, the Preamble of the instrument as well as in a standalone Principles article/provision of the instrument.
Saudi Arabia	Saudi Arabia calls for the removal of this provision from the Zero Draft to avoid duplication of work from other MEAs, as well as not being a mandate of UNEA resolution 5/14, and believes it does not interrelate with other provisions.
United States.	While there are interrelations to most of the draft provisions, linkages to the draft provisions on polymers, products, product design, trade, and transparency should be particularly considered.
Ecuador	The management of the hazards and risks of chemical substances of concern requires being incorporated into national programs that guarantee their adequate management throughout their life cycle (use, transport, disposal, emissions and releases), due to which, it has to do with the provisions related to: 2.5 Product design 2.8 Emissions and releases of plastic throughout its life cycle 2.10 Trade in listed chemicals, polymers and products 2.13 Transparency, tracking, monitoring and labeling 3.2 Capacity-building, technical assistance and technology transfer Part IV. National Plans Annex A regarding to primary plastic polymers, and chemicals and polymers of concern Annex E regarding emissions and releases of plastic through its life cycle

	Annex [X] regarding effective measures at each stage of plastic lifecycle
Ethiopia	1. The draft provisions regarding chemicals and polymers of concern are interconnected with several other provisions in the treaty aimed at addressing plastic pollution. Problematic and Avoidable Plastic Products (Part II.3): There is a strong link between the regulation of chemicals and polymers of concern and the identification of problematic and avoidable plastic products. The measures for regulating chemicals should be aligned with efforts to define and manage problematic plastics, as both aim to reduce environmental and health impacts from plastic pollution. This includes discussions on short-lived and single-use plastics, which often contain harmful chemicals. https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary https://documents.un.org/doc/undoc/gen/k23/040/88/pdf/k2304088.pdf?fe=true&token=K6CcYXfEGbIpqV3KiY 2. Exemptions (Part II.4): • The provisions for exemptions allow countries to request exceptions to the regulations on chemicals and polymers. This raises concerns about potential loopholes that could undermine the overall objectives of the treaty. Ensuring that exemptions are strictly limited and justified is crucial to maintaining the integrity of the measures aimed at controlling harmful substances in plastics. https://unctad.org/system/files/non-official-document/ditc-ted-12112023-INC3-plastics-Comments-v2.pdf https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary 3. Product Design, Composition, and Performance (Part II.5): • Provisions related to product design are also relevant, as they emphasize the importance of creating products that are safer and more sustainable. This includes considerations for labeling and facilitating recycling, which are essential for managing the lifecycle of plastics and minimizing the presence of harmful chemicals. https://unctad.org/system/files/non-official-document/ditc-ted-12112023-INC3-plastics-Comments-v2.pdf https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary 4. National Plans and Implementation (Part IV.1): • The measures taken under the chemicals and polymers of concern provisions must be reflected in national plans. This creates a direct link between the obligations to manage chemicals and the broader framework for national implementation of the treaty's objectives, ensuring that countries commit to specific actions and timelines. https://documents.un.org/doc/undoc/gen/k23/040/88/pdf/k2304088.pdf?fe=true&token=K6CcYXfEGbIpqV3KiY https://ipen.org/sites/default/files/documents/quick-views-4th-session_v2_web.pdf 5. Lifecycle Considerations: • Both the chemicals and polymers of concern and the provisions on problematic plastics emphasize a lifecycle approach. This means that the environmental and health impacts of plastics, from production to disposal, must be considered in regulatory measures, reinforcing the need for comprehensive strategies that address all stages of plastic use. https://unctad.org/system/files/non-official-document/ditc-ted-12112023-INC3-plastics-Comments-v2.pdf https://enb.iisd.org/plastic-pollution-marine-environment-negotiating-committee-inc4-summary
Uruguay	Yes, the most important interrelation is with Part I 5, the scope. In the draft text there are a lot of proposed exclusions that make that the IBLI lost its real commitment. Also, provision II 2 is related to provision II 5.
Chile	Extended Producer Responsibility (EPR): Interrelation: Criteria-based approaches for identifying and managing hazardous chemicals in plastics align with EPR provisions that hold producers accountable for the entire lifecycle of their products, including the environmental and health impacts of chemicals used. • Rationale: By ensuring that products are free from hazardous chemicals, producers can meet their EPR obligations more effectively. This alignment encourages the adoption of safer materials and production practices, reducing the environmental and health impacts of plastic products. • Sources: OECD. (2016). Extended Producer Responsibility. Waste Management and Recycling Infrastructure: Interrelation: Effective management of chemicals of concern enhances waste management and recycling infrastructure by ensuring that plastic products are safe to recycle and do not contaminate recycling streams. • Rationale: Plastics free from hazardous substances are easier to recycle, leading to higher recovery rates and reduced environmental contamination. This supports the development of efficient and sustainable recycling systems. • Sources: UNEP. (2021). Global Waste Management Outlook. Environmental Health and Safety: Interrelation: The focus on non-toxicity and safe use in product design directly supports provisions related to environmental health and safety, ensuring that plastic products do not release harmful chemicals into the environment or pose health risks to humans. • Rationale: Ensuring that plastic products are free from harmful chemicals protects public health and ecosystems. This holistic approach addresses multiple aspects of sustainability and safety. • Sources: European Chemicals Agency (ECHA). (2020). Chemicals and Plastic Additives. Innovation and Research: Interrelation: The need to identify and replace hazardous chemicals in plastics drives innovation and research in the development of safer alternatives and advanced materials.

	• Rationale: Encouraging research and innovation helps develop new materials that are safe, sustainable, and economically viable, fostering a transition to safer plastic products. • Sources: Ellen MacArthur Foundation. (2017). Circular Design Guide. Public Awareness and Education: Interrelation: Educating the public about the risks associated with hazardous chemicals in plastics and promoting the benefits of safer alternatives is crucial for consumer acceptance and demand for safer products. • Rationale: Informed consumers are more likely to choose safer products and support regulatory measures aimed at reducing the use of hazardous chemicals in plastics. Public awareness campaigns and educational programs play a key role in driving market shifts toward safer materials. • Sources: National Geographic. (2019). Consumer Guide to Reusable Plastics. Sustainable Development Goals (SDGs): Interrelation: Managing chemicals of concern in plastics contributes to several Sustainable Development Goals (SDGs), including good health and well-being (SDG 3), clean water and sanitation (SDG 6), responsible consumption and production (SDG 12), and life below water (SDG 14). • Rationale: By reducing the use of hazardous chemicals in plastics, the ILBI supports global efforts to achieve these SDGs, promoting a healthier planet and more sustainable development. • Sources: United Nations. (2015). Sustainable Development Goals. Circular Economy: Interrelation: The focus on safe, recyclable, and reusable plastics supports the transition to a circular economy, where materials are kept in use for as long as possible, and waste is minimized. • Rationale: By ensuring that plastic products are designed for reuse and recycling and free from hazardous chemicals, the ILBI promotes a circular economy model, reducing environmental impact and conserving resources. • Sources: Ellen MacArthur Foundation. (2021). Circular Economy.
State of Kuwait	See Part B.4
Government of India.	Any categorization and regulation of chemicals of concerns in plastic products based upon criteria or non-criteria approaches is linked to scope of the instrument, product design and trade provisions. Any classification of products and further regulation shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. It is also inextricably linked with availability, accessibility, affordability and environmental sustainability of alternatives and Means of Implementation including cost of transition and setting up of dedicated financial mechanism for meeting compliance obligation by developing countries based upon CBDR.
The State of Qatar	No, there are no important interrelations to other draft provisions of the instrument.
The Islamic Republic of IRAN	As we understand, the issue of chemicals in particular chemicals of concern has not been mentioned in UNEA 5/14 and therefore it is not recognized to be part of the current instrument's mandate. Therefore, there is no interrelation with other draft provisions of this instrument.
Switzerland	Strong interrelation to draft provisions of the Draft Text Part II.3 (Plastic Products), Part II.5 (Design), Part II.8 (Emission and releases of plastics), Part II.9 (Waste management), Part II.10a (Trade) and Part II.13 (Transparency, tracking, monitoring and labelling), final provisions in Part VI.2 (Amendments to the instrument) and Part VI.3 (Adoption and amendments of annexes), and the "possible annexes to the Instrument" where the chemicals of concern could be listed.
Madagascar	Based on the search results, there are a few important interrelations to other draft provisions of the ILBI for plastic products identification and classification: Based on the search results, there appear to be several important interrelations between the draft provisions on chemicals of concern in plastic products and other provisions of the ILBI: Interrelations with provisions on primary plastic polymers: it ndicates that there are differing views on whether the ILBI should include mandatory or voluntary provisions on sustainable production and consumption of primary plastic polymers. This is closely linked to the provisions on chemicals and polymers of concern, as the approach taken on primary plastics will impact the types of chemicals and polymers that need to be addressed Interrelations with provisions on trade measures highlights that there are proposals for global/harmonized rules prohibiting the export/import of chemicals, polymers, and microplastics controlled by the ILBI, except where permitted. This trade-related provision is closely linked to the provisions on chemicals and polymers of concern Interrelations with provisions on transparency, tracking, and monitoring: it ‘s important to hav information on the components in plastic products in order to reduce the potential impact of harmful substances. This links to the provisions on chemicals and polymers of concern, as transparency measures would be needed to support the identification and control of these substances Interrelations with provisions on extended producer responsibility (EPR) indicates that EPR schemes could be used to operationalize the polluter pays principle and provide incentives for sustainable product design, which relates to the provisions on chemicals and polymers of concern

	Interrelations with provisions on financing and capacity building: The provisions on chemicals and polymers of concern will likely require significant financial and capacity building support, particularly for developing countries, to implement the necessary measures
Brazil	This topic should be linked to provisions on financing, capacity building, technical assistance and technology transfer as well as international cooperation.
Australia	Part II.5 - Part II. 5 Product design, [composition] and performance - The regulation of chemicals in plastic is relevant across a product's life cycle and as such, the product design components of the ILBI are relevant to the chemicals provision. Part II.13 – Transparency, tracking, monitoring and labelling. - Transparency of plastic product composition through the supply chain will be a necessary enabler of effective chemicals and products management provisions in the treaty, and a strong enabler of the effective operation of domestic management frameworks. Part II.10 – Trade [in listed chemicals[, polymers] and products, and in plastic waste] [related measures]. - This provision specifically includes a reference to '[a chemical, group of chemicals or polymer referred to in [Part II.2 on chemicals and polymers of concern]…' and as such is a relevant provision. Part IV.4[b][c.] Review of [hazardous] chemicals [and polymers] of concern, microplastics and problematic and avoidable products[, and non-plastic substitutes] – review of listed chemicals and polymers - Regular review of listed chemicals and polymers in plastics to be regulated under the ILBI is important to ensure that the instrument remains current.
Guatemala	I consider so.
Indonesia	Important interrelations to other draft provisions: 1. Waste Management and Recycling • Hazardous Waste Handling: Effective management of hazardous chemicals impacts waste handling procedures and recycling processes, ensuring safe disposal and recycling of plastics. 2. Extended Producer Responsibility (EPR) • Producer Accountability: Producers are responsible for the lifecycle of their products, including the safe use of chemicals, enhancing the regulation of harmful substances. 3. Public Awareness and Education • Consumer Safety: Educating the public about the dangers of certain chemicals in plastics and promoting safer alternatives can drive consumer demand for safer products. 4. Research and Innovation • Safer Substitutes: Promoting research into safer chemical alternatives and innovative recycling technologies can reduce reliance on hazardous chemicals. 5. International Cooperation and Support • Global Standards Alignment: Aligning national and international regulations ensures coherent global management of chemicals in plastics, enhancing overall safety and environmental protection.
Iraq	No answer
The Republic of BURUNDI	Yes.
Germany	Yes.
The Government of Canada	See answers to question 6 above.
Palau	Palau is of the view that all provisions in the Agreement are interrelated. For the purpose of criteria to identify chemicals of concern in plastic products, there are strong interrelation with II.1, 3, 3bis, 4, 4bis, 5, 6, 8, 9, 10, 13; II.2; III.1, 2, 3, 4, 5, 6, 7, 8, 8bis.

<table>
<tr><td>Panama</td><td>OP1 Ter Alt of Option 3 states the following:
Each Party shall adopt measures, consistent with their regulatory frameworks and processes, and based on scientific evidence, to analyze the chemicals used or intended to be used in the production of plastics that may pose a concerning risk to human health or the environment.
OP1 ter of Option 3 states the following:
The cost of compliance with control measures will be assessed for each country, and funding will be provided through a specific fund, according to a procedure decided by the governing body, to enable compliance with control measures.
In the case of Panama, there are two reference laboratories for the analysis of these plastic products (INDICASAT and LABAICA), thus complying with the aforementioned. On the other hand, the funding mentioned here would be ideal for developing countries and could be used as a source of income for the previously mentioned tax incentives.</td></tr>
<tr><td>México</td><td>What is indicated in section II.5 of the "Compilation of draft text of the international legally binding instrument on plastic pollution, including in the marine environment" is considered appropriate</td></tr>
<tr><td>Egypt</td><td>Yes IV National action plan</td></tr>
<tr><td>Thailand</td><td>
<table>
<tr><th>Provision</th><th>Criteria</th><th>Interrelations</th></tr>
<tr><td>II.1 – Primary polymer plastics</td><td>Toxicity, Bioaccumulation</td><td>Ensuring primary polymers are free from hazardous chemicals supports safer material selection and use.</td></tr>
<tr><td>II.3 – Problematic plastic products</td><td>Toxicity, Persistence, Bioaccumulation, Environmental Impact</td><td>Criteria help identify plastic products that are problematic and should be avoided or phased out.</td></tr>
<tr><td>II.5 – Products Design</td><td>Recyclability Impact, Toxicity</td><td>Designing products with safe chemicals and recyclable materials aligns with criteria for reducing toxicity and promoting
recyclability.</td></tr>
<tr><td>II.6 - Non-Plastic Substitutes</td><td>Toxicity, Persistence</td><td>Identifying and promoting non-plastic substitutes supports the transition to safer
alternatives.
Life-cycle analysis</td></tr>
<tr><td>II.7. Extended Producer Responsibility</td><td>Recyclability Impact, Toxicity</td><td>Producers should manage chemicals of concern in their products, including safe disposal and
recycling.
Extended producer responsibility ensures manufacturers
take accountability for the lifecycle impacts of their products.</td></tr>
<tr><td>II. 8. Emissions and Releases of Plastic Throughout its Life-Cycle</td><td>Toxicity, Persistence, Environmental Impact</td><td>Managing chemicals of concern helps reduce emissions and releases of hazardous substances during the lifecycle of plastics.</td></tr>
<tr><td>II. 9. Waste Management</td><td>Recyclability Impact, Toxicity</td><td>Waste management strategies must address hazardous chemicals in plastics, ensuring safe disposal and recycling.</td></tr>
<tr><td>II. 10. Trade in Listed Chemicals, Polymers, or Products</td><td>Toxicity, Persistence, Bioaccumulation, Recyclability Impact, Microplastic Release Potential</td><td>Regulating the trade of chemicals and products containing hazardous substances</td></tr>
<tr><td>II. 11. Existing Plastic Pollution</td><td>Environmental Impact, Microplastic Release Potential</td><td>Addressing existing plastic pollution requires understanding the
environmental impact and potential for microplastic release from current plastic waste.</td></tr>
<tr><td>II.12. Just Transition</td><td>Toxicity, Environmental Impact</td><td>Ensuring a fair transition to safer chemicals and materials
requires considering socio-economic impacts and supporting affected communities and industries.</td></tr>
<tr><td>II. 13. Transparency, Tracking, Monitoring and Labelling</td><td>Recyclability, Additives, Toxicity</td><td>Transparency and labelling based on these criteria help
consumers make informed choices and support tracking and
monitoring efforts. This also ensures that products can be safely and efficiently recycled or circulated at the end-of-life.</td></tr>
</table>
</td></tr>
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Solomon Islands	Part II Provision 3 - products of concern Provision 5 - product design, composition, performance Provision 6 - non-plastic substitutes and alternatives Provision 8 - emissions Provision 9 - waste management Provision 13 - transparency Part III Provision 2+/-[3] -Capacity-building, technical assistance and technology transfer Part IV Provision 5 - International Cooperation Provision 6 - Information exchange
Bahrain	Bahrain calls for the removal of this provision from the Zero Draft to avoid duplication of work from other MEAs, as well as not being a mandate of UNEA resolution 5/14, and believes it does not interrelate with other provisions.
Algeria	Need for in-depth review of the FINAL text and relation with provisions of UNEA decision 5/14.
China	Duplicating chemical criteria with other proposed control measures should be avoided, which could lead to difficulties during implementation. It is also recommended to consider this provision in combination with means of implementation such as financial assistance, capacity building, and technical assistance, particularly noting the difficulties faced by developing countries in implementation.
United Arab Emirates	UAE calls for the removal of this provision from the Zero Draft to avoid duplication of work from other MEAs, as well as not being a mandate of UNEA resolution 5/14, and believes it does not interrelate with other provisions.

Nominating Member	Part D. 10. What criteria or non criteria based approaches for plastic product design could be reflected in the ILBI to improve the recyclability of plastic products and the quality of recycled products? a. Recyclability of plastic products. b. Quality of recycled plastic products
Portugal	10a and 10b
Suriname	10.a. Recyclability of plastic products 1. Design for Mono-material Use Criteria: Products should be designed using a single type of plastic. Rationale: Mono-material products are easier to recycle as they don't require separation. Reference: Ellen MacArthur Foundation. (2016). The New Plastics Economy: Rethinking the future of plastics. 2. Easily Separable Components Criteria: Different materials in a product should be easily separable. Rationale: Facilitates efficient sorting and recycling of individual components. Reference: Hahladakis, J. N., & Iacovidou, E. (2018). Closing the loop on plastic packaging materials: What is quality and how does it affect their circularity? Science of The Total Environment, 630, 1394-1400. 3. Standardized Polymer Types Criteria: Use of a limited, standardized set of polymer types for specific applications.

Rationale: Simplifies recycling processes and improves recycling rates.
Reference: European Commission. (2018). A European Strategy for Plastics in a Circular Economy.
4. Avoid Problematic Additives
Criteria: Minimize or eliminate the use of additives that hinder recyclability.
Rationale: Certain additives can contaminate recycling streams or degrade recycled materials.
Reference: Pivnenko, K., et al. (2016). Recycling of plastic waste: Presence of phthalates in plastics from households and industry. Waste Management, 54, 44-52.
5. Color Considerations
Criteria: Prefer clear or light-colored plastics over dark colors.
Rationale: Dark colors limit recycling options and reduce the value of recycled material.
Reference: Hahladakis, J. N., et al. (2018). An overview of chemical additives present in plastics: Migration, release, fate and environmental impact during their use, disposal and recycling. Journal of Hazardous Materials, 344, 179-199.

Non-criteria based approach:
6. Lifecycle Assessment (LCA)
Approach: Conduct LCAs to inform design decisions that improve overall environmental performance, including recyclability.
Rationale: Provides a holistic view of environmental impacts throughout the product lifecycle.
Reference: ISO 14040:2006 Environmental management — Life cycle assessment — Principles and framework.

10.b. Quality of recycled plastic products
1. Traceability Systems
Criteria: Implement systems to track the origin and composition of recycled materials.
Rationale: Ensures quality and safety of recycled content, particularly for food-contact applications.
Reference: European Food Safety Authority. (2021). Safety assessment of recycled plastic materials and articles for use in food contact.
2. Contamination Thresholds
Criteria: Set maximum allowable levels of contaminants in recycled plastics.
Rationale: Maintains quality and safety standards for recycled materials.
Reference: EU Regulation No 282/2008 on recycled plastic materials and articles intended to come into contact with foods.
3. Upcycling Potential
Criteria: Design products with the potential for upcycling into higher-value applications.
Rationale: Improves the economic viability of recycling and encourages circular use.
Reference: Ragaert, K., et al. (2017). Mechanical and chemical recycling of solid plastic waste. Waste Management, 69, 24-58.
4. Additives for Quality Improvement
Criteria: Allow for the use of specific additives that enhance the properties of recycled plastics.
Rationale: Can improve the quality and expand applications for recycled materials.
Reference: Vilaplana, F., & Karlsson, S. (2008). Quality concepts for the improved use of recycled polymeric materials: A review. Macromolecular Materials and Engineering, 293(4), 274-297.
5. Standardized Testing Methods
Criteria: Develop and implement standardized methods for testing the quality of recycled plastics.
Rationale: Ensures consistency in quality assessment across different recyclers and applications.
Reference: ISO 15270:2008 Plastics — Guidelines for the recovery and recycling of plastics waste.

Non-criteria based approaches:
6. Design for Reprocessing
Approach: Consider the entire recycling process in product design, including collection, sorting, and reprocessing steps.
Rationale: Holistic approach to improving the quality of recycled materials.
Reference: Huysman, S., et al. (2017). Performance indicators for a circular economy: A case study on post-industrial plastic waste. Resources, Conservation and Recycling, 120, 46-54.
7. Collaborative Value Chain Approach

	Approach: Foster collaboration between designers, manufacturers, and recyclers to improve overall recycling outcomes. Rationale: Addresses quality issues throughout the entire plastic value chain. Reference: World Economic Forum. (2016). The New Plastics Economy: Rethinking the future of plastics.
Somalia	Consider material compatibility, design for disassembly, and clear labeling. Quality of recycled products: consistent material properties, minimal contamination.
El Salvador	Choosing a single type of plastic in the manufacture of the same product, such as PET and HDPE are highly recyclable and widely used in the beverage industry. The measure would shorten the separation processes. Also use easily identifiable packaging designs according to the type of plastic. Avoid the use of additives, pigments, mixtures of different plastics in the same product that hinder recycling.
Oman	a. Recyclability of plastic products Potential criteria for the improvement of recyclability of products and quality of recycled products: • Appropriate regulation of using chemical substances that hinder the recyclability of products, taking into account that such regulation could lead to the decline in shelf life of food products, which, in turn, may lead to a significant increase in waste of products that have lost their consumer properties; • Improvement in quality of processing of products by considering that the design of products should take into account the possibility of future recycling: - minimizing the volume of materials used. - preference for easily recyclable materials. - minimizing the use of different types of materials in the manufacture of a product (for example, -preference for the production of nonmaterial packaging); - minimizing the use of individual components in the product. - technical simplification of product disassembly. b. Quality of recycled plastic products Oman would like to highlight that recycled plastic products shall meet the same quality requirements as plastic products made of virgin materials – they should perform the same functions and at the same level.
Republic of Cuba	In specifying requirements for product design, it is necessary to take into consideration differences of the characteristics and use methods of its products nationally, and under national circumstances: such as the infrastructure for recycle and waste management, the production technologies for plastic products and the availability of recycled materials. Each country needs to set design and performance standards for plastic production and take appropriate measures. In general from the design stage, plastic products should promote the use of the most easily recyclable materials, improve the recyclability of the products and the quality of the recycled products, as well as minimize the volume of materials used in their production. We present some specific elements that can be considered in the product design stage: a. Structure of Product 1. Reduction in volume of plastic use. 2. Simplified packaging: Restrain excessive packaging. 3. Longer use and longer service life. 4. Use of easily reusable parts or reuse of parts 5. Use of Single materials or reduction of material types. 6. Easier disassembly and separation 7. Easier collection and transportation 8. Easier crushing and incineration a. Materials of Product: 1. Use of easily-recyclable materials 2. Use of recycled plastic It is also important to take into consideration that environmental impacts of plastic product recycling systems, including greenhouse gas emissions, should be lower, or at least similar, to those when using original raw materials. The application of the above should take into account national circumstances and be progressive. The recycled plastic products shall meet the same quality requirements as plastic products made of virgin materials. In addition, their cost must be lower than that of the latter.
Japan	In considering the specific wordings to be included in the provisions related to product design in the ILBI, it is necessary to take into account different characteristics and ways of usage of the plastic products in each country, including availabilities of production technology and recycled materials. Therefore, it is strongly suggested that elements related to the design and performance be provided in the Annex of the instrument, under which each Party should take necessary measures, while taking into consideration national circumstances and capabilities. As for recyclability, the following elements, which would contribute to the improved recyclability of plastic products and the quality of recycled products, are suggested to be included in the Annex; 1. Simplified packaging ✓ Restrain excessive packaging. 2. Use of Single materials or reduction of material types. ✓ Use a single material for the product as a whole or parts thereof, or reduce the material types used. 3. Easier disassembly and separation ✓ The parts are easily disassembled and sorted by components. (Easier removal of lithium-ion batteries from other parts of the product is better.) ✓ The number of processes required to remove parts, etc., is minimized as much as possible. ✓ The types of materials used are indicated.

	4. Easier collection and transportation ✓ The weight, size, shape, and structure of the product are to facilitate easier collection and transportation as much as possible. 5. Easier crushing and incineration ✓ Easier crushing and incineration for parts that are difficult to reuse or recycle. 6. Use of easily-recyclable materials ✓ Use easily-recyclable materials. ✓ Reduce material types . ✓ Avoid using additives and other materials, that hinder recycling. 7. Use of recycled plastics ✓ Use recycled plastics. Note: The same proposals by Japan are already reflected in the Annex of the compilation of draft text ("Possible annexes to the instrument", "4. Proposed annex relating to element II.5", page 76-77).
New Zealand	10a Recyclability of plastic products New Zealand wishes to propose a non-exhaustive list of design strategies that could be used to improve the recyclability of plastic products, based on engagement with domestic stakeholders and domestic policy thinking. - Using mono-materials or only one polymer for all components of the product, including caps and labels. - Materials to be light weight where possible. - Minimise the use of colours, or have a list of preferred colours relevant to domestic recycling capabilities. - Cap or lid materials to be compatible for relevant domestic recycling capabilities. - Labelling requirements such as size and material to be compatible with relevant domestic recycling capabilities. - Include labelling on the product to indicate recyclability. Product design standards to increase the recyclability of plastic products should provide flexibility so that standards are in line with domestically recyclable materials. 10b Quality of recycled plastic products New Zealand considers that targets and standards for recycled content should be sector-specific, such as food safety standards.
Russian Federation	10.a. Recyclability of plastic products. The Russian Federation' response relates to both sections: 10.a. and 10.b. Potential criteria for the improvement of recyclability of products and quality of recycled products: • Appropriate regulation of using chemical substances that hinder the recyclability of products, taking into account that such regulation could lead to the decline in shelf life of food products, which, in turn, may lead to a significant increase in waste of products that have lost their consumer properties; • Improvement in quality of processing of products by considering that the design of products should take into account the possibility of future recycling: o minimizing the volume of materials used; o preference for easily recyclable materials; o minimizing the use of different types of materials in the manufacture of a product (for example, preference for the production of monomaterial packaging); o minimizing the use of individual components in the product; o technical simplification of product disassembly. Members also should bear in mind that these criteria should apply "to the extent possible and feasible" because not all criteria could be applied simultaneously for all products. 10.b. Quality of recycled plastic products. In addition to response to section 10.a., we would like to highlight that recycled plastic products shall meet the same quality requirements as plastic products made of virgin materials – they should perform the same functions and at the same level. Members also should keep in mind that for different products and applications there should be different sets of allowable levels of recycled content – precisely for the purpose of maintenance of products' physical and mechanical properties.

Cook Islands	10.a. Recyclability of plastic products Noting that criteria for recyclability should ideally also address reusability and repairability, design criteria should broadly cover safety, sustainability, essentiality, and transparency aspects. The safe-and-sustainable-by-design framework provides valuable guidance that can be applied to plastic chemicals, materials and products. Several important steps can be taken to support safe and sustainable recyclability and reusability with a particular emphasis on data disclosure, traceability and trackability. Recommendations include: 1. economic incentives to drive product design high up the waste hierarchy to prioritize safe and sustainable substitute materials, products, systems and services, and safe and sustainable reuse, repair, refill, repurpose, and remanufacture. 2. improved reporting, transparency and traceability of chemicals in plastics throughout their full life cycle in combination with obligation II.13, 3. promote chemical simplification of plastic materials and products to improve their recyclability and avoid chemicals of concern. Plastic chemicals assessed as of high concern should not be used in plastics and legacy plastics should not be allowed to enter recycling streams as they may also contain chemicals of high concern (and lack data disclosure). 4. improve chemical monitoring, testing and quality control. 5. improve the recyclability of plastic products while ensuring they are designed to limit micro and nanoplastic emissions and introduce non-intentionally added substances (NIAS). 6. Increasing recycled content for limited essential uses (and preferably) reusable items (but not for food and beverage containers or baby bottles, for example). 7. Improve collection and sorting to ensure hazardous sanitary plastics (for example) are not co- mingled with food contact plastics and other plastics that could directly expose humans. Products should be designed for recycling where that is the intended waste management scenario, ensuring chemical simplification and use of monomaterials. Closed loop collection and recycling and/or sector specific recycling will increase safety and homogeneity of materials and their sustainable management. This requires infrastructure and support for improved waste management. Biodegradable plastics cannot be included in waste streams for recycling of non-biodegradable plastics' and require dedicated waste streams. Any application of these materials (potentially via a sectoral approach) needs to be carefully controlled throughout the full life cycle. 10.b. Quality of recycled plastic products Mechanical recycling is the most energy efficient and (currently most) economical and least hazardous means of recycling plastics, but the degradation of material quality during the recycling process is a problem, leading to performance limitations and with negative economic, environmental, and human health impacts. This can be addressed in part by recommendations made at 8.a. Chemical contamination and the presence of chemicals of concern render some recycled plastics unsuitable for some applications. This is especially true for products where exposure to chemicals is very likely, such as, food contact materials, childcare goods and toys, and medical equipment. There needs to be very careful transparency, traceability and reporting including the source, management, and intended use of recycled products. We recommend banning recycled plastics for food contact, children's toys, and medical applications because it is extremely difficult to ensure the safety of these products. Generation and emissions of micro- and nanoplastics from mechanical recycling (facilities), i.e. wash water etc. is concerning and should be mitigated. Toxic and greenhouse gas emissions from chemical recycling plants make them even more hazardous and unsustainable than mechanical recycling 11; these technologies have not been shown to be safe or sustainable, or economically viable. Chemical recycling is not recommended also because of their high economic lock-in costs and low technical and economic rates of success.
Tuvalu	10.a. Recyclability of plastic products Recyclability may be specific to use, application and polymer type. High-level criteria could be reflected in different annexes or sections of annexes, as well as guidelines. For details and examples, see https://plasticsrecycling.org/apr-design-guide. This could include: • Recycling enables cost-effective material recovery • Minimum energy loss • Multiple recycling rounds enabled to avoid downcycling • Minimum threshold for recycled content agreed • Minimum thresholds agreed for chemical contaminants agreed A mechanism for updating annexes can be established, such as within other MEAs: 1. Proposal made by any Party based on a required set of information, e.g. risk assessment. 2. Proposal forwarded to technical review committee. 3. Proposal and recommendation made to COP. 4. Decision made by COP by two-thirds majority. 5. Decision binding on all Parties, unless a time-bound exemption has been approved by the Parties. 10.b. Quality of recycled plastic products Quality is greatly influenced by: 1. Design of products - Recyclability may be specific to use, application and polymer type. For examples, see https://plasticsrecycling.org/apr-design-guide 2. Contamination of waste stream, requiring improvements to collection, sorting and cleaning. EPR schemes can assist, including container-deposit schemes.

