

Convention on Plastic Pollution

Plastics Treaty Essential Elements: Reuse

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Introduction

In March 2022, the United Nations Environment Assembly (UNEA) adopted resolution 5/14 titled *“End plastic pollution: Towards an international legally binding instrument.”*

The resolution convenes an intergovernmental negotiating committee (INC) to develop a new global agreement on plastic pollution, with an aim to conclude negotiations by the end of 2024 and open the agreement for adoption in 2025. Negotiators now have the daunting task of moving swiftly to agree to measures across the plastics lifecycle that will move us towards ending plastic pollution. Despite the discussions on product bans, recycling and other potential approaches to managing plastics, thus far there has been scant mention of one of the essential solutions to the plastic crisis: the role of reuseⁱ in facilitating a circular economy and protecting natural resources.

Reuse is broadly understood as any operation by which a product or packaging is used again for the same purpose for which it was conceived and is an important measure to reduce resource and energy consumption as well as waste generation. In the context of the agreement, the promotion of well-designed reusable packaging within reuse systems, where take-back and as many rotations as possible are incentivised, needs to be highlighted for its particular relevance to the matter.

Background

Operative paragraph 3(b) of resolution 5/14 calls on the INC to explore provisions *“To promote sustainable production and consumption of plastics, including, among others, product design and environmentally sound waste management, including through resource efficiency and circular economy approaches.”*

At the outset negotiators must consider what is “sustainable” production and consumption of plastics and how that relates to current and future levels. At a minimum, this will require reporting on virgin plastic production and consumption to establish baselines and measure progress toward sustainability. It should also include a mechanism for controlling polymers—e.g. restrictions or caps on certain polymers. Such considerations sit squarely within the ‘*upstream*’ component of the plastics lifecycle, but midstream measures, for example on product design, will be essential to complement these efforts in moving towards sustainability.

When considering the ‘*midstream*’ elements of the plastics lifecycle, negotiators must consider how to drive action on product design and use to achieve the objectives of the agreement. This could include consideration of the role of product standards or eco-design requirements such as composition, durability and safety, alongside other elements such as polymer and additive restrictions, recycled content targets, common criteria for unnecessary, avoidable and problematic plastics and so on.

A fundamental challenge with a linear conception of plastic materials and products is not considering the environmental and societal benefits of both reduction and reuse, particularly when designing midstream policy measures. Thus, an essential element of the new global policy framework that needs specific consideration is the role of inclusive and accessible reuse systems in supporting the overarching policy ambitions of plastic pollution elimination and what measures are required at the global level to facilitate a swift, just and safe transition to such systems. Ultimately, it is time to move beyond simply banning products in isolation and use the opportunity of the treaty to envision, and create the framework for, a new and more sustainable model of consumption.

Heavy rotation: creating the case for reuse systems

Many plastic products are designed for short-term use, be it packaging, consumer goods or products within different sectors. Yet a more sustainable consumption of plastics is possible.

It has been shown in numerous studies that each rotation or ‘use’ of a plastic product further reduces the environmental impact associated with producing and disposing of an item. Reusing items as many times as possible also significantly improves resource efficiency and reduces the constant need to discard and manage the waste, decreasing its chances of ending up in the environment. This is especially true for reusable packaging, which is owned by the producer, since the producer has a strong incentive to retrieve the packaging to reuse it and reduce costs.

