

## Policy briefing to inform the INC discussions on a Global Plastics Treaty

# Identification of chemicals and polymers of concern as well as problematic and avoidable plastic products

*Updated version of 15 April 2024*

This policy briefing has been developed in consultation with experts and members of the Business Coalition to inform the INC discussions on the revised draft text for the Global Plastics Treaty ([UNEP/PP/INC.4/3](#)) and potential intersessional work ahead of INC-4. It refers to Part II, Sections 2. '[Chemicals and polymers of concern](#)', 3.a. '[Problematic and avoidable plastic products](#), including short-lived and single-use plastic products' and 3.b. '[Intentionally added microplastics](#). The document will be updated as needed to provide meaningful input at the different stages of the treaty negotiations and as new insights and resources become available.<sup>1</sup>

## Introduction

An increasingly fragmented regulatory landscape drives growing compliance costs for businesses in the plastics value chain. Aligning globally on the criteria to determine which type of plastics should be phased out completely or restricted for certain applications, would provide businesses with more clarity and confidence to accelerate their efforts towards promoting alternative solutions. In conjunction with scaling up reuse models and recycling infrastructure for the remaining plastics to work at scale, this would allow a systemic shift to a circular economy and reduce concerns about the safety and quality of recycled plastics.

The Business Coalition supports the development of harmonised criteria to identify

- [Chemical substances](#) used in the production process, specific polymers, or plastic additives that pose a significant health or environmental risk over their product lifecycle, including for workers in the informal waste sector
- [Material combinations and product designs](#) that technically or economically hamper the recycling of specific waste streams
- [Plastic applications](#) that are at high risk of ending up in nature and should be prioritised for elimination if circulation does not work in practice and at scale

It is key to organise intersessional work in this area to align on harmonised criteria and to start compiling an initial list of problematic plastics and additives, differentiated by application, prioritising short-lived items including packaging. The Business Coalition is of

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<sup>1</sup> This document was developed in close coordination with a [Policy Working Group](#) co-chaired by business representatives, and through a consultation process with the [Members of the Coalition](#), ensuring a high-level of alignment amongst member organisations. However, it does not necessarily reflect in all aspects the position of every single Coalition Member.

the view that good starting points for developing both criteria and initial lists for phasing out problematic plastic products and packaging exist already, as outlined in this policy briefing.<sup>2</sup>

A coordinated phase-out of chemicals and polymers of concern as well as problematic and avoidable plastic products in line with harmonised criteria in the treaty and specific lists provided in technical annexes would avoid that national governments start developing vastly diverging elimination criteria and lists as part of their treaty obligations. Avoiding unnecessary loopholes for the trade of items that are already banned in one country but not in another, is key to ensure effective enforcement and lowers the administrative burden for the implementation of purely national rules that require intensive border control measures. Coordinated efforts on elimination will reduce compliance risks for businesses, decrease contamination in recycling processes and ultimately increase the safety and quality of plastic products and recycled feedstock for use in a more circular economy.

## Chemicals and polymers of concern

The core obligation in the treaty should mention the necessary measures each party needs to undertake to not allow or to restrict the use and presence of these chemicals and polymers of concern in specific plastic applications, including the production, sale, distribution, import or export of plastic polymers, plastics and plastic products containing these.

The approach to identify and the control measures to be applied to chemicals, groups of chemicals and polymers listed in the annex to the plastics treaty should ensure and reinforce a consistent implementation in line with other relevant international policy and regulatory frameworks.<sup>3</sup>

Building on the revised draft treaty text the criteria for compiling the list of chemicals, groups of chemicals and polymers could refer to

- Adverse impacts on human health or the environment at any stage of the plastic life cycle
- Properties that may hinder their safe and environmentally sound management, including their reusability, repairability, recyclability and disposal

Similar to the Montreal Protocol on Substances that Deplete the Ozone Layer, the annex to the plastics treaty should facilitate a harmonised regulatory approach, and be as specific as possible. Therefore, it should contain the following information:

- List of chemicals and polymers subject to prohibition or restrictions and other applicable control measures (including phase-out dates and possible exemptions)
- Harmonised information disclosure, marking and labelling requirements

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<sup>2</sup> Ellen MacArthur Foundation (2023): [Initial considerations for global rules in the international legally binding instrument to end plastic pollution. Appendix A: Elimination of problematic plastic packaging](#);