	These could be supported by global criteria for design of products, including the use of chemicals, and guidelines on implementation. A commitment to implement EPR schemes at the national level based on guidelines established under the plastics instrument or the Basel Convention, or decisions of the COP.
Republic of Korea	10.a. Recyclability of plastic products: It is necessary to assess plastic product's recyclability, and to certify and label such evaluated recyclability, with following criteria: 1. Use of single materials or avoiding material combination A. Using single material for the whole product or the component of the product B. Reducing material types, including polymer types, of the product C. Avoiding using materials that may hinder recyclability 2. Easier disassembly and separation A. Using components of different density (e.g. label and caps with specific gravity less than 1) B. The consumers can easier separate the components (e.g. easily detachable labels) C. Avoiding use of adhesives or using alkaline water-soluble adhesives D. Producing products without an additional external label or sleeve 3. Enhancing recyclability through avoiding use of pigment or additives A. Using un-pigmented plastic polymers B. Except essential product information, avoiding printing on plastic products particularly packaging, especially on un-pigmented plastic products 4. Easier identification of materials or polymer types in use A. Labeling polymer type of use 10.b. Quality of recycled plastic products: Currently, definitions and methodology regarding recycled plastic contents used in government policies differ. Harmonized standards must be established for recycled materials to ensure the use of high-quality recyclable materials. Following criteria and measures, captured from the best practices of Republic of Korea focusing on PET bottles for food containers, could be considered to improve the quality of recycled products: 1. Improving waste separation system: Household waste separation is crucial to collect high-quality waste-derived materials from the discharging stage. Korea introduced a waste separation system for transparent PET bottles in 2020, aiming for a minimum target 3% of recycled content in newly produced PET bottles. 2. Establishing necessary procedures for making recycled content from the mixed waste collection: Although household waste separation is prioritized, mixed PET bottles can be used for creating recycled materials if the following compliance matters are observed. A. Standardized processes and operational standards must be followed, including removing caps and labels → primary optical sorting → crushing → density separation → cleaning and dehydrating three or more times → hot air drying → secondary optical sorting → dust removal → metal sorting. B. Companies are required to submit quality results from accredited testing and analysis institutions once a month to confirm whether the recycled materials they produce meet the quality standards for recycled materials used in food containers in Republic of Korea since 2024. C. To ensure the safety of food containers, companies must comply with the standards set by the Ministry of Environment for flakes and the standards set by the Ministry of Food and Drug Safety for pellets. 3. Utilizing EPR system: It is necessary to utilize EPR to secure high-quality recycled plastics through effective recycling programs. 4. Certifying the product that contain verified recycled material: MOE Republic of Korea certifies and labels the packaging products made with a minimum of 10% recycled material and electronics with a minimum of 20% recycled material. There are other certifying organizations around the world as following that could be referenced: A. E.g. Labeling of Percentage of Use of Recycled Raw Materials in Republic of Korea (Act on THE PROMOTION OF SAVING AND RECYCLING OF RESOURCES, Republic of Korea), SCS Recycled Content Standard, GreenBlue Recycled Material Standard in North America 5. Promoting public-private collaboration project: Cooperate with bottled water producers to collect their own waste, and to recycle them into new PET bottles. Also, efforts are needed to support establishment of well-structured recycling facilities. Following reports and guidelines by International Organization or Foundations could be referenced: 1. The Ellen MacArthur Foundation's Circular Design Guide 2. UNEP Report on Assessing Plastic Packaging Labels 3. "Can I Recycle This?" A Global Mapping and Assessment of Standards, Labels, and Claims on Plastic Packaging Report 4. Plastic Recycled Content Requirements (OECD Environment Working Papers No.236) Following national measures implemented by Republic of Korea could also be referenced:

	1. Evaluation of Quality and Structure of Packaging Materials 2. Standard for recycled raw material used for food containers 3. Standard for Labelling of percentage of use of recycled raw materials 4. Assessment of Circular Usability of Products 5. Material and Structural Improvement System for Electrical and Electronic Products 6. Material and Structural Improvement System for Packaging
Malaysia	As per our overarching principle, to promote recyclability and reusability of plastics products, the establishment of harmonised standards is crucial to provide a guideline/baseline on how products can be considered as recyclable and reusable. 10.a. Recyclability of plastic products Some factors to improve recyclability of plastics products: i.Effective collection and sorting to ensure that different types of plastics are separated and recycled appropriately ii.Product design plays a critical role to ensure products are easier to be recycled - avoiding multi-material composites, using mono-material composition and more iii.Proper labelling of plastics products with recycling symbols and resin identification codes helps consumers and recyclers to identify and sort recyclable plastics accurately to ease the plastics recycling process iv.The availability of advanced recycling technologies and robust infrastructure for collecting and processing plastics can help to increase the range of plastics to be collected and recycled v.There must be a market demand for the recycled plastics products to sustain the recycling ecosystem 10.b. Quality of recycled plastic products Recycled plastics products should meet similar performance requirements (such as durability, strength and more) as close as possible to the intended application of the products. The performance of recycled plastics products has to be acceptable by the market, especially the Brand Owners, in order to continue to serve the society with quality products.
Philippines	The Safe & Sustainable by Design framework (Ref: C. Caldeira et al., Safe and Sustainable by Design chemicals and materials – Framework for the definition of criteria and evaluation procedure for chemicals and materials. EUR 41100 EN, Publications Office of the European Union, Luxembourg, 2022) provides a basis for design that is safe for humans and the environment from a life-cycle perspective, with a minimized environmental footprint towards a zero pollution, climate-neutral, and resource-efficient economy while delivering performance and value throughout the value chain. Criteria and methodology have been developed with an inventory of relevant indicators. The Safe & Sustainable by Design concept is an approach to guide product innovation. It should emphasize chemical simplification to avoid the existing complexity and redundancy of chemicals in plastics which impede safe reuse and recycling. An example of existing approaches is the Sustainability Guide developed by SVID (Stiftelsen Svensk Industridesign, Interreg Baltic Sea Region, European Regional Development Fund, 2018) within the EcoDesign Circle. Product design should be interactive (entailing consultations with users), adaptive, and flexible. 10.a. Recyclability of plastic products The recyclability of plastic products involves the selection of materials at the design stage: some materials like PET is widely recyclable while PVC is not. Mono-materials are easier to recycle than multi-component or multi-layered materials. Additives such as fiberglass or fillers such as talc make products hard to recycle. Simplicity in design, using fewer parts, using common parts, using common fasteners that do not require specialty tools, eliminating adhesives, avoiding paints and coatings on plastics, and avoiding unnecessary complexity make products easier to disassemble and recycle. Standardization of products and packaging and proper labelling make recycling more efficient. Detailed recycling instructions for consumers and providing lists of recycling centers for the product make recycling easier for the end-user. In light of what is now known about plastic chemicals, chemical simplification of plastic materials and products and avoiding chemicals of concern are key to improving recyclability and preventing the spread of hazardous chemicals through the recycling stream. Designing products to limit micro- and nano-plastic emissions and to avoid the introduction of non-intentionally added substances further enhance recyclability. Transparency, traceability, and reporting of plastic chemicals throughout their value chain, chemical monitoring and testing, quality control, and closed loop collection and recycling or sector-specific recycling as part of improved infrastructure can increase safety. Lack of sorting and the commingling of contaminated plastics could render some recycled plastics unsuitable for some applications. The emissions of micro-and nano-plastics and wastewater discharges from recycling facilities need further study and should be mitigated. 10.b. Quality of recycled plastic products In North America, the APR Design Guide for Plastics Recyclability (https://plasticsrecycling.org/apr-design-guide) by the Association of Plastics Recyclers provides comprehensive design guidance and testing protocols to measure package design against industry-accepted criteria along four (4) recyclability categories. The Ellen MacArthur Foundation's Circular Design Guide (https://www.ellenmacarthurfoundation.org/circular-design-guide/overview) and related resources (strategies, briefs, product redesign worksheets, circular flow worksheets, etc.) help innovators and designers create solutions for the circular economy. Mechanical recycling remains the most energy-efficient, economical, and least hazardous means of recycling plastics. Issues such as degradation of the polymer during recycling still need to be addressed. Chemical recycling, or "advanced recycling", which breaks down plastic waste into chemical building blocks or into basic chemicals or fuel to be burned, creates significant greenhouse gases and toxic by-products and are energy and resource-intensive. Some technologies work on only one type of plastic in clean conditions and would be impractical or very expensive to apply in real-world conditions of dirty and

	mixed plastic waste. These technologies require a constant supply of waste to operate resulting in high economic lock-in costs. Despite huge investments in the last few decades, many projects have failed. For these reasons, chemical recycling is not recommended.
Singapore	a. Recyclability of plastic products Guidelines/framework for plastic product design to improve recyclability of plastic products could include the following - • Availability of recycling pathways: Designs should avoid use of materials that cannot be readily recycled in the country/region. • Material selection and combination: Materials used should be easy to recycle. Designs should prioritise the use of only one type of plastic polymer to increase recyclability of the product, or use different plastic polymers that are easily separated. • Separability of materials: Designs that cannot be readily separated into various plastic polymer types should be avoided whenever possible. This includes inks and adhesives that could be challenging to remove. • Material identification: All plastic products should be easily identifiable to facilitate material separation. • Colour and use of additives: To avoid use of coloured plastics whenever possible given that non-coloured polymers have the highest recycling value. To minimise use of additives that hinder recyclability of plastic products. • Applications for recycled polymers/materials: There should be sufficient applications/demand for the recycled polymers/materials such that recycling remains economically viable for the country. b. Quality of recycled plastic products The purity of the recycled polymer would determine the quality of recycled products. Therefore, guidelines/framework for plastic product design to improve quality of recycled products could include the following - • Use of single source/application to minimise contamination of plastic polymer (e.g. for plastic beverage containers) • Minimisation of the use of additives (e.g. ink, adhesives, colour masterbatch) • Use of materials that can withstand multiple heat cycles with minimal degradation of physical properties
Costa Rica	8.a. Recyclability of Plastic Products 1. Use of homogeneous polymers and monomaterials: To increase the recyclability of plastic products, it is essential to implement design criteria for recyclability. These include the use of homogeneous polymers and monomaterials, which facilitate the recycling process by reducing contamination from mixtures of different plastics. It is also recommended to avoid the use of harmful additives and dyes that may interfere with recycling. Additionally, it is vital to design products that are easy to disassemble, allowing efficient separation of components and materials. 2. Design for Disassembly (DfD): Products are designed to be easily taken apart at the end of their life cycle. 3. Material Selection: Choosing materials that are recyclable and have a lower environmental impact. 4. Standardization: Creating standard components and connections for plastic products. 8.b. Quality of Recycled Plastic Products To improve the quality of recycled plastic products, the purity of the recycling stream must be ensured. This can be achieved by implementing advanced collection and sorting systems, which effectively segregate different types of plastics. The use of sensor-based sorting technologies (e.g. near-infrared) can increase the purity of recycled material. Additionally, harmonizing standards and certifications for recycled products can ensure that recycled plastics meet the specifications necessary for reuse in high-quality applications.
The European Union and its 27 Member States	10.a. Recyclability of plastic products: A non-recyclable product should be identified as problematic and eliminated if avoidable. In the case of all the products remaining on the market, including the ones that are unavoidable, reduction or product design measures should be applied. As a wide range of products is covered under the ILBI, specific criteria or requirements should be established, prioritizing the high impact sectors. It could be done via a dedicated programme of work, bringing together the relevant experts and stakeholders, which will provide useful recommendations to the future parties for the improvement of the design and the performance of the products, including their recyclability. Furthermore, a minimum target for the use of recycled content could be developed within the ILBI. With regards to packaging, as priority sector, many design guidelines for recyclability already exist , which present a number of common elements: - the reduction of material diversity, - reduction and/or avoidance of pigments, - ensuring products are compatible with sorting mechanisms, e.g. by following specific density thresholds 10.b. Quality of recycled plastic products: To increase the quality of the recycled plastic products, it should be done with specific criteria or requirements, as explained above. Moreover, the criteria used to define a plastic product as problematic would cover this aspect, notably: • The product disrupts the ability of other items to be recycled

	• The product negatively affects the quality or safety of the end-product of the recycling process • Restrictive measures set under provision (2) should improve the content of chemicals of concern in products and to some extent increase the quality of plastic products including recycled ones. Parties to the treaty could agree on establishing for example a common methodology to develop international standards to define recycled plastics, determine quality of recyclates, and manage harmonized limits on the presence of problematic chemicals in recycled plastics.
United Kingdom	a criteria-based approach or non-criteria approach for plastic product design. (a)aspects of the product's design which affect its expected life; (b)the availability or cost of component parts, tools, or anything else required to repair or maintain the product; (c)whether the product can be upgraded, and the availability or cost of upgrades; (d)any other matter relevant to repairing, maintaining, remanufacturing or otherwise prolonging the expected life of, the product; (e)the ways in which the product can be disposed of at the end of its life (including whether and to what extent it can be recycled, and whether materials used in it can be extracted and reused or recycled). 10.a. Recyclability of plastic products The following could be considered when developing criteria and non-criteria approaches: • Plastics that are free of toxic additives • Plastics that are easy and safe to recycle mechanically, most likely designed in mono-materials and to align with prevailing recycling capacity • Design for disassembly – Develop standards that ensure plastic products can be easily disassembled into constituent parts (e.g. limiting use of permanent adhesives). 10.b. Quality of recycled plastic products The following could be considered when developing criteria and non-criteria approaches: Reduce products that contain mixed plastics that can't be easily recycled together Where products contain mixed plastics- encourage easy disassembly/modular design to facilitate sorting Reduce use of any additives or dyes that cause barriers to the recycling of plastics (e.g. black plastics that are hard to recycle) Restrictions on hard to recycle plastics where alternative materials exist Stricter limits on allowable contaminants in recycled plastics (eg. maximum levels for impurities like residual adhesives, dirt, and mixed polymers). References: (7) https://www.legislation.gov.uk/ukpga/2021/30/schedule/7
Federated States of Micronesia	Criteria and/or non-criteria-based approaches for regulating plastic product design for recyclability under provision II.5 of the instrument include, but are not necessarily limited to: 1) the capacity of plastic products to be recycled in an environmentally-sound and healthy-friendly manner; 2) whether the plastic products are designed and produced in such a manner as to reduce demand for and use of plastic polymers, chemicals of concern, and/or plastics and plastic products; 3) whether the plastic products are designed and produced in a manner that minimizes environmental leakages, including in the marine environment, as well as other economic, social, cultural, and human health impacts, during the recycling process; and 4) whether the plastic product design limits recyclability in a manner that imposes disproportionate burdens on Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories, including in terms of leakages and other harmful effects on their human health and natural environments, as well as in terms of limiting the availability of facilities that can carry out the recycling operations to major metropolitan centers while excluding non-metropolitan/traditional territories.
Saudi Arabia	In line with the mandate of UNEA resolution 5/14 and to ensure effective and context-specific implementation, the ILBI should emphasize that product design improvements focus only on plastic products identified in national plans as problematic. All approaches should be integrated into national plans to align with each country's unique circumstances and capacities. Recyclability of plastic products: Approach 1: National Context-Specific Criteria for Problematic Plastic Products • Rationale: The ILBI should ensure that national plans consider criteria for improving recyclability are applied specifically to plastic products identified as problematic in national circumstances and plans. This focus ensures that efforts are directed towards products that pose significant challenges to national waste management. • Implementation: National plans are encouraged to include criteria for assessing and enhancing the recyclability of identified problematic plastic products. These criteria should be based on unique national waste management capabilities and priorities of in the utilization of technologies and best practices • Reference: National waste management plans, sustainability assessments.

	Approach 2: Design for Enhanced Recycling Processes • Rationale: The ILBI should support national efforts to promote product designs that facilitate recycling processes, specifically for problematic plastic products. This includes encouraging designs that increase the efficiency of recycling operations. • Implementation: National plans should incorporate measures for designing plastic products to improve recycling. • Reference: Industry best practices, national recycling guidelines, national specific technology availability. Quality of recycled plastic products : Approach 1: Best practices for Recycled Products • Rationale: The ILBI should ensure that national plans establish best practices for recycled plastic products. Following best practices in recycled products can enhance market acceptance and promote sustainable use. • Implementation: National plans should define and enforce quality standards for recycled plastic products, ensuring that they meet the required specifications for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Promoting Advanced Recycling Technologies • Rationale: The ILBI should support the adoption of all solutions in management of plastic pollution including advanced recycling technologies to implement best practices for recycled plastic products. These technologies can help convert plastic products into recycled materials that can go into food and medical applications. • Implementation: National plans should encourage adoption of advanced recycling technologies. • Reference: National innovation programs, technology assessment reports. By focusing on these criteria and non-criteria-based approaches through national plans, the ILBI can ensure that product design improvements are both effective and contextually appropriate. This strategy respects national sovereignty while promoting global consistency and sustainability in managing and recycling plastic products.
the United States.	The recyclability of plastic products depends on many factors (e.g., product composition and design, availability of collection and infrastructure and technologies for recycling). Any approaches for increasing recyclability, if included in the future agreement, should be general enough to apply to a wide variety of plastic products and also provide flexibility to account for such factors. Many resources exist to inform efforts to improve design for recyclability and such information can support each Party in implementing provisions related to recyclability. Such approaches should also address the quality of plastic recycled content and the quality of plastic products produced with such material.
Ecuador	8.a. Recyclability of plastic products Recyclability Assessment: Considering factors such as material composition, ease of recyclability, recyclability indices and compatibility with existing recycling infrastructure, promoting that adjectives that fragment plastic are not used so that the use is better. Design for Recycling: to facilitate the disassembly and separation of components, use of mono-materials or easily separable materials, elimination of non-recyclable parts to enhance recyclability, and avoid chemicals of concern. Material Selection Criteria: focusing on selecting recyclable materials, such as PET, HDPE, and PP, over harder-to-recycle plastics like PVC or mixed materials, to improve the ease and efficiency of recycling processes and removing harmful substances (chemicals of concern) Compatibility with Recycling Infrastructure: Criteria ensuring that plastic products are compatible with existing recycling technologies and infrastructure to streamline the recycling process and reduce contamination in recycled materials, and to the future improved technologies. Advanced Recycling Technologies: such as chemical recycling and depolymerization processes to improve the quality of recycled plastic products by enabling a higher degree of material recovery and purity. Minimizing the emissions and releases (including of chemicals non intentionals or microplastics) References: https://www.researchgate.net/publication/370110359_Post-Consumer_Plastic_Waste_Management_From_Collection_and_Sortation_to_Mechanical_Recycling https://plasticsrecycling.org/recycling-definitions https://recyclass.eu/ https://www.basel.int/Implementation/TechnicalMatters/DevelopmentofTechnicalGuidelines/TechnicalGuidelines/tabid/8025/Default.aspx 8.b. Quality of recycled plastic products

	Harmful substances free: Laboratory tests can be carried out which demonstrate that they do not contain protective chemicals, heavy metals, and other elements that generate health concerns due to their indirect use with food, or direct contact with medicines, etc For this, in the world there are specific migration tests determined by physical and chemical values in the laboratory at the molecular level of a sample of the selected product. Reference: https://www.researchgate.net/publication/26742209_Use_of_overall_migration_methodology_to_test_for_food-contact_substances_with_specific_migration_limits/link/09e415110f5e397865000000/download?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19
Ethiopia	To improve the recyclability of plastic products and the quality of recycled products, various criteria and non-criteria-based approaches can be integrated into the International Legally Binding Instrument (ILBI). These approaches can be categorized into two main areas: recyclability of plastic products and the quality of recycled plastic products. A. Recyclability of Plastic Products: Criteria-Based Approaches: 1. Design for Recyclability: Ensure products are designed with materials that are easily separable and recyclable. This includes using mono-materials or materials that are compatible with existing recycling streams (e.g., PET, HDPE). 2. Use of Recycled Content: Incorporate recycled materials into product design to promote a circular economy and increase demand for recycled plastics. 3. Standardized Labeling: Implement clear and standardized labeling systems (e.g., Resin Identification Codes) to facilitate sorting and recycling processes globally. 4. Minimize Contamination: Design products that minimize contamination by considering labels, adhesives, and additives that hinder recyclability. 5. Consideration of End-of-Life Options: Design products with end-of-life considerations in mind, including recyclability but also other options like compossibility or biodegradability where appropriate. 6. Material Selection: The choice of materials is critical. Using mono-materials or compatible materials of similar densities enhances recyclability. Mixed materials should be avoided unless they are easily separable. https://www.bpf.co.uk/design/recyclability-by-design.aspx https://www.wrap.ngo/resources/guide/design-guidance-recyclability-household-rigid-plastic-packaging 7. Color and Additives: Non-pigmented plastics are preferred, as strong colors can complicate the recycling process. Additionally, the use of additives should be minimized, as they can interfere with recycling technologies. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf https://www.bpf.co.uk/design/recyclability-by-design.aspx 8. Ease of Separation: Product components, such as closures and labels, should be designed for easy detachment. This includes ensuring that closures are recyclable themselves and that labels cover minimal surface area. https://recyclass.eu/recyclability/design-for-recycling-guidelines/ https://www.bpf.co.uk/design/recyclability-by-design.aspx 9. Product Design: Products should be designed for disassembly, allowing for the easy removal of different materials at the end of their lifecycle. This reduces contamination and improves sorting efficiency. https://www.unido.org/sites/default/files/unidopublications/202404/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 10. Standardized Guidelines: Establishing clear guidelines for what constitutes recyclable design is essential. This includes creating a checklist for designers to assess their products based on recyclability criteria. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf https://recyclass.eu/recyclability/design-for-recycling-guidelines/ Non-Criteria-Based Approaches: 1. Collaboration Between Stakeholders: Fostering dialogue between designers, manufacturers, and recyclers can help identify challenges and develop solutions that enhance recyclability. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf https://www.unido.org/sites/default/files/unido-publications/2024 04/GACERE%20Policy%20Brief%20%20Circular%20Design%20of%20Plastic%20Products_0.pdf 2. Educational Initiatives: Educate consumers and businesses about proper recycling practices and the importance of recyclable product design. Increasing awareness among designers about the impact of their design choices on recyclability can lead to better practices. This includes understanding the recycling process and the lifecycle of materials. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 3. Innovation in Materials: Support research and development for new materials that are inherently more recyclable or biodegradable without compromising performance. 4. Policy Support: Advocate for policies that incentivize recyclable product design and support infrastructure development for recycling. 5. Lifecycle Assessments: Conduct comprehensive lifecycle assessments to understand the environmental impacts of different design choices, promoting more sustainable decisions. B. Quality of Recycled Plastic Products:

	Criteria-Based Approaches: 1. Material Traceability: Ensure traceability of recycled materials to maintain quality standards and meet regulatory requirements. Establishing traceability for recycled materials can improve market confidence in recycled products. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 2. Quality Standards: Establish and adhere to quality standards for recycled materials to ensure consistency and performance in applications. 3. Technological Innovation: Invest in technologies that enhance the sorting, cleaning, and processing of recycled plastics to improve quality. 4. Certification Programs: Participate in certification programs (e.g., Recycled Content Standard) to verify the quality and origin of recycled materials. Certification can help ensure that recycled materials meet specific quality standards, making them more attractive for manufacturers. https://www.unido.org/sites/default/files/unido-publications/2024 04/GACERE%20Policy%20Brief%20%20Circular%20Design%20of%20Plastic%20Products_0.pdf 5. Feedback Loops: Establish feedback loops between recyclers and product designers/manufacturers to improve the design and quality of recycled materials. 6. Recyclability Testing: Implementing robust testing protocols to evaluate the recyclability of materials can ensure that only suitable materials are used in production. This includes assessing the compatibility of different materials with recycling processes. https://recyclass.eu/recyclability/design-for-recycling-guidelines/ https://www.wrap.ngo/resources/guide/design-guidance-recyclability-household-rigid-plastic-packaging 7. Closed-Loop Systems: Encouraging the development of closed-loop recycling systems can enhance the quality of recycled materials. This involves designing products that can be easily recycled back into the same product type, maintaining material integrity and quality. Non-Criteria-Based Approaches: 1. Market Demand: Create demand for high-quality recycled plastics through market incentives and consumer awareness campaigns. Increasing the demand for high-quality recycled materials can drive improvements in recycling technologies and processes. This can be achieved through policies that incentivize the use of recycled content in new products. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf https://www.bpf.co.uk/design/recyclability-by-design.aspx 2. Research and Development: Support R&D initiatives focused on improving the mechanical, thermal, and chemical properties of recycled plastics. 3. Capacity Building: Provide training and capacity-building programs for recyclers to enhance their skills in handling and processing recycled materials. 4. Circular Design Principles: Adopt circular design principles that prioritize durability, reparability, and longevity to improve the potential for recycling. 5. Cross-Sector Collaboration: Foster collaboration between industries (e.g., packaging, automotive, electronics) to develop shared standards and best practices for recycled materials. 6. Investment in Recycling Technology: Encouraging investment in advanced recycling technologies can enhance the quality of recycled products. Innovations in sorting and processing can lead to better recovery rates and higher-quality recycles. https://recyclass.eu/recyclability/design-for-recycling-guidelines/ https://www.unido.org/sites/default/files/unido-publications/2024 04/GACERE%20Policy%20Brief%20%20Circular%20Design%20of%20Plastic%20Products_0.pdf Rationale: The criteria-based approaches focus on specific design and operational principles that directly impact recyclability and recycled product quality. These are grounded in practical considerations such as material compatibility, sorting efficiency, and regulatory compliance. On the other hand, non-criteria-based approaches emphasize broader systemic changes, including education, policy advocacy, and technological innovation, which can collectively enhance the sustainability of plastic product design and recycling efforts. By integrating these criteria and approaches into the ILBI, the recyclability of plastic products can be significantly improved, along with the quality of recycled materials. This will help facilitate a circular economy for plastics, reducing environmental impact and promoting sustainable practices.
Uruguay	Recyclability of plastic products - Contain chemicals or polymers of concern and problematic elements that hinders recyclability (for example undetectable carbon black) - Use transparent and uncolored polymers when is feasible - Ensure the use of labels and adhesives that are not problematic for recycling or it is possible to remove them easily. - Use mono-material when is feasible - Use minimal direct printing It is important to take into account that a plastic product is recyclable if post-consumer collection, sorting and recycling is proven to work in practice and at scale. In this sense, it will be necessary to develop and a functional system to obtain this Quality of recycled plastic products

	If the plastic products comply with the criteria mentioned in 8a, they recycled plastic will have a better quality which will translate also in an increase of the recycled material value. It is important to mention that the recycling should not only focus on plastic scrap and the post-consumer plastics should be prioritized for the recycling. Also it will be needed the development of a certification scheme or mechanism, to assure the real plastic recycled content on plastics, in an harmonized way. Additionally, it will be needed to address bromatological aspects that must be resolved for packaging in direct contact with food.
Chile	10.a. Recyclability of plastic products 10.b. Quality of recycled plastic products Criteria-Based Approaches In general context, It is necessary a clear, truthful labeling of materials to ensure safe handling and processing by recyclers. Material Compatibility • Criterion: Use of single-type polymers or compatible polymer blends in product design. o Rationale: Ensures that plastic products are easier to sort and recycle, improving the efficiency and quality of the recycling process. Single-type polymers like PET, HDPE, and PP are widely recyclable and have established recycling streams. o Sources: PlasticsEurope, American Chemistry Council. Chemical Safety • Criterion: Limiting the use of hazardous chemicals that can contaminate recycling streams, such as heavy metals, phthalates, and flame retardants. o Rationale: Reducing the presence of toxic substances in plastic products prevents contamination of recycled materials, ensuring that the recycled products are safe for use. o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA). Design for Disassembly • Criterion: Designing products for easy disassembly, allowing for efficient separation of different materials. o Rationale: Facilitates the recycling process by making it easier to sort and process different components. This approach helps recover high-quality materials from complex products like electronics and packaging. o Sources: Ellen MacArthur Foundation, UNEP. Standardization • Criterion: Standardizing components and materials to enhance compatibility and recyclability. o Rationale: Standardized materials and components simplify the recycling process, ensuring consistent quality and compatibility of recycled plastics. o Sources: ISO, ASTM International. In general, it is important to highlight the Recyclability of plastic products Non-Criteria Based Approaches Best Practices and Industry Guidelines • Approach: Developing and promoting best practices for product design that enhance recyclability. o Rationale: Industry-specific guidelines can provide practical advice on designing for recyclability, encouraging manufacturers to adopt sustainable practices. o Sources: Plastics Industry Association, Sustainable Packaging Coalition. Lifecycle Assessments (LCAs) • Approach: Conducting comprehensive LCAs to evaluate the environmental impact of plastic products throughout their lifecycle, from production to disposal. o Rationale: Identifies opportunities to improve recyclability and minimize environmental impact, guiding manufacturers in making informed design choices. o Sources: Environmental Protection Agency (EPA), Journal of Industrial Ecology. Consumer Education and Engagement • Approach: Educating consumers on the importance of recycling and proper disposal of plastic products. o Rationale: Informed consumers are more likely to participate in recycling programs, increasing the quantity and quality of recyclable materials.

o Sources: National Geographic, GreenBlue.

Incentive Programs
• Approach: Implementing financial and regulatory incentives to encourage the design and production of recyclable plastic products.
o Rationale: Incentives such as tax breaks, subsidies, or grants can motivate manufacturers to prioritize recyclability in their product designs.
o Sources: Ellen MacArthur Foundation, Resource Recycling Systems.

Specific Criteria for Improving Recyclability

Polymer Selection
• Criterion: Prioritizing the use of easily recyclable polymers like PET, HDPE, and PP.
o Rationale: These polymers have well-established recycling processes and markets, making them more economically viable to recycle.
o Sources: PlasticsEurope, American Chemistry Council.

Additive Restrictions
• Criterion: Limiting the use of non-recyclable additives and ensuring that any additives used do not hinder the recycling process.
o Rationale: Non-recyclable additives can contaminate recycling streams and reduce the quality of recycled products. Ensuring that additives are compatible with recycling processes enhances the quality of recycled materials.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

Color and Pigmentation
• Criterion: Using clear or natural-colored plastics to improve recyclability.
o Rationale: Clear and natural-colored plastics are easier to sort and have higher value in recycling markets. They can be more easily reprocessed into high-quality recycled products.
o Sources: Sustainable Packaging Coalition, Plastics Industry Association.

Product Labeling
• Criterion: Including clear recycling instructions and material identification codes on plastic products.
o Rationale: Proper labeling helps consumers and recyclers identify recyclable materials and sort them correctly, enhancing the efficiency of recycling programs.
o Sources: ISO, ASTM International.

Non-Criteria Based Approaches for Enhancing Recyclability
Collaboration and Partnerships
• Approach: Encouraging collaboration between manufacturers, recyclers, and policymakers to develop and implement recycling-friendly design standards.
o Rationale: Collaborative efforts ensure that all stakeholders are aligned in promoting recyclability and improving recycling infrastructure.
o Sources: Ellen MacArthur Foundation, UNEP.

Research and Development
• Approach: Investing in research and development to create innovative recycling technologies and sustainable materials.
o Rationale: Advances in recycling technologies and materials science can significantly enhance the recyclability and quality of recycled plastics.
o Sources: National Science Foundation (NSF), Horizon 2020.

Extended Producer Responsibility (EPR)
• Approach: Implementing EPR programs that require producers to take responsibility for the end-of-life management of their products.
o Rationale: EPR programs incentivize manufacturers to design products with recyclability in mind and to support recycling infrastructure.
o Sources: OECD, European Union.

State of Kuwait	8.a. Recyclability of plastic products The design of products should ease the recycling by: • Utilizing mono-material structure • Minimize the volume of the material • Ability of disassembly • Applicability of biodegradation, thermolysis-degradation, thermal treatment (including but not limited to chemical classification). 8.b. Quality of recycled plastic products N/A
Peru	10.a. Related to recyclability of plastic products, we should consider: 1.Material choice: Simplification is key to driving recyclability, reduction in the variety of materials used is a key first step e.g.: - Rigid packaging from PP, PE & PETo - Flexible packaging from PP & PE 2.Wherever possible using monomaterial structures. This applied both to mechanical and non-mechanical recycling. 3.Reduction and/or avoidance of pigments 4.Ensuring products are compatible with sorting mechanisms (e.g. size) 5.Ensure material choice, adhesive choice, inks and size of sleeve or label is not problematic for recycling. 10.b. Related of the quality of recycled plastic products If monomaterial structures are utilized, the most effective approach to enhance quality through mechanical recycling is to: - Eliminate color, as colors limit potential end markets- Minimize ink coverage, since inks not only add color to plastics, which restricts end markets, but can also decompose during recycling, creating chemicals of concern. - Minimise barriers - Consider markers to enhance the sorting quality and purity This will benefit both mechanical and non-mechanical recycling methods, although mechanical recycling remains the preferred option when considering life cycle analysis.
Government of India	8 a) Recyclability of plastic products – Criteria based approaches This is important for promoting sustainable and optimal use of plastics and their products, leading to an extended lifespan through improved design for repair, reuse, refill, recyclability, and refurbishability. These measures should be nationally driven. An assessment of financial and technological needs is crucial for each country to meet its national commitments under this provision, following the principle of common but differentiated responsibilities. Harmonized standards should not be imposed. The scope of such an exercise is determined by UNEA 5/14 resolution. Any provision related to product design shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. The implementation of any compliance provision needs to follow principle of CBDR. A. Designing for Recycling (DfR): • Material Selection: Choosing plastic types that are widely recyclable and have high market demand for recycled content. • Minimizing the Material Complexity: Reducing the use of multi-layer or composite materials or family of polymers that are difficult to separate and recycle. • Avoiding the Contaminants: Design products that minimize contamination with non-recyclable materials (e.g., metal components, mixed plastics). • Colour of the packaging and other products should be neutral or transparent as far as possible. B. Compatibility with Existing Recycling Infrastructure: • Ensuring that product design aligns well with the existing recycling facilities and processes in a country or region, in terms of size, shape, and material composition. • Use standardized labeling and marking for easy identification of resin types and recycling instructions (e.g., resin identification codes).