In order to reduce plastic pollution and minimise waste generation, it is important that the principle of the waste hierarchy is reflected within the design of the plastics treaty. Oftentimes recycling is framed as the solution to the plastic crisis despite the fact that waste management systems are currently overwhelmed and only a fraction of waste generated is eventually recycled. Wherever possible, reducing the production and usage of non-essential plastic products should be the first priority. Waste prevention means measures taken before any product or packaging has become waste. Reuse reduces the quantity of waste generated. Therefore, *reuse should be prioritised over recycling as a more resource efficient¹¹ approach which reduces carbon emissions over the entire material lifecycle and prevents waste generation.*

This is particularly, but not exclusively, the case for packaging, which has rightfully been identified as one of the worst causes of plastic pollution and avoidable resource consumption.¹ About one third of the global plastic production is used in the production of packaging² and results in about 40% of global plastic waste. The overwhelming majority of plastic packaging is single-use,³ so that on average the total lifespan for plastic packaging is only 6 months.⁴ In a business as-usual-scenario, the OECD estimates greenhouse gas emissions from the plastics lifecycle to more than double, from 1.8 gigatonnes of carbon dioxide equivalent (Gt CO₂e) to 4.3 Gt CO₂e.

An important part of the solution is reuse, and especially reuse systems. The discussion has unfortunately been increasingly concentrated on one material (i.e. plastic), lacking the necessary focus on sustainable systems rather than *materials*.

So, what is a reuse system? Reuse systems for packaging do not refer to individually owned, refillable items, such as a cup that a person can get refilled at a coffee shop. Instead, reusable packaging within a reuse system is typically provided by the business selling an item and there is an incentive to return the packaging, so that it can be reused in the same function for as long and often as possible.⁵ Already existing reuse systems for packaging, e.g. for beverage, take-away, e-commerce or transport packaging, demonstrate (a) the benefits for the environment and climate that reusable packaging results in and (b) the requirements for efficient and well-managed reuse systems.

a) Reuse benefits the environment and climate

Reuse is essential to overcome plastic pollution, in particular where it is linked to packaging. *Comparing single-use and reusable packaging, the great majority of research points to reusable packaging as the most environmentally friendly option.*⁶ The underlying logic is as simple as it is compelling: by using and reusing an item many times before it ends up as waste, the environmental costs, the amount of waste generated and the resources needed to produce and dispose of it can be divided by the number of uses. Since half of total global greenhouse gas emissions and more than 90 percent of biodiversity loss are estimated to be related to resource extraction and processing,⁷ drastically scaling up reuse could lead to a reduction of necessary extraction by several orders of magnitude.

The reduction of environmental costs is not necessarily linear in reuse systems. However, transport, sorting and washing processes of reusable packaging cause environmental impacts that are comparatively low to the continuous production of new single-use-packaging. For example, in Germany, both refillable glass and refillable PET bottles cause around 50 percent less CO₂ emissions compared to single-use plastic bottles.⁸ A recent study found that a 50% reusable packaging quota by 2030 in the EU alone and in just three sectors (take-away food and beverages, e-commerce and cleaning detergents) could lead to a reduction of 3.7 million tonnes (Mt) of CO₂-equivalent, 10 billion cubic metres of water and 28 million tons of material use.⁹

Governments from all over the world, such as India, Australia, Rwanda and the EU, have imposed bans on certain plastic products, such as plastic bags, straws or food packaging, given their disproportionate leakage into the environment. Oftentimes, this leads to the banned items being replaced with other materials being presented as a allegedly more ecological 'plastic-free' alternative - a concept known as product or material substitution. However, replacing conventional single-use plastic with single-use products made from alternative materials (e.g. biobased or compostable plastics, aluminum, glass, paper) comes with risks as no finite materials are without an environmental burden and such switches can bear unintended consequences. Fundamentally, material substitution is an inadequate solution to a problem ingrained in a linear model of consumption.

b) Principles for efficient and well-managed packaging reuse systems

Functioning reuse systems for packaging can quickly establish themselves on the market if the necessary conditions are present. *Existing reuse systems provide direction on how introducing or scaling up reuse can be done in the most efficient, environmentally friendly way. Consistent and uniform legislation is required in order for effective reuse systems to be put into practice at a larger scale.*

• Defining reuse and regulating labelling

To enable the scale-up of reuse, especially reuse systems, and to monitor their market shares, the definitions in place need to be precise in order to avoid unintended developments. For example, a product should not be able to be defined as reusable if it typically isn't reused for a minimum number of times or loses its ability to function after a single or very few rotations (pseudo-reusability). In the context of packaging it is important to differentiate between packaging waste prevention (e.g. refill at home or on-the-go) and actual reuse of packaging that is taking place within a reuse system, since the two are often used interchangeably but quite different in their application, impact, their measurabilityⁱⁱⁱ and especially political implications.¹⁰ Therefore, it is important not to conflate reuse and prevention regarding packaging.