WWF (2023): [Breaking down high-risk plastic products](#); WWF (2023): [Regulating High-risk Plastic Products](#)

<sup>3</sup> Such as the new [Global Framework on Chemicals](#), and the [Basel, Rotterdam and Stockholm conventions](#)

Previous efforts have been conducted by a number of organisations to identify lists of chemicals of concern, for example in plastics<sup>4</sup> and food packaging<sup>5</sup>, however further work is required to align globally on a list of chemicals and polymers of concern to be phased out. Health agencies across different geographies (the [FDA in the US](#), [ECHA](#) and [EFSA](#) in the EU) are monitoring and regulating the use of chemicals in plastics. While they have some differences, there is also some overlap on the chemicals of concern identified by these health agencies.

In addition, the [informal technical dialogue co-chaired by the UK Government and the Government of Brazil](#) with contributions from 35+ countries, started an important discussion with experts to identify possible criteria on chemicals and polymers of concern. Building on the work to date, the Business Coalition supports formal intersessional work to identify a priority list of chemicals and polymers of concern for immediate action, which could draw on existing regulatory listings of individual chemicals and chemical groups for specific plastic applications. This could be complemented by a mandate for the INC Secretariat to compile such lists with the possibility for scientific experts and stakeholders to review and comment, including proposing other candidates to be considered for this initial list.

Intersessional work should leverage scientific classifications and risk assessment that already have been carried out by existing international policy frameworks with already established rules and review mechanisms to regulate certain chemicals, groups of chemicals or polymers used in the production of plastics, including the Stockholm and Rotterdam Conventions.

## Problematic and avoidable plastic products

Building on the example of the Minamata Convention on Mercury<sup>6</sup>, the future treaty to end plastic pollution must establish binding criteria and a harmonised approach that allow governments to define what type of products made of or containing certain types of plastics shall no longer be placed on the market in a consistent manner.

In this regard, the Business Coalition supports the restriction and phase out of problematic and avoidable plastic products<sup>7</sup>, with the focus on short-lived and single-use applications such as specific types of plastic packaging. In line with the criteria to be established by the

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<sup>4</sup> UNEP (2023): [Chemicals in plastics: a technical report](#), identified ten most relevant groups of chemicals of concern used in plastics due to their toxicity and potential to migrate from plastics

<sup>5</sup> Food Packaging Forum (2020): Food contact chemicals database, contains an extensive set of intentionally added food contact chemicals (FCCs), with hazard and regulatory information included where available. Following a review of all substances within the database, authoritative sources of hazard information were used to identify a priority substances list.

<sup>6</sup> Parties to the Minamata Convention are to phase out the use of products which contain mercury and to promote alternatives.

<sup>7</sup> The term 'plastic products' should be understood as 'products containing plastics'. Defining these terms will be crucial in the context of the negotiations of the Global Plastics Treaty. The Center for International Environment Law (CIEL) has developed an overview of existing definitions as part of its [pre INC-3 submission](#) which can be used as a starting point.

treaty, each Party shall not allow the manufacture and use, import or export of problematic and avoidable plastic products and packaging, after the phase-out dates specified for those items listed in an annex to the treaty.

The Business Coalition agrees with the need to provide a clear definition of the criteria used to determine problematic and avoidable single-use plastic items which could build on the work carried out by the Ellen MacArthur Foundation and UNEP on elimination criteria<sup>8</sup> in the context of the [Global Commitment](#) for example as follows:

1. The product contains, or its manufacturing requires, hazardous chemicals that pose a significant risk to human health or the environment.<sup>9</sup>
2. It has a high likelihood of being littered or ending up in the natural environment.
3. It can be avoided or replaced while maintaining its utility.<sup>10</sup>
4. It cannot be reused, recycled or composted in practice and at scale<sup>11</sup>.
5. Its material combination or product design technically or economically hampers the recyclability or compostability of specific waste streams.<sup>12</sup>

In addition, a report commissioned by the Nordic Council of Ministers provides additional considerations and suggests similar but more detailed criteria for elimination for different categories of plastics products: *problematic* plastic products, *unnecessary* plastic products, and *avoidable* plastic products.<sup>13</sup>

It is important to note that ideally the same criteria should also be referenced in the treaty provisions on alternative plastics and non-plastic substitutes<sup>14</sup> to avoid shifting from a problematic or avoidable plastic product to another material or solution that is equally harmful.

