



# Perspectives.

Issue No. 41

**On the road  
to success:  
Designing  
an effective  
plastics treaty**

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# Executive Summary

The adoption of UNEA Resolution 5/14 entitled *'End plastic pollution - towards an international legally binding instrument'* was a landmark moment in global policymaking. It expressly recognises the need for 'circular economy approaches', taking a 'comprehensive approach that addresses the full life cycle of plastic', in pursuit of 'sustainable production and consumption of plastics'. This sets the stage for negotiations with the potential to create an agreement which fundamentally transforms the global plastics economy.

It is increasingly recognised that achieving sustainable production and consumption of plastics is a necessary precursor to ending plastic pollution. We should not be blinded by a narrow conceptualisation of plastics as just a 'waste' or 'waste and product design' problem. A fundamental reimagining of humanity's relationship with plastics as materials – a 'system change' scenario - is required. The treaty that will emerge out of the negotiations is the once in a generation opportunity the global community has to reshape this relationship and realise this scenario. As such, negotiators have a tremendous responsibility to ensure the incoming treaty is developed and designed to be fit-for-purpose.

For this to be achieved, negotiators need to align around objective(s) and priorities but should also find common ground on what a 'failed' treaty would look like. This would provide them with something to run away from, as well as something to strive towards. It is extremely likely that without controls on virgin (primary) plastic polymer production, robust national reporting obligations, stable and predictable funding and full chemical transparency, the treaty will not be effective at ending plastic pollution. In addition to ensuring the essential elements and design of the new instrument are in place, one that gives the necessary tools to end plastic pollution for this and future generations, the ubiquity and diversity of plastics in almost every economic sector means that solutions tailored to the nature of different applications and contexts are required. As such, in addition to ensuring the institutional framework is fit for purpose, negotiators would be well-advised to set out dedicated programmes of work for each major industrial sector in which plastics are used as well as designing measures that address plastics as materials. This could include but not necessarily be limited to: (i) fishing gear, (ii) agricultural plastics, (iii) packaging, (iv) textiles, (v) transportation, (vi) healthcare / medical, (vii) construction.

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October 2022

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# Introduction

The pollution resulting from the production, use and disposal of plastics across their lifecycles directly undermines our health, drives biodiversity loss, exacerbates climate change and risks generating large-scale harmful and irreversible environmental changes. With emissions into the oceans alone due to triple by 2040, in line with projected production trends, it threatens the planet's basic ability to maintain a habitable environment.

While two of the three global environmental crises identified by UN Environment Programme (UNEP) have had dedicated multilateral environmental agreements (MEAs) for nearly 30 years (biodiversity loss and climate change), no such instrument for pollution yet exists. As one of the most prevalent and destructive environmental pollutants in existence, plastics have rightfully skyrocketed to the top of the global environmental policy agenda.

In response to this, the United Nations Environment Assembly (UNEA) adopted resolution 5/14 titled *"End Plastic Pollution: Towards an International Legally Binding Instrument"* in March 2022. Resolution 5/14 convenes an intergovernmental negotiating committee (INC) to develop a new global legally binding instrument plastic to end plastic pollution. The expressed aim is to conclude negotiations by the end of 2024, after which it would be adopted and opened for signature at a Conference of the Plenipotentiaries

in 2025.<sup>1</sup> **The resulting agreement will define humanity's relationship with plastics for the decades to come, meaning negotiators have a tremendous responsibility to ensure it is fit-for-purpose.**

The INC mandate calls for addressing plastic pollution in all environments through a comprehensive approach focusing on the full plastics lifecycle and sets out a series of provisions to be developed. While the task ahead is daunting, decision makers can take guidance and direction from the significant body of work that has already been conducted.<sup>2</sup> At this early stage, developing a common understanding of what 'essential elements' will be required from the new agreement as well as what should categorically be avoided will assist negotiators in developing an effective instrument truly capable of 'ending' plastic pollution as Resolution 5/14 ambitiously intends.

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# Treaty Work Programmes

From a policy perspective, plastic polymers, the chemicals used in plastics, plastic products, and plastic pollution are inseparable. This is because the ways in which plastics are produced and designed directly dictate the forms and extent to which they become pollutants. It is for this reason that Resolution 5/14 requests the instrument to achieve 'sustainable production and consumption of plastics', which aligns directly with Sustainable Development Goal 12.