Key definitions to be considered within the global policy framework should need to make this crucial distinction clear:

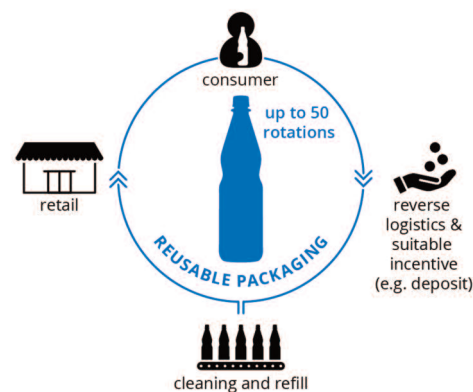
→ **Packaging waste prevention:** There are many types of packaging prevention, but it is very important to differentiate between waste prevention due to private refill at home or refill in-store and actual reuse within a reuse system. The action of using a container that is owned by the consumer and it is either refilled in the shop or refilled at home. In both cases the container is in fact not packaging but a product. Other types of packaging waste prevention include for example providing products free of packaging and avoiding overpackaging such as additional packaging around prepackaged goods or oversized packaging.

→ **Reusable packaging within a reuse system:** The action of using a container that is an asset owned by the producer or a third party and/or collected, washed and refilled by a third party.

There are some key aspects that are crucial to be embedded into the definition of a reusable packaging system:

- The existence of *infrastructure and reverse logistics* for actual take-back, cleaning, refill and redistribution of the packaging (operated by the producers and/or a third party)
- A *suitable incentive* to return the packaging (usually a deposit, but can also be a system in which the consumer pays a fine when the packaging is not returned)
- A certain amount of *minimum rotations*, which should be at least between 10-15 cycles
- A *collection rate* of at least 90% of the packaging

Reuse systems for beverages



This definition also needs to be reflected within the labelling of products. In order to empower consumers and avoid greenwashing with pseudo-reusable packaging, there is a need for a clear definition of reusable and single-use packaging and a corresponding *obligatory labelling directly on the packaging*.

• Binding quantitative reuse targets

Binding reuse targets create a safe environment for investments in the associated technology and infrastructure. That applies to both SMEs and regionally operating companies, but also to big corporations. Furthermore, reuse targets send out a strong signal against replacing disposable products with disposable products made from different materials. Voluntary targets cannot fulfill this function and do not provide the security for investors, businesses and governments needed to transition to reuse systems on the necessary scale.

Key recommendations related to targets include:

- Setting an *overall reuse target* for all goods placed on the market, sending a strong signal to all market sectors to kick-start the transition
- Setting *sector-specific reuse targets*, especially for packaging and packaging types, e.g. beverage, food, take-away, transport, e-commerce packaging
- Incentivising targets by implementing sanctions if targets aren't reached
- Setting a *cap on the use of single-use packaging*

• Developing and strengthening standardisation and managed pooling systems

To maximise the environmental benefits, economical effectiveness and consumer friendliness, establishing managed 'pooling systems', where participants use a shared supply of a certain packaging type, is key. Standardised packaging being used among many participants reduces transport distances and helps in maximising rotations, two factors which are important to optimise the positive impact on the environment. Therefore, supporting standardisation efforts by implementing key criteria for managing reuse pool systems to simplify sharing of container collection points, washing facilities and logistics among businesses, is important. When looking at current success stories in the field of reusable packaging in Europe, one can indeed observe a certain degree of standardisation of packaging, logistics, or washing processes. Yet, the main reason for their success lies in the use of a managed pooling system, which enables a central governance structure; ownership; shared access; and self-imposed quality and efficiency standards. They reduce operating costs and risks for individual owners, are easier for SMEs to enter and can be scaled up in a short amount of time.