Based on the final criteria, the INC needs to agree on a process to identify an initial list of problematic and avoidable plastic products that all countries should be obliged to restrict or phase out by certain target dates. This list should be differentiated by sector or application, and contained in an annex to the treaty where countries can register (temporary) exemptions if needed and that can be expanded and updated over time.

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<sup>8</sup> [New Plastics Economy Global Commitment: commitments, vision and definitions](#)

<sup>9</sup> This point could become redundant depending if and how separate criteria and assessments would be established by the potential treaty provision on 'chemicals and polymers of concern' (see section above)

<sup>10</sup> Maintaining utility for packaging means being able to deliver products with the required level of consumer protection, avoiding spoilage and damage, at reasonable cost and with less environmental impact.

<sup>11</sup> Plastic products that will not be considered to be recyclable in practice and at scale by a certain target date, must eventually be phased out as explained in the separate briefing on '[Product Design and performance](#)'.

<sup>12</sup> Points 4 and 5 may require the development of dedicated assessment methods that should be linked to the respective treaty provisions on product design and reuse & refill systems for example. For more details please see the Business Coalition's policy briefings '[Product design and performance](#)' and 'Reuse policies'.

<sup>13</sup> Nordic Council of Ministers (2024): [Global criteria to address problematic, unnecessary and avoidable plastic products](#)

<sup>14</sup> See Zero Draft Part II.5.d Alternative plastics and plastic products & Part II.6 Non-plastic substitutes

The Business Coalition encourages the INC to agree on intersessional work to start the development of such a technical annex, based existing resources (see below) and additional inputs from experts and stakeholders with the aim to compile an initial list of problematic and avoidable plastic products, prioritising short-lived single use applications such as specific types of plastic packaging.

To facilitate a harmonised regulatory approach, the annex would have to be as specific as possible and contain the following information:

- Criteria for the determination of problematic and avoidable plastic products
- List of plastic applications, material combinations and product designs subject to prohibition or restrictions and other applicable control measures (including phase-out dates and possible exemptions)

Significant work has already been carried out by multiple organisations and initiatives on drawing up lists of material combinations, product designs, and plastics applications to be eliminated. This existing work has led to significant actions being taken by businesses along the plastics value chain, and therefore could be considered as a starting point for intersessional work to outline the content of a technical annex to the treaty on problematic and avoidable plastic products.

In addition, many governments have introduced legislation that feature single-use plastic bans on a number of plastic applications, including the [European Union](#), [Kenya](#), and [Chile](#). The Chilean government recently approved a bill<sup>15</sup> to limit the use of a number of single-use products, including material combinations such as multi-material plastic sachets for some industry categories. Current research<sup>16</sup> indicates that a total of 141 countries have banned or restricted some form of plastic products, and 33 countries have banned or restricted one or more plastic polymers or monomers (in some cases, for particular applications only).

The list of problematic and avoidable plastic products in the Global Plastics Treaty should go beyond the voluntarily identified list of problematic plastic items in the appendixes [A](#) and [B](#) of this document, and could address plastics in several sectors or product applications over time. The review process that leads to amendments, updates or expansion of the list in the relevant annex of the treaty should be based on the best available scientific evidence and take into account new technological developments.

## Resources on problematic and avoidable plastic packaging

As part of the [New Plastics Economy Global Commitment](#) (GC), led by the Ellen MacArthur Foundation in collaboration with UNEP, there is already significant alignment regarding the plastic material combinations and product designs which are most frequently identified as unnecessary or problematic.

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<sup>15</sup> [Chilean Ministry of Environment: Law 21368](#)

<sup>16</sup> See the latest report from the Nordic Council of Ministers: *Global criteria to address problematic, unnecessary and avoidable plastic products* for more details.

The five criteria suggested above are already used by the GC signatories (a group of 500 signatories including [businesses representing over 20% of the global plastic packaging market](#) and 50 governments) and members of the [Plastic Pacts network](#)<sup>17</sup>. The latter collaborate within national initiatives across five continents including in the Global South to help identify problematic or unnecessary plastic packaging or plastic packaging components.