**Plastics are ubiquitous in almost every industrial sector and consumer product, taking the form of raw materials, products, or and/or pollutants.** There remains significant scientific, political, and societal complexity of the issue, and as such, plastic pollution has been termed a 'wicked problem'. Solving it will require interventions along the full life cycle of plastics, starting at a minimum from virgin (primary) production, through product design to waste management and remediation. Negotiators could also consider measures for the sourcing of petrochemical feedstocks used to make plastics, which themselves are significant contributors to climate emissions. It will also require dedicated programmes of work for each major industrial sector in which plastics are used. This is because the alternatives, trade-offs and solutions inherently vary depending on the industries, markets, contexts, and applications in which they are used. As such, **negotiators are strongly**

**encouraged to initiate at least seven dedicated programmes of work or 'sector-specific strategies' under the new treaty. Such an approach would facilitate the development and alignment of global provisions alongside context-dependent measures tailored to each industrial sector and implemented nationally.**

**Fishing gear.** Approximately 640,000 tonnes of fishing gear are lost or abandoned in the oceans each year, although this is likely a gross underestimation due to fragmented availability of data.<sup>3</sup> This gear continues to catch both target and non-target species – also known as 'ghost-fishing' – entangling and killing threatened and protected marine animals and commercially important fish species. Lost gear also damages coral reefs and the seabed while also presenting a significant safety hazard for shipping and maritime activities, such as through propeller entanglement. Fishing gear comprises an estimated 27 per cent of beach litter in Europe, 86 per cent of the large floating debris in the Great Pacific Garbage Patch<sup>4</sup> and nearly 90% of marine debris intercepted by longline fisheries was ghost gear.<sup>5</sup>

To address ALDFG, international coordination and collaboration is required. Yet the existing international governance framework, comprised predominantly of the IMO and FAO, is inadequate for this task, while the existing regional governance

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framework is uneven and ill-equipped. The reason for this is simple – those frameworks were never designed for this purpose, resulting in fishing gear often being treated as a political hot potato. To deliver on the 2030 Agenda for Sustainable Development, notably Sustainable Development Goal (SDG) 14.1, more is required than the existing frameworks provide. Into this vacuum enters a global treaty on plastics. It would establish a single forum to oversee a comprehensive body of work to discuss and promote measures across the full lifecycle of fishing gear, ensuring coherent regional and national actions. It would create a clearinghouse for data gathering and monitoring and serve as a platform for scientific assessment and knowledge exchange. It would also provide a venue to convene states, secretariats, and stakeholders to discuss emerging issues as well as to coordinate funding and capacity building. Importantly, it could build upon the existing regional frameworks, empowering them in

their role as intermediaries between international commitments and national action.

**Agricultural plastics.** Agriplastics (also known as ‘plasticulture’ or ‘ag plastics’) are plastic products, films and packaging used in agricultural production and sales. Examples include mulch and greenhouse film, silage covers and bags, irrigation systems, plastic-coated agrochemicals, tunnels and covers.<sup>6</sup> They have a variety of purposes, including weed suppression, protecting produce from insects, shielding from harsh weather conditions, and for storage and transportation.

Despite short-term benefits, there are significant problems with the intensification of plastic-use in agriculture. **Agriplastics are routinely mismanaged, difficult to recycle, degrade soil, reduce the productivity of arable crops, contaminate agricultural land, and impact terrestrial and aquatic ecosystems.** Likewise, there are significant concerns whether ‘biodegradable’ agriplastics break down sufficiently in real-world conditions, and what the long-term impacts of their integration into soil are.<sup>7</sup> While the FAO Committee on Agriculture recently agreed to develop a voluntary code of conduct for agricultural plastics, this alone will not be enough. Addressing the problems associated with agriplastics will require a focus on reduction, redesign, and innovative and holistic systemic approaches. These changes can only be brought about by legislative solutions developed globally and implemented nationally.

**Packaging.** Around 141 million tonnes of plastic packaging is produced globally per year, generating more waste than the next four biggest industrial sectors combined. Around a third of all plastic packaging put on the global

market leaks from collection systems, polluting the environment. To manufacture one kilogram of plastic, 3.5 kg of CO<sub>2</sub> is emitted into the atmosphere. As most plastic packaging is still single use, it has been estimated that CO<sub>2</sub> emissions from materials used for packaging are more than those from global aviation. Likewise, 37% of all food sold in the EU is wrapped in plastic packaging, which is supposed to protect food and increase its shelf life. However, recent research has shown that wrapping fresh products in plastic packaging adds to pollution and food waste, rather than making them last longer. Most statistics available on the recyclability of packaging are inaccurate as the current waste management scenarios do not reflect the real conditions of the sector. As such, most of the world’s packaging waste doesn’t get recycled.<sup>8</sup>

At the core of the solution to unsustainable production and use of plastic packaging is redesigning it according to the Zero Waste Hierarchy to prioritise prevention and minimisation alongside significant investments in and development of reuse infrastructure. **A dedicated programme of work for the packaging sector - responsible for over 40% of plastics demand**

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in 2021 - would help to identify targets, approaches, and priorities as well as the complementary measures and economic incentives to support the transition to reuse.