	C. Ease of Disassembly: Designing products with components that can be easily separated for recycling purposes. D. Closed-Loop Systems and Circular Design: Design products and packaging with circularity in mind, aiming to create closed-loop systems where recycled materials are reintegrated into new products. Encouraging design for reuse or remanufacturing to extend product lifecycles and reduce overall waste generation. Non Criteria-Based Approaches includes the following § Material innovation: Develop new materials or blends that enhance recyclability while maintaining or improving product performance. § Research and development on improving the efficiency and accuracy of sorting plastics by type and quality, such as automated optical sorting systems involving combination of spectroscopy and spectrophotometry or chemical-based identification methods. § Consumer education and behavior change about the importance of recycling and proper disposal practices to reduce contamination and improve the quality of recycled materials. 8. b. Quality of recycled plastic products o The recycled products should be able to meet the identified quality standards and should be able to achieve the desired results expected from such products. o Quality Control and Certification: Implementing rigorous quality control measures throughout the recycling process. Adhering to certification standards like the Recycled Content Certification to ensure the quality and reliability of recycled plastics.
The State of Qatar	Section II.5 discusses Product Design, Composition, and Performance. The main onus lies with the manufacturing of plastic products' companies. Once the required plastic polymers have been produced and shipped to the products' manufacturers the role of plastic producers ends. It is up to the products' designers and manufacturers what they want to accomplish with the product that they sell in the markets. Again, it's the demand and behavioral change in the people that will drive the plastic products market, how much they want their products recyclable, reusable, repairable. The designers will have to come up with innovative ideas to make the end-of-life waste management of the products easy. It should be national circumstances that determine the mandatory or voluntary EPR schemes. These EPR schemes must be applicable within the national jurisdiction and extending them to international supply chains will result in nothing but chaos. All the approaches, whether criteria or non-criteria based should be based on the national circumstances of the individual Parties signatories to the treaty. Making something like 'minimum percentage' of recyclable plastic in the products may unnecessarily hamper the economic development of a developing country. Such policies should not be prescriptive, and the Parties must be allowed to chart out their approaches to tackling plastic pollution. 8.a. Recyclability of plastic products Minimum percentage of the recyclable plastic in products shall not burden the developing economies that do not have the adequate technology and capacities to manage their plastic wastes. If ILBI prescribes any measure like this, then it must ensure technology transfer, and capacity building for the developing world from the developed nations. 8.b. Quality of recycled plastic products Quality of recycled plastic products depends upon the: • Product design for durability, disassembly and reassembly. • The percentage of plastic recycled used in the products. • Effective waste management of plastic. • Adequate know-how of end-of-life waste management of plastic with minimum leakage. • Adequate capacities for end-of-life waste management of plastic waste. • Effective, economic technologies that are available for end-of-life waste management for plastics. But all these should not be prescriptive and should be upon the Parties to adopt and employ according to their specific needs and circumstances.
The Islamic Republic of IRAN	Iran response: - In developing specifications for product design, it is crucial to consider the varying characteristics and methods of using products in each country and national circumstances, such as the infrastructure for recycling and waste management, production technologies for plastic products and the availability of recycled materials. Consequently, each country could establish ambitious design and performance standards for plastics and implement corresponding measures, based on elements related to product design and performance standards - To strive to follow a circular economy approach. - To improve and enhance the recyclability and reusability of plastics products; - Single-use and short-live plastics products as well as the impacts of the alternative materials on human health and environment need to be identified and determined at the national level, considering unique national circumstances, socio-economic needs. Therefore, Iran does not support a global ban list for single-use and short-live plastics products. - The primary objective of UNEA 5/14 is to combat plastics pollution, which is primarily caused by mismanaged of plastic waste products. To achieve this goal, it is essential to focus on increasing recyclable and reusable rates. To this end, diversifying technologies such as Advanced Recycling/Chemical Recycling in the upper bound as well as Mechanical Recycling in the downstream, while aligning with design

improvement for better recyclability and reusability are crucial elements of the future instrument.
- Concerns about plastics products design should be addressed on a product-by-product and application-by-application basis, with a focus on increasing recycling and reuse rates first. Once this goal has been achieved, the impact of alternatives should be assessed and compared to inform decisions, taking into account the national socio-economic context.
- In the decision-making process, members should take into account the following factors in order to avoid discrimination of plastic products vis-à-vis like products made of any alternative materials (i.e. not only alternative plastics, but also paper, aluminum, glass etc.):

ü Availability: the technical ability of the industry to produce alternatives in the
required volumes,

ü Accessibility: the ability of consumers to obtain the required volume of alternatives in the market,
ü Affordability: measured by the costs related to alternative material use relative to consumers' income,
ü Environmental impact of the alternatives shall be considered and examined throughout the full life cycle of the alternative materials."

- And finally, domestic regulators should carefully consider the socio-economic effects of any restrictive measures aimed at reducing the use of plastic products, taking into account a comprehensive set of data and evidence gathered through public consultations on proposed measures.

- In specifying requirements for product design in the instrument, it is crucial to consider the diverse characteristics and usage methods of products in each country, including:
• Infrastructure for recycling and waste management
• Production technologies for plastic products
• Availability of recycled materials
- Therefore, each country should establish its own ambitious design and performance standards for plastics and take corresponding measures, based on the elements outlined below. The following factors should be considered during the product design stage to improve recyclability and reusability:

(Structure of Product):

1. Reduction in volume of plastic use.
Use the smallest volume of material as much as possible.
2. Simplified packaging: Restrain excessive packaging.
3. Longer use and longer service life.
Enhance the durability of the product.
The product is able to withstand repeated use.
The parts of the product are easily replaceable.
The product is easily repairable.
4. Use of easily reusable parts or reuse of parts
Use parts that are easily reusable.
Reuse parts.
5. Use of Single materials or reduction of material types.
Use a single material for the product as a whole or parts thereof, or reduce the material
types used.
6. Easier disassembly and separation
The parts are easily disassembled and sorted by components. (Easier removal of lithium ion
batteries from other parts of the product is better.)
The number of processes required to remove parts, etc., is minimized as much as possible.
The types of materials used are indicated.
7. Easier collection and transportation
The weight, size, shape, and structure of the product are to facilitate easier collection and

	transportation as much as possible. 8. Easier crushing and incineration Easier crushing and incineration for parts that are difficult to reuse or recycle. (Materials of Product): 1. Use of easily-recyclable materials Use easily-recyclable materials. Reduce material types. Avoid using additives and other materials, that hinder recycling. 2. Use of recycled plastics Use recycled plastics. - We would like to emphasize the importance to allow standards and criteria for product design to be nationally-determined, with an overarching global guidance. This would ensure that future production of plastics is better, safer and circular. 8.a. Recyclability and Reusability of plastic products- Iran response: Same as Above. 8.b. Quality of recycled material and reuse system for plastic products No Text, this is out of the mandate of the outcome of INC 4 with respect to this Intersessional work.
Switzerland	In our opinion, it is difficult to reach the level of "criteria and non-criteria based approaches" in the question of plastic product design. We should focus on a strategic discussion on what is needed in terms of design principles in the agreement. The main long-term question is how design criteria can assist Parties in reducing the quantity and toxicity of plastics produced through product simplification and recyclability. The short-term question for the expert group is to articulate a roadmap for addressing the underlying technical issues, so that member states can consider at INC-5 the level of detail necessary to include in the treaty text, and what can be deferred for future work. In our view, the ILIB should contain a set of generic criteria, which could also be integrated into the products Article(s). The COP can then adopt at its first meeting guidance to assist Parties in their implementation of the design paragraph. 8.a. Recyclability of plastic products Ultimately, the design-related control measures might include components such as: • Guidelines to improve the recyclability of plastic products. • Flow control channels to facilitate recycling. The guidelines on recyclability should address the following aspects: o Material choice (use monomaterial, avoid chemicals which hinder recycling, simplify formulations) o Shape of the product (make different materials easily separable) o Transparency along the product life cycle (information on polymers and chemicals that are contained in the product) o Design for recycling and design from recycling (make products easily recyclable, and design products that can be made from recycled materials). The safe-and-sustainable-by-design framework provides valuable guidance that can be applied to plastic chemicals, materials and products: https://research-and- innovation.ec.europa.eu/research-area/industrial-research-and- innovation/chemicals-and-advanced-materials/safe-and-sustainable-design_en o Practical implementation at the system level – steps towards sectoral/regional product standardization and harmonization, and existing and foreseeable recycling channels. • If the parties decide on mandatory design for recycling requirements, they should be developed on a sectoral basis (FMCG packaging, fashion, toys, fishing gear, tires, etc). 8.b. Quality of recycled plastic products • The COP shall adopt guidelines to improve the quality of plastic products. Quality criteria of recycled products should include the technical functionality of recycled products and also criteria to limit potential adverse impacts on the environment and human health. • See 8.a. The guidelines for increasing the recyclability would also increase the quality of recycled products.

Madagascar	Here are some criteria-based and non-criteria-based approaches for plastic product design that could be reflected in an International Legally Binding Instrument (ILBI) to improve the recyclability of plastic products and the quality of recycled products: Criteria-based approaches: Adopt the recyclability criteria outlined in the APR Design Guide for Plastics Recyclability. This comprehensive guide provides industry-accepted criteria to measure each aspect of a package design, ensuring it is truly recycling compatible. The guide covers criteria for primary body material, closures, labels, adhesives, inks, and other design features. Establish criteria for hazardous chemicals and polymers of concern that should be avoided in plastic products. This could be based on a separate set of criteria developed under the ILBI to determine elements of concern, as suggested in the "Global criteria to address problematic, unnecessary and avoidable plastic products" report. Develop criteria for microplastic and nanoplastic emissions during production and use of plastic products. This could include thresholds for intentionally added microplastics as well as emissions from wear and tear, such as from tires and artificial turf. Implement criteria for recyclability and circularity, such as prohibiting non-recyclable plastic components, problematic label constructions, and small separable parts that are likely to be lost during collection and sorting. Non-criteria-based approaches: Promote the elimination of unnecessary or avoidable plastic products where feasible and safe alternative practices are available. This could include primary, secondary, and tertiary packaging, as well as products like helium-filled balloons intended for release. Encourage the development of reuse and refill business models to reduce the need for new plastic products. This could include incentives or requirements for reusable packaging systems. Support the remanufacturing of plastic products to extend their lifespan and reduce the need for new products. Mandate clear and standardized labeling to guide consumers on proper waste management and sorting, improving the quality of recycled materials. Require transparency on the safety and environmental impact of plastic products across their full life cycle, to inform decision-making.
The state of Israel	The purpose of the criteria in the Agreement must be stated: A. To lead to a reduction in the amount of waste generated and sustainable production B. Product life extension along with the possibility to be repaired, the improvement in the ability to reuse, collect, sort, recycle and derive value from the product at the end of its life. This is a non-exhaustive list of criteria: •Recycled Content: to reduce the demand for virgin plastic production. •Monomaterial Design: to simplify recycling processes and improve the quality of recycled materials. •Ease of Disassembly: enabling efficient separation of different materials for recycling. •Minimize Additives: as dyes, and coatings that can complicate recycling processes. •Durability and Longevity: for a longer lifespan. •Resource Efficiency: Optimize material use and minimize waste in the manufacturing process. •Clear Labeling: indicating the type of plastic and recyclability of the product •Non-Toxic Materials •R&D for Sustainable Alternatives: •Adaptability and Modularity: to ease updated or modified to extend lifespan and reduce waste. •Minimization of small parts that are easily separated (for example: bottle caps) and which may end up in the public domain (cigarette butts). •Use of polymers that have a solution for recycling, preferably on the local market it was used.
Brazil	The recyclability of plastic products and the quality of recycled products should be based on relevant international standards, which should avoid arbitrary or unjustifiable discrimination or disguised restriction on international trade.
Australia	General Comments: Design for recycling criteria provide industry with clear and certain directions on best practice plastics design. Criteria based approaches to product design will assist in ensuring that plastic products are free from problematic chemicals and are designed for safe circularity (e.g. prioritise recyclability of plastic products). Criteria or standards increase recyclability by removing materials which contaminate recycling streams and encouraging materials with higher values, supporting and incentivising the recovery, recycling, reprocessing, and end markets of used plastics. Providing clear direction on the optimal design of plastics also allows industry to make long-term investments, optimising the cost and environmental efficiency of manufacturing and allowing investments in the transition to more circular manufacturing and recycling methods and systems. Waste Hierarchy:

	Sustainable design can be guided by the waste hierarchy to ensure the recyclability of plastic products is safe and, by extension, the quality of recycled plastic products to enable a safe circular economy. Product design should also consider the likelihood of materials and chemicals leaking into the environment. Sector-based approaches: Sector-based approaches for product design will be important to allow for the different application of the recycled product. For example, plastic originating from plastic packaging is more appealing to use as recycled content compared to plastic originating from electronics because it is cleaner (as it needs to come into direct contact with food, etc). Improvements and Targets for recyclability To improve recyclability, there is also a need to identify how potential recyclate from a plastic product will be used during its design stage. To address the lack of information about where a product will end up, design for recyclability should aim to be technology neutral, ensuring that criteria accounts for all adequately available technologies. This helps to maximise the recyclability of a product in different country contexts. Recycling targets are a high-level mechanism to drive industry and the waste recovery and recycling sectors to collaborate and take responsibility for the plastics problem. Underpinned by supporting systems, they can lead to increases in plastics recycling and enable further increases in the use of recycled content in plastic products. Examples of the scheme can be found here: https://www.dcceew.gov.au/environment/protection/waste/packaging/2025-national-packaging-targets Mandating targets for the uptake of reuse systems also incentivises investment in this key but under-developed area which is essential for the reduction of plastic pollution and litter. Clear and consistent recycling guidance for households improves recycling rates, reduces contamination in waste recovery systems, and increases public awareness on the sustainability and environmental impacts of packaging, leading to behaviour change. More information can be found here: https://arl.org.au/ It is also important for approaches to address monitoring and traceability of recycled content, particularly verification of self-reporting. This could include consideration of certification schemes. Sustainable design standards can also be supported through non criteria approaches tailored to specific sectors, needs and the local circumstances of each country. A combination of both criteria and non criteria based approaches may assist to achieve the outcome of sustainable design.
Guatemala	As it is know that various additives, colorants, and heat retardants do not facilitate recycling, it must also be considered that the plastics produced can be processed with the use of pelletizing machines and, if possible they can be melted an reshaped.
Indonesia	Criteria-Based Approaches 1. Material Selection o Monomaterials: Promote the use of single-type polymers in plastic products to facilitate easier recycling. o Avoiding Contaminants: Minimize or eliminate the use of additives, fillers, and composite materials that hinder recycling processes. 2. Design for Disassembly o Modular Design: Design products that can be easily disassembled into individual components for recycling. o Standardized Parts: Use standardized components and connections that simplify sorting and separation. 3. Labeling and Transparency o Clear Labeling: Implement clear labeling to identify the type of plastic and any additives used, aiding in proper sorting and recycling. o Transparency in Composition: Ensure transparency in the chemical composition of plastics, including any processing aids. 4. Recycling Compatibility o Compatibility Testing: Ensure that new plastic products are tested for compatibility with existing recycling technologies and infrastructure. o Innovation in Recycling: Encourage the development of new recycling technologies that can handle a wider range of plastic types and composites. Non-Criteria-Based Approaches 1. Market Incentives o Economic Incentives: Provide economic incentives for manufacturers to design products with higher recyclability and for consumers to choose recyclable products. o Subsidies for R&D: Offer subsidies or grants for research and development in sustainable plastic design and advanced recycling technologies. 2. Policy and Regulation Frameworks o Extended Producer Responsibility (EPR): Implement EPR schemes that hold producers accountable for the entire lifecycle of their products, including end-of-life management. o International Standards: Align national policies with international standards and guidelines to ensure consistency and cooperation. 3. Stakeholder Engagement

	o Collaborative Efforts: Engage stakeholders from across the plastic value chain, including manufacturers, recyclers, and consumers, to develop and implement best practices. o Public Awareness Campaigns: Conduct campaigns to educate the public about the importance of recyclability and the proper disposal of plastic products. 4. Innovation and Research o Support for Innovation: Encourage innovation in plastic materials and recycling technologies through public and private sector partnerships. o Research Grants: Provide grants for academic and industrial research into new, more sustainable plastic materials and more efficient recycling methods.
Iraq	The following response includes the answer for question 9 and 10: A. The design of plastic products has a significant impact on their recyclability, Here are some criteria approaches can be used: B. Material Selection: Different types of plastics (e.g., PET, HDPE, PVC) have varying recycling capabilities. Designers should choose materials that are widely accepted by recycling facilities and have established recycling streams. C. Single Material: Products made from a single type of plastic are generally easier to recycle compared to products with multiple materials that are difficult to separate during recycling for example: for water bottle the package from PET and the stopper from PE so it must separate before recycle. D. Ease of Disassembly: Designing products that are easy to disassemble into their component parts facilitates recycling. This includes avoiding complex assemblies and using fasteners or adhesives that can be easily separated. E. Size and Shape: Large, bulky products may be more challenging to handle in recycling processes. Designing products to be compact and stackable can improve efficiency. F. Labeling and Identification: Clear and standardized labeling of plastic types (e.g., resin identification codes) helps recyclers identify and sort materials correctly. G. Additives and Contaminants: Certain additives and contaminants in plastics can complicate recycling processes. Designers should avoid using additives that hinder recyclability. For example: some chlorine and fluorine additive is added for the products to enhance the thermal properties. H. Colorants materials: Light colors or transparent products are easier to recycle, while dark products are difficult. Also, separating products of different colors is difficult and expensive.
The Republic of BURUNDI	Recycling plastics poses significant risks: When plastics contain hazardous monomers or additives, or when plastic polymers break down into hazardous components, the recycled materials will become contaminated. Letting toxic substances into recycling loops will only result in the perpetuation of pollution of products and supply chains into the future. Additionally, the EU maintains different standards for virgin and recycled materials, allowing for increased levels of contamination in recycled products. Recycling should promote clean manufacturing loops, rather than being used as a screen of smoke to prolong the emission of toxic substances into the environment and our bodies. The problem with recycling polymers essentially comes from the fact that they are rarely used alone. Hence, plastics pose environmental problems when they are not carefully sorted and recycled, particularly when they contain chlorine (like PVC) and toxic heavy metals such as lead. or cadmium The combustion of most plastic materials releases numerous pollutants and toxicants84, particularly when it comes to PVC (organochlorine). • To facilitate shaping, industrial processes often use plasticizers and fillers. • Indeed, the manufacture of a “recycled” plastic bottle, for example, requires recycled plastic on the one hand, and virgin plastic on the other. Due to their high calorific value, they make it possible to obtain energy recovery through incineration. • You can also proceed by: • mechanical treatment (washing, sorting, grinding, separation); • thermochemical treatment (solvolysis, pyrolysis, chemical reaction).
Germany	The International Legislation on Bioeconomy and Innovation (ILBI) aims to enhance the sustainability of plastic products, particularly focusing on improving recyclability and the quality of recycled materials. To achieve these goals, various criteria and non-criteria based approaches can be employed in plastic product design. Criteria-Based Approaches Material Selection: Recyclability Index: Products should be designed using materials that have a high recyclability index. This involves selecting polymers that are widely accepted in recycling streams, such as PET, HDPE, and PP. Additive Compatibility: The use of additives should be minimized or carefully selected to ensure they do not hinder the recycling process. For instance, avoiding colorants or fillers that complicate sorting and processing. Design for Disassembly: Modular Design: Products should be designed so that they can be easily disassembled into their constituent parts. This facilitates easier recycling by allowing different materials to be separated efficiently. Fasteners and Joints: Utilizing mechanical fasteners instead of adhesives can improve disassembly rates, making it easier to recycle individual components. Lifecycle Assessment (LCA):

	Conducting a comprehensive LCA during the design phase helps identify environmental impacts associated with different design choices. This assessment can guide designers towards more sustainable options that enhance recyclability. Standardization: Developing standardized designs for common products can streamline recycling processes. Standardization reduces complexity in sorting and processing recycled materials, leading to higher quality outputs. Consumer Education: Designing products with clear labeling regarding recyclability encourages consumers to dispose of them correctly, enhancing the overall recycling rate. Non-Criteria Based Approaches Innovative Materials Development: Research into biodegradable plastics or bio-based alternatives can lead to new product designs that are inherently more recyclable or compostable without relying solely on traditional recycling methods. Collaboration Across Industries: Engaging with stakeholders across the supply chain—including manufacturers, recyclers, and policymakers—can foster innovative solutions that improve product design for better end-of-life outcomes. Circular Economy Principles: Emphasizing a circular economy approach encourages designers to think beyond single-use products and focus on creating items that can be reused or repurposed at the end of their life cycle. Consumer Feedback Integration: Incorporating consumer feedback into the design process allows manufacturers to understand user behavior regarding disposal and recycling, leading to designs that align better with actual practices. Digital Technologies: Utilizing digital tools such as 3D printing allows for rapid prototyping of designs that prioritize recyclability from inception while also enabling customization which may reduce waste during production. Conclusion By integrating both criteria-based and non-criteria based approaches into plastic product design within the ILBI framework, manufacturers can significantly enhance the recyclability of their products while simultaneously improving the quality of recycled materials. These strategies not only contribute to environmental sustainability but also align with global efforts toward reducing plastic waste and promoting a circular economy.
The Government of Canada	Given the global nature of plastic value chains, the ILBI should include minimum circularity design criteria for plastic products that enables safe circularity, improves sustainable consumption and production, increases value retention and recovery of plastics (e.g., through reuse, repair, remanufacture, refurbishment and recycling), and strengthens sustainable management of plastic products across their life cycle. Enabling a circular economy through harmonized and consistent design criteria contributes to the goal of ending plastic pollution by keeping plastics in the economy for as long as possible to maximize its benefit while reducing plastic waste and pollution and associated negative socio-economic and environmental impacts. It would also reduce the demand for virgin feedstocks, strengthen secondary markets and increase the value of post-consumer plastics, spur innovation, drive investments, and help to level the playing field. 10.a. Recyclability of plastic products Approach and Potential Process: • A criteria-based approach is recommended as the preferred path forward to ensure an evidence and science-based process, as well as clarity, certainty, consistency, and transparency for all Parties, partners and stakeholders. Design criteria will also build a shared understanding of recyclability, reinforcing the principle of 'in practice' and 'at scale'. • There are many guidelines and principles available for designing plastic material for recyclability, mainly for plastic packaging. Recognizing that the ability to recycle a product varies greatly at the local, regional and national levels, many of these existing voluntary design guidelines and principles are broadly aligned and can be leveraged to inform the INC intersessional work and potential criteria in the treaty. The guidelines generally recommend reducing the variety of materials used, minimizing or avoiding the use of pigments, and compatibility with sorting mechanisms, e.g. by following specific density thresholds. • The ILBI should take an evidence and science-based approach and build on existing initiatives to establish harmonized/consistent minimum design criteria for plastic products to facilitate safe recycling in practice, that considers specific uses and applications of plastic products. • An expert body could also recommend changes to the ILBI's criteria for adoption by the governing body, to ensure the design criteria remain relevant and science and evidence-based over time, taking into account scientific knowledge, including Indigenous knowledge, advancements in innovations and sound technologies (including consideration of applicability in practice and at scale), as well as uses and applications. Potential minimum design criteria for circularity, including recyclability, could include:. For design for reduction and safe, sustainable circularity: • Remove or minimize problematic, excessive or avoidable elements (e.g., phase-out, remove or restrict use of chemicals of concern or reduce potential releases of chemicals of concern in plastic products across its lifecycle; remove excessive headspace, packaging layers or overwraps from packaging) • Increase secondary plastic content in certain plastic products (increasing the value and competitiveness of recycled plastics, reducing demand for virgin plastic use in specified applications and uses, strengthening sustainable and resilient recycling markets, spurring investment in value retention infrastructure, and promoting a safe circular economy

	• Design and composition, including chemicals and additives, are protective of the environment and human health, including through multiple uses and a circular economy • Access to safe, environmentally sound and viable alternatives • Minimize unnecessary waste of material and energy For design for durability and extending the life of plastic products, including reuse, refill, repair, remanufacture, and refurbishment: • Fit for repeated/multiple uses (e.g., avoidance of single-use items) • Parts are easily replaceable, repairable or can easily be remanufactured into new useable parts or materials (e.g., separability and accessibility of components, availability of parts or elements) • (see details in question 11a/b on reuse and refill criteria) For design for technical recyclability, in practice and at scale • Simplify and minimize number of materials and components used (e.g., use of single materials or reduction of multiple material types; minimize use of additives; use of common polymers) • Minimize, restrict or eliminate hard-to-recycle polymers • Separability of materials (e.g., ease of separation by consumers for cleaning, ease of separation by waste and recycling practitioners for processing) and material identification to facilitate recycling • Physical and chemical composition and characteristics (e.g. colours, shapes and additives) do not hinder or disrupt recycling • Product labels and claims accurately inform consumers and end-users about recyclability For design for use and disposal: • Product labels and claims comply with recognized standards and/or transparency requirements • Product labels and claims accurately inform consumers and end-users about disposal • Easier disassembly and separation to facilitate collection, transportation, sorting and waste management • Comparable physical attributes (e.g., weight, size and shape) to enable collection, transportation and processing References: • Environment and Climate Change Canada. 2023. Recycled content and labelling rules for plastics: Regulatory Framework Paper. • Canada Plastics Pact. The Golden Design Rules for Plastic Packaging. (website contains Canadian guidance) • The Consumer Goods Forum. Golden Design Rules. • Swedish Environmental Research Institute. May 2024. Design for recycling of products containing plastics. • Deloitte study commissioned by WWF-Norway. December 2023. Design for Circularity Relevant technical considerations for the International Legally Binding Instrument on Plastic Pollution, including in the Marine Environment. • Global Alliance on Circular Economy and Resource Efficiency (GACERE). April 2024. Circular Design of Plastic Products Policy Brief. • The Association of Plastic Recyclers (APR). APR Design Guide for Plastics Recyclability. 10.b. Quality of recycled plastic products • Eliminating, phasing-out or restricting problematic plastic products and chemicals of concern in plastic products; implementing minimum design criteria and requirements or standards; as well as, improved transparency will help to optimize the quality of recycled plastics and thus increase the value and competitiveness of post-consumer plastics, strengthen secondary plastics markets and support a safe circular economy. • Plastic materials and products that are not recyclable (including in practice or at scale), hinder or disrupt the recycling process, or negatively impact the safety and quality of recycled materials, should be identified and addressed through the draft provisions on chemicals of concern and on problematic and avoidable plastic products. In addition, under draft provision II.5 on product design, minimum criteria, performance or product requirements and international standards could define recyclability and determine the quality of recyclates or composition of certain plastic products (e.g., via recycled content requirements) in a transparent and safe manner that is protective of the environment and human health.
Armenia	Children's toys - a heterogeneous area of application of recycled plastic from the point of view of safety of use. However, manufacturers of children's goods assure that their products meet international quality standards. For example, the American company Green Toys produces children's goods from recycled plastic obtained from used milk containers. In the process of processing the collected containers at the Green Toys factories in the USA, they receive purified high-density polyethylene, one of the safest and cleanest types of plastic in the world. The company has many awards from ecological associations, parenting centers and children's educational institutions. Another example of the unusual use of polymer products was again demonstrated by the Japanese company Uniqlo. The company turns about 20% of the donated unsuitable clothes into soundproofing materials for cars or high-calorie solid fuel. It replaces fossil fuel and is used for industrial purposes, for example, in boilers for paper production. The manufacturer notes that 22 t-shirts need to be processed for sound insulation material in the amount sufficient for one car. https://rupec.ru/news/48328/

Palau	10.a. Recyclability of plastic products All provisions in the Agreement, including in the Annexes, must be guided by the objective of the Agreement which is to end plastic pollution, including in the marine environment, to protect human health. Criteria to determine recyclability could include minimum number of materials and components used in particular hard to recycle polymers, compatibility with sorting mechanisms, minimum use of additives. 10.b. Quality of recycled plastic products The quality of recycled plastic products could be determined by the absence of harmful chemicals and additives, the fact that the recycling process does not present additional impacts on human health and the environment
Panama	Recycling cannot be enhanced unless production is reduced, and the waste management hierarchy must be respected, including reuse and reparability. 10.a. Recyclability of plastic products It must be ensure that the recycling of plastic products is safe and does not release hazardous toxic substances. In other words, for recyclability to exist, there must be safety in the process and the resulting product. Promote the chemical simplification of materials and plastic products to improve their recyclability and avoid concerning chemicals, and prevent legacy plastics from entering recycling streams, as they may also contain highly concerning chemicals. Whenever possible, feasible, and viable, from an environmental and economic perspective, increase the recycled plastic content for limited essential uses, preferably reusable items. Products should be designed for recycling when that is the intended waste management scenario, ensuring chemical simplification and the use of single materials. Closed-loop collection and recycling and/or sector-specific recycling will increase the safety and homogeneity of materials and their sustainable management. This requires infrastructure and support for better waste management. 10.b. Quality of recycled plastic products Before determining the recycled content in plastic products, it is necessary to ensure the safety of the process for human health and the environment and for the final consumer. It is also essential to determine the number of cycles that can be recycled to maintain the required quality for the specific application, always keeping in mind health and the environment.
México	One of the most worrying aspects is the use of additives with harmful effects on plastics. In this sense, it is necessary to consider that there is a need to have greater traceability in the supply chain so that in part it regulates whether a certain plastic waste can enter its territory for recycling purposes or not. An important aspect that has been identified is the destination of recycled plastics; in this sense, criteria have not yet been developed to determine specific uses of recycled plastics by virtue of their constituents and the processes from which waste susceptible to recycling resulted.
Egypt	8.a. Recyclability of plastic products Product design is considered one of the most important provisions of the instrument because it can support the reduction of the negative impact of plastic pollution caused by plastic products with reference to the following aspects: - Design for recycling including both engineering design and material selection. - Design for disassembly and easy separation - Use of single type plastic - Reduce plastic use and additives - Consider product lifetime - Adopt advanced recycling techniques - Consumer education and awareness - Do not use thermosets polymer; choose thermoplastics or another alternative instead - When thermoset polymers are necessary, use thermosets with a different density than the common recycled plastics 8.b. Quality of recycled plastic products Clear recycling labels and recycled content Supply chain efficiency Mix with virgin plastic polymers Effective waste management system
Vanuatu	Criteria : Plastic product does not meet recyclability standards globally The product can ultimately be recycled. In this context, the underlying idea is that the type of plastic should be suitable for recycling – here a good design can be supported by excluding non-recyclable materials, additives, composite materials, etc. In addition, and equally important, plastics should be recyclable 'in practice'and 'at scale', considering the infrastructure available not only at the national level but also internationally. These criteria should be supported by the inclusion of recycled content in the design phase and a common uptake of the recyclate in the market creating the incentive to move away from virgin plastic.

	Different actors in the plastic value chain are involved in the adoption of circular design criteria. For instance, material developers and producers can ensure that the design of products mainstreams innovative circular design approaches.Their choices can be influenced by transparency requirements, restrictions, incentives, and policies in general. Hence, a stepwise and inclusive approach for the adoption of such criteria in the instrument is proposed: first, the establishment of overarching design criteria based on the approaches described; second, an approach that paves the way for the determination of sector- or product-specific criteria by future decision-making bodies, liaising with standardisation institutions.
Thailand	8.a. Recyclability of plastic products 1. Material Selection and Management of Chemicals Used in Plastics (CiP) • Material Selection • Additive Restrictions 2. Ecodesign: Design for Disassembly, Modular Design, and Standardization • Design for Disassembly • Modular Design • Design for Reuse or Multiple Life Cycles • Standardization

Criteria	Primary Concern	Impact	Rationale
Material Selection	Use of single-type plastics and avoidance of multi-layer or composite materials	Easier sorting, recycling, and processing compared to multi-layer or composite materials, which often end up in landfills.	Single-type plastics simplify the recycling process and improve efficiency.
Additive Restrictions	Limiting the use of harmful additives, dyes, and fillers that can hinder the recycling process.	Reduces contamination in recycling streams, improves the quality of recycled plastics, and reduces environmental and health risks.	Certain additives can pose significant challenges in recycling and reuse.
Design for Disassembly	Designing products that can be easily disassembled into individual components.	Facilitates the separation of different materials, improving recycling efficiency.	Easier disassembly helps in better material recovery.
Modular Design	Designing products with modular components that can be easily replaced or upgraded.	Extends the product's lifecycle, reduces waste, and simplifies recycling by enabling easier disassembly and replacement of parts.	Modular design supports the circular economy by promoting reuse and easy maintenance.
Design for Reuse or Multiple Life Cycles	Creating products that can be reused or repurposed multiple times throughout their lifecycle.	Reduces waste generation, conserves resources, and maximizes the utility of materials.	Design for reuse promotes sustainability and efficient resource use.
Standardization	Standardizing plastic types and components to simplify sorting and recycling processes.	Simplifies the recycling process, reducing waste and improving the quality of recycled materials	Standardized materials are easier to recycle at scale.