Members of the [Consumer Goods Forum](#) (CGF) have aligned on Golden Design Rules (GDRs) for packaging, including a largely overlapping list of 'Problematic Elements' to be eliminated from packaging.

[Appendix A](#) to this policy briefing provides a table of material combinations and product designs used in plastic packaging items that have been identified to be eliminated by these initiatives. This work can serve as a contribution for the development of a treaty annex.

## Resources on other product categories for consideration

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 the most high-risk plastic categories<sup>18</sup>, and matching these with the most appropriate global policy measures (such as global bans or phase-outs, global requirements to ensure a non-toxic circular economy and standards for environmentally sound waste management). This categorisation could serve as a starting point for intersessional work: [Appendix B](#) to this policy briefing provides a table of plastic applications other than packaging that are at high risk of ending up in nature and could be prioritised for global phase-outs.

## Intentionally added microplastics

The Business Coalition is supportive of establishing effective control measures in the global plastics treaty covering the full range of direct and indirect sources of releasing micro- and nanoplastics into the environment. For this reason, it welcomes the inclusion of provisions on 'Intentionally added microplastics' in Part II.3.b as well as additional provisions on "Emissions and releases of plastic throughout its life cycle" in Part II.8. of the revised draft treaty text.

We believe that the treaty provisions proposed for Part II.3.b must define what constitutes 'intentionally added microplastics' to enable and harmonise approaches to phase out their

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<sup>17</sup> Plastics Pacts that have published a list of problematic and unnecessary plastic types and items: South Africa, United States, United Kingdom, Kenya, Chile, Portugal, Poland, France, and Canada

<sup>18</sup> WWF (2023): [Breaking down high-risk plastic products](#) lays out the criteria framework development used to identify the most high-risk plastic categories

production, use, and trade globally, as well as establish clear functions and additional requirements for applications that may be subject to exemptions via a dedicated annex.<sup>19</sup>

The knowledge of micro- and nanoplastics and their impacts on the environment and on human health, including methodologies for their detection and control, is constantly evolving<sup>20</sup>. Therefore, potential provisions, measures and annexes to the treaty should be regularly updated to ensure that harmonised global rules reflect best scientific knowledge and practices as reflected in part IV.4 on “Periodic Assessment” in the revised draft treaty text.

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<sup>19</sup> The European Commission has recently adopted [measures to restrict intentionally added microplastics](#). The items regulated in the EU could serve as a starting point for intersessional work to develop a similar list as part of an annex to the Global Plastics Treaty.

<sup>20</sup> For example dissolvable plastics are nearly impossible to capture and only degrade under controlled conditions which are unlikely to be present once the dissolved plastic is released to the environment.

## APPENDIX A - Problematic and avoidable plastic packaging

Items proposed for phase out or restrictions <sup>21</sup>	Rationale quoted by selected stakeholders	Plastics Pacts identifying this item as problematic & avoidable:	CGF GDR <sup>22</sup>
ePS (Expanded Polystyrene) packaging	<a href="#">CGF GDR/Kenya Pact</a> : Too uncommon to make recycling economically viable. The material is rarely sorted from household waste and recycled. Most of the material is incinerated and landfilled.	7 Plastics Pacts: US, Canada, Chile, South Africa, Kenya, France, Poland, Portugal, UK	x
PVC (Polyvinyl chloride) packaging	<a href="#">CGF GDR/UK Plastics Pact/South Africa Pact</a> : Not recyclable and acts as a contaminant if it enters the recycling system. Its presence negatively affects the quality of other recyclates.	9 Pacts: US, Canada, Chile, South Africa, Kenya, France, Poland, Portugal, UK	x
Carbon black pigment	<a href="#">CGF GDR/French Plastics Pact</a> : Undetectable in the sorting process when using Near Infra-Red (NIR) technology, which prevents it from being recycled. Most of the material is incinerated and landfilled.	5 Pacts: US, Canada, France, Poland, Portugal	x
PVDC (Polyvinylidene chloride, or polyvinylidene dichloride)	<a href="#">CGF GDR/Poland Pact</a> : The presence of these materials in packaging interferes with the recycling of other plastics, negatively affecting the quality of other recyclates.	4 Pacts: US, Canada, Poland, Portugal (under revision)	x
PS (Polystyrene) Packaging	<a href="#">CGF GDR/UK Plastics Pact</a> : Too uncommon to make recycling economically viable. The material is rarely sorted from household waste and recycled. Most of the material is incinerated and landfilled.	8 Pacts: US, Canada, Chile (under revision), South Africa (takeaway packaging only), Kenya, France (under revision), Poland (under revision), UK	x
Non-recyclable <sup>23</sup> multilayer materials (multimaterial)	<a href="#">Portugal Pact</a> : These are packages containing several layers of plastics, often of different and incompatible types. It is highly difficult to recycle.	5 Pacts: Chile (under revision), France (under revision), Portugal (under revision), Poland, UK (under revision)	
PETg (Polyethylene terephthalate glycol)	<a href="#">CGF GDR/Kenya Pact/Poland Pact</a> : Acts as a contaminant if present in the PET recycling stream, hindering the recyclability and value of PET materials.	5 Pacts: US, Canada, Kenya, France (under revision), Poland	x
Oxo-degradable packaging	<a href="#">CGF GDR/South Africa Pact/Kenya Pact</a> : Fragments into microplastics, contributing to plastic pollution. Not suited for long-term reuse, recycling at scale, or composting.	7 Pacts: US, Canada, South Africa, Kenya, Poland, Portugal, UK	x