To make the set-up of managed pooling systems easier, some guidelines should be set regarding governance structure, ownership of the packaging, cooperation for system setup, inclusivity and reporting (for more details, see here¹¹). An example for a successfully managed pooling system is the biggest European Pooling system, the Genossenschaft Deutscher Brunnen (GDB): almost all German mineral water fountains participate in their pool of one billion bottles and 100 million crates.¹²

- **Financial incentives to support the transition**

In order to turn today's single-use business model into a reuse model, financial incentives and the development of favourable economic structures are necessary. This includes:

- Setting up *effective take-back systems, such as deposit return systems (DRS) or other systems, that enable the take-back of reusable packaging* and guarantee high return rates, to reduce the overall production and consumption of single-use packaging. This has to be done also for non-beverage sectors, such as take-away packaging, ecommerce, cosmetics or FMCGs. If take-back-systems for single-use packaging are established, the possibility of take-back of reusable packaging needs to be mandatory
- environmental costs need to be internalised, for example by pricing in negative externalities of plastic packaging by establishing resource *taxes, levies* on single-use packaging and setting up *extended producer responsibility (EPR)* systems. Those EPR systems should dedicate a minimum share of their budget to promote reusable packaging and finance reuse infrastructure
- Incentivise the development of a reuse system infrastructure by using instruments such as: Incentivise the roll-out of *reverse vending infrastructure* by instruments such as direct *funding or tax breaks* or (this can also be done for individual reuse of items, i.e. second-hand shops), setting up funds for small business owners to participate in reuse systems
- Green Public Procurement (GPP). Prioritising reusable products and packaging should be obligatory for procurement offices. This can be achieved by placing bans on certain single-use products or orders to exclusively purchase reusable products.

- **Freedom from pollutants and toxicity**

Just because a product is more durable, it does not mean that it is safe.¹³ Given the myriad of chemicals and substances of concern found in plastic products, it is essential that product design standards for reusable packaging also consider the material composition and set clear design criteria not only on durability and eco-design, but also safety, including restrictions on certain polymers and additives of concern. Such criteria can be supported in the global policy framework through clear guidance on plastic production reporting and material transparency.

Integrating reuse into the global plastics treaty negotiations

There is unlikely to be a dedicated negotiation track on reuse and thus it's important to understand how reuse principles and measures can form part of the overarching vision for achieving a non-toxic and just circular economy for plastics (as well as other materials), alongside measures to reduce production and use of plastics in general.

Moreover, advocates for reuse should view the mandate and consider when and where in the INC discussions these issues are best placed.

Reuse should be a key consideration in discussions on:

1. **Product design.** Negotiations on midstream measures such as product design should not focus solely on design for recyclability and eco-design criteria for single-use packaging and products, but also include clear recommendations on design standards for reuse and other requirements for operating reuse systems at scale, such as the role of take back systems and reverse logistics for reusable packaging, and the structuring of EPR schemes to incentivise reusable packaging and products.
Relevance to mandate OP3(b), 3(o)

2. Sustainable production and consumption of plastics. The discussions on sustainable production and consumption of plastics should highlight reuse as a complimentary tool for achieving these objectives. Negotiators should consider including targets for plastic reduction as well as targets for reuse and commit to monitoring and reporting on progress towards both as part of the transition to a safe circular economy.^{14,15}
Relevance to mandate OP3(b), 3(f)