8.b. Quality of recycled plastic products
1. Purity Standards and Material Traceability
• Purity Standards
• Material Traceability
• Additive Management
2. Collection and Materials Reprocessing Systems
• Efficient Collection Systems
• Well-controlled Reprocessing Technologies
• Integration of Circular Economy Principles

Criteria	Primary Concern	Impact	Rationale
Purity Standards	Establishing standards for the purity of recycled plastics, including limits on contaminants and additives.	Ensures that recycled plastics meet quality requirements for various applications, improving marketability and usability.	High-purity recycled plastics can be used more effectively in a wider range of products.
Material Traceability	Implementing systems for tracking and tracing the origin and composition of recycled plastics.	Enhances transparency and quality control, ensuring that recycled materials are suitable for their intended uses.	Traceability helps in maintaining high standards for recycled materials.
Additive Management	Controlling the use of additives in recycled plastics to ensure compatibility and quality.	Prevents negative interactions between different additives and improves the performance of recycled materials.	Managing additives is crucial for maintaining the integrity of recycled plastics.
Efficient Collection Systems	Developing and implementing efficient collection systems for plastic waste.	Ensures a steady supply of high-quality plastic waste for recycling, reducing contamination and improving the quality of recycled products.	Efficient collection systems are essential for maintaining the integrity of recyclable materials.
Reprocessing Technologies	Well-controlled reprocessing technologies to improve the quality and purity of recycled plastics.	Enhances the capabilities of recycling facilities to produce high-quality recycled plastics suitable for various applications.	Well-controlled recycling technologies can significantly improve the efficiency of the recycling process and the quality of recycled plastics
Integration of Circular Economy Principles	Designing systems that support the principles of the circular economy, ensuring that materials are kept in use for as long as possible.	Reduces waste, promotes sustainable resource use, and enhances the quality and utility of recycled plastics.	Circular economy principles help in creating sustainable systems that maximize resource efficiency.

Solomon Islands

8. What criteria or non-criteria based approaches for plastic product design could be reflected in the ILBI to improve the recyclability of plastic products and the quality of recycled products?

Noting that criteria for recyclability should ideally also address reusability and repairability, design criteria should broadly cover safety, sustainability, essentiality, and transparency aspects. The safe-and-sustainable-by-design framework provides valuable guidance that can be applied to plastic chemicals, materials and products.8

Several important steps can be taken to support safe and sustainable recyclability and reusability with a particular emphasis on data disclosure, traceability and trackability. Recommendations include:

1. economic incentives to drive product design high up the waste hierarchy to prioritize safe and sustainable substitute materials, products, systems and services, and safe and sustainable reuse, repair, refill, repurpose, and remanufacture.
2. improved reporting, transparency and traceability of chemicals in plastics throughout their full life cycle in combination with obligation II.13,
3. promote chemical simplification of plastic materials and products to improve their recyclability and avoid chemicals of concern. Plastic chemicals assessed as of high concern should not be used in plastics and legacy plastics should not be allowed to enter recycling streams as they may also contain chemicals of high concern (and lack data disclosure).
4. improve chemical monitoring, testing and quality control.
5. improve the recyclability of plastic products while ensuring they are designed to limit micro and nanoplastic emissions and introduce non-intentionally added substances (NIAS).
6. Increasing recycled content for limited essential uses (and preferably) reusable items (but not for food and beverage containers or baby bottles, for example).
7. Improve collection and sorting to ensure hazardous sanitary plastics (for example) are not co-mingled with food contact plastics and other plastics that could directly expose humans.

Products should be designed for recycling where that is the intended waste management scenario, ensuring chemical simplification and use of monomaterials. Closed loop collection and recycling and/or sector specific recycling will increase safety and homogeneity of materials and their sustainable management. This requires infrastructure and support for improved waste management.

Biodegradable plastics cannot be included in waste streams for recycling of non-biodegradable plastics' and require dedicated waste streams. Any application of these materials (potentially via a sectoral approach) needs to be carefully controlled throughout the full life cycle.

	8.b. Quality of recycled plastic products Mechanical recycling is the most energy efficient and (currently most) economical and least hazardous means of recycling plastics, but the degradation of material quality during the recycling process is a problem, leading to performance limitations and with negative economic, environmental, and human health impacts. This can be addressed in part by recommendations made at 8.a. Chemical contamination9 and the presence of chemicals of concern render some recycled plastics unsuitable for some applications. This is especially true for products where exposure to chemicals is very likely, such as, food contact materials, childcare goods and toys, and medical equipment. There needs to be very careful transparency, traceability and reporting including the source, management, and intended use of recycled products. We recommend banning recycled plastics for food contact, children's toys, and medical applications because it is extremely difficult to ensure the safety of these products.10 Generation and emissions of micro- and nanoplastics from mechanical recycling (facilities), i.e. wash water etc. is concerning and should be mitigated. Toxic and greenhouse gas emissions from chemical recycling plants make them even more hazardous and unsustainable than mechanical recycling 11; these technologies have not been shown to be safe or sustainable, or economically viable. Chemical recycling is not recommended also because of their high economic lock-in costs and low technical and economic rates of success12 References: 7 PlastChem – State-of-the-science of hazardous chemicals in plastic (plastchem-project.org) 8 https://op.europa.eu/en/publication-detail/-/publication/eb0a62f3-031b-11ed-acce-01aa75ed71a1/language-en/format-PDF/source-285338970 9 A dataset of organic pollutants identified and quantified in recycled polyethylene pellets - ScienceDirect 10 https://www.foodpackagingforum.org/news/hundreds-of-chemicals-migrate-from-reusable-plastic-bottles 11 'Patented blunderings', efficiency awareness, and self-sustainability claims in the pyrolysis energy from waste sector - ScienceDirect; Fire, explosion and chemical toxicity hazards of gasification energy from waste - ScienceDirect; Toxicity of char residues produced in the co-pyrolysis of different wastes - ScienceDirect 12 WG2-Briefing-Circular-Economy_ENGLISH-2.pdf (ikhapp.org)
Bahrain	- In line with the mandate of UNEA resolution 5/14 and to ensure effective and context-specific implementation, the ILBI should emphasize that product design improvements focus only on plastic products identified in national plans as problematic. All approaches should be integrated into national plans to align with each country's unique circumstances and capacities. 8.a. Recyclability of plastic products Approach 1: National Context-Specific Criteria for Problematic Plastic Products • Rationale: The ILBI should ensure that national plans consider criteria for improving recyclability are applied specifically to plastic products identified as problematic in national circumstances and plans. This focus ensures that efforts are directed towards products that pose significant challenges to national waste management. • Implementation: National plans are encouraged to include criteria for assessing and enhancing the recyclability of identified problematic plastic products. These criteria should be based on unique national waste management capabilities and priorities of in the utilization of technologies and best practices • Reference: National waste management plans, sustainability assessments. Approach 2: Design for Enhanced Recycling Processes • Rationale: The ILBI should support national efforts to promote product designs that facilitate recycling processes, specifically for problematic plastic products. This includes encouraging designs that increase the efficiency of recycling operations. • Implementation: National plans should incorporate measures for designing plastic products to improve recycling. • Reference: Industry best practices, national recycling guidelines, national specific technology availability. 8.b. Quality of recycled plastic products Approach 1: Best practices for Recycled Products • Rationale: The ILBI should ensure that national plans establish best practices for recycled plastic products. Following best practices in recycled products can enhance market acceptance and promote sustainable use. • Implementation: National plans should define and enforce quality standards for recycled plastic products, ensuring that they meet the required specifications for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Promoting Advanced Recycling Technologies • Rationale: The ILBI should support the adoption of all solutions in management of plastic pollution including advanced recycling technologies to implement best practices for recycled plastic products. These technologies can help convert plastic products into recycled materials that can go into food and medical applications. • Implementation: National plans should encourage adoption of advanced recycling technologies.

	• Reference: National innovation programs, technology assessment reports. By focusing on these criteria and non-criteria-based approaches through national plans, the ILBI can ensure that product design improvements are both effective and contextually appropriate. This strategy respects national sovereignty while promoting global consistency and sustainability in managing and recycling plastic products.
Algeria	8.a. Recyclability of plastic products Recyclability must take into account the ease of recycling the product as well as its non-harmfulness in both health and environmental terms. This part must take into consideration the principles cited in national legislation and relating to the foundations of the circular economy and the national conditions and standards for recycling, reuse and recovery; The exit from waste status to the recycling product will be clearly defined by the provisions of the new instrument. 8.b. Quality of recycled plastic products quality must take into account points relating to the ergonomics of the product, its effectiveness and its acceptability on a societal level. Aspects to be identified consensually at the instrument level and in compliance with the articles of UNEA decision 5/14.
China	8.a. Recyclability of plastic products Overall, plastic products design should be considered from the aspects of raw materials and chemical additives, how easy it can be recycled, collected, reused and repaired. For criteria-based approach, voluntary national standards or industry standards determined by countries on the design of recyclability of plastic products could be considered. Reference: Eco-design Product Evaluation Guidelines (GB/T 32161-2015), Design Guidelines for the Recyclability of Electrical and Electronic Products (GB/T 32356-2015), Evaluation Guidelines for the Design of Easy to Collect and Easy to Recycle Plastic Products (T/CRRA 0302-2020), Design Requirements for the Design of Plastic Packaging Products for Easy to Collect and Easy to Recycle and the Methods of Evaluation (T/CPF 0054-2023). For non-criteria approach: 1. Guidelines for the recyclability of plastic products based on specific product types and sectors. Considering that countries have different priorities areas in plastic pollution control, different industry characteristics and current stage of development, it is recommended the governing body of the instrument to develope guidelines so that countries and industry organizations could refer to while formulating national and industrial standards. These standards should aim to promote waste recycling and consider technological availability, social and environmental impacts, and affordability. 2.Best environmental practices and cases of product design which could help promote recycling of waste plastics (with reference to similar practices under the Basel Convention and the Stockholm Convention). 8.b. Quality of recycled plastic products The content of recycled plastics added should comply with national laws and regulations and ensure product quality. The cascade use of recycled plastics should be encouraged according to the characteristics of the industry for the sake of feasibility. For criteria-based approach, voluntary national standards or industry standards for the quality of recycled plastics formulated by countries could be considered. For non-criteria approach, guidelines prepared by the governing body of the instrument could be considered.
United Arab Emirates	In line with the mandate of UNEA resolution 5/14 and to ensure effective and context-specific implementation, the ILBI should emphasize that product design improvements focus only on plastic products identified in national plans as problematic. All approaches should be integrated into national plans to align with each country's unique circumstances and capacities. 8.a. Recyclability of plastic products Approach 1: National Context-Specific Criteria for Problematic Plastic Products • Rationale: The ILBI should ensure that national plans consider criteria for improving recyclability are applied specifically to plastic products identified as problematic in national circumstances and plans. This focus ensures that efforts are directed towards products that pose significant challenges to national waste management. • Implementation: National plans are encouraged to include criteria for assessing and enhancing the recyclability of identified problematic plastic products. These criteria should be based on unique national waste management capabilities and priorities of in the utilization of technologies and best practices • Reference: National waste management plans, sustainability assessments.

	Approach 2: Design for Enhanced Recycling Processes • Rationale: The ILBI should support national efforts to promote product designs that facilitate recycling processes, specifically for problematic plastic products. This includes encouraging designs that increase the efficiency of recycling operations. • Implementation: National plans should incorporate measures for designing plastic products to improve recycling. • Reference: Industry best practices, national recycling guidelines, national specific technology availability. 8.b. Quality of recycled plastic products Approach 1: Best practices for Recycled Products • Rationale: The ILBI should ensure that national plans establish best practices for recycled plastic products. Following best practices in recycled products can enhance market acceptance and promote sustainable use. • Implementation: National plans should define and enforce quality standards for recycled plastic products, ensuring that they meet the required specifications for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Promoting Advanced Recycling Technologies • Rationale: The ILBI should support the adoption of all solutions in management of plastic pollution including advanced recycling technologies to implement best practices for recycled plastic products. These technologies can help convert plastic products into recycled materials that can go into food and medical applications. • Implementation: National plans should encourage adoption of advanced recycling technologies. • Reference: National innovation programs, technology assessment reports. By focusing on these criteria and non-criteria-based approaches through national plans, the ILBI can ensure that product design improvements are both effective and contextually appropriate. This strategy respects national sovereignty while promoting global consistency and sustainability in managing and recycling plastic products.

Nominating Member	Part D. 11. What criteria or non criteria based approaches for plastic product design could contribute to improve the reusability of plastic products and the quality of reuse systems? a. Reusability of plastic products b. Quality of reuse systems for plastic products
Portugal	11a, 11b,
Suriname	I'll address this question by discussing approaches for improving the reusability of plastic products and the quality of reuse systems separately. 11.a. Reusability of plastic products 1. Durability Standards Criteria: Establish minimum durability requirements for reusable products. Rationale: Ensures products can withstand multiple use cycles. Reference: Coelho, P. M., et al. (2020). Sustainability of reusable packaging–Current situation and trends. Resources, Conservation & Recycling: X, 6, 100037. 2. Design for Disassembly Criteria: Products should be easily disassembled for cleaning, repair, or part replacement. Rationale: Facilitates maintenance and extends product lifespan. Reference: Bakker, C., et al. (2014). Products that last: Product design for circular business models. TU Delft Library. 3. Standardized Components Criteria: Use standardized, interchangeable parts across product lines. Rationale: Simplifies repair and replacement, encouraging longer use. Reference: Ellen MacArthur Foundation. (2013). Towards the Circular Economy Vol. 1: Economic and business rationale for an accelerated transition.

4. Material Selection Criteria: Choose materials that maintain integrity over multiple use cycles.
Rationale: Ensures product quality and safety over extended periods of use.
Reference: Hahladakis, J. N., & Iacovidou, E. (2018). Closing the loop on plastic packaging materials: What is quality and how does it affect their circularity? Science of The Total Environment, 630, 1394-1400.

5. User-Centered Design
Criteria: Design products that are convenient and appealing for repeated use.
Rationale: Encourages consumer adoption of reusable alternatives.
Reference: Lofthouse, V., & Prendeville, S. (2018). Human-centred design of products and services for the circular economy–A Review. The Design Journal, 21(4), 451-476.

Non-criteria based approach:
6. Lifecycle Assessment (LCA)
Approach: Use LCA to compare environmental impacts of single-use vs. reusable options.
Rationale: Ensures reusable designs offer genuine environmental benefits.
Reference: Gallego-Schmid, A., et al. (2019). Environmental impacts of takeaway food containers. Journal of Cleaner Production, 211, 417-427.

11.b. Quality of reuse systems for plastic products
1. Cleaning and Sanitization Standards
Criteria: Establish protocols for cleaning and sanitizing reusable products.
Rationale: Ensures safety and hygiene in reuse systems, particularly for food contact items.
Reference: Greenwood, S., et al. (2020). Hygiene Aspects of Reusable Food Containers. Reference Module in Food Science, Elsevier.

2. Traceability Systems
Criteria: Implement systems to track individual items through multiple use cycles.
Rationale: Enables monitoring of product lifespan and ensures quality control.
Reference: Coelho, P. M., et al. (2020). Sustainability of reusable packaging–Current situation and trends. Resources, Conservation & Recycling: X, 6, 100037.

3. Reverse Logistics Infrastructure
Criteria: Design efficient systems for collection, cleaning, and redistribution of reusable items.
Rationale: Facilitates widespread adoption of reuse systems.
Reference: Coelho, P. M., et al. (2020). Sustainability of reusable packaging–Current situation and trends. Resources, Conservation & Recycling: X, 6, 100037.

4. Quality Assurance Protocols
Criteria: Establish regular inspection and testing procedures for reusable products.
Rationale: Ensures continued safety and functionality of products over multiple use cycles.
Reference: Greenwood, S., et al. (2020). Hygiene Aspects of Reusable Food Containers. Reference Module in Food Science, Elsevier.

5. Standardized Reuse Models
Criteria: Develop standardized reuse models (e.g., refill, return systems) for different product categories.
Rationale: Simplifies implementation and scaling of reuse systems.
Reference: Ellen MacArthur Foundation. (2019). Reuse: Rethinking Packaging.

Non-criteria based approaches:

6. Collaborative Ecosystem Approach
Approach: Foster collaboration between producers, retailers, and waste management to create integrated reuse systems.

	Rationale: Addresses systemic challenges in implementing reuse at scale. Reference: Lofthouse, V., & Prendeville, S. (2018). Human-centred design of products and services for the circular economy–A Review. The Design Journal, 21(4), 451-476. 7. Consumer Education and Incentives Approach: Develop programs to educate consumers and provide incentives for participating in reuse systems. Rationale: Encourages behavior change and adoption of reusable products. Reference: Heidbreder, L. M., et al. (2019). Tackling the plastic problem: A review on perceptions, behaviors, and interventions. Science of The Total Environment, 668, 1077-1093.
Somalia	Focus on durability, modular design, and ease of cleaning. Relevant applications: food containers, household items, automotive parts.
El Salvador	The criterion of durability, robust, attractive to use many times, together with promoting the use of beverage vending machines, being able to use technologies with QR codes to choose between the different brands. Plastic products must be easily dismantled and easy to repair with a stock of parts or the possibility of 3D printing.
Oman	a. Reusability of plastic products: Potential criteria for the improvement of reusability of products: - Design for durability. - Standardization of individual components used in finished products. - Design for easy disassembly. - Design for easy reassembling. b. Quality of reuse systems for plastic products: Refurbish ability and optimization of material flow could be considered as other potential attributes.
Republic of Cuba	The criteria were set out in the previous point (recycled plastic products).
Japan	As for reusability, the following elements, which would contribute to the improved reusability of plastic products and the quality of reuse systems, are suggested to be included in the Annex; 1. Longer use and longer service life ✓ Enhance the durability of the product. ✓ The product is able to withstand repeated use. ✓ The parts of the product are easily replaceable. ✓ The product is easily repairable. 2. Use of easily reusable parts or reuse of parts ✓ Use parts that are easily reusable. ✓ Reuse parts. Note: The same proposals by Japan are already reflected in the Annex of the compilation of draft text (“Possible annexes to the instrument”, “4. Proposed annex relating to element II.5”, page 76-77).
New Zealand	11a Reusability of plastic products New Zealand wishes to propose a non-exhaustive list of possible criteria that could be used to improve the reusability of plastic products, based on engagement with domestic stakeholders and domestic policy thinking. - The product can be reused many times for the same purpose. - The product can be reused safely before it begins to degrade. - The product has passed a manufacturers test for durability. - The product is clearly labelled or there is communication with customers on what should be done with the product at the end of its life. 11b Quality of reuse systems for plastic products New Zealand wishes to provide the following non-exhaustive list of possible criteria for reusable packaging systems: - High reuse rates of the product that meet and surpass the cost and environmental impact of the products original production and transportation, than compared to single-use equivalents (ie. Life cycle assessment).

	- Efficient logistics and preparation for reuse phase, such as returns, transportation, washing, and redistribution. For example, low-emission mode of transport and energy and water efficient equipment and machinery. - Packaging units and materials that are benign to environmental and public health across the lifecycle (this could be linked to requirements in Part II.2 chemicals and polymers of concern). - Reusable packaging systems should be accessible, affordable, and readily available for consumers and businesses at a level at least equivalent to single-use products.
Russian Federation	11.a. Reusability of plastic products. Potential criteria for the improvement of reusability of products: • Design for durability; • Standardization of individual components used in finished products; • Design for easy disassembly; • Design for easy reassembling. Members also should bear in mind that these criteria should apply "to the extent possible and feasible" because not all criteria could be applied simultaneously for all products.
Cook Islands	11.a. Reusability of plastic products Standards should require that products do not contain chemicals of high concern, and that applications suit the material/chemical composition of the materials. Measures to improve design and performance must beincluded. Durability assessments should ensure low microplastic and nanoplastic particles emissions, tested under a range of conditions including heat and abrasion, and eliminate risks associated with additional leaching of potentially hazardous chemicals. We stress that chemical contamination in reused plastic food contact products is of concern, requires standards for washing, etc. The same safety and sustainability criteria should apply here. Reuse (identical purpose) and repurpose (different purpose) need to be assessed differently. Reuse requires dedicated programs for building infrastructure that companies can potentially share. This will likely require governments supporting the setting up and operation of appropriate infrastructure, container pools, etc. Maintaining such infrastructure will not be viable for individual commercial companies, therefore a coordinated approach will be needed to increase economies of scale. 11.b. Quality of reuse systems for plastic products Criteria should be established to construct and maintain infrastructure. Reuse rates should be monitored and reported. Quality assurance will require economic investments and capacity building. Ecomodulated fees, levies, plastic taxes, EPR schemes and the financial mechanism under the future treaty should direct funds toward, and otherwise support and incentivise safe and sustainable product and systems/services design for plastic free delivery systems and reuse/refill.
Tuvalu	11.a. Reusability of plastic products Reusability is influenced by, amongst others: 1. Durability of the item (not subject to breakdown by UV, cleaning chemicals, etc). 2. Feasibility of collection of the item destined for reuse due to product design. 3. Feasibility of collection of the item destined for reuse due to infrastructure required. 11.b. Quality of reuse systems for plastic products Safety of reuse systems is greatly influenced by: 1. Release of chemicals, micro- and nano-plastics during continued reuse. 2. Chemicals used to clean items for reuse. 3. Contamination of waste stream, requiring improvements to collection, sorting and cleaning. EPR schemes can assist, including container-deposit schemes.
Republic of Korea	11.a. Reusability of plastic products: Criteria for enhancing the durability, reusability, cleaning, collection, and storage of plastic products could be considered. 1. Expanding life cycle of products A. Enhancing the durability of the product B. Enhancing the reusability of the product or its components C Making the product easier to clean (e.g., dishwasher safe, separable components, etc.) D. Establishing sanitation standards for the product and reusing services to maintain a high level of hygiene E. Making collection and storage of the product easier 11.b. Quality of reuse systems for plastic products: To enable and ensure a high-quality reuse system, authorities can implement various measures such as offering economic incentives to industries that provide alternative options to consumers. 1. Promoting rental and sharing services for multi-use food containers involves providing economic incentives to certified enterprises that meet the following criteria: A. The production and design of food containers must comply with the Standards and Specifications concerning Apparatus, Containers, and Packages. B. The production and design of food containers must consider reusability and recyclability, including using single materials and separable components. C. Enterprises must establish management standards and plans for reusing and recycling food containers. Recommended standards and plans include:

	i. Water usage is managed according to WATER ENVIRONMENT CONSERVATION ACT, to reduce environmental impacts. Monthly hygiene and safety training are provided for cleaning personnel, and maintenance of cleaning system equipment is documented. ii. Green product purchases are prioritized, with performance tracked in documentation (excluding cleaning agents), and specific measures are taken to prevent container loss. iii. Collaborative efforts are in place for transportation efficiency, and delivery vehicles receive regular safety inspections, alongside ongoing safety training to prevent accidents. Following reports and guidelines by international organization or foundations could be referenced: 1. World Economic Forum, "The New Plastics Economy: Rethinking the future of plastics" 2. Ellen MacArthur Foundation (2019). Reuse rethinking packaging. Available at: https://www.ellenmacarthurfoundation.org/reuse-rethinking-packaging Following national measures implemented by Republic of Korea could also be referenced: 1. Standards for certification of Eco-Label: Reusable Containers Rental Service.
Malaysia	Similar to Question 10, we believe that those factors can be applied to reusability of plastics products as well. The availability of robust infrastructure and ecosystem and market acceptance of reusability will be crucial to promote and sustain the habit of reuse amongst the consumers.
Philippines	11.a. Reusability of plastic products Reuse refers to the process of using a plastic product again for a purpose identical to its original purpose, while repurposing refers to a purpose different from its original one. Designing for reuse requires products to be more robust and durable. It also means withstanding higher temperatures and pressures in a wash cycle. Scaling reuse requires organizational, financial, and technical arrangements, shared infrastructure, and standards to improve efficiency, convenience, and affordability while promoting compatibility and interoperability within and among regions and nations. Minimum performance criteria for reusable systems could include a minimum number of rotations and/or minimum packaging return rates. Other criteria include harmonized reuse labeling, packaging design that allows for effective washing, interoperable collection systems, and standards developed through the participation of stakeholders including businesses, waste workers, the informal sector, consumer and environmental groups, and public health professionals. Key packaging sectors could have phase-in targets including food and beverage take-away packaging, consumer packaged goods, business-to-business packaging, and e-commerce packaging. (Ref: Recommendations on the revised draft text of the international legally binding instrument on plastic pollution, including in the marine environment, Recommendations by PR3, the Global Alliance to Advance Reuse; https://www.pr3standards.org/global-plastic-treaty-inc-4) 11.b. Quality of reuse systems for plastic products Mechanical testing can be used to assess durability, including impact strength, flexural strength, scratch or abrasion resistance, elongation and tearing strength, etc. The design should be optimized for chemical resistance based on intended use to prevent cracking, clouding, decomposition, crazing, deformation, etc. of reused plastic products. Outdoor products should be designed for UV stability based on the solar radiation (in kilo Langley per year) of the region where reuse is intended while promoting chemical simplification. Solar radiation is mapped per region worldwide. In the Philippines, the challenges related to reuse systems are illustrated by the 164 million pieces of sachet plastic waste discarded daily. Sachets are cheap, single-use, disposable packaging of small quantities of consumer products ranging from shampoo, and soap, to coffee and condiments. These sachets were introduced in the late 1960s by multinational companies for sale in about a million neighborhood stores catering to low-income families. In doing so, they displaced traditional dispensing and refill systems using reusable containers, a sustainable practice dating back to the 16th century. A return to traditional reuse-refill systems requires storage containers that maintain the shelf life of products, sustainable packaging, development of an alternative distribution system and supply chain, low-cost dispensing equipment, reusable containers and associated washing and sanitizing systems, mainstreaming of zero waste stores, enabling regulation, and a cultural shift that challenges the marketing power of branded products, among others.
Singapore	a. Reusability of plastic products Guidelines/framework for plastic product design to improve reusability of plastic products could include the following - • Durability of material: Product should be designed for long service-life and long-term use. • Ease of disassembly and reassembly: Design should facilitate non-destructive disassembly and reassembly to promote reuse. • Multiple use cases: Design should allow for a variety of use cases (i.e. product can be reused in multiple ways) to promote reuse. • Safety/human health aspect: Reuse system should be safe for long-term use (i.e. do not release harmful chemicals after prolonged usage). b. Quality of reuse systems for plastic products Guidelines/framework for plastic product design to improve quality of reuse systems for plastic products could include the following - • Type of reuse system: Design should consider the type of reuse system for the product (e.g. refill at home, refill on the go, return from home, return on the go). • Scale of infrastructure

	• Packaging standardisation and pooling
Costa Rica	9.a Criteria-based approaches to enhance the reusability of plastic products include designing for durability, standardization, and modularity. Durable designs ensure that plastic products can withstand multiple uses and extended lifespans. Standardization involves creating uniform sizes and shapes, making it easier to interchange components and products, thus promoting reuse. Modularity allows for parts to be replaced or upgraded instead of discarding the entire product. In Costa Rica, incorporating locally sourced, biodegradable, or recyclable materials into these designs can also support local economies More details as follow: Biodegradability: o Ensuring that the plastic products can break down naturally in the environment without causing harm. Material Safety and Non-Toxicity: o Using non-toxic materials that do not release harmful chemicals during production, use, or disposal. Durability and Repairability: Designing plastic products that are durable and easy to repair can significantly extend their useful life, which is essential in a circular economy. Products that can be fixed rather than thrown away foster a culture of repair and maintenance. In Costa Rica, this can translate into the creation of community workshops and repair centers, generating employment and reducing waste. Simplicity in Disassembly: Products should be designed to facilitate disassembly at the end of their useful life, allowing the separation and recycling of their individual components. This includes avoiding combining different types of plastics that are difficult to separate and recycle. In Costa Rica, this could support more efficient recycling infrastructure and help cooperatives and small recycling businesses operate more effectively, maximizing the recovery of valuable materials and reducing pollution. Ease of Manufacturing: Simplifying the manufacturing process to reduce complexity, time, and cost. Supply Chain Sustainability: Ensuring that the raw materials and manufacturing processes are sourced and conducted in an environmentally and socially responsible manner. 9.b Quality of reuse systems for plastic products Criteria-based approaches to improve the quality of reuse systems include implementing robust collection and sorting infrastructure, establishing clear labeling standards, and promoting product take-back schemes. Effective collection and sorting systems ensure that reusable plastics are efficiently recovered and directed back into the reuse cycle. Non-Criteria-Based Approaches Innovation and Creativity: Encouraging novel and creative design solutions that may not fit traditional criteria but offer unique benefits. Consumer Preferences and Trends: Taking into account the changing preferences and trends in consumer behavior which may influence design choices. Brand Image and Values: Aligning product design with the brand's image and values, such as sustainability commitments.
The European Union and its 27 Member States	11.a. Reusability of plastic products: A non-reusable or a non-recyclable plastic product should be identified as problematic and restricted. As a wide range of products is covered under the ILBI, specific criteria or requirements should be established, prioritizing the high impact sectors. It could be done via a dedicated programme of work, bringing together the relevant experts and stakeholders, which will provide useful recommendations to the future parties. Furthermore, a minimum target for reuse should be established, with in the second stage a specific target per sector. General design principles regarding design for reuse could include (derived from the business coalition policy briefing on reuse): • Design reusable products for a minimum number of rotations within a given system • Provide clear labeling for consumers on how to return • Ensure consumer acceptance and avoid unnecessary hurdles for reuse compared with single-use alternatives • At the end of life, reusable plastics products should be recyclable In addition to general design principles regarding the design of reuse and recycling, the EU and its member states strongly support the idea of a list in the Annex containing problematic products to be phased out and reduced.