<sup>21</sup> At least 30% of [Global Commitment](#) Signatories or at least 4 [Plastics Pacts](#) have already phased out these packaging 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 \(CGF\)](#). Each item proposed to be phased out or restricted under the Global Plastics Treaty should be identified and confirmed by a thorough exposure and risk analysis before adapting the relevant regulatory standards.

<sup>22</sup> [Consumer Goods Forum: Golden Design Rules](#)

<sup>23</sup> As per definition of recyclability in practice and at scale by the Ellen MacArthur Foundation - see the [New Plastics Economy Global Commitment: commitments, vision and definitions](#) and the Business Coalition policy briefing on product design and performance



## APPENDIX B - Other plastic applications

Items proposed for phase-out or restrictions <sup>24</sup>	Rationale quoted by <a href="#">WWF report</a>	Plastics Pacts identifying this item as problematic & avoidable:
Non-necessary fibres-non-woven: such as wet wipes, cigarette butts, disposable vacuum filters and plastic tea bags.	<p>Prone to incorrect disposal (littering, flushing). Fibres are usually transferred to the environment, particularly during overflow events. Tend to break down into fibres and be lightweight/buoyant leading to potential transboundary impact</p> <p>Wet wipes and cigarette butts are among the most commonly found single-use plastic items in marine and terrestrial environments. Size, fibre and floating properties mean risk of ingestion in marine wildlife is high. Some items contain hazardous chemicals which can get into waterways and oceans; the chemicals inhibit plant growth and can be harmful to wildlife.</p>	Plastic tea bags: 2 Pacts (UK, South Africa)
Non-necessary single-use items: such as plastic balloons, cutlery/ plates/ cups, ear bud sticks and disposable e-cigarettes, etc.	<p>Often consumed outside of the home so there is a higher chance of littering. Very low value which can lend itself to littering and improper disposal. Easily lost from waste management systems.</p> <p>Single-use plastic items including disposable cutlery and utensils have high prevalence in plastic found in the ocean. Lightweight and mobile through wind transfer and water systems. Items can often become fragmented to create sharp edges, causing harm to wildlife.</p>	<p>Single use plastic cutlery/serveware: 5 Pacts (UK, Portugal, South Africa, US, Kenya)</p> <p>Single use plastic straws: 5 Pacts (UK, Portugal, South Africa, US, Kenya)</p> <p>Single use plastic stirrers: 5 Pacts (UK, Portugal, South Africa, US, Kenya)</p> <p>Single use cotton buds with plastic stems:: 4 Pacts (UK, Portugal, South Africa, Kenya)</p>
Intentionally added microplastics	<p>Application in direct contact with water. Lightweight, small, easily blown away and carried by water. Costly to capture with no subsequent use or recycling value.</p> <p>Size means high likelihood of transboundary impact through migration through water systems.</p>	Microbeads in cosmetics: 1 Pact (US)

<sup>24</sup> In addition to these three groups of products that WWF recommends to be applicable to immediate bans, the report identifies a few more product groups for phaseouts and phasedowns. The Business Coalition recommends the relevant annex to the treaty to be regularly reviewed, expanded and updated over time.