**Transportation (automotive, aeronautic, marine).** Since 1839 when vulcanised rubber was first created for use in vehicle tyres,<sup>9</sup> the use of plastics in the transportation sector has increased dramatically. While plastics can result in a 3% to 7% improvement in fuel efficiency, increased use is shifting the environmental burden from the use phase (emissions reduction) to the end-of-life stage (materials disposal).<sup>10</sup>

The automotive industry is responsible for 8.8% of plastics consumption in the EU alone,<sup>11</sup> and is one of the most profitable and productive industries in the world. The aeronautics industry uses plastics for use in wing panels, seating, galleys, bulkheads, nacelles, flaps, and rotor blades. Plastics are also used extensively in seafaring vessels, including boat hulls, sails, rudders, lifeboats, propellers, paints, and navigational equipment. The rapid rise and unfettered use of plastics in transportation calls for an urgent re-assessment of their use in the sector in pursuit of minimising unnecessary emissions, fostering circularity and mitigating wider harm.

**Textiles.** The global consumption of synthetic plastic fibres used in textile production increased from a few thousand tonnes in 1940 to more than 60 million tonnes in 2018 and continues to rise. Since the late 1990s, polyester has surpassed cotton as the fibre most used in textiles, and together with nylon makes up about 60% of clothing and 70% of household textiles.<sup>12</sup> Ostensibly many of the clothes we now wear are made from fossil fuels. Due to technical and economic limitations, recycling



is especially challenging in the case of synthetic textiles, which combined with **overproduction patterns 'fast fashion' trends results in 42 million tonnes of waste per year, or 13% of all plastic waste produced.**<sup>13</sup>

There are pathways to make synthetic textiles production and consumption sustainable and circular. Reducing aggregate production, increasing product longevity, eliminating harmful chemicals, and controlling emissions of microplastics (as well as recycling where appropriate) are all critical to moving towards truly circular economy for plastics protective of human health. Likewise, the types of fibre to be used for a particular product or application and how it is woven in the design stage is also hugely important. A dedicated work programme for synthetic textiles would allow decisionmakers to design policy measures appropriately adapted to this sector.

**Healthcare and medical.** For all the ways plastics have revolutionised the medical industry over the past century, there are significant and well-justified concerns about their overuse in the sector. While some uses and applications are currently unavoidable, 25 percent of the waste generated by hospitals is plastic, and many sources can be prevented, replaced, or minimised.

Plastics are attractive options for the healthcare and medical sector. They are cheap, durable, and easily thrown away, with each fresh item offering a newly sterile environment. However, the mountains of single-use plastic waste are beginning to concern medical professionals, many of whom now believe it has begun to contradict their oath *primum non nocere* (first do no harm). While the environmental impacts are well recognised, researchers are yet to



Photo: EIA

fully determine the harm of plastics, particularly microplastics, to human health.

The prevention, use and management of plastics in the medical sector requires increased attention and diligence to avoid adverse health outcomes associated with poor practice, including exposure to infectious pathogens and toxic substances.<sup>14</sup> Solutions lie in practices that reduce the volume of waste generated and harmonised definitions of 'essential use' applications and exemptions.

**The use of plastics in the medical sector is completely distinct to that of other sectors and remedying unsustainable practices will be a long-term process sustained by global policies and gradual improvements.** A dedicated programme of work would provide the space to understand trade-offs and plan interventions to minimise plastic waste generation safely and sustainably in the healthcare sector.