	11.b. Quality of reuse systems for plastic products: This is notably linked to the design of the plastic products including the selection of the suitable material to build the product, the design of replaceable parts of the product and the standardization of shape and design of the different elements to ensure easy management and practical use of reuse systems. Examples of criteria for the design of reuse systems can be found in the business coalition policy briefing on reuse .
United Kingdom	11.a. Reusability of plastic products The following are some examples of what could be considered when developing criteria and non-criteria approaches: • Reusable items are sufficiently robust to withstand a minimum number of rotations greater than their sustainability breakeven point. This is the point after which a reusable item's single rotation has a smaller environmental footprint than its equivalent single-use item • Standardised and clear product data to enable the identification of the sustainability breakeven point of a reusable item • Consistent design allowing products to be reused by multiple brands (like wine bottles, tin cans, etc.) • Development of hygiene standards associated with the reusable item • Labelling to support consumer choices • Globally harmonised labelling • Increased transparency to understand and monitor reusability for an application. • Consumer reward systems (loyalty points, discounts, donation to social enterprise etc etc) • Development of distributed and shared reuse hubs for hygiene treatment and replenishment models for operational and economic efficiency • Promote polymer types that are strong and durable e.g. Polycarbonate reusable cups over Polystyrene single use cups • Use polymers that are chemically stable- that do not leach harmful materials (e.g. additives) or readily form microplastics over time • Modular design/ easy disassembly. Noting that reuse systems do not need to involve the reuse of plastics only. It may be sensible to adopt a position of being material agnostic for reuse systems, as in some cases alternatives to plastics (subject to high integrity and full life cycle LCAs) may be less sustainable than plastic. 11.b. Quality of reuse systems for plastic products Those highlighted in 11a could also apply to the quality of reuse systems.
Federated States of Micronesia	
Saudi Arabia	All approaches should be implemented through national plans to ensure they are context-specific and align with each country's unique circumstances and capacities. The focus should be on plastic products identified as problematic Reusability of plastic products: Approach 1: National Context-Specific Criteria for Reusability • Rationale: The ILBI should encourage national plans apply criteria for enhancing reusability. This focus ensures efforts are directed towards products that present significant reuse challenges. • Implementation: National plans should define criteria for assessing and improving the reusability of plastic products. These criteria should consider national capabilities, and market conditions. • Reference: National reuse policies, sustainability assessments. Approach 2: Design for Multiple Uses • Rationale: National initiatives to promote product designs that facilitate multiple uses. This includes encouraging designs that enhance the durability and adaptability of plastic products identified as non-reusable within national waste management context. • Implementation: National plans should incorporate measures for enhancing designs for plastic products, considering product specific considerations such as meeting application requirements, robustness, longevity, durability, safety, ease of cleaning, storability, reassembly, and fitness for multiple uses. • Reference: Industry best practices, national design standards. Quality of reuse systems for plastic products: Response of Saudi Arabia: The effectiveness of reuse systems varies by country due to factors like resources, infrastructure, and consumer needs. Approach 1: Best practices for Reuse Systems

	• Rationale: The ILBI should encourage national plans to support best practices for reuse systems, focusing on plastic products identified as non-reusable within national waste management context, to enhance efficiency and sustainability. • Implementation: National plans should define and enforce standards for reuse systems, ensuring effectiveness for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Support for Reuse Infrastructure • Rationale: The ILBI should encourage the development of infrastructure for reuse systems within national plans while recognizing the cost implications of such infrastructure and the limitations of developing countries both fiscal and technology wise. • Implementation: Developing countries require support for national plans to promote the development and maintenance of infrastructure necessary for effective reuse systems. • Reference: National infrastructure development programs, industry best practices.
the United States.	The answers provided for question 10 are relevant for product reusability.
Ecuador	9.a. Reusability of plastic products Safety and Compliance: ensuring adherence to safety standards, hygiene protocols, and regulatory requirements in reuse systems to guarantee the quality and integrity of reused plastic products. Inspection and Certification: for regular inspection, testing, and certification of reused plastic products and reuse systems to verify quality, performance, and reliability. Traceability and Documentation: promoting traceability measures and proper documentation throughout the reuse process to track product history, maintenance records, and adherence to quality control measures. 9.b. Quality of reuse systems for plastic products Technology Integration: Introducing digital solutions, IoT-enabled tracking systems, and smart technologies to optimize the management, monitoring, and quality control of reuse systems for plastic products. Circular Economy Business Models: Implementing circular economy business models such as product-as-a-service and sharing economy platforms that encourage efficient resource utilization, product longevity, and quality-driven reuse practices. Stakeholder Collaboration: Fostering collaboration among stakeholders, including manufacturers, recyclers, consumers, and policymakers, to establish best practices, standards, and innovation in quality assurance for reuse systems of plastic products. Training and awareness
Ethiopia	A. Reusability of plastic products Improving the reusability of plastic products involves both design criteria and non-criteria-based approaches that focus on enhancing durability, compatibility, and efficiency in reuse systems. To improve the reusability of plastic products and the quality of reuse systems, the following criteria should be considered in the design phase: 1. Material Selection: o Rationale: Choosing durable and easily cleanable materials (like certain types of plastics) can prolong product lifespan and facilitate multiple reuse cycles. o Source: The Ellen MacArthur Foundation emphasizes the importance of selecting materials that are suitable for reuse without degradation, thus supporting circular economy principles. 2. Modularity and Standardization: o Rationale: Designing products with standardized components or modular structures allows for easier disassembly, repair, and replacement of parts, extending product life and facilitating reuse. o Source: The EU Circular Economy Action Plan highlights the benefits of modular design in promoting reusability and reducing waste. 3. Ease of Cleaning and Maintenance: Products should be designed to allow thorough and simple cleaning, such as being dishwasher-safe and fit for disassembly. o Rationale: Products that are easy to clean and maintain are more likely to be reused effectively without compromising hygiene or performance. o Source: The World Economic Forum discusses the importance of design for ease of cleaning in promoting circularity and reuse in various product categories. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 4. Fit for Multiple Use: - Products should be designed with good strength and durability characteristics to enable prolonged use and reuse instead of single-use. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 5. Specificity:

	- Design choices should be specific to the target reuse model, incorporating all the life cycle stages of the reusable product. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 6. Safety: - Design and composition, including chemical substances, should consider safety requirements for health and the environment for repeated use, such as potential issues with the release of microplastics over a long-life cycle. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 7. Ease of Storability: - The shape, including packaging, should be designed to make it easy to stack and store. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 8. Reassembly: - Design for reuse should enable non-destructive disassembly and reassembly at end-of-life. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf B. Quality Criteria for Reuse Systems 1. Collaboration: - across the value chain is key to making the economics work and maximizing the environmental opportunity for return-based reusable plastic packaging. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 2. Scale and Implementation Level: - Higher scale of reuse system implementation and collaboration lead to greater environmental benefits in terms of GHG emissions, material and water savings, as well as potential economic benefits, compared to single-use packaging. https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 3. Logistic Lifetime: - Identifying the waste path, including market criteria in collection and sorting (local, national, global), and recycling technology. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 4. Recyclability Verification: - Ensuring recyclability according to existing, revised or newly developed standards. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 5. Cradle to Cradle/Grave LCA: - Conducting standardized life cycle assessments as decision support for design [2]. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf By incorporating these criteria into the design process, plastic products can be made more reusable, and reuse systems can be designed to ensure high-quality, efficient, and environmentally-friendly operations.
Uruguay	First of all, it is necessary to stablish a list of plastic products which in a specific timeframe shall be reusable. For example, some packaging products that are used in the distribution and transportation logistics. There are 2 types of reusability for plastics products that would require different design criteria and also different system requirements. There are those dedicated to consumers and the dedicated to B2B. In addition to design criteria, also, the following step will be key in the implementation on an effective reusability system: - Co-creation of a standard for reusable packaging. - Development of additional convenient return infrastructure. - Investment in regional, shared, classification and washing infrastructure. - IT integration for automation and traceability. For both cases, there will be needed universal designs for packaging formats across all brands or products. For B2B, in addition to standardization (or universalization), modularization will be necessary.

Chile	11.a. Reusability of plastic products 11.b. Quality of reuse systems for plastic products Criteria-Based Approaches Material Durability and Safety • Criterion: Use of durable, high-quality materials that can withstand multiple uses and cleaning cycles without degrading. o Rationale: Durable materials such as high-density polyethylene (HDPE), polypropylene (PP), and certain grades of polyethylene terephthalate (PET) ensure that plastic products can be reused without degrading. These materials are resistant to wear, impact, and chemical exposure, making them ideal for repeated use. o Sources: European Commission. (2020). A European Strategy for Plastics in a Circular Economy; American Chemistry Council. (2021). Plastic Material Properties. It is important to take into account the reusability of plastic products Design for Ease of Cleaning • Criterion: Design products with smooth surfaces and minimal crevices to facilitate easy cleaning and sanitation. o Rationale: Products that are easy to clean and sanitize reduce the risk of contamination and prolong their lifespan. Smooth surfaces and simple designs ensure that all parts of the product can be thoroughly cleaned, maintaining hygiene standards. o Sources: Food Packaging Forum. (2021). Design for Reuse; International Journal of Environmental Research and Public Health. (2018). Sanitization of Reusable Plastic Items. Modularity and Repairability • Criterion: Incorporate modular design elements that allow for easy replacement of parts and repairs. o Rationale: Modular designs enable users to replace worn or damaged components instead of discarding the entire product. This approach extends the product's life and reduces waste, supporting a circular economy. o Sources: Ellen MacArthur Foundation. (2017). Circular Design Guide; Sustainable Packaging Coalition. (2020). Modular Design in Packaging. Standardization of Components • Criterion: Use standardized components and fittings to ensure compatibility and ease of replacement. o Rationale: Standardized parts facilitate the interchangeability of components across different products, simplifying repairs and maintenance. This standardization allows for the interchangeability of components across different products, reducing the need for specialized parts and making the reuse system more efficient. o Sources: ISO. (2019). Standards for Sustainable Development; Journal of Cleaner Production. (2016). Standardization and Modularization in Product Design. Non-Criteria Based Approaches Best Practices and Recommendations • Approach: Develop and promote industry-specific best practices for designing reusable plastic products. o Rationale: Best practices provide guidelines and examples for manufacturers to follow, encouraging the adoption of design principles that enhance reusability. These practices can be tailored to different industries, ensuring relevance and practicality. o Sources: UNEP. (2020). Guidelines for Designing Reusable Products; Plastics Industry Association. (2019). Best Practices in Plastic Product Design. Lifecycle Assessments (LCAs) • Approach: Conduct comprehensive LCAs to evaluate the environmental impact of plastic products from production to disposal. o Rationale: LCAs provide insights into the environmental benefits and drawbacks of reusable products, helping designers optimize their products for sustainability. By understanding the full lifecycle impact, manufacturers can make informed decisions about materials and design features. o Sources: Environmental Protection Agency (EPA). (2021). Life Cycle Assessment (LCA) Resources; Journal of Industrial Ecology. (2018). LCA of Reusable Plastic Products. Consumer Education and Engagement • Approach: Educate consumers about the benefits of reusable plastic products and how to maintain them properly. o Rationale: Consumer behavior plays a significant role in the success of reuse systems. Educating consumers on the environmental benefits of reusables and providing guidance on proper use and maintenance can increase acceptance and prolong the life of products. o Sources: National Geographic. (2019). Consumer Guide to Reusable Plastics; GreenBlue. (2020). Engaging Consumers in Reuse.

Incentive Programs
• Approach: Implement programs that incentivize the use of reusable plastic products, such as deposit-refund schemes and loyalty programs. o Rationale: Incentives encourage consumers to return and reuse products, reducing the demand for single-use plastics. Programs like deposit-refund schemes create a financial motivation for consumers to participate in reuse systems.
o Sources: Ellen MacArthur Foundation. (2021). Incentive Systems for Reusable Products; Resource Recycling Systems. (2019). Deposit-Refund Systems and Reuse.

Specific Criteria for Improving Reusability
Ergonomic Design
• Criterion: Design products that are comfortable and easy to use repeatedly.
o Rationale: Ergonomic designs encourage consumers to reuse products by making them more user-friendly and convenient. For example, reusable water bottles with easy-to-open lids and comfortable grips are more likely to be used regularly.
o Sources: Human Factors and Ergonomics Society (HFES); Journal of Ergonomics.
Labeling and Instructions
• Criterion: Provide clear labeling and instructions for proper use, cleaning, and maintenance of reusable products.
o Rationale: Clear instructions help consumers understand how to care for reusable products, ensuring they remain in good condition and are used to their full potential. Labels can also inform consumers about the environmental benefits of using the product.
o Sources: ISO. (2019). Standards for Sustainable Development; Consumer Reports.

Functional Aesthetics
• Criterion: Design products that are not only functional but also aesthetically pleasing to encourage repeated use.
o Rationale: Products that look good and function well are more likely to be used repeatedly. Aesthetically pleasing designs can also enhance the perceived value of the product, encouraging consumers to keep and reuse it.
o Sources: Journal of Product Innovation Management; Design Management Institute.

Non-Criteria Based Approaches for Enhancing Reusability

Collaboration and Partnerships
• Approach: Encourage collaboration between manufacturers, designers, and environmental organizations to develop and promote reusable products.
o Rationale: Collaborative efforts can lead to the development of innovative solutions and the widespread adoption of best practices for designing reusable products.
o Sources: Ellen MacArthur Foundation; UNEP.

Research and Development
• Approach: Invest in research and development to create new materials and technologies that enhance the durability and reusability of plastic products.
o Rationale: Advances in materials science and product design can lead to the development of products that are more durable, easier to clean, and more user-friendly.
o Sources: National Science Foundation (NSF); Horizon 2020.

Extended Producer Responsibility (EPR)
• Approach: Implement EPR programs that require producers to take responsibility for the entire lifecycle of their products, including the end-of-life management of reusable products.
o Rationale: EPR programs incentivize manufacturers to design products that are durable and reusable, supporting the development of effective reuse systems.
o Sources: OECD. (2016). Extended Producer Responsibility; European Union.

10. Are there other potential attributes, apart from improved reusability and recyclability, to be considered in criteria and non criteria based approaches for plastic product design?

Criteria-Based Approaches
Biodegradability and Compostability
• Criterion: Use of materials that can biodegrade or be composted under natural conditions.

o Rationale: Biodegradable and compostable plastics reduce long-term environmental impact by breaking down into non-toxic byproducts. This is especially important for single-use products that are prone to littering and difficult to collect for recycling.
o Sources: UNEP. (2021). Biodegradable Plastics.

Chemical Safety and Non-Toxicity
• Criterion: Ensuring that plastics do not release harmful chemicals during use or disposal.
o Rationale: Non-toxic plastics protect human health and the environment from hazardous substances such as phthalates, bisphenols, and heavy metals. This attribute is crucial for products in direct contact with food, beverages, or human skin.
o Sources: European Chemicals Agency (ECHA), U.S. Environmental Protection Agency (EPA).

Energy Efficiency in Production
• Criterion: Reducing the amount of energy required to produce plastic products.
o Rationale: Lowering the energy consumption during manufacturing reduces greenhouse gas emissions and the overall carbon footprint of plastic products. This is essential for mitigating climate change and enhancing the sustainability of production practices.
o Sources: International Energy Agency (IEA). (2019). Energy Efficiency in Plastics Manufacturing.

Lightweighting
• Criterion: Designing plastics that use less material without compromising strength and functionality.
o Rationale: Lightweighting reduces material use and transportation costs, resulting in lower environmental impact and resource conservation. This is particularly beneficial for packaging and automotive industries.
o Sources: PlasticsEurope. (2020). Lightweight Packaging.

Functional Performance
• Criterion: Ensuring that plastics meet high standards of durability, flexibility, and strength for their intended applications.
o Rationale: High-performance plastics that maintain their properties over time reduce the need for frequent replacements, contributing to sustainability and cost-effectiveness.
o Sources: American Chemistry Council. (2021). Plastic Material Properties.

Non-Criteria Based Approaches
Best Practices and Industry Guidelines
• Approach: Developing and promoting best practices for designing safe, sustainable, and efficient plastic products.
o Rationale: Best practices offer actionable advice and examples for manufacturers, encouraging the adoption of sustainable and safe design principles. These can be tailored to specific industries and applications.
o Sources: UNEP, Plastics Industry Association.

Lifecycle Assessments (LCAs)
• Approach: Conducting comprehensive LCAs to evaluate the environmental impact of plastic products from production to disposal.
o Rationale: LCAs provide insights into the environmental and health impacts of plastic products, guiding manufacturers in optimizing designs for sustainability. This includes considering energy use, emissions, and end-of-life scenarios.
o Sources: Environmental Protection Agency (EPA). (2021). Life Cycle Assessment (LCA) Resources.

Consumer Education and Engagement
• Approach: Educating consumers on the benefits of sustainable plastic products and how to use and dispose of them properly.
o Rationale: Informed consumers are more likely to choose and maintain sustainable products, supporting market shifts towards environmentally friendly options.
o Sources: National Geographic. (2019). Consumer Guide to Sustainable Plastics.

Incentive Programs
• Approach: Implementing financial and regulatory incentives to encourage the design and production of sustainable plastic products.
o Rationale: Incentives such as tax breaks, subsidies, or grants can motivate manufacturers to prioritize sustainability and safety in their product designs.

	o Sources: Ellen MacArthur Foundation. (2021). Incentive Systems for Sustainable Products. Collaboration and Partnerships • Approach: Encouraging collaboration between manufacturers, recyclers, policymakers, and researchers to develop and implement sustainable plastic design standards. o Rationale: Collaborative efforts ensure that all stakeholders are aligned in promoting sustainability and improving recycling and reuse systems. o Sources: Ellen MacArthur Foundation, UNEP.
State of Kuwait	9.a. Reusability of plastic products The design should be durable. 9.b. Quality of reuse systems for plastic products N/A
Peru	For reuse models to be effective on a large scale, it's crucial to consider both the design of the packaging and the system in which the reuse model operates. Research and practical experience have shown that reuse can be both environmentally and economically advantageous in certain applications and with specific system considerations. Most international stakeholders involved in developing reuse systems agree that a collaborative approach is necessary, which includes: • Identifying priority applications and sectors where the model has proven to be most effective (e.g., closed systems like venues, events, and on-site dining, bottled beverages, on-the-go food and drink, home and personal care, and business-to-business). • Sharing infrastructure, such as collection, sorting, cleaning, and transportation, to achieve economies of scale. • Standardizing and pooling packaging: standardized packaging enhances the efficiency of sorting, cleaning, and storage, while pooling reduces transportation distances, emissions, and costs. • Implementing incentives to promote high return rates. About design requirements: • Reusable containers must be integrated into a system where the necessary infrastructure and mechanisms are established to enable practical and scalable reuse. • Reuse models should be designed to avoid unintentionally increasing packaging waste or contributing to the proliferation of problematic packaging. • Reusable containers should be rotated a sufficient number of times to ensure they do not create a higher environmental impact compared to the single-use alternatives they replace. • Reusable containers must be recyclable at the end of their life cycle.
Government of India	9.a. Reusability of plastic products Criteria-based and non-criteria-based approaches can significantly contribute to the reusability of plastic products in the following ways • Designing for Disassembly: Products must be designed so they can be easily taken apart without damage to leverage the benefits of repair, upgradation, and eventual recycling of individual components. • Use of Single-Type Plastics: Products should be made from a single type of plastic or compatible plastics/ polymers to facilitate the recycling process and reduce contamination. • Standardized Components: Using standard sizes and types of components would make it easier to find replacement parts, extending the product's life. • Standardisation mechanism for ensuring durability in the product: Products should meet specific durability standards to withstand repeated use which can thereby reduce the need for frequent replacements while promoting reuse. • Modular Design: Designing products with interchangeable and replaceable parts allows the consumers to replace only the damaged part instead of the entire product. • Minimalism & User centric design: Simplifying the product design to include only essential features and components, reduces the material use and makes products easier to disassemble and recycle. • Combining Circular Economy Principles & Life Cycle approach of the product from material extraction to disposal, can effectively promote designing for longevity, repairability, and recyclability. 9.b. Quality of reuse systems for plastic products The quality of reuse systems for plastic products is crucial for maximizing the lifespan of materials, reducing waste, and promoting a circular economy. Some of the key elements and strategies to improve the quality of these systems includes Efficient Collection and Sorting; Effective Cleaning and Sanitization; Robust Reverse Logistics and tracking systems; Design for Reuse; Quality Control and Testing and Consumer Engagement and Education which has been detailed above Few of the Strategies to Improve the Quality of Reuse Systems can be added which includes the following: • Smart Packaging: Use RFID tags or QR codes to track product usage and facilitate efficient sorting and return processes. • Automated Refurbishment: Develop automated systems for cleaning, repairing, and refurbishing returned products. • Collaborative Networks through Industry & Public-Private Partnerships: Collaborating with companies, industry associations, government agencies and stakeholders to develop infrastructure and policies and

	support creating standardized reuse systems. • Policy and Regulation: Extended Producer Responsibility (EPR)policies that hold manufacturers accountable for the entire lifecycle of their products, including reuse and recycling • Regulatory Standards: Establish and enforce regulatory standards for the quality of reused and refurbished products. • Economic Models: Product-as-a-Service (PaaS): Transition to PaaS models where consumers lease or rent products instead of buying them, ensuring products are returned for reuse • Introduce deposit-return schemes where consumers pay a deposit when purchasing a product, which is refunded upon return.
The State of Qatar	9.a. Reusability of plastic products: The products' designers must ensure that there are manuals to repair and reuse the plastic products that they bring in the markets. The products must be labelled according to their ease of repairability and reuse. 9.b. Quality of reuse systems for plastic products: The parts must be available with easy accessibility for the products to be reusable. There should be criterion for the spare parts interchangeable with the other brands and it should be encouraged.
The Islamic Republic of IRAN	Iran response: Same as Above.
Switzerland	In our opinion, we should focus on a strategic discussion on what is needed in terms of design principles in the agreement. The main long-term question is how design criteria can simplify products and improve recyclability and thus assist Parties in reducing the quantity and toxicity of plastics produced. The short-term question for the expert group is to articulate a roadmap for addressing the underlying technical issues, so that member states can consider at INC-5 the necessary level of detail of the treaty text, and what can be deferred for future work. The COP can adopt at its first meeting guidance to assist Parties in their implementation of the design paragraph. 9.a. Reusability of plastic products • The following approaches could be further discussed (based on the policy brief "Demystifying Reuse in the Global Plastics Treaty" by the University of Portsmouth): o Define sectors for which reuse systems can easily be introduced. Such a sector is for example the packaging sector with the following sub-sectors: § Food and drink services (e.g. beverage cups or bottles, take-away food containers) § Business to Business (e.g. transport packaging) § E-commerce (e.g. transport packaging from business to consumer) o Define reuse mandates for specific sectors (easiest: hotel, restaurant and cafeteria applications, take-away food packaging) and settings (easiest: closed systems). o Define clear mandatory targets for the adoption of reuse schemes by industry sector and guidance on how to set them → The COP shall adopt guidance to promote the reusability of plastic products, and related channels and capacities. o Define mechanisms of financing to make reuse financially competitive compared to single-use alternatives. o Define standards and guidance on how to implement reuse systems in different settings and ensure interoperability between systems o Ensure the inclusion and livelihoods of waste pickers in reuse systems • The guidelines on reusability should address the following aspects: o Material choice (durability, avoid chemicals which hinder reusability) o Shape of the product (durability; easy to collect, transport and clean) o Standardization (harmonized design, make products suitable for big-scale reuse systems) o Recyclability (at some point, a reusable product will still turn into waste, and then it should be recyclable. Refer to guidelines in 8.a) 9.b Quality of reuse systems for plastic products • The COP shall adopt guidelines to improve the quality of reuse systems. Quality criteria of reused systems for plastic products should include the technical functionality of reuse systems and also criteria to limit potential adverse impacts on the environment and human health. • The reuse systems should feature the following aspects: o Broad dissemination, easy access for customers o Transparent financing
Madagascar	Based on the search results, there are several criteria-based and non-criteria-based approaches that can contribute to improving the reusability of plastic products and the quality of reuse systems: Criteria-based approaches: Design for reuse and refill: Companies are designing reusable packaging and containers that can be returned, cleaned, and refilled repeatedly. This includes features like RFID tags that allow consumers to earn discounts for reusing the containers.

	Sustainable product design: Designing plastic products with sustainability in mind, such as using recycled content or making them easier to recycle, can improve their reusability and the quality of reuse systems. Extended producer responsibility (EPR): EPR policies that make producers responsible for the end-of-life management of their products can incentivize design for reuse and recycling. This is gaining traction in Europe and may spread to other regions. Non-criteria-based approaches: Partnerships between established brands and reuse startups: Large companies are collaborating with innovative startups to integrate reuse and refill models into their product offerings, helping to scale these solutions. Shifting consumer behavior: Companies are focusing on creating great products and user experiences that also happen to be sustainable, making reuse and refill models more appealing to consumers. Addressing challenges with recycling: As recycling becomes more expensive and disrupted, companies are turning to reuse and refill solutions as a more cost-effective and reliable alternative.
Brazil	The reusability of plastic products and the quality of reused systems should be based on relevant international standards, which should avoid arbitrary or unjustifiable discrimination or disguised restriction on international trade.
Australia	Sector Based approach: A sector-based approach to reusability of plastic products is needed as not all reusable plastics would be appropriate in all situations. For example, it may not be appropriate for plastics used in the medical care sector to be reusable due to possible contamination. Harmonised standards will allow for a safe circular economy. As not all countries have the same capabilities, non criteria approaches such as targets can offer flexibility for countries to achieve reusability for plastic products at a global scale. Any targets/timeframes for implementing reuse should be nationally determined to accommodate local contexts. Definitions and supporting infrastructure: Implementing reuse systems requires various supporting infrastructure and logistical requirements that may vary according to local contexts, uses and applications. Sector-based approaches are important to ensure they are set up to succeed based on their intended uses and potential challenges such as food safety requirements and ease of access. A universal definition for reuse systems will ensure that obligations can be more coherent and carefully considered, while allowing for flexibility for implementation Material Choice: Material choice for reusable products needs to consider its intended use, lifespan, safety, handling at end-of-life, and whole-of-life environmental impact. This could require considering, for example, durability, toxicity, suitability for multiple washing, recyclability, among others. Life cycle assessments can be used to inform material selection for reuse, however, choice should ultimately be informed by system requirements. Criteria approaches can therefore incorporate assessments/specification of a product's sustainability breakeven point – the point at which a plastic product must be reused before its environmental impact per use is less than a comparable single-use item. Examples can be found here: https://www.mondelezinternational.com/united-kingdom/news/mdlz-launches-cadbury-dairy-milk-packaging-in-uk-using-certified-recycled-plastic/ , https://www.gov.uk/guidance/work-out-which-packaging-is-subject-to-plastic-packaging-tax) Transparency: Transparency and information disclosure requirements covering the polymers and chemical composition of plastic packaging and other plastic products can also help to ensure that plastic products are safe to be reused and recycled. Australia has an example of the scheme here: https://www.dcceew.gov.au/environment/protection/waste/recycled-content-traceability
Guatemala	Biodegradability, recycling without harm to the environment and human and animal health, toxicity, persistence in the environment, that can form pellets and that can be melted for reuse.
Indonesia	Criteria-Based Approaches 1. Durability and Strength o High-Quality Materials: Use durable and high-quality materials that can withstand multiple uses without significant degradation. o Impact Resistance: Ensure products are designed to resist impacts and stresses encountered during repeated use. 2. Design for Reusability o Modular Design: Create products with modular components that can be easily replaced or repaired to extend their lifespan. o Standardized Dimensions: Use standardized dimensions and features to facilitate interoperability and ease of use in various systems. 3. Ease of Cleaning and Maintenance o Non-Toxic Materials: Use materials that can be safely cleaned with non-toxic substances. o Smooth Surfaces: Design products with smooth surfaces and minimal crevices to make cleaning easier. 4. Versatility and Functionality o Multi-Purpose Design: Create products that can be used for multiple purposes or adapted for different functions. o User-Friendly Features: Include features that enhance usability, such as ergonomic handles and stackable designs.

	Non-Criteria-Based Approaches 1. Market Incentives o Economic Benefits: Provide financial incentives for manufacturers to design reusable products and for consumers to use them. o Subsidies for Reuse Systems: Offer subsidies or grants to support the development and maintenance of reuse systems. o References: OECD, "Economic Instruments for Environmental Management," World Bank, "Incentives for Recycling and Reuse." 2. Policy and Regulation Frameworks o Extended Producer Responsibility (EPR): Implement EPR schemes that require producers to take responsibility for the reuse of their products. o Reuse Targets: Set mandatory reuse targets for certain types of plastic products to encourage widespread adoption. o References: European Commission, "A European Strategy for Plastics in a Circular Economy," Basel Convention. 3. Stakeholder Engagement o Collaborative Efforts: Engage stakeholders from across the value chain, including manufacturers, retailers, and consumers, to develop best practices for reuse. o Public Awareness Campaigns: Conduct campaigns to educate the public about the benefits of reusability and proper product care. o References: UNEP, "Global Partnership on Marine Litter," public consultation documents. 4. Innovation and Research o Support for Innovation: Encourage the development of innovative reusable plastic products through public and private sector partnerships. o Research Grants: Provide grants for academic and industrial research into new materials and designs that enhance reusability. o References: Ellen MacArthur Foundation, "Catalysing Action: Accelerating the Transition to a Circular Economy," OECD, "Research and Development for Sustainable Product Design." Rationale • Durability and Strength: Ensures that products can withstand repeated use, reducing the need for frequent replacements and minimizing waste. • Design for Reusability: Facilitates easy repair, maintenance, and repurposing, extending the product lifecycle. • Ease of Cleaning and Maintenance: Enhances hygiene and safety, making reusable products more attractive and practical for consumers. • Versatility and Functionality: Increases the utility of products, encouraging consumers to choose reusable options over single-use items. • Market Incentives and Policy Frameworks: Encourage both producers and consumers to adopt reusable products, supporting a circular economy. • Stakeholder Engagement and Innovation: Fosters collaboration and continuous improvement in product design and reuse systems.
Iraq	No answer
The Republic of BURUNDI	Thermoplastic materials, unlike thermosets or elastomers, can be recovered, crushed and transformed for reuse. Most packaging for everyday products is made from plastic. Numerous polymer transformation steps are necessary for this. Each operation adds value to the product. However, the trend observed is that the cost of recycling increases considerably if high purity material is desired.
Germany	The design of plastic products plays a crucial role in their reusability and the effectiveness of reuse systems. By adopting specific criteria and non-criteria based approaches, designers can significantly enhance the potential for plastic products to be reused efficiently. Below are detailed strategies that can be employed: 1. Design for Disassembly (DfD) Design for Disassembly is a critical approach that focuses on creating products that can be easily taken apart at the end of their life cycle. This method allows for the separation of different materials, making it easier to recycle or reuse components. Key elements include: Modular Design: Products should be designed in modules or components that can be independently replaced or upgraded without needing to discard the entire product. Use of Standardized Fasteners: Utilizing screws, clips, or other fasteners that are easy to remove encourages users to disassemble products rather than throw them away. Clear Instructions: Providing clear instructions on how to disassemble the product can empower consumers to engage in reuse practices. 2. Material Selection Choosing appropriate materials is fundamental in enhancing reusability. The following considerations are essential: Recyclable Materials: Selecting plastics that are widely accepted in recycling programs increases the likelihood of materials being reused. Durability: Using high-quality, durable materials ensures that products withstand repeated use without degrading. Non-toxic Materials: Ensuring that materials are safe for human health and the environment encourages consumers to return products for reuse rather than disposal. 3. Lifecycle Assessment (LCA) Implementing a Lifecycle Assessment during the design phase helps identify environmental impacts associated with different stages of a product's life—from raw material extraction through manufacturing, use, and disposal. This assessment can guide decisions towards more sustainable practices by:

	Identifying hotspots where improvements can be made. Encouraging designs that minimize energy consumption and waste generation throughout the lifecycle. 4. User-Centric Design Incorporating user feedback into product design enhances usability and promotes reusability: Understanding User Needs: Engaging with users to understand their needs and preferences can lead to designs that encourage reuse. Education on Reuse Practices: Designing products with educational components about how they can be reused effectively fosters a culture of sustainability among consumers. 5. Incentive Structures Creating incentive structures around reusable products can significantly impact consumer behavior: Deposit Return Schemes (DRS): Implementing systems where consumers receive financial incentives for returning used products encourages participation in reuse systems. Loyalty Programs: Offering rewards for customers who consistently choose reusable options over single-use alternatives promotes long-term engagement. 6. Collaboration with Stakeholders Engaging various stakeholders throughout the supply chain is vital for improving reuse systems: Partnerships with Recycling Facilities: Collaborating with recycling centers ensures there is a clear pathway for returned items, enhancing overall system efficiency. Industry Standards Development: Working together with industry groups to establish standards for reusable packaging or containers helps streamline processes across sectors. 7. Non-Criteria Based Approaches While criteria-based approaches focus on specific measurable outcomes, non-criteria based approaches emphasize broader concepts such as innovation and cultural shifts: Innovative Business Models: Exploring models such as product-as-a-service (where companies retain ownership of products) encourages manufacturers to design for longevity and reusability. Cultural Change Initiatives: Promoting societal values around sustainability and responsible consumption influences consumer behavior towards reusing plastic products. Conclusion By integrating these criteria and non-criteria based approaches into plastic product design, manufacturers can significantly enhance both the reusability of their products and the quality of reuse systems. These strategies not only contribute to environmental sustainability but also foster economic benefits through resource efficiency.
The Government of Canada	• Reusability (and refillability) are a crucial component for promoting the longevity of plastic products and therefore reduce plastic waste generation. Optimized reuse and refill with high circulation rates is more material efficient and could displace significant amounts of single-use items and lower the probability for plastic pollution. While acknowledging differences in local, national and regional infrastructure, circumstances and/or capabilities, certain reuse/refill design criteria/principles and guidance may be adopted globally through the ILBI. • Effective reuse/refill criteria must encompass both the products and the systems designed to ensure those products are reused in practice. Ineffective or absent reuse/refill systems will likely result in minimal reuse for most products. A one-size-fits-all-products solution for reuse/refill does not exist even in a common national context. Reuse/refill systems must be tailored to specific products, after establishing overall minimum requirements and recognizing distinctions between sectors such as food, beverages, personal products, and business-to-business (B2B) or business-to-consumer (B2C). For example, a closed-loop B2B transport packaging reuse system will differ from a closed-loop reuse system for takeaway food containers. • These criteria should be flexible enough to accommodate technological advancements and varying national contexts and capabilities. • The applications that are suited to reuse/refill will not necessarily be suited to other types of circularity approaches (e.g., repairability, repurposing, refurbishment), and vice versa. This means that reuse/refill measures need to be specified separately from measures related to other design criteria. Potential minimum reuse/refill criteria: • Design for longevity, durability, safety (avoiding or restricting chemicals and polymers of concern), collection, transport, reconditioning (nestability, collapsibility), and interoperability between different reuse systems; • Design for the ease, affordability, and effectiveness of cleaning (e.g., dishwasher safe/designed to be disassembled for cleaning); - The World Economic Forum Design Guidelines stresses that the most critical pressure point for reuse is cleaning. Designers must take into consideration the ease, affordability, and effectiveness of cleaning. • Design for a minimum number of rotations within a given system before end-of-life; • Design for ease of disassembly and ease of recycling at end of life; • Harmonize packaging design for universal acceptance across different reuse systems, ensuring material agnosticism and avoidance of chemicals of concern; • Design for the environment the product will be used in (e.g., waterproof if used in the bathroom, air sealed if used for food products, microwavable if product is typically heated, refillable after emptying); • Optimize design for the specific reuse or refill model (refill at home, refill on the go, return from home, return on the go); • Design for recyclability at the reusable products end of life; • Provide clear labelling for consumers on the modalities of the product to be reused or refilled. Potential minimum system-related reuse criteria: • Reuse systems must be set up to include necessary infrastructure and reverse logistics for collection, sorting, washing, refilling, and redistribution; • Reuse systems must be subject to minimum reuse collection/return rate targets by a designated application-specific entity; • Robust data collection and reporting on reuse system performance should be established and implemented; • Economic operators are held accountable for return rates, allowing collective discharge of reuse obligations (including collection, sorting, washing and redistribution);