3. Financing. Transitioning to affordable and inclusive reuse systems at scale will require investment in infrastructure and logistics, including the potential retooling of existing plastics processing facilities, and re-training and support of workers currently involved in the linear plastics economy. Advocating for infrastructure and capacity building investment should be a priority consideration within the discussions on financing for circular solutions to the plastics crisis. In particular, conversations on the best use of financing to support enabling activities, incremental costs and compliance with the obligations of the agreement should include an emphasis on the need for reuse systems to promote resource efficiency, rather than investment in end of life treatment technologies that are not aligned with the priorities of the waste hierarchy, such as incineration, landfilling, waste to energy and, to a lesser degree, recycling.¹⁶
Relevance to mandate OP4(b), 3(n)

4. National Action Plans. A key element for the implementation of the new global agreement will be national action plans that specify the national level policies and measures to comply with the international obligations. Negotiators will be tasked with addressing the content of these plans to guide progress towards plastic pollution prevention, reduction and elimination. National efforts to reduce plastic pollution require regional and international cooperation as plastics, as raw materials, products and as exported waste, cross porous borders, thus no national policy in isolation can be effective. In facilitating effective transition to plastic reduction and a reuse economy, global standards for reuse, with national level plans for implementing the systems, alongside national reduction and reuse targets and corresponding reporting mechanisms, should form a core part of considerations.
Relevance to mandate 3(d), 3(e), 3(f), 3(g)

5. Informal sector. The informal waste sector is at the frontline of managing our current system of overproduction and consumption of plastics yet are rarely consulted in the policymaking process despite their significant expertise and experience. To ensure a just and inclusive transition to an economy that prioritises the protection of finite resources and promotes reuse and circularity, it is essential that those working in the informal sector are meaningfully involved in informing the treaty development process and the approaches undertaken in its implementation, in particular by being consulted on provisions for the protection of health and livelihoods for those communities impacted by both the current harms and the impact and rollout of incoming policy.¹⁷
Relevance to the mandate OP4(e)

Another important area to consider is ensuring there is an agreed definition for reuse systems and related elements, such as reusable packaging, packaging waste prevention and so on. These concepts are not all covered in the glossary of terms provided by the Secretariat,¹⁸ but the common language is essential for understanding and applying them to the discussions.

Conclusions

Transitioning to reusable plastic packaging and products is an essential tool to promote resource efficiency and circular economy approaches pursuant to operative paragraph 3(b), thus reduction of new polymer production (both virgin and recycled) goes hand in hand with setting concrete targets and creating infrastructure to transition safely to a reuse economy.

The current fragmented approach to product bans, while to a degree effective in reducing plastic pollution from commonly polluted items, does not serve to shift the dial meaningfully towards true circularity. In particular, the frequent replacement of banned or restricted single-use plastic items with other materials, such as paper, bio-based or biodegradable plastics, ensures we remain locked into a linear model of consumption. For the plastics treaty to be effective, the conceptualisation of plastic pollution and plastic waste prevention must be seen within this broader context. The task now handed to negotiators is to craft an agreement capable of achieving truly sustainable production and consumption by re-shaping the plastics economy with an emphasis on the protection of finite resources, notably by scaling up reuse.

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Notes

- i. The definition provided by the Secretariat for reuse in UNEP/PP/INC.1/6 is based on International Organization for Standardization, "Plastics – Vocabulary", document ISO:472:2013, s.2.1708. It reads: Re-use means use of a product more than once in its original form. This term does not appear in the resolution but was included in the glossary as a related concept with a definition adopted or endorsed by an intergovernmental process.
- ii. The definition for resource efficiency is captured in UNEP/PP/INC.1/6 as: "Resource efficiency, in general terms, describes the overarching goals of decoupling, increasing human well-being and economic growth while lowering the amount of resources required and negative environmental impacts associated with resource use" It is based on the International Resource Panel # Glossary (2021).
- iii. It is notoriously hard to measure the impact of refill at home or on-the-go of individually owned packaging, or the impact of individual single-use-plastics avoidance given it is likely based on consumers' self-assessments. Lumping it in with measurements of the impacts of reusable packaging within reuse systems risks reducing the meaningfulness of indicators to zero, disincentivising reuse systems while opening loopholes for greenwashing and consumer confusion.