	• Reuse systems should be capable of adjusting system design for unmet return rates (e.g., utilizing incentives like deposits, fees or rewards to enhance returns); • Implement strategies to increase public demand and engagement with reuse systems and models; • Ensure reuse system implementation and operation are unrestricted by national boundaries (e.g., systems and processes for reuse could effectively work across borders and increase the scale and interoperability of such systems or processes). Rationale • Reuse product design must work in complementarity with the required systems and technologies, through a life cycle approach that considers its design and production until its end-of-life management as well as focus on specific sectors and applications, such as short-lived consumer products. This will enable products to be effectively reused and to work in complementarity with the implementation of other potential draft provisions in the ILBI (e.g., plastic waste management and labelling). References: • World Economic Forum. 2021. Consumers Beyond Waste: An initiative of the future of consumption platform. Design Guidelines Working Group. • WWF International and Eunomia Research & Consulting Ltd. April 2024. Unpacking Reuse in the Plastic Pollution Treaty. • Deloitte study commissioned by WWF-Norway. December 2023. Design for Circularity Relevant technical considerations for the International Legally Binding Instrument on Plastic Pollution, including in the Marine Environment.
Armenia	To achieve reusability, two questions must be answered: how it will be used and for how long? It's critical that the reusable plastic material selection is connected to and can withstand the environment it is intended to live in. Environment When considering how the end-product will be used, other questions, like where will it be used, in what environment, and for what purpose must also be addressed. The answers to these questions determine the materials used to ensure the product will thrive in the intended reusable environment. For example, if this is a product that is going to spend most of its time outside, enduring the elements, like sun, rain, and wind. If you design a reusable plastic product without these factors in mind, it will not last the time it needs to be a durable product. Material selection Selecting the optimal material and additives for an application is a critical early part of the design process. Reusable products designs must be built to last. This is achieved with a range of polymer additives, such as antioxidants, thermal stabilizers, UV absorbers, modifiers and resin selection that meets the life cycle demand, sterilization and reusability. edge/solutions/reusable-plastic-considering-environment-testing-and-end-of-life-in-design-MCASIFMRN4VJDUPBMBT6ETDO5FEI?business-group=advanced-materials&market-segment=packaging
Panama	11.a. Reuse of plastic products Increasing the quality of plastic products, avoiding disposability (single-use) when necessary. 11.b. Quality of reuse systems for plastic products Applying fiscal incentives, developing environmental awareness programs, and approving regulations for the progressive replacement of synthetic plastics with recycled plastics or bioplastics through legal means specific to each country. Similarly, investing in appropriate sorting and recycling technology, accompanied by proper identification of the received plastic products for recycling (either through technical sheets or labels), would show the composition of the plastic product to be recycled. This way, the additives used in these plastic products, the functionality conferred, and therefore, all the resistances engineers must overcome during the mechanical or chemical recycling process to obtain high-quality recycled plastic would be known. For this, again, it is necessary to know the additives and their classification, according to their functionality.
México	This issue implies a problem that must be addressed not only at a global level but mainly at a national level, since depending on the capabilities of each party, the consumer could be encouraged to reuse plastics, avoid single-use plastics, etc. . As well as companies to generate mechanisms in this framework. As in the previous section, this section must contain a global and a national component, to establish quality criteria and strengthen the traceability of plastics throughout their life cycle.
Egypt	9.a. Reusability of plastic products Design for reuse, multi-functionality and/or durability Adopting circular economy approach 9.b. Quality of reuse systems for plastic products Material Selection - Use of safe and re-usable Plastic formula Standardization Develop Refill Systems Clear Labelling Consumer Behaviour development

Vanuatu

Criteria 1: The plastic product is made for reduction and optimisation.
This is the idea that the same result can be obtained with less material, for example when the service provided by a plastic product can be achieved without using plastics, or when the volume of plastics can be reduced while preserving a product's quality
Criteria 2: The plastic product is made for prolonged use and reuse
This leverages and promotes a number of models that move away from single-use plastics. In this case, circular design focuses on ensuring products are suitable for multiple uses, and can be easily cleaned by the user or returned for bulk processing (cleaning, non-destructive disassembly and reassembly, etc.)
Criteria 3:Design for repairability and refurbishability
This builds on the previous considerations to further ascertain how certain products can be designed in a way that makes repairing them easy, also via disassembly and replacement of certain parts without elimination of the entire product, by minimising interdependence of a product's components and its proneness to contamination.

Thailand

9.a. Reusability of plastic products

1. Durability and Material Selection
- Durability
- Material Selection

2. Design for Reuse and Multiple Life Cycles
- Design for Reuse
- Design for Multiple Life Cycles

3. Standardization and Modularity
- Standardization
- Modularity

4. Chemical Safety and Environmental Impact
- Chemical Safety
- Environmental Impact

5. User-Centric Design and Ease of Use
- User-Centric Design
- Ease of Maintenance and Cleaning

Criteria	Primary Concern	Impact	Rationale
Durability	Designing products that are robust and have a long lifespan to withstand multiple uses.	Increases the lifecycle of products, reduces the need for frequent replacements, and minimizes waste generation.	Durable products are essential for effective reuse systems as they can be used multiple times before disposal.
Material Selection	Choosing high-quality, durable materials that can withstand repeated use without significant degradation.	Ensures that products remain functional and aesthetically pleasing over multiple uses.	Selecting appropriate materials is crucial for maintaining the integrity and performance of reusable products.
Design for Reuse	Creating products that are specifically designed to be used multiple times.	Promotes a shift from single- use to reusable products, reducing waste and environmental impact.	Design for reuse encourages the development of products that can be repeatedly used, cleaned, and repurposed.
Design for Multiple Life Cycles	Ensuring products can be easily repaired, refurbished, or repurposed to extend their useful life.	Reduces waste and resource consumption by maximizing the lifespan of products.	Designing for multiple life cycles supports the circular economy by keeping materials in use for longer periods.

Standardization	Developing standardized components and materials to simplify repair, refurbishment, and repurposing.	Facilitates the reuse and interchangeability of parts, enhancing the longevity and reusability of products.	Standardization helps in creating compatible and easily replaceable components.
Modularity	Designing products with modular components that can be easily replaced or upgraded.	Extends product lifespan by allowing parts to be replaced or upgraded without discarding the entire product.	Modularity supports the circular economy by enabling easier maintenance and longer product use.
Chemical Safety	Ensuring that reusable products do not contain harmful chemicals that could pose health risks over repeated use.	Protects consumer health and ensures safe use of products over multiple life cycles.	Chemical safety is crucial for maintaining the integrity and safety of reusable products.
Environmental Impact	Designing products with minimal environmental impact throughout their lifecycle, including production, use, and disposal.	Reduces overall environmental footprint and supports sustainable consumption.	Considering environmental impact in design helps in creating products that are not only reusable but also environmentally friendly.
User-Centric Design	Designing products that are easy and convenient for users to reuse.	Enhances user experience and encourages repeated use.	User-friendly designs are more likely to be adopted and reused by consumers.
Ease of Maintenance and Cleaning	Ensuring that products can be easily cleaned and maintained to support multiple uses.	Maintains product hygiene and functionality, encouraging reuse.	Easy maintenance is essential for practical and widespread adoption of reusable products.

9.b. Quality of reuse systems for plastic products

1. Infrastructure and Collection Systems
- Efficient Collection Systems
- Reuse Centers

2. Cleaning and Sanitization Protocols
- Standardized Cleaning Protocols
- Sanitization Technologies

3. Design for Reuse and Durability
- Design for Reuse
- Durability

4. Traceability and Transparency
- Product Traceability
- Transparency and Labelling

Criteria	Primary Concern	Impact	Rationale
Efficient Collection Systems	Developing and implementing efficient systems for collecting reusable plastic products.	Ensures a steady and clean supply of reusable products, reducing contamination and increasing the efficiency of reuse systems.	Efficient collection systems are essential for maintaining the integrity of reusable products and ensuring they can be properly cleaned and reused.

	Reuse Centers	Establishing facilities for the collection, cleaning, and redistribution of reusable products.	Reuse centers can streamline processes, improve quality control, and facilitate the efficient distribution of reusable products.	Centralized reuse centers can enhance the efficiency and effectiveness of reuse systems.
	Standardized Cleaning Protocols	Implementing standardized cleaning and sanitization protocols for reusable plastic products.	Ensures that reusable products are hygienic and safe for multiple uses, maintaining consumer trust and compliance with health regulations.	Standardized cleaning protocols are essential for maintaining the safety and quality of reusable products.
	Sanitization Technologies	Investing in sanitization technologies to ensure thorough cleaning and sterilization of reusable products.	Reduces the risk of contamination and increases the safety of reusable products.	Advanced technologies can significantly enhance the effectiveness of cleaning and sanitization processes.
	Design for Reuse	Creating products that are specifically designed for multiple uses, with features that facilitate cleaning, repair, and refurbishment.	Promotes the longevity and usability of reusable products, reducing waste and resource consumption.	Design for reuse ensures that products can withstand multiple uses and maintain their functionality and safety.
	Durability	Designing products that are robust and have a long lifespan to withstand multiple uses.	Increases the lifecycle of products, reduces the need for frequent replacements, and minimizes waste generation.	Durable products are essential for effective reuse systems as they can be used multiple times before disposal.
	Product Traceability	Implementing systems for tracking and tracing the lifecycle of reusable products.	Enhances transparency, quality control, and accountability, ensuring that reusable products meet safety and quality standards throughout their lifecycle.	Traceability helps in monitoring the condition and performance of reusable products, facilitating timely maintenance and ensuring safety.
	Transparency and Labelling	Providing clear information on the reuse cycles and maintenance of reusable products.	Helps consumers make informed choices and supports tracking and monitoring efforts.	Transparency and labelling ensure that products are properly managed and maintained throughout their lifecycle.

Solomon Islands

9.a. Reusability of plastic products

Standards should require that products do not contain chemicals of high concern, and that applications suit the material/chemical composition of the materials. Measures to improve design and performance must be included. Durability assessments should ensure low microplastic and nanoplastic particles emissions, tested under a range of conditions including heat and abrasion, and eliminate risks associated with additional leaching of potentially hazardous chemicals. We stress that chemical contamination in reused plastic food contact products is of concern, requires standards for washing 13 etc. The same safety and sustainability criteria should apply here.

Reuse (identical purpose) and repurpose (different purpose) need to be assessed differently. Reuse requires dedicated programs for building infrastructure that companies can potentially share. This will likely require governments supporting the setting up and operation of appropriate infrastructure, container pools, etc. Maintaining such infrastructure will not be viable for individual commercial companies, therefore a coordinated approach will be needed to increase economies of scale14.

9.b. Quality of reuse systems for plastic products

Criteria should be established to construct and maintain infrastructure. Reuse rates should be monitored and reported. Quality assurance will require economic investments and capacity building. Ecomodulated fees, levies, plastic taxes, EPR schemes and the financial mechanism under the future treaty should direct funds toward, and otherwise support and incentivise safe and sustainable product and systems/services design for plastic free delivery systems and reuse/refill.

References

	13 https://www.pr3standards.org/ 14 https://issuu.com/greenallianceuk/docs/monday_evening_official_version_-_fixing_the_syste/s/10310927
Bahrain	All approaches should be implemented through national plans to ensure they are context-specific and align with each country's unique circumstances and capacities. The focus should be on plastic products identified as problematic. 9.a. Reusability of plastic products Approach 1: National Context-Specific Criteria for Reusability • Rationale: The ILBI should encourage national plans apply criteria for enhancing reusability. This focus ensures efforts are directed towards products that present significant reuse challenges. • Implementation: National plans should define criteria for assessing and improving the reusability of plastic products. These criteria should consider national capabilities, and market conditions. • Reference: National reuse policies, sustainability assessments. Approach 2: Design for Multiple Uses • Rationale: National initiatives to promote product designs that facilitate multiple uses. This includes encouraging designs that enhance the durability and adaptability of plastic products identified as non-reusable within national waste management context. • Implementation: National plans should incorporate measures for enhancing designs for plastic products, considering product specific considerations such as meeting application requirements, robustness, longevity, durability, safety, ease of cleaning, storability, reassembly, and fitness for multiple uses. Exceptions should be allowed for certain applications such as those for medical use. • Reference: Industry best practices, national design standards. 9.b. Quality of reuse systems for plastic products The effectiveness of reuse systems varies by country due to factors like resources, infrastructure, and consumer needs. Approach 1: Best practices for Reuse Systems • Rationale: The ILBI should encourage national plans to support best practices for reuse systems, focusing on plastic products identified as non-reusable within national waste management context, to enhance efficiency and sustainability. • Implementation: National plans should define and enforce standards for reuse systems, ensuring effectiveness for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Support for Reuse Infrastructure • Rationale: The ILBI should encourage the development of infrastructure for reuse systems within national plans while recognizing the cost implications of such infrastructure and the limitations of developing countries both fiscal and technology wise. • Implementation: Developing countries require support for national plans to promote the development and maintenance of infrastructure necessary for effective reuse systems. • Reference: National infrastructure development programs, industry best practices.
Algeria	9.a. Reusability of plastic products The reuse criteria must take into account the intrinsic components, which constitute the product and thus facilitate its industrial recovery. 9.b. Quality of reuse systems for plastic products The Quality of plastic product reuse systems must satisfy everything relating to clean production techniques and the best available techniques in this area.
China	Criteria Approaches: Voluntary national standards or industry standards for the design of reusability of plastic products, determined by the country, especially standards for reusability models for businesses. Reference: "Transport Packaging Reusable Plastic Turnover Boxes Part 1: General Requirements" (GB/T 43133.1-2023 MOD: ISO 18616-1:2016); "Recyclable Express Packaging Boxes" (GB/T 43283-2023) Non-Criteria Approach: Guidelines for the design of reusability of plastic products by category and industry, prepared by the governing body. These guidelines should provide references to countries and industrial organizations in developing national standards, group standards, or/and other initiatives to promote the reusability of plastic products, considering socio-cultural characteristics, technological availability, environmental impact, and economic affordability from a life-cycle perspective.

United Arab Emirates	All approaches should be implemented through national plans to ensure they are context-specific and align with each country's unique circumstances and capacities. The focus should be on plastic products identified as problematic. 9.a. Reusability of plastic products Approach 1: National Context-Specific Criteria for Reusability • Rationale: The ILBI should encourage national plans apply criteria for enhancing reusability. This focus ensures efforts are directed towards products that present significant reuse challenges. • Implementation: National plans should define criteria for assessing and improving the reusability of plastic products. These criteria should consider national capabilities, and market conditions. • Reference: National reuse policies, sustainability assessments. Approach 2: Design for Multiple Uses • Rationale: National initiatives to promote product designs that facilitate multiple uses. This includes encouraging designs that enhance the durability and adaptability of plastic products identified as non-reusable within national waste management context. • Implementation: National plans should incorporate measures for enhancing designs for plastic products, considering product specific considerations such as meeting application requirements, robustness, longevity, durability, safety, ease of cleaning, storability, reassembly, and fitness for multiple uses. Exceptions should be allowed for certain applications such as those for medical use. • Reference: Industry best practices, national design standards. 9.b. Quality of reuse systems for plastic products The effectiveness of reuse systems varies by country due to factors like resources, infrastructure, and consumer needs. Approach 1: Best practices for Reuse Systems • Rationale: The ILBI should encourage national plans to support best practices for reuse systems, focusing on plastic products identified as non-reusable within national waste management context, to enhance efficiency and sustainability. • Implementation: National plans should define and enforce standards for reuse systems, ensuring effectiveness for various applications. • Reference: National quality control frameworks, industry standards. Approach 2: Support for Reuse Infrastructure • Rationale: The ILBI should encourage the development of infrastructure for reuse systems within national plans while recognizing the cost implications of such infrastructure and the limitations of developing countries both fiscal and technology wise. • Implementation: Developing countries require support for national plans to promote the development and maintenance of infrastructure necessary for effective reuse systems. • Reference: National infrastructure development programs, industry best practices.

Nominating Member	**Part D. 12. Are there other potential attributes, apart from improved reusability and recyclability, to be considered in criteria and non criteria based approaches for plastic product design?**
Suriname	Yes, there are several other important attributes to consider in criteria and non-criteria based approaches for plastic product design beyond reusability and recyclability. Here's a overview of additional potential attributes: 1. Biodegradability/Compostability Criteria: Products designed to biodegrade or compost in specific environments. Rationale: Reduces long-term environmental impact, especially for items likely to be littered. Reference: Emadian, S. M., et al. (2017). Biodegradation of bioplastics in natural environments. Waste Management, 59, 526-536. 2. Reduced Material Usage (Dematerialization) Criteria: Minimize the amount of plastic used while maintaining functionality. Rationale: Decreases resource consumption and waste generation. Reference: Rossi, V., et al. (2015). Life cycle assessment of end-of-life options for two biodegradable packaging materials: sound application of the European waste hierarchy. Journal of Cleaner Production, 86, 132-145. 3. Non-toxicity Criteria: Eliminate or minimize the use of harmful chemicals in product design. Rationale: Protects human health and environmental safety throughout the product lifecycle.

	Reference: Groh, K. J., et al. (2019). Overview of known plastic packaging-associated chemicals and their hazards. Science of the Total Environment, 651, 3253-3268. 4. Carbon Footprint Criteria: Design to minimize greenhouse gas emissions throughout the product lifecycle. Rationale: Addresses climate change impacts of plastic products. Reference: Zheng, J., & Suh, S. (2019). Strategies to reduce the global carbon footprint of plastics. Nature Climate Change, 9(5), 374-378. 5. Water Efficiency Criteria: Design products to minimize water use in production and use phases. Rationale: Addresses water scarcity and pollution issues associated with plastics. Reference: Vince, J., & Hardesty, B. D. (2017). Plastic pollution challenges in marine and coastal environments: from local to global governance. Restoration Ecology, 25(1), 123-128. 6. Repairability Criteria: Design products to be easily repaired, with readily available spare parts. Rationale: Extends product lifespan and reduces waste. Reference: Svensson-Hoglund, S., et al. (2021). Barriers, enablers and market solutions to circular business models in the plastic packaging industry. Journal of Cleaner Production, 316, 128502. 7. Modularity Criteria: Design products with interchangeable components that can be upgraded or replaced. Rationale: Enhances product longevity and adaptability. Reference: Bocken, N. M., et al. (2016). Product design and business model strategies for a circular economy. Journal of Industrial and Production Engineering, 33(5), 308-320. 8. Alternative Feedstocks Criteria: Use of renewable or recycled content in plastic production. Rationale: Reduces dependence on virgin fossil-based materials. Reference: Nguyen, H., et al. (2020). Recycling of plastic waste: Screening for brominated flame retardants (BFRs). Chemosphere, 251, 126342. 9. End-of-life Considerations Criteria: Design that considers how the product will be disposed of or recycled at end-of-life. Rationale: Facilitates proper waste management and circular economy principles. Reference: Hahladakis, J. N., & Iacovidou, E. (2018). Closing the loop on plastic packaging materials: What is quality and how does it affect their circularity? Science of The Total Environment, 630, 1394-1400. 10. Cultural and Ethical Considerations Non-criteria based approach: Consider local cultural norms and ethical implications in product design. Rationale: Ensures products are socially acceptable and ethically produced. Reference: Medkova, K., & Fifield, B. (2016). Circular design-design for circular economy. Lahti Cleantech Annual Review, 32-47.
Somalia	Safety, aesthetics, and cost-effectiveness.
El Salvador	The reuse system must be economically viable in order to be sustainable in the long term.
Oman	Refurbish ability and optimization of material flow could be considered as other potential attributes
Republic of Cuba	non
Japan	Other than reusability and recyclability, reduce, renewable, refillability and repairability would be potential attributes. Our suggested illustration on the linkage between elements proposed by Japan in the Annex of the compilation of draft text (page 76-77) and potential attributes are as follows:

	Reduce	Reuse	Recycle	Refill	Repair	Renewable
Structure						

Reduction in volume of plastic use	✓					
Simplified packaging	✓		✓			
Longer use and longer service life	✓	✓		✓	✓	
Use of easily reusable parts or reuse of parts		✓		✓	✓	
Use of Single materials or reduction of material types			✓			
Easier disassembly and separation			✓		✓	
Easier collection and transportation			✓			
Easier crushing and incineration			✓			
Materials						
Substitution of materials other than plastic	✓					
Use of easily-recyclable materials			✓			
Use of recycled plastics			✓			
Use of bioplastics						✓

General elements relating to the design and performance for plastic products

＜Structure of Product＞

1. Reduction, in volume of plastic use

✓ Use the smallest volume of material as much as possible.

2. Simplified packaging

✓ Restrain excessive packaging.

3. Longer use and longer service life

✓ Enhance the durability of the product.
✓ The product is able to withstand repeated use.
✓ The parts of the product are easily replaceable.
✓ The product is easily repairable.

4. Use of easily reusable parts or reuse of parts

✓ Use parts that are easily reusable.
✓ Reuse parts.

5. Use of Single materials or reduction of material types.

✓ Use a single material for the product as a whole or parts thereof, or reduce the material types used.

6. Easier disassembly and separation

✓ The parts are easily disassembled and sorted by components. (Easier removal of lithium-ion batteries from other parts of the product is better.)
✓ The number of processes required to remove parts, etc., is minimized as much as possible.
✓ The types of materials used are indicated.

7. Easier collection and transportation

✓ The weight, size, shape, and structure of the product are to facilitate easier collection and transportation as much as possible.

8. Easier crushing and incineration

✓ Easier crushing and incineration for parts that are difficult to reuse or recycle.

＜Materials of Product＞

1. Substitution of materials other than plastic

✓ Substitute materials other than plastic.

2. Use of easily-recyclable materials

	✓ Use easily-recyclable materials. ✓ Reduce material types . ✓ Avoid using additives and other materials, that hinder recycling. 3. Use of recycled plastics ✓ Use recycled plastics. 4. Use of bioplastics ✓ Use biomass (bio-based) plastics from renewable organic resources such as plants . ✓ Use biodegradable plastics for products that tend to unavoidably leak to natural environment, taking into account the conditions in which biodegradation occurs.
New Zealand	New Zealand wishes to provide the following non-exhaustive list of other possible criteria to improved reusability and recyclability: - Design requirement for repairability - Design requirement for refurbishability - Design requirement for refillability
Russian Federation	Refurbishability and optimization of material flow could be considered as other potential attributes.
Cook Islands	Design criteria should encourage the shift to non-plastic options where possible.
Tuvalu	1. Minimization: Overall reduction in use of primary and secondary polymers. 2. Chemical simplification: Overall reduction and simplification of chemicals. 3. Carbon footprint reduction: GHG emissions across the life cycle. 4. Repairability: Enhancing the ease with which products can be repaired to extend their lifespan. 5. Safety: Ensuring that products and processes are safe for human health and the environment. 6. Durability or chemical stability: Overall reduction in microplastics and chemical releases.
Republic of Korea	1. Recommending measures such as reducing the volume of plastic use and establishing Life-Cycle Assessment (LCA) methods to Parties, while considering their national circumstances, is necessary to achieve product circularity: A. Reducing the volume of plastic use i. Reducing the volume and weight of plastic products while considering their functionality, performance, and safety. ii. Reducing excessive packaging (e.g., restricting packaging layers and/or empty space) iii. Enhancing the use of secondary plastic polymers. iv. Replacing the use of plastic with substitutes and alternative materials. B. Establishing Life-Cycle Assessment methods for plastic products involves evaluating their carbon footprint. C. Providing certification to products with significant environmental benefits and labeling product design and performance can inform consumers and encourage businesses to pursue circular economy efforts. Possible criteria and methods include: i. Certification of products with significant environmental benefits: ii. Products which have improved their environmental impact compared to other products for the same use a. Products that have an improved environmental impact compared to others for the same use. b. Products that have reduced greenhouse gas emissions. c. Recycled products with beneficial environmental impacts. iii. Labeling of product design and performance: a. Identification of materials. b. Labeling the product's recyclability, relevant to recyclability assessments. c. Labeling certified products, relevant to certification of products with significant environmental benefits. Referencing ISO International Standards on Circular Economy (ISO 59004, 59010, 59020) and The Global Circularity Gap Report 2024 (Circle Economy Foundation) is recommended.

Malaysia	The 12Rs of waste management - Refuse, Rethink, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle, Research, Re-skill, Re-design, Re-vision and Recover – can be applicable to plastics products with the common goal to promote and achieve sustainable production and consumption of plastics products.
Philippines	Yes. With regards to product design, the focus should be not just on recyclability and reusability, but also on repairability, refillability, safety, sustainability, essentiality, and transparency. Some existing product design frameworks focus on material and energy efficiency, and maximizing the potential for circularity in general.
Singapore	• Material substitution: Product design guidelines should not lead to unintended environmental impacts. For example, guidelines should not support material substitution unless there is proven net environmental benefit. Life cycle analyses of the product as a whole should be considered, to achieve the most resource efficient design.
The European Union and its 27 Member States	The ILBI should follow the waste hierarchy. Next to reusability and recyclability, other aspects of the waste hierarchy should be integrated, including reduce, repair, refurbishment, etc. The reduction of the use of primary plastic polymers, the improvement of the safety of the product, including through the improvement of the releases of microplastics, need to be addressed under provision 5 as well.
United Kingdom	Durability but this is also closely related to designing for reusability.
Saudi Arabia	Approach: Comprehensive Sustainability Attributes • Rationale: Beyond reusability and recyclability, national plans are encouraged to consider attributes like Life Cycle Assessment "LCA" and supply chain processes, energy efficiency, affordability, food and water security, sustainability, national resources and environmental impact specific to national context. • and overall environmental impact. • Implementation: National plans should incorporate criteria assessing these additional attributes for a comprehensive approach to sustainable plastic product design. • Reference: National environmental policies, sustainability frameworks.
United States.	There are many other attributes to be considered, but the important attributes will vary depending on the specific goal related to product design (e.g., improved longevity, minimizing virgin plastic content, increasing recyclability). Before delving into attributes and any approaches for identified attributes, there should be a clear, shared understanding of the goal(s) for a provision on plastic product design.
Ecuador	Resource Efficiency: Emphasizing resource-efficient design practices to minimize material waste, optimize resource use, and reduce energy consumption throughout the product life cycle Energy Efficiency: Designing energy-efficient plastic products that require less energy in production, use, and end-of-life processes can contribute to energy conservation and reduced greenhouse gas emissions. Social Impact and just transition: Considering social aspects such as health and safety of workers, fair labor practices, and community engagement in plastic product design to ensure ethical and socially responsible manufacturing practices. Cultural Adaptability: Designing products that cater to diverse cultural preferences, lifestyles, and user needs to enhance inclusivity, usability, and acceptance in different regions and markets. Aesthetics and User Experience: Incorporating aesthetic appeal, ergonomic design, and user-friendly features to enhance the overall user experience, usability, and desirability to use better plastic products. Local Sourcing and Production: Promoting the use of local sourcing, manufacturing, and production processes to reduce transportation emissions, support local economies, and enhance supply chain resilience. Innovation and Research: Encouraging innovation, research, and development in sustainable materials, technologies, and circular design strategies to drive continuous improvement and advancement in plastic product design, with the help of proper and established financing mechanisms Transparency and Certification: Adopting transparency,labeling, and third-party certifications to ensure product traceability, authenticity, and compliance with sustainability standards and certifications, and norms
Ethiopia	In addition to improved reusability and recyclability, several other attributes are crucial in the design of plastic products, particularly in both criteria-based and non-criteria-based approaches. These attributes can significantly influence the overall performance, manufacturability, and sustainability of plastic products. Key Attributes in Plastic Product Design 1. Material Selection Choosing the right material is fundamental. Designers must consider factors such as: • Thermal and Chemical Resistance: The material must withstand the temperatures and chemicals it will encounter during its lifecycle, including manufacturing, use, and disposal. https://www.nicoletplastics.com/resources/blog/factors-plastic-part-design-manufacturability/ • Mechanical Properties: Strength, flexibility, and durability are essential to ensure that the product performs as intended under various conditions. https://prototool.com/general-principles-of-plastic-part-design-for-injection-molding/ • Cost and Availability: The economic viability of materials, including their cost and availability, can impact production decisions. https://www.nicoletplastics.com/resources/blog/factors-plastic-part-design-manufacturability/

	2. Design for Manufacturability (DFM) Designing with manufacturability in mind can streamline production processes. Considerations include: • Wall Thickness and Consistency: Uniform wall thickness can prevent defects during manufacturing and ensure structural integrity. https://prototool.com/general-principles-of-plastic-part-design-for-injection-molding/ • Draft Angles and Radii: Proper angles and rounded corners facilitate easier mold release, reducing production costs and time. https://prototool.com/general-principles-of-plastic-part-design-for-injection-molding/ • Assembly Considerations: Simplifying assembly processes can decrease labor costs and enhance product reliability. https://www.nicoletplastics.com/resources/blog/factors-plastic-part-design-manufacturability/ 3. Functional Performance The product must meet its intended use without compromising on performance. This includes: • End-Use Requirements: Establishing clear specifications for how the product will be used helps guide design decisions. https://www.hardiepolymers.com/knowledge/designing-with-plastics/ • Durability and Service Life: Products should be designed to last, which not only reduces waste but also enhances customer satisfaction. http://his.diva-portal.org/smash/get/diva2:734435/FULLTEXT01.pdf 4. Environmental Impact Beyond recyclability, the overall environmental footprint of a product must be assessed. This includes: • Life Cycle Assessment (LCA): Evaluating the environmental impact from raw material extraction through to disposal can inform more sustainable design choices. http://his.diva-portal.org/smash/get/diva2:734435/FULLTEXT01.pdf • Energy Efficiency: Designing products that require less energy during production and use can contribute to lower overall emissions. http://his.diva-portal.org/smash/get/diva2:734435/FULLTEXT01.pdf 5. Compliance with Standards: -Adhering to relevant industry standards and regulations is critical. This includes: • Safety and Regulatory Standards: Ensuring that products meet necessary safety requirements can prevent legal issues and enhance market acceptance. https://www.nicoletplastics.com/resources/blog/factors-plastic-part-design-manufacturability/ • Quality Control Standards: Implementing rigorous quality checks during the design and manufacturing phases helps maintain product integrity and performance. https://prototool.com/general-principles-of-plastic-part-design-for-injection-molding/ 6. Aesthetic and User-Centric Design The visual appeal and usability of a product can significantly affect its market success. Attributes to consider include: • User Experience (UX): The design should be intuitive and user-friendly, enhancing customer satisfaction and engagement. https://www.hardiepolymers.com/knowledge/designing-with-plastics/ • Aesthetic Qualities: The product's appearance can influence consumer preferences, making aesthetic considerations important in the design process [5]. https://www.hardiepolymers.com/knowledge/designing-with-plastics/ 7. Transport Efficiency: Designing products that are lightweight and compact can reduce energy consumption during transportation. and minimizes material use and is optimized for transport efficiency. 8. Toxicity and Health Impacts: Ensuring that the materials used are safe for both humans and the environment throughout the lifecycle of the product. By integrating these attributes into the design process, manufacturers can create plastic products that not only meet functional requirements but also contribute positively to sustainability and user satisfaction.
Uruguay	Yes, durability and repairability should be criteria to take into account in the product design for some kind of products (toys for example).

The State of Qatar	Ease of refurbishing the products could be another criterion apart from those mentioned above.
The Islamic Republic of IRAN	Iran response: Same as Above.
Switzerland	These issues should be seen as options for implementation by a Party. The COP can adopt guidelines. Generally, according to the 9-R principle the following attributes that increase the circular economy by smarter use and extension of lifespan are missing: • Refuse: Make a product redundant by abandoning its function or by offering the same function with a radically different product. • Rethink: Make product use more intensive (e.g. by sharing a product). • Reduce: Increase efficiency in product manufacture or use by consuming fewer natural resources and materials. • Repair: Repair and maintenance of a defective product so it can be used with its original function. • Refurbish: Restore an old product and bring it up to date. • Remanufacture: Use parts of a discarded product in a new product with the same function. • Repurpose: Use discarded product or its parts in a new product with a different function. The full 9R Framework can be viewed here: The 9R Framework. Source: Adapted from Potting et al. (2017, p.5) | Download Scientific Diagram (researchgate.net) Note that in the waste hierarchy, reusing ranks higher than recycling. Another aspect of design: make products safer for health and the environment. For example, no hazardous substances should be contained (this would also help recycling and reuse), release to the environment and fragmentation should be minimized.
Madagascar	Yes, there are several other potential attributes that can be considered in criteria and non-criteria based approaches for plastic product design, apart from improved reusability and recyclability: Hazards: The product should not contain chemicals or polymers of concern that can pose hazards to human health or the environment. This can be addressed through separate criteria to determine elements of concern. Emissions generation: The product should not release nano-, micro- or macroplastics during production or intended use. This includes microplastics from intentional addition or breakdown/abrasion of materials. Impediment of circularity: The product should not impede the circularity of other products, such as by being non-recyclable as per established recyclability criteria. Lack of transparency: The product should have data available to determine its safety for the environment and human health across the full life cycle. Availability of alternate practices: Feasible and safe modified/alternate practices that eliminate the need for the plastic product should be considered. Availability of alternate designs: Plastic components that can be removed without compromising the primary function should be considered. Availability of alternate practices that reduce the need for new versions: Feasible reuse, refill or remanufacture business models should be evaluated. Material complexity: Simplification of the material structure to avoid "monstrous hybrids" that cannot be easily separated and recycled should be a priority. Alignment with recycling infrastructure investments and public access: Packaging design should consider where investments are being made in recycling to ensure compatibility.
The state of Israel	A. The cumulative effects on health (cumulative exposure). B. The difficulty or ease of collection.
Brazil	Member States could possibly discuss refill and repair systems as well, taking into account national circumstances and capabilities.
Australia	In considering criteria and non-criteria based approaches for product design, local circumstances and applications need to be taken into account. Hence, nationally determined targets and/or timeframes will assist in implementing globally mandated targets and/or timeframes, to allow for tailored regulatory and policy actions to apply across various contexts. Life cycle assessments, information sharing and incentives for sustainable product designs: Life cycle assessments can be used to ensure that the entire life cycle of plastic is considered during the design stage. As these assessments allow consideration of extraction, processing, production, use and end-of-life of plastic, products can be designed in ways that reduce plastic pollution and support a circular economy. Indicators for life cycle assessments will need to be globally harmonised for consistency across value chains. Information sharing between product designers and suppliers would assist in designing plastic products that conform to the standards to be set out in the ILBI whilst respecting intellectual property rights of companies, as applicable. This standard could be monitored by reporting on recycled materials used within products and their intended process. Extended producer responsibility can be leveraged to promote more sustainable and circular product design and facilitate recycling and reusability to be more economical.

	Another factor to be considered regarding reusability and recyclability is the need to encourage product design to use safe recycled content. This should be partnered with a traceability mechanism to ensure quality recyclate is being used that is fit for purpose and safe. Standards in use: Standards could ensure reuse systems are underpinned by economic and environmental modelling and consumer education. This would ensure reusable items are likely to be used the minimum number of times to ensure the system is viable, whilst ensuring economic viability to encourage business uptake. For instance, the ISO / AS Circular Economy Standards provide guidance on reduce, repair, re-purpose and maintenance: - AS ISO 59004: Circular economy – Vocabulary, principles and guidance for implementation (https://www.iso.org/standard/80648.html) - AS ISO 59010: Circular economy – Guidance on the transition of business models and value networks (https://www.iso.org/standard/80649.html).
Guatemala	That can be melted and that can be processed in a pelletizing machine. That when used in microwaves or when exposed to the sun, it does not release toxic and volatile compounds.
Iraq	Yes, there are several other important attributes to consider in criteria and non-criteria based approaches for plastic product design beyond reusability and recyclability. Here's a overview of additional potential attributes: 1. Biodegradability/Compostability Criteria: Products designed to biodegrade or compost in specific environments. Rationale: Reduces long-term environmental impact, especially for items likely to be littered. Reference: Emadian, S. M., et al. (2017). Biodegradation of bioplastics in natural environments. Waste Management, 59, 526-536. 2. Reduced Material Usage (Dematerialization) Criteria: Minimize the amount of plastic used while maintaining functionality. Rationale: Decreases resource consumption and waste generation. Reference: Rossi, V., et al. (2015). Life cycle assessment of end-of-life options for two biodegradable packaging materials: sound application of the European waste hierarchy. Journal of Cleaner Production, 86, 132-145. 3. Non-toxicity Criteria: Eliminate or minimize the use of harmful chemicals in product design. Rationale: Protects human health and environmental safety throughout the product lifecycle. Reference: Groh, K. J., et al. (2019). Overview of known plastic packaging-associated chemicals and their hazards. Science of the Total Environment, 651, 3253-3268. 4. Carbon Footprint Criteria: Design to minimize greenhouse gas emissions throughout the product lifecycle. Rationale: Addresses climate change impacts of plastic products. Reference: Zheng, J., & Suh, S. (2019). Strategies to reduce the global carbon footprint of plastics. Nature Climate Change, 9(5), 374-378. 5. Water Efficiency Criteria: Design products to minimize water use in production and use phases. Rationale: Addresses water scarcity and pollution issues associated with plastics. Reference: Vince, J., & Hardesty, B. D. (2017). Plastic pollution challenges in marine and coastal environments: from local to global governance. Restoration Ecology, 25(1), 123-128. 6. Repairability Criteria: Design products to be easily repaired, with readily available spare parts. Rationale: Extends product lifespan and reduces waste. Reference: Svensson-Hoglund, S., et al. (2021). Barriers, enablers and market solutions to circular business models in the plastic packaging industry. Journal of Cleaner Production, 316, 128502. 7. Modularity Criteria: Design products with interchangeable components that can be upgraded or replaced.

	Rationale: Enhances product longevity and adaptability. Reference: Bocken, N. M., et al. (2016). Product design and business model strategies for a circular economy. Journal of Industrial and Production Engineering, 33(5), 308-320. 8. Alternative Feedstocks Criteria: Use of renewable or recycled content in plastic production. Rationale: Reduces dependence on virgin fossil-based materials. Reference: Nguyen, H., et al. (2020). Recycling of plastic waste: Screening for brominated flame retardants (BFRs). Chemosphere, 251, 126342. 9. End-of-life Considerations Criteria: Design that considers how the product will be disposed of or recycled at end-of-life. Rationale: Facilitates proper waste management and circular economy principles. Reference: Hahladakis, J. N., & Iacovidou, E. (2018). Closing the loop on plastic packaging materials: What is quality and how does it affect their circularity? Science of The Total Environment, 630, 1394-1400. 10. Cultural and Ethical Considerations Non-criteria based approach: Consider local cultural norms and ethical implications in product design. Rationale: Ensures products are socially acceptable and ethically produced. Reference: Medkova, K., & Fifield, B. (2016). Circular design-design for circular economy. Lahti Cleantech Annual Review, 32-47.
The Republic of BURUNDI	• To facilitate shaping, industrial processes often use plasticizers and fillers. • Indeed, the manufacture of a "recycled" plastic bottle, for example, requires recycled plastic on the one hand, and virgin plastic on the other. Due to their high calorific value, they make it possible to obtain energy recovery through incineration. • You can also proceed by: • mechanical treatment (washing, sorting, grinding, separation); • thermochemical treatment (solvolysis, pyrolysis, chemical reaction). • marking system by type of plastic material, resin identification code. Packaging using this system is marked with an arrowed triangle inside which there is a number indicating the type of plastic used: • Identification code for thermoplastic resins. • These codes indicate the type of plastic used, so that each item can be sorted and processed for proper recycling (where possible and available). However, many other types of plastics do not carry a code and are generally not recyclable.
Germany	While improved reusability and recyclability are important attributes in plastic product design, there are numerous other factors that must be considered. These include material selection, energy efficiency during production, product longevity, end-of-life options, user experience, social impact, regulatory compliance, and innovation in design techniques. By adopting a holistic approach that encompasses these diverse attributes, designers can create more sustainable plastic products that benefit both consumers and the environment.
The Government of Canada	A comprehensive approach to circular design involves addressing a wide range of criteria. While recyclability, reusability, and refillability are important parameters of circular design, other factors are also important. These include enhancing the safety, durability, repairability, and refurbishability of plastics and plastic products, as well as their capacity to be remanufactured, repurposed and disposed of safely and in an environmentally sound manner at their end-of-life. Additionally, minimizing the release of these plastic products, including the release of microplastic into the environment is also essential to reducing plastic pollution. As such, design criteria for circularity should consider all value retention processes, not only reuse and recyclability. An expert body could also recommend changes or additions to the ILBI's criteria for adoption by the governing body.
Malawi	No
Palau	With global supply chains, the generation of recycled plastic feedstock may not be geographically co-located with the manufacture of plastic products. This mismatch will need to be addressed. It is important to provide of effective and robust means of implementation to enable SIDS to participate in recycling, and to access recycling technologies.
Panama	Design criteria will be guidelines, such as opting for monomaterials (avoiding multilayer materials), avoiding pigments, and switching to non-plastic options when appropriate. Chemical simplification should be implemented.
México	A fundamental factor consists of the dissemination of information, as well as raising awareness among the population in order to adopt measures that contribute to ending plastic pollution.

Egypt	1- Enhancement of product design 2- Innovation in technologies and technology transfer
Thailand	1. Chemical Safety and Low Toxicity 2. Resource Efficiency and Lightweighting 3. Energy Efficiency in Production and Use 4. End-of-Life Options and Circularity 5. Products Service System (PSS)
Solomon Islands	Design criteria will be indicative, such as, calling for monomaterials (avoiding multilayer materials), avoiding pigments, movement to non-plastic options where appropriate. Chemical simplification should be implemented.
Bahrain	Approach: Comprehensive Sustainability Attributes • Rationale: Beyond reusability and recyclability, national plans are encouraged to consider attributes like Life Cycle Assessment "LCA" and supply chain processes, energy efficiency, affordability, food and water security, sustainability, national resources and environmental impact specific to national context. • and overall environmental impact. • Implementation: National plans should incorporate criteria assessing these additional attributes for a comprehensive approach to sustainable plastic product design. • Reference: National environmental policies, sustainability frameworks.
Algeria	The products and materials that enter the production process must be studied carefully. these products must facilitate the shaping of the design and the latter must itself facilitate the recycling and recovery process.
United Arab Emirates	Approach: Comprehensive Sustainability Attributes • Rationale: Beyond reusability and recyclability, national plans are encouraged to consider attributes like Life Cycle Assessment "LCA" and supply chain processes, energy efficiency, affordability, food and water security, sustainability, national resources and environmental impact specific to national context. • and overall environmental impact. • Implementation: National plans should incorporate criteria assessing these additional attributes for a comprehensive approach to sustainable plastic product design. • Reference: National environmental policies, sustainability frameworks.

Nominating Member	Part D. 13. Are there specific applications or uses for which criteria and non criteria based approaches for plastics product design are particularly applicable/relevant?
Suriname	Yes, there are specific applications and uses where certain criteria and non-criteria based approaches for plastic product design are particularly relevant. Here's an overview of key areas: 1. Food Packaging Relevant approaches: - Non-toxicity criteria - Reusability and recyclability criteria - Biodegradability (for certain applications) Rationale: Food safety is paramount, requiring strict control over chemical migration. Reusable and recyclable designs can significantly reduce single-use plastic waste in this high-volume sector. Reference: Guillard, V., et al. (2018). The Next Generation of Sustainable Food Packaging to Preserve Our Environment in a Circular Economy Context. Frontiers in Nutrition, 5, 121. 2. Electronics and Appliances Relevant approaches: - Modularity and repairability criteria - Design for disassembly - Recycled content criteria

	Rationale: These products often contain valuable materials and have significant environmental impacts. Design approaches that extend product life and facilitate recycling are crucial. Reference: Bocken, N. M., et al. (2016). Product design and business model strategies for a circular economy. Journal of Industrial and Production Engineering, 33(5), 308-320. 3. Personal Care and Cosmetics Packaging Relevant approaches: - Refillable design criteria - Reduced material usage - Alternative feedstocks Rationale: This sector produces a large volume of single-use plastics. Refillable designs and material reduction can significantly decrease waste. Reference: Monnot, E., et al. (2019). Combining environmental and economic performance in circular economy: The case of refillable packaging. Journal of Cleaner Production, 223, 1122-1135. 4. Automotive Components Relevant approaches: - Durability standards - Recycled content criteria - Design for disassembly Rationale: Long product lifespans and the need for safety make durability crucial, while end-of-life vehicle regulations necessitate recyclability considerations. Reference: Mayyas, A., et al. (2012). Design for sustainability in automotive industry: A comprehensive review. Renewable and Sustainable Energy Reviews, 16(4), 1845-1862. 5. Medical Devices and Packaging Relevant approaches: - Non-toxicity criteria - Sterilization-compatible design - Single-use vs. reusable assessment Rationale: Safety and sterility are paramount, but there's growing recognition of the need to balance these with environmental considerations. Reference: Kane, G. M., et al. (2018). Towards design-driven innovation for sustainability in medical devices. Procedia CIRP, 78, 100-105. 6. Agricultural Plastics Relevant approaches: - Biodegradability criteria - UV stability (for non-biodegradable applications) - Recycled content criteria Rationale: Many agricultural plastics are left in the environment, making biodegradability crucial. For longer-lasting applications, durability and recyclability are key. Reference: Kasirajan, S., & Ngouajio, M. (2012). Polyethylene and biodegradable mulches for agricultural applications: a review. Agronomy for Sustainable Development, 32(2), 501-529. 7. Beverage Containers Relevant approaches: - Reusable design criteria - Recyclability criteria - Lightweight design Rationale: High-volume, often single-use products with significant environmental impact. Reusable and easily recyclable designs can greatly reduce waste. Reference: Simon, B., et al. (2016). Life cycle impact assessment of beverage packaging systems: focus on the collection of post-consumer bottles. Journal of Cleaner Production, 112, 238-248. 8. Textiles and Clothing Relevant approaches: - Microfiber shedding reduction - Recyclability criteria - Alternative feedstocks Rationale: Microfiber pollution is a significant issue, and fast fashion contributes to large volumes of textile waste. Reference: Sandin, G., & Peters, G. M. (2018). Environmental impact of textile reuse and recycling – A review. Journal of Cleaner Production, 184, 353-365.
Somalia	Consider contexts like food storage, transportation, and industrial applications.

El Salvador	Generating high-quality, standard-sized enclosures for easily removable electronic equipment would facilitate repair and upgrading. Generating a much longer life of the plastic casing.
Oman	Applications related to medical, pharmaceutical, sanitary and hygienic purposes could be considered as specific in terms of use of plastic products. This is due to undisputable necessity of using such products, the absence of alternative solutions and potential disastrous consequences for the humanity in case of applying prohibitions and restrictions with respect to such products
Republic of Cuba	non
New Zealand	The application of the proposed approaches could be in particular focused on the redesigning of problematic and avoidable products (Part II.3).
Russian Federation	Special approach may be warranted based on product applications. Please, see the responses to sections 5 and 7.b.
Cook Islands	No, all uses and applications of plastics should be addressed.
Tuvalu	All products must be designed for safety, reduction in overall use of plastic polymers (primary and secondary), and reduction in GHG emissions.
Republic of Korea	1. Packaging is undeniably the most heavily regulated field and is subject to various national measures as well as extensive research efforts. 2. All of the criteria mentioned above (such as using single materials, facilitating easier disassembly and separation, avoiding pigments, expanding the product's life cycle, and reducing plastic volume) can be applied to plastic packaging. 3. Further case studies could be found in these reports and guidelines: A. Ellen MacArthur Foundation (2019). Reuse rethinking packaging. Available at: https://www.ellenmacarthurfoundation.org/reuse-rethinking-packaging B. Evaluation of Quality and Structure of Packaging Materials (Republic of Korea) C. Assessment of Circular Usability of Products based on the Act on Promotion of Transition to Circular Economy and Society (Republic of Korea) D. Standards for the quality of packing materials and packing methods (referring to the ratio of a packing space and the number of packing, Republic of Korea) E. Standards for annual reduction of packing materials made of synthetic resin(Republic of Korea)
Malaysia	We believe design rules should be applicable to all plastics products, perhaps starting with products that are currently not being able to be channelled into the recycling and reuse streams and ending up in the environment.
Philippines	Yes. Product design performance criteria have both general criteria (such as material selection, chemical simplification, and ease of disassembly) and criteria that are application- or use-specific (such as simple and innovative design, standardization, and reusable plastic product testing).
Singapore	Nil.
Costa Rica	Criteria-Based Approaches Applications: Medical Devices: o Reason: High regulatory standards and safety requirements necessitate precise criteria for materials, design, and performance. o Example: Surgical instruments, prosthetics, and medical implants. Automotive Industry: o Reason: Strict performance, safety, and durability standards require detailed criteria for plastic components.

	o Example: Dashboard components, bumpers, and under-the-hood parts. Aerospace: o Reason: Extreme operating conditions and high safety standards demand specific criteria for materials and design. o Example: Interior panels, insulation, and lightweight structural components. Consumer Electronics: o Reason: Need for durability, aesthetic appeal, and precise functionality calls for criteria-based design. o Example: Smartphone casings, laptop bodies, and wearable devices. Packaging: o Reason: Regulatory requirements for food safety, recyclability, and material properties necessitate clear criteria. o Example: Food containers, beverage bottles, and pharmaceutical packaging. Non-Criteria-Based Approaches Applications: Innovative Product Development: o Reason: Flexibility in design encourages creativity and the exploration of new ideas without being constrained by predefined criteria. o Example: Conceptual consumer products, artistic installations, and experimental designs. Rapid Prototyping: o Reason: Emphasis on speed and iteration over adherence to strict criteria allows for quick testing and refinement of ideas. o Example: Prototype models for feedback and testing, proof-of-concept designs. Design Exploration: o Reason: Freedom from criteria enables exploration of alternative materials, forms, and functions. o Example: Architectural models, furniture design, and bespoke custom products. Niche Markets: o Reason: Unique market demands or low-volume production runs may benefit from a more flexible, non-criteria-based approach. o Example: Custom automotive parts, personalized consumer goods, and limited edition items.
The European Union and its 27 Member States	These criteria should be applicable for all uses and applications, for all categories of plastics and plastic products, while the focus could be at the beginning on the high impact sectors, particularly for the development, in a second stage of specific design and performance requirements. Relevant uses, applications, references: While generic design criteria should be applicable to all plastics and plastic products, specific design requirements should be developed, starting with some high impact sectors, such as: packaging, aquaculture and agriculture, textiles, electric and electronic equipment, construction, automotive, etc..
United Kingdom	A sectoral approach would be needed for any measures to be feasible and effective. The UK supports Norway's proposal under 4bis. as a pragmatic approach to embed a sectoral approach in the ILBI.
Saudi Arabia	Approach: Nationally Identified Applications • Rationale: Specific applications for which criteria and non-criteria-based approaches are relevant should be identified by each country based on their national circumstances. This ensures that interventions are tailored to the unique needs and priorities of each nation. • Implementation: National plans should determine the relevant applications where plastic products are problematic and apply appropriate criteria and non-criteria-based approaches accordingly. • Reference: National waste management strategies, sector-specific sustainability reports.
United States.	Any criteria/approaches identified should be broadly relevant for all potential products, including non-plastic substitutes and alternatives.
Ecuador	Food Packaging: Criteria-based approaches focusing on food safety, recyclability, and compatibility with food contact regulations are crucial for plastic product design in food packaging applications. Non-criteria based approaches like circular design principles can enhance the reusability and sustainability of food packaging materials. Medical Devices: Criteria-based approaches emphasizing biocompatibility, sterilization, and durability are essential for plastic product design in medical devices. Non-criteria based approaches, such as material innovation and circular design, can improve the recyclability and reusability of medical plastic products.

	Automotive Components: Criteria-based approaches focusing on durability, heat resistance, and impact strength are critical for plastic product design in automotive components. Non-criteria based approaches like modular design and resource efficiency can enhance the sustainability and circularity of plastic materials in the automotive industry. Consumer Electronics: Criteria-based approaches highlighting electrical properties, flame resistance, and design for disassembly are important for plastic product design in consumer electronics. Non-criteria based approaches, such as energy efficiency and material transparency, can contribute to sustainable and environmentally friendly electronics products. Building Materials: Criteria-based approaches addressing weather resistance, recyclability, and energy efficiency are key for plastic product design in building materials. Non-criteria based approaches like local sourcing and production can promote sustainability and reduce environmental impact in the construction industry. Textile and Apparel: Criteria-based approaches emphasizing dyeability, comfort, and durability are relevant for plastic product design in textile and apparel applications. Non-criteria based approaches such as waste reduction and material innovation can enhance the sustainability and circularity of plastic textiles and garments. Household Goods: Criteria-based approaches focusing on safety, ease of cleaning, and material durability are important for plastic product design in household goods. Non-criteria based approaches like user experience design and social impact considerations can improve the usability and societal benefits of plastic household products. Agricultural Applications: Criteria-based approaches addressing UV resistance, chemical compatibility, and biodegradability are relevant for plastic product design in agricultural applications. Non-criteria based approaches like eco-friendly materials and resource efficiency can support sustainable practices in agriculture.
Ethiopia	Applications of Criteria-Based Approaches 1. Circular Design of Plastic Products • Criteria-based approaches: - are essential for establishing guidelines that promote the circular economy. This includes developing harmonized design criteria that ensure plastics can be effectively reused and recycled. The emphasis is on aligning product design with existing collection and recycling infrastructure, which enhances the feasibility of recycling and reduces environmental impacts. https://www.unido.org/sites/default/files/unido-publications/2024 04/GACERE%20Policy%20Brief%20 %20Circular%20Design%20of%20Plastic%20Products_0.pdf 2. Regulatory Compliance • Many regions have implemented regulations that necessitate specific design criteria for plastic products. For instance, the EU's Single-Use Plastics Directive mandates that products must be designed to facilitate recycling and reduce environmental harm. This requires designers to consider the entire lifecycle of the product, including its end-of-life management. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html https://pub.norden.org/temanord2024-508/2-methodology-and-basis-for-selection-of-criteria.html 3. Design for Recycling (DfR) • DfR is a critical application of criteria-based approaches. It involves designing products to enhance their recyclability by selecting appropriate materials, minimizing the use of additives, and ensuring that products can be easily disassembled. This approach addresses the challenges of low recycling rates and the economic viability of recycled materials. https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 4. Safety-critical applications: In industries such as automotive, aerospace, medical devices, and consumer electronics, where safety and reliability are paramount, criteria-based approaches are essential. Design criteria might include mechanical strength, chemical resistance, thermal stability, and dimensional accuracy. These criteria ensure that the plastic parts can withstand the operational stresses and environmental conditions they will be exposed to. 5. Regulated industries: Products that are subject to strict regulations and standards (e.g., FDA regulations for medical devices, FAA regulations for aerospace components) require adherence to specific criteria. Criteria-based design ensures compliance with these standards to ensure safety, efficacy, and legality of the products. Applications of Non-Criteria Based Approaches 1. Innovation in Packaging Solutions • Non-criteria-based approaches allow for more flexible and innovative solutions in product design. For example, businesses can explore alternative materials or packaging methods that eliminate the need for plastics altogether, such as reusable packaging systems. This approach can significantly reduce plastic consumption without compromising functionality.

	https://www.unido.org/sites/default/files/unido-publications/2024-04/GACERE%20Policy%20Brief%20-%20Circular%20Design%20of%20Plastic%20Products_0.pdf 2. Product Optimization • Non-criteria-based approaches focus on optimizing existing products by reducing the volume and weight of plastic used while maintaining performance. This can involve rethinking the design to eliminate non-essential plastic components, thus minimizing environmental impact and resource use. https://www.unido.org/sites/default/files/unido-publications/2024 04/GACERE%20Policy%20Brief%20%20Circular%20Design%20of%20Plastic%20Products_0.pdf https://ivl.diva-portal.org/smash/get/diva2:1845203/FULLTEXT01.pdf 3. Consumer Behavior and Market Dynamics • Non-criteria approach also consider the market dynamics and consumer preferences, allowing companies to adapt their products based on consumer trends towards sustainability. This flexibility can lead to the development of innovative products that meet consumer demands while reducing plastic usage. https://pub.norden.org/temanord2024-508/3-potential-criteria-for-problematic-unnecessary-and-avoidable-plastic-products.html https://pub.norden.org/temanord2024-508/2-methodology-and-basis-for-selection-of-criteria.html Rationale for Use The rationale behind employing these approaches includes: • Environmental Impact Reduction: Both criteria and non-criteria-based approaches aim to minimize the environmental footprint of plastic products by enhancing recyclability and reducing unnecessary plastic use. • Regulatory Alignment: As regulations become stricter regarding plastic usage and waste management, adherence to criteria-based approaches ensures compliance and avoids potential penalties. • Market Competitiveness: Companies adopting innovative and sustainable practices can enhance their market position by appealing to environmentally conscious consumers. • Resource Efficiency: Optimizing product design leads to better resource management, reducing waste and promoting a circular economy. In conclusion, the application of criteria and non-criteria-based approaches in plastics product design is crucial for fostering sustainability, meeting regulatory requirements, and driving innovation in the industry.
Uruguay	The packaging sector could be an initial sector on which start the application of the mentioned criteria.
Chile	Food and Beverage Packaging Criteria-Based Approaches • Chemical Safety and Non-Toxicity: Ensuring that packaging materials do not leach harmful chemicals into food and beverages. o Rationale: Chemicals such as phthalates and bisphenol A (BPA) can migrate into food products, posing significant health risks. Criteria to limit these substances ensure food safety. o Sources: Food Packaging Forum. (2022). Sustainable Food Packaging; European Food Safety Authority (EFSA). • Material Compatibility: Use of single-type polymers or compatible polymer blends. o Rationale: Single-type polymers like PET and HDPE are easier to recycle, improving the efficiency and quality of the recycling process. o Sources: PlasticsEurope, American Chemistry Council. Non-Criteria Based Approaches • Best Practices: Promoting the use of safer alternatives and encouraging manufacturers to adopt green chemistry principles. o Rationale: Industry-specific guidelines can help manufacturers minimize the use of hazardous chemicals and improve the sustainability of food packaging. o Sources: UNEP. (2020). Guidelines for Sustainable Packaging. • Lifecycle Assessments (LCAs): Evaluating the environmental impact of packaging materials from production to disposal. o Rationale: LCAs help identify opportunities to reduce environmental impacts and enhance the sustainability of food packaging. o Sources: Environmental Protection Agency (EPA). (2021). Life Cycle Assessment (LCA) Resources. Medical Devices Criteria-Based Approaches • Sterility and Non-Toxicity: Ensuring medical devices do not release harmful substances and can be safely sterilized. o Rationale: Medical devices are in direct contact with human tissues and fluids, and exposure to toxic chemicals can lead to serious health issues. Criteria to ensure non-toxicity and sterility are crucial for patient safety. o Sources: World Health Organization (WHO). (2016). Medical Device Regulations; U.S. Food and Drug Administration (FDA).

• Design for Disassembly: Designing devices for easy disassembly to facilitate sterilization and reuse.
o Rationale: Products designed for disassembly can be easily cleaned and sterilized, supporting repeated use and reducing medical waste.
o Sources: Ellen MacArthur Foundation, UNEP.

Non-Criteria Based Approaches
• Lifecycle Assessments (LCAs): Conducting LCAs to evaluate the environmental and health impacts of medical devices throughout their lifecycle.
o Rationale: LCAs guide manufacturers in making informed decisions about materials and design features that enhance the sustainability and safety of medical devices.
o Sources: Journal of Industrial Ecology. (2018). LCA of Medical Devices.
• Best Practices: Developing industry-specific best practices for safe and sustainable medical device design.
o Rationale: Best practices provide actionable advice for manufacturers, promoting the adoption of sustainable and safe design principles.
o Sources: Medical Device Innovation Consortium (MDIC), GreenBlue.

Children's Toys
Criteria-Based Approaches
• Chemical Safety and Non-Toxicity: Strictly limiting or banning the use of hazardous chemicals such as phthalates, bisphenols, and heavy metals in toys.
o Rationale: Children are particularly vulnerable to the effects of toxic chemicals. Ensuring that toys are free from harmful substances protects children's health and development.
o Sources: European Chemicals Agency (ECHA). Toy Safety Directive; U.S. Consumer Product Safety Commission (CPSC).
• Durability and Safety: Ensuring toys are durable and safe for repeated use.
o Rationale: Durable toys reduce waste and provide long-term safety for children.
o Sources: International Toy Industry Association, ISO.

Non-Criteria Based Approaches
• Consumer Education: Informing parents and caregivers about the importance of choosing non-toxic toys.
o Rationale: Educated consumers are more likely to select safe and sustainable toys for their children.
o Sources: Healthy Toys. (2020). Guide to Safer Toys; Green America. (2019). Safer Toy Guide.
• Best Practices: Encouraging manufacturers to use safer materials and adopt designs that minimize chemical use.
o Rationale: Best practices help manufacturers create safer and more sustainable toys.
o Sources: Toy Industry Association, UNEP.

Consumer Electronics
Criteria-Based Approaches
• Durability and Non-Toxicity: Limiting the use of harmful flame retardants, heavy metals, and other toxic substances in electronic devices.
o Rationale: Electronics often contain hazardous substances that can leach out during use and disposal, posing health and environmental risks. Ensuring the durability and safety of materials used in electronics reduces these risks.
o Sources: European Chemicals Agency (ECHA). RoHS Directive; U.S. Environmental Protection Agency (EPA).
• Design for Disassembly and Repairability: Designing electronics for easy disassembly and repair.
o Rationale: Products designed for disassembly and repair can be easily maintained and upgraded, extending their lifespan and reducing electronic waste.
o Sources: Ellen MacArthur Foundation, ISO.

Non-Criteria Based Approaches
• Lifecycle Assessments (LCAs): Evaluating the full lifecycle of electronic products to minimize environmental impact and health risks.
o Rationale: LCAs help identify opportunities to improve the sustainability and safety of electronic products.
o Sources: Journal of Cleaner Production. (2016). Sustainable Electronics.
• Consumer Education: Informing consumers about the safe use and disposal of electronic products.
o Rationale: Educated consumers are more likely to participate in proper disposal and recycling programs, reducing electronic waste and environmental contamination.
o Sources: GreenBlue, National Geographic.

	Agricultural Plastics Criteria-Based Approaches • Biodegradability: Using biodegradable plastics for applications such as mulching films and greenhouse covers. o Rationale: Biodegradable plastics can decompose naturally, reducing plastic waste in agricultural settings and preventing soil contamination. o Sources: UNEP. (2021). Biodegradable Plastics in Agriculture. • Chemical Safety: Ensuring agricultural plastics do not release harmful substances into the soil and crops. o Rationale: Non-toxic agricultural plastics protect soil health and crop safety, promoting sustainable farming practices. o Sources: European Chemicals Agency (ECHA), Food and Agriculture Organization (FAO). Non-Criteria Based Approaches • Best Practices: Developing best practices for the use and disposal of agricultural plastics. o Rationale: Best practices help farmers adopt sustainable plastic use and disposal methods, reducing environmental impact. o Sources: Food and Agriculture Organization (FAO), UNEP. • Consumer Education: Educating farmers about the benefits of biodegradable and non-toxic agricultural plastics. o Rationale: Informed farmers are more likely to choose sustainable plastic products and disposal methods, promoting sustainable agriculture. o Sources: National Geographic, GreenBlue.
The State of Qatar	Ease of repairability of products would effectively decrease plastic waste. In addition, please refer to the responses to questions 3 and 5 of this questionnaire.
The Islamic Republic of IRAN	There are many applications in plastic products that have no accessible and affordable alternatives. In such cases, the decision should be made nationally based on the socio-economic and circumstances of each country.
Switzerland	• In general, both criteria or non-criteria based approaches could lead to the classification of a product as problematic, and a possible measure could be a re-design. These approaches should be applied in the broadest sense and, in particular, should lead to re-designing the products concerned (Provision 3). • Define sectors for which reuse systems can easily be introduced. Such a sector is for example the packaging sector with the following sub-sectors: o Food and drink services (e.g. beverage cups and bottles, take-away food containers) o Business to Business (e.g. transport packaging) o E-commerce (e.g transport packaging from business to consumer) Based on the policy brief “Demystifying Reuse in the Global Plastics Treaty” by the University of Portsmouth). Further sources for the rationale: plasticspolicy.port.ac.uk/wp-content/uploads/2023/05/Making-reuse-a-reality-report_GPPC.pdf GPPC x BFFP policy brief REUSE (port.ac.uk)
Madagascar	There are several specific applications and uses where criteria-based and non-criteria-based approaches for plastic product design are particularly relevant: Criteria-based approaches: -Designing plastic products for structural or load-bearing applications - Criteria related to strength, stiffness, impact resistance, and fatigue life are crucial. -Designing plastic products for use in harsh environments - Criteria related to chemical resistance, thermal stability, and UV resistance are important. -Designing plastic products that need to meet regulatory standards or certifications - Criteria based on flammability, food contact, or other regulatory requirements must be satisfied. -Designing plastic products for precision or dimensional accuracy - Criteria related to mold shrinkage, warpage, and dimensional tolerances are key. Non-criteria-based approaches: -Designing plastic products for aesthetic or user experience purposes

	- Non-criteria factors like appearance, feel, and ergonomics are prioritized over technical specifications. -Designing innovative or novel plastic products - Non-criteria approaches allow for more creativity and exploration of new design concepts without being constrained by specific performance requirements. -Designing plastic products for end-of-life considerations - Non-criteria factors like disassembly, recyclability, and reparability can guide the design process. -Designing plastic products for cost-effectiveness - Non-criteria factors like manufacturing efficiency, material usage, and assembly can be optimized.
The state of Israel	Groups of products to start with (better this tool will deal with groups of Products and not single items, to better face the ongoing change). a)Packaging (as a great deal of work has already been carried out on this subject). b)Utensils, cups and plates that come into contact with food (disposable and reusable). c)Products with direct contact with humans such as textiles, breathable products (such as masks) and products that break down into macroplastics (synthetic grass, tires, textiles, etc.)
Brazil	Specific uses and applications could be considered.
Australia	Yes, in the use of recycled material in new plastic products to ensure that the product remains functional and recyclable while remaining fit for purpose without compromising on safety for human health and the environment. The waste hierarchy is integral to support safe circularity of reused and recycled plastic products. The transition to a circular economy for plastics requires an evolution beyond recyclability and reusability to consider the entire life cycle of plastics. This requires environmental analysis including consideration of emissions, energy use, water use, and the impacts of logistics and other supply chain operations. Avoidance of microplastics creation: Products that deteriorate in the environment and therefore contribute to the proliferation of microplastics, or single-use plastics disproportionately contribute to plastic pollution and would also benefit from criteria and non criteria based improvements to their design. This is particularly relevant for the packaging sector and the Australian Packaging Covenant Organisation (APCO) provides useful guidelines for sustainable packaging (https://apco.org.au/sustainable-packaging-guidelines). Plastic emissions: Improving product design is also essential to reducing plastic leakage into the environment. Criteria and non criteria based approaches for product design may assist when considering those plastic products that contribute the most to environmental pollution. More effective design standards can improve the longevity of a product to minimise plastic leakage and releases throughout the life cycle. The Organisation for Economic Co-operation and Development report 'A Chemicals Perspective on Designing with Sustainable Plastics' provides useful information on goals, considerations and trade-offs when applying a chemicals lens to the plastic material selection process (https://www.oecd.org/en/publications/a-chemicals-perspective-on-designing-with-sustainable-plastics_f2ba8ff3-en.html).
Guatemala	Products designed to store food, water or to house products for human consumption must not release toxic substances when subjected to heat or in conctact with them.
Iraq	No answer
The Republic of BURUNDI	1. PET or PETE: poly(ethylene terephthalate): usually used for mineral water, soda and fruit juice bottles, packaging, blisters, padding. Its danger to health is debated. One study suggested that plastic bottles release endocrine disruptors into water, but the study's findings and methodology have been disputed by other experts and food safety agencies; 2. HDPE or HDPE: high density polyethylene: certain bottles, flasks, and more generally semi-rigid packaging. Considered safe for food use; 3. V or PVC: polyvinyl chloride: used for pipes, tubes, garden furniture, floor coverings, window profiles, shutters, detergent bottles, oilcloths. Potentially dangerous for food use (may contain dioxins, bisphenol A, mercury, cadmium); 4. LDPE or LDPE: low density polyethylene: tarpaulins, garbage bags, bags, films, flexible containers. Considered safe for food use; 5. PP: polypropylene: used in the automotive industry (equipment, bumpers), toys, and in the food industry (packaging). Considered safe for food use; 6. PS: polystyrene: thermal insulation boards for buildings, food trays (expanded polystyrene), disposable cutlery and cups, CD cases, packaging (foam and films), toys, kitchen utensils, pens, etc. Dangerous, especially in the event of combustion (contains styrene); 7. OTHER or O: any plastic other than those named 1 to 6. Includes for example polycarbonate-based plastics; bisphenol A polycarbonates are potentially toxic.
Germany	Both criteria-based and non-criteria based approaches have their unique strengths and applications within plastics product design. Criteria-based methods excel in environments demanding compliance with regulations, performance optimization, sustainability goals, cost management, and user-centric designs. Conversely, non-criteria based methods shine in conceptual development phases, rapid prototyping scenarios, artistic endeavors, innovative material exploration, and interdisciplinary collaborations where creativity is key. By understanding when each approach is most applicable, designers can better navigate the complexities of plastics product development to achieve successful outcomes tailored to their specific needs.

The Government of Canada	Currently, the packaging sector is the largest generator of plastic waste, a key source of plastic pollution. Plastic packaging is also identified as a product group with potential for product design measures, due to the large volumes and high probability of leakage. Sector-specific design criteria for plastic packaging must be prioritized, with the possibility to add other uses and applications at a later stage. Many guidelines already exist for plastic packaging, and while they have some differences, they are broadly aligned across the world. Additional sectors, uses or applications that should be addressed by design criteria may be identified through the work in other provision areas during the treaty development or at a later date by the COP or expert group (e.g., targeted uses or applications identified for problematic and avoidable plastic products, chemicals of concern, or to reduce emissions or releases of plastics and associated pollutants into the environment).
Armenia	A separate group of plastics that have found a variety of applications in industry and everyday life are materials after recycling. Most often, these are bottles, packaging or film made of LDPE, HDPE, PP or PET plastic. Separately collected plastic waste is sent to special enterprises, where it undergoes a recycling process. Semi-finished products (for example, granules) are made from used plastics, which can be re-produced: films, tapes, packaging and non-woven materials (used in construction, courier and postal services, agriculture, food industry, etc.); toys, home accessories, sports equipment; clothing and footwear; water and sewer pipes, electrical wiring elements; disposable tableware, containers, trays, etc. Increasingly, global manufacturers of electronics, household appliances and the furniture industry are also interested in recycled plastic, looking for new ways to use recycled plastic. This material is also becoming an object of interest for designers of modern green construction, an industry that is currently experiencing the greatest boom.
México	Of special importance is the food sector, in which there is extensive use of plastics, as well as the medical sector that was mentioned above.
Egypt	No
Thailand	Answer: Packaging, EEE, Automotive, Construction products
Solomon Islands	These approaches should be applied in the broader sense and in particular for redesigning products of concern (provision 3).
Bahrain	Approach: Nationally Identified Applications • Rationale: Specific applications for which criteria and non-criteria-based approaches are relevant should be identified by each country based on their national circumstances. This ensures that interventions are tailored to the unique needs and priorities of each nation. • Implementation: National plans should determine the relevant applications where plastic products are problematic and apply appropriate criteria and non-criteria-based approaches accordingly. • Reference: National waste management strategies, sector-specific sustainability reports.
Algeria	All activities relating to scientific research as well as industries with sensitive applications (electronics, IT, space technology, etc.) must be taken into consideration.
China	Yes. 1. Electronic and Electrical Products In 2023, China collected 1.7 million tons of waste plastics from electronic and electrical products. With an extensive downstream application market for recycled plastics sourced from dismantled waste electronic and electrical products, most of wastes can be looped back into the production of electronic and electrical products (components or packaging), while some are used in automotive parts, secondary packaging, and other products. Reference: "Research Report on the Waste Electronic and Electrical Products Processing Industry" (2020) published by the Solid Waste and Chemicals Management Technology Center of the Ministry of Ecology and Environment, "2022 China Electronic and Electrical Products Plastic Recycling Development Report" compiled by the China Material Recycling Association's Recycled Plastics Branch, and the China Material Recycling Association's Electronic Product Recycling Branch, and "China Recycled Plastics Industry Development Annual Report 2023". 2. Automotive In 2023, China collected 1.15 million tons of waste plastics from automobiles (accounting for 6%). Reference: "China Recycled Plastics Industry Development Annual Report 2023".

United Arab Emirates	Approach: Nationally Identified Applications • Rationale: Specific applications for which criteria and non-criteria-based approaches are relevant should be identified by each country based on their national circumstances. This ensures that interventions are tailored to the unique needs and priorities of each nation. • Implementation: National plans should determine the relevant applications where plastic products are problematic and apply appropriate criteria and non-criteria-based approaches accordingly. • Reference: National waste management strategies, sector-specific sustainability reports.

Nominating Member	Part D. 14. Are there any important interrelations to other draft provisions of the instrument?
Suriname	Yes, there are several important interrelations between the approaches for plastic product design and other potential provisions of the ILBI. Here's a overview of key interrelations: 1. Scope and definitions: Product design criteria will inform the scope of products covered by the instrument and help define key terms. 2. Waste reduction targets: Design approaches directly impact the ability to meet waste reduction goals. 3. Recycling and reuse targets: Product design is crucial for achieving specific recycling and reuse objectives. 4. Chemical regulations: Design criteria for non-toxicity and material selection relate to provisions on chemical use and restrictions. 5. Extended Producer Responsibility (EPR): Design choices influence producers' responsibilities throughout the product lifecycle. 6. Standardization and labeling: Design criteria may inform labeling requirements and product standards. 7. Innovation and research: Design approaches drive the need for innovation in materials and manufacturing processes. 8. Capacity building and technology transfer: New design approaches may require provisions for technical assistance and knowledge sharing. 9. Monitoring and reporting: Product design criteria will influence what data needs to be collected and reported. 10. Market-based instruments: Design choices may be influenced by economic incentives or disincentives in the instrument. 11. Lifecycle assessment requirements: Design approaches should align with any provisions for lifecycle impact assessment. 12. Waste management infrastructure: Product design needs to consider existing and future waste management capabilities. 13. Consumer awareness and education: Design changes may necessitate consumer education provisions. 14. Trade measures: Product design criteria could impact trade-related provisions. 15. Marine litter prevention: Design approaches, especially for commonly littered items, relate to marine pollution prevention measures.
Somalia	Connections to provisions on chemicals and recyclability Regional Efforts and Compliance: Somalia's ban on single-use plastics aligns with regional standards set by the East African Community (EAC) on environmental protection. The country joins other East African nations like Kenya and Rwanda in taking decisive action against plastic pollution. These efforts reflect Somalia's dedication to environmental conservation and its role as a global leader in the fight against plastic pollution.
El Salvador	Yes, Law on Integrated Waste Management and Promotion of Recycling.
Oman	The design of plastic products could relate to Section II.3 in ways that producers of "problematic" plastic products should have the opportunity to improve the design of such products that could increase their recyclability, reusability, and material efficiency, thereby, transforming the products from "problematic" to those having more desirable properties in terms of reaching the goals of the Instrument – combatting plastic pollution
Republic of Cuba	The product design provision (Sect II.5) shall include the issue of problematic plastic products, in order to achieve synergies and improve the design of such products that permits their recyclability, reusability and material efficiency.
Japan	As characteristics of plastic products are diverse, it is practical and effective for each Party to take concrete measures according to each application and specific situation. For this reason, sectoral approach, as captured in 4bis "Dedicated Programme of work", is useful.
New Zealand	Part II.2 - as answered above Part II.3 - as answered above Part II.5 interrelates with Part II.7 on extended producer responsibility (EPR). EPR schemes can be used as a tool to drive improvements earlier on in a product's lifespan and can link to product design requirements under Part II.5.

	Part II.5 interrelates with Part II.6 on non-plastic substitutes. Design criteria should be considered alongside requirements for non-plastic substitutes, as redesigned products could be moved to non-plastic substitutes where appropriate.
Russian Federation	The design of plastic products could relate to Section II.3 in ways that producers of "problematic" plastic products should have the opportunity to improve the design of such products that could increase their recyclability, reusability, and material efficiency, thereby, transforming the products from "problematic" to those having more desirable properties in terms of reaching the goals of the Instrument – combatting plastic pollution.
Cook Islands	Part II Provision 1 - primary and secondary plastic polymers Provision 2 - chemicals of concern Provision 3 - products of concern Provision 7 - producer responsibility Provision 6 - non-plastic substitutes Provision 9 - waste management Provision 12 - just transition Provision 13 - transparency All of Part IV and Part V
Tuvalu	See 4b and 7b.
Republic of Korea	1. Draft Provision II. 3 (Problematic and avoidable plastic products): Enhancing the circularity of the design of problematic and avoidable plastic products is essential to tackle plastic pollution. 2. Draft Provision II. 7 (Extended Producer Responsibility): Extended Producer Responsibility (EPR) could be utilized to enhance product design by providing incentives or penalties to producers (GACERE Circular Design of Plastic Products Policy Brief, 2024). 3. Draft Provision II. 9 (Waste Management): The product's recyclability must be closely interlinked with waste management to ensure practical and scalable implementation. 4. Draft Provision II. 13 (Transparency, tracking, monitoring, and labeling): Labeling is a crucial measure to inform consumers about product circularity and help businesses highlight their products' benefits
Malaysia	Yes. Design rules should be applicable throughout the whole plastics value chain and could be potentially considered under provisions II.1, 2, 3, 4, 6, 7, 9 and 10.
Philippines	Yes. Part II: II.1 Primary and secondary plastic polymers; II.2 Chemicals and polymers of concern; II.3 Problematic plastic products; II.4 Exemptions available to a party upon request and Dedicated Programmes of work; II.5 Product design, composition, and performance; II.6 Non-plastic substitutes; II.7 Extended producer responsibility; II.8 Emissions and releases of plastic throughout its life cycle; II.9 Waste management; II.10 Trade; 11.12 Just Transition; II.13 Transparency, tracking, monitoring and labelling. Part III: III.1 Financing; III.2 Capacity building, technical assistance and technology transfer; III.3 Technology Part IV: IV.1 National plans; IV.2 Implementation compliance and cooperation; IV.5 International Cooperation; IV.6 Information exchange; IV.7 Awareness-raising, education and research, IV.8 Stakeholder engagement Part V: V.2 Subsidiary bodies Possible annexes: Annex A, B, C, D
Singapore	Aside from the abovementioned linkages (i.e. in Parts B and C), it is important to ensure that product design supports Extended Producer Responsibility (EPR) implementation, and linkages to Provision 7 (EPR) should be considered. Product design guidelines should be developed with EPR implementation in mind, and producers should be responsible for designing products in a way that could be managed in an EPR scheme.
The European Union and its 27 Member States	• On provision 2 on chemicals of concern, because one of the generic design criteria in provision 5 is related to the need to increase the safety of the product with respect to chemicals referred to provision 2 and the related Annex A. • On provision 3 problematic and avoidable plastic products: products that are on the market because they are not yet assessed or restricted, or they are derogated or that are identified as unavoidable under provision 3 will be impacted by measures of provision 5. • On provision 10 trade, as equivalent trade measures need to be established • On provision 13 on transparency, tracking and labelling, as they are necessary for the efficiency of these provisions by knowing the presence of plastic in products, the chemical content of the products, the production of the products restricted, labelling to inform consumers choices.
United Kingdom	Draft provisions Part 2.1 Primary Plastic Production and Part 2.7 Extended Producer Responsibility are also provisions that relate to better design. For example, the UK's Plastic Packaging Tax incentivises increased recycled content by requiring importers and manufactures of plastic packaging to pay over £200 per tonne for components of plastic packaging which contain less than 30% recycled plastic.

Federated States of Micronesia	Regulating plastic product design is without prejudice to provisions in the instrument regulating the production and consumption of plastic polymers, including in provision II.1 of the instrument, which must be a priority objective of the instrument. Additionally, to the extent that the regulation of plastic product design under provision II.5 of the instrument involves recourse to traditional knowledge, knowledge of Indigenous Peoples, and local knowledge systems, including in terms of harmful impacts during the recycling process on Indigenous Peoples, local communities, and their traditional terrestrial and maritime territories, there must also be recourse to the safeguards in the instrument pertaining to such types of knowledge and their holders, including the free, prior, and informed consent and other internationally recognized rights of such holders. Such safeguards must be reflected in, at a minimum, the Preamble of the instrument as well as in a standalone Principles article/provision of the instrument.
Saudi Arabia	Answer provided in Section 6. • We suggest linking and merging Part 2.3 Section with Part 2.5 from the revised zero-draft related to plastic products design to improve reusability, recyclability, and material efficiency in one single section. • A link and a reference for this section in section 9 related to waste management.
United States.	While there are interrelations to most of the draft provisions, linkages to the draft provisions on chemicals, products, non-plastic substitutes, and transparency should be particularly considered.
Ecuador	It has to do with the provisions related to: · 2.8 Emissions and releases of plastic throughout its life cycle · 2.10 Trade in listed chemicals, polymers and products · 2.13 Transparency, tracking, monitoring and labeling · 3.2 Capacity-building, technical assistance and technology transfer · Part IV. National Plans · Annex A regarding to primary plastic polymers, and chemicals and polymers of concern · Annex E regarding emissions and releases of plastic through its life cycle · Annex [X] regarding effective measures at each stage of plastic lifecycle
Ethiopia	1. Waste Management (e.g., Provision II.3): Measures related to waste management systems, including collection, sorting, and processing of recyclable materials, are crucial for implementing effective recyclability and reusability strategies. 2. Product Lifecycle Assessment (e.g., Provision II.4): Assessing the environmental impacts of products throughout their lifecycle informs design decisions aimed at reducing environmental footprints, including considerations of recyclability and reusability. 3. Technical Standards and Specifications (e.g., Provision II.6): Setting technical standards and specifications for products, materials, and recycling processes supports uniformity and effectiveness in achieving recyclability and reusability goals. 4. Market-based Instruments (e.g., Provision II.7): Economic instruments such as taxes or incentives can influence product design decisions favoring recyclability and reusability. Uses and Applications The uses and applications of criteria-based and non-criteria-based approaches in product design for recyclability and reusability are diverse: • Packaging: Designing plastic packaging that is easily recyclable or reusable reduces waste and promotes a circular economy. • Consumer Goods: Products like household items, electronics, and furniture can be designed for easy disassembly and material recovery. • Industrial Applications: Components and materials used in industrial settings can be optimized for reuse or recycling to minimize waste generation. Integrating both criteria-based and non-criteria-based approaches into the draft provision II.5 of the Compilation text ensures comprehensive strategies for enhancing the recyclability and reusability of plastic products. These approaches are interconnected with other draft provisions, collectively supporting sustainable practices and environmental stewardship in product design and management. References • Barnes, D. K. A., Galgani, F., Thompson, R. C., & Barlaz, M. (2009). Accumulation and fragmentation of plastic debris in global environments. *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*(1526), 1985-1998. • Ellen MacArthur Foundation. (2019). The New Plastics Economy: Rethinking the Future of Plastics & Catalysing Action. • European Commission. (2020). Study on the Improved Circularity of Plastic Packaging: Designing for Recycling and its Influence on Circular Economy. • Galgani, F., Hanke, G., Maes, T., & Thompson, R. C. (2013). *Monitoring Guidance for Marine Litter in European Seas*. Publications Office of the European Union. • Gewert, B., Plassmann, M. M., & MacLeod, M. (2015). Pathways for degradation of plastic polymers floating in the marine environment. *Environmental Science: Processes & Impacts, 17*(9), 1513-1521. • Geyer, R., Jambeck, J. R., & Law, K. L. (2017). Production, use, and fate of all plastics ever made. *Science Advances, 3*(7), e1700782. • Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., ... & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science, 347*(6223), 768-771. • Maximenko, N., Hafner, J., & Niiler, P. (2012). Pathways of marine debris derived from trajectories of Lagrangian drifters. *Marine Pollution Bulletin, 65*(1-3), 51-62.

	• Plastics Recyclers Europe. (2021). Design for Recycling Guidelines: Best Practices for Packaging. • Rochman, C. M., Browne, M. A., Halpern, B. S., Hentschel, B. T., Hoh, E., Karapanagioti, H. K., ... & Thompson, R. C. (2013). Policy: Classify plastic waste as hazardous. *Nature, 494*(7436), 169-171. • UNEP. (2016). *Marine Plastic Debris and Microplastics - Global Lessons and Research to Inspire Action and Guide Policy Change*. United Nations Environment Programme.
Uruguay	Yes. As we mentioned in 8a, a plastic product is recyclable if post-consumer collection, sorting and recycling is proven to work in practice and at scale. In this regard, provision II 5 should be related to II 7 (EPR) and II 9 (waste management).
Peru	Yes, there is a direct connection with provision II.7 (EPR). EPR schemes in various countries establish reuse targets and serve as a mechanism to encourage reuse, so there should be a correlation between these two provisions.
Government of India.	Any provision related to product design based upon criteria and non-criteria approaches is linked to scope of the instrument and trade provisions. Any provision related to product design and further regulation shall necessarily adhere to WTO norms and regulations, and not lead to unjustified restrictions on international trade. There should be no harmonization of standards. It is also inextricably linked with availability, accessibility, affordability and environmental sustainability of alternatives and Means of Implementation including cost of transition and setting up of dedicated financial mechanism for meeting compliance obligation by developing countries based upon CBDR.
The Response of the State of Qatar: The State of Qatar	ILBI is an important step to foster development of plastic products that are more durable, repairable, refurbish able, and less problematic. The Parties to ILBI must seize the opportunity to design their products in a similar fashion so that the goal of the instrument, “End plastic pollution”, is realized.
The Islamic Republic of IRAN	There are many applications in plastic products that have no accessible and affordable alternatives. In such cases, the decision should be made nationally based on the socio-economic and circumstances of each country.
Switzerland	Strong interrelation to draft provisions of the Draft Text Part II.2 (Chemicals), Part II.4bis (Dedicated programmes of work) Part II.5 (Design), Part II.6 (Non-plastic substitutes), Part II.7 (EPR), Part II.10a (Trade) and Part II.13 (Transparency).
Madagascar	Based on the search results, there appear to be several important interrelations between the draft provisions of the international legally binding instrument on plastic pollution: Scope and Lifecycle Approach: it should cover the full lifecycle of plastics, including production and design, while others want it to focus only on the waste management stage. This interrelates with provisions on control measures, obligations, and the overall approach to addressing plastic pollution . Chemicals and Polymers of Concern: The treatment of chemicals and polymers used in plastic products is a contentious issue, with disagreements on whether to include specific provisions addressing them. This interrelates with provisions on product design, recycling, and the overall environmental and health impacts of plastic . Institutional Arrangements: There are differing views on the structure and decision-making powers of the governing body for the instrument, such as whether it should be a Conference of the Parties like other multilateral environmental agreements. This interrelates with implementation, compliance, and financing provisions . Financing and Means of Implementation: Developing countries have emphasized the need for financial and technical assistance mechanisms to support implementation. This interrelates with provisions on capacity building, technology transfer, and the overall equity and fairness of the instrument . Linkages to Existing Processes: the instrument aligns with and avoids duplication of other relevant international agreements and initiatives on chemicals, waste, and the environment. This interrelates with the overall coherence and effectiveness of the instrument .
Brazil	This provision needs to be linked to provisions on financing, capacity building, technical assistance and technology transfer as well as international cooperation.
Australia	Part II. 1 [[Primary [and secondary] plastic polymers] - Primary and secondary polymers are relevant as product design can make primary plastic polymers more sustainable and have better circularity. Part II. 2 [Cooperation and coordination with relevant MEAs on] [[Chemicals [and polymers] of concern [in [plastics and] plastic products]] - Relevant criteria when making sustainable designs for plastics. Part II. 3 [[Problematic [plastic products] [and avoidable] [Single-use] plastic products] [[and groups of such products]] - By introducing design criteria, there would be a change from plastics which are problematic and enables a circular economy better.

	Part II. 4bis Dedicated programmes of work - Research into product design standards will be needed to help implement and track the amount of plastics which conform to design standards set. Part II. 7 [[Extended] producer responsibility] - A tool which can be used to make more sustainable designs the more economical option by providing incentives for a more sustainable design. Part II.10 – Trade [in listed chemicals[, polymers] and products, and in plastic waste] [related measures] - Some level of mandatory labelling relating to design criteria could apply to import and export requirements. Part II.13 – Transparency, tracking, monitoring and labelling - Transparency allows us to see if plastics manufactured and traded adhere to the design standard as well as giving supply chain visibility to find where there is an issue. Integrating design standard conformity labelling with mandatory labelling for listed chemical ingredients, plastic types and listed problematic plastic articles will help ensure businesses in the value chain, consumers, governments and end-of-life facilities can make effective decisions about use and disposal of plastic articles.
Guatemala	I consider so.
Indonesia	1. Waste Management and Recycling • Infrastructure Support: Effective product design enhances recycling infrastructure efficiency, reducing contamination and improving recycling rates. 2. Extended Producer Responsibility (EPR) • Lifecycle Management: Design for recyclability and reusability complements EPR by ensuring products are easier to reclaim and recycle. 3. Public Awareness and Education • Consumer Engagement: Educating consumers about recyclable and reusable products promotes informed choices and better disposal practices. 4. Research and Innovation • Sustainable Design: Investing in research for sustainable product design aligns with efforts to develop innovative recycling technologies and materials. 5. International Cooperation and Standards • Global Alignment: Harmonizing design standards for recyclability and reusability ensures consistent practices across borders, facilitating international trade and cooperation.
Iraq	No answer
The Republic of BURUNDI	Yes.
Germany	Yes.
The Government of Canada	• See question 6 above. • The assessment of chemicals used in plastics, problematic and avoidable plastic products and product design criteria require a mix of general and sectoral approaches. Dedicated programmes of work or identification of key sectors, uses and applications to prioritize or focus efforts can apply to multiple provision areas within these and other provision areas (e.g., labelling and transparency, and emissions and releases of plastics and associated pollutants) and be further expanded and updated over time by the COP or an expert body based on performance monitoring and advancements in science. • Matching harmonized and consistent design criteria with requirements for plastic materials and products (e.g., minimum recycled content requirements) with the setting up and scaling of infrastructure and systems for their after-use recirculation is a prerequisite to keep them in the economy at their highest value for as long as possible. This requires a clear link with draft provisions on Extended Producer Responsibility and on Plastic Waste Management. • Workers in the informal economy, including waste pickers, play an important role in collecting, sorting, reusing and recycling plastic products. The ILBI should provide a framework to protect the rights of Indigenous Peoples, waste pickers, and vulnerable populations to protect human health and support the enjoyment of a clean, healthy and sustainable environment. In line with draft provision II.12 of the Compilation text, it is important to integrate workers in informal and cooperative settings in the design to enable value retention processes or circularity including reuse and recycling systems for plastic products. • Robust, accurate and transparent data, including via effective and sound data collection, analysis and reporting, are crucial to inform decision-making, support accountability, and measure performance—all essential for progressing towards the treaty's draft objectives. As such, design criteria are strongly linked with draft provisions on transparency, tracking, monitoring, and labeling (draft provisions II.13 of the Compilation text).

<table>
<tr><td>Palau</td><td>All parts of the Agreement are interrealted. Some particular important provisions for design include the composition of the products with regards to chemicals and polymers used.
For countries like Palau who are small island developing states, it is important that provisions take into account the special circumstances of SIDS and that the Agreement provides for adequate for SIDS to implement the future instrument. In particular, recyclability of products might not be feasible in all domestic contexts.
Strong provisions on transparency on the composition of products is crucial.
Specific sectors may need specific provisions or measures.</td></tr>
<tr><td>Panama</td><td>Part II
Provision 1 - Primary and secondary plastic polymers
Provision 2: Concerning chemicals
Provision 3: Concerning products
Provision 7 - Producer responsibility
Provision 6 - Non-plastic substitutes
Provision 9 - Waste management
Provision 12 - Just transition
Provision 13 - Transparency
Parts IV and V (financial mechanism/science-policy interface (SPI)).</td></tr>
<tr><td>México</td><td>Provisions II.2 and II.5</td></tr>
<tr><td>Egypt</td><td>I.5 product design III.2 Capacity building, technical and financial assistance and technology transfer IV.7 Awareness raising, education and research</td></tr>
<tr><td>Thailand</td><td>
<table>
<tr><th>Provision</th><th>Criteria</th><th>Interrelations</th></tr>
<tr><td>II.1 – Primary polymer plastics</td><td>Material Selection, Chemical Safety</td><td>Ensuring that primary plastic polymers are selected based on their safety and environmental impact is crucial for sustainable product design. This helps in minimizing the use of hazardous materials and promoting the use of safer alternatives.</td></tr>
<tr><td>II.2 - Chemicals and Polymers of Concern</td><td>Toxicity, Additives</td><td>The identification and regulation of chemicals and polymers of concern are essential for ensuring the safety and sustainability of plastic products. This provision directly impacts product design by limiting or banning the use of harmful substances.</td></tr>
<tr><td>II.3 – Problematic plastic products</td><td>Usage Patterns, Material Composition</td><td>Defining and regulating problematic and avoidable plastic products can guide the design of more sustainable alternatives and promote the reduction of single-use plastics.</td></tr>
<tr><td>II.6 - Non-Plastic Substitutes</td><td>Material Selection</td><td>• Promoting non-plastic substitutes that are sustainable materials can significantly reduce plastic pollution and environmental impact. This aligns with criteria for material selection and end-of-life management.
• Encourages the adoption of sustainable materials and reduces reliance on conventional plastics. Using lifecycle analysis helps prevent regrettable substitutes by ensuring that alternatives do not pose unforeseen environmental or health risks.</td></tr>
<tr><td>II.7. Extended Producer Responsibility</td><td>Lifecycle Analysis, Resource Efficiency</td><td>EPR schemes require producers to take responsibility for the entire lifecycle of their products, incentivizing sustainable design and resource efficiency. This aligns with the criteria for lifecycle analysis and efficient use of materials.</td></tr>
<tr><td>II. 8. Emissions and Releases of Plastic Throughout its Life-Cycle</td><td>Environmental Impact, Energy Efficiency, Material Efficiency</td><td>Addressing emissions and releases from plastic products throughout their lifecycle is essential for mitigating environmental and health impacts. This provision supports criteria focused on minimizing the environmental footprint of plastic products.</td></tr>
<tr><td>II. 9. Waste Management</td><td>Recyclability, End-of-Life Options</td><td>Effective waste management systems are crucial for the sustainable handling of plastic products at the end of their life.</td></tr>
</table>
</td></tr>
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			This provision directly impacts criteria related to recyclability and end-of-life management.
	II. 10. Trade in Listed Chemicals, Polymers, or Products	Chemical Safety, Transparency	Regulating the trade of chemicals and polymers can help control the distribution of hazardous substances and ensure transparency in the supply chain. This aligns with criteria focused on chemical safety and transparent labelling.
	II. 11. Existing Plastic Pollution	Environmental Impact, Microplastic Release Potential	• Addressing existing plastic pollution requires understanding the environmental impact and potential for microplastic release from current plastic waste. This provision is essential for criteria focused on mitigating long-term environmental harm. • Learning from existing systems and their shortcomings can inform better product design to prevent repeating the same problems.
	II.12. Just Transition		
Solomon Islands	Part II Provision 1 - primary and secondary plastic polymers Provision 2 - chemicals of concern Provision 3 - products of concern Provision 7 - producer responsibility Provision 6 - non-plastic substitutes Provision 9 - waste management Provision 12 - just transition Provision 13 - transparency All of Part IV and Part V (financial mechanism/science policy interface (SPI)).		
Bahrain	Answer provided in Part B. Section 4.		
Algeria	Need for in-depth review of the provisions on the final text.		
China	It is recommended to combine control measures with means of implementation such as financial assistance, capacity building, and technical assistance, particularly noting the difficulties faced by developing countries.		
United Arab Emirates	• UAE suggest linking and merging Part 2.3 Section with Part 2.5 from the revised zero-draft related to plastic products design to improve reusability, recyclability, and material efficiency in one single section. • A link and a reference for this section in section 9 related to waste management		