**Construction.** For decades plastics have become increasingly popular in construction due to their

durability, performance, weight and weather resistance. The materials have diverse applications within building design and construction, in particular plastic piping, insulation, and window frames, as well as a myriad of uses in building interiors. In Europe, the sector uses approximately 10 million tonnes of plastics per year, accounting for 20% of total consumption.<sup>15</sup> In the UK, the sector comes only second to packaging in terms of contribution to overall volumes of plastic waste.<sup>16</sup> While there will be a need to address the usage of certain problematic polymers used in commonly found construction materials, such as Polyvinyl Chloride (common in piping) and Expanded Polystyrene (insulation), a dedicated programme focused on the reduction, redesign and reuse of materials following the waste hierarchy and principles of safe and non-toxic circularity will be required. Strategies for procurement, reduction, and reuse of transit packaging for construction materials (e.g through reverse logistics) and emphasising zero-to-landfill for on-site operations should also form part of the considerations.

# Setting the Goalposts: What would constitute a ‘failed’ treaty design?

Aligning on the objective(s) and priorities of the instrument provides something for negotiators to strive towards. However, **finding common ground on what a ‘failed’ treaty design would look like is equally critical as it provides negotiators with something to avoid at all costs.** Based on an extensive and growing body of evidence, the following design elements would likely undermine the ability of the instrument to be effective at ending plastic pollution pursuant to UNEA Resolution 5/14 and would therefore constitute a ‘failed’ treaty design.

**No controls on virgin plastic polymer production.** Upstream (i.e. production) controls are a

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Without controlling the production of virgin plastic polymers, economic circularity will remain a pipe dream and the enabling conditions for the reduction and elimination of plastic pollution will not be established. While critical, midstream, and downstream measures will be inadequate if instituted alone, and upstream controls are required as part of a holistic package of policies to address the plastic pollution crisis.

necessary precursor to achieving sustainable production and consumption plastics, pursuant to Resolution 5/14. **Without controlling the production of virgin plastic polymers, economic circularity will remain a pipe dream and the enabling conditions for the reduction and elimination of plastic pollution will not be established.** While critical, midstream, and downstream measures will be inadequate if instituted alone, and upstream controls are required as part of a holistic package of policies to address the plastic pollution crisis. Negotiators must ensure that the agreement contains a mechanism for controlling or restricting polymers through adjustments, meaning decisions without the need for additional amendment or ratification, similar to the approach taken in the Montreal Protocol and Stockholm Convention.

**Lack of monitoring and reporting obligations.** A global monitoring and reporting framework is *sine qua non* for the new legally binding instrument. Resolution 5/14 mentions the development of provisions that “specify national reporting, as appropriate”, “periodically assess the progress of implementation of the instrument” and “the effectiveness of the instrument in achieving its objectives.” **Progress towards this needs to be measured through a combination of both economic and environmental indicators, instituted through national reporting (bottom-up) and environmental monitoring (top-**

**down).** These are complementary and interdependent activities that together will help us understand the evolution of plastics inputs into the economy and presence of plastic pollution in the environment, based on established baselines. Without a framework that obligates reporting on everything from virgin plastic production and plastics use to waste management, sea-based sources and chemicals, we will not be able to ascertain the relative success or failure of policy interventions, stifling adaptive policymaking.

**Inadequate and unstable funding.** The financial aspects of a global agreement on plastic pollution should be addressed head-on as an essential element to achieve its objectives. Significant resources are already being dedicated to marine and other plastic pollution – and will be for the foreseeable future – making the predominant issue how best to direct and deliver them in a coordinated, predictable, and effective manner. Various financial mechanisms are used in multilateral environmental agreements to deliver financial resources, with some much more successful than others. Based on analysis of previous multilateral environmental agreements (MEAs), a dedicated multilateral fund is the surest means to ensure reliable, predictable, and efficient funding to achieve adequate means of implementation.

**Lack of transparency and restrictions on the chemicals used in plastic products.** At least

10,000 chemicals are found in plastics, almost a quarter (24%) of which are substances of concern and 39% of which are lacking data.<sup>17</sup> There is an urgent need for quality standards for virgin plastic polymers and plastic products to eliminate harmful chemicals, such as endocrine disruptors and carcinogens, as well as standards for recycled products to ensure their safety and environmental sustainability. Furthermore, full transparency and public disclosure of the chemical additives and residual chemicals present in plastic products is required to ensure the human right to science and freedom of information.

**Linear-economy conceptualisation of plastics.** The current linear model of plastics use is unsustainable and in dire need of systemic reform. The UNEA resolution requests the instrument to “*promote... environmentally sound [plastic] waste management, including through resource efficiency and circular economy approaches.*” While the term ‘circular economy’ has been subverted by motives that seek to weaken policy responses, the original concept focused on two key pillars: the protection of natural capital (i.e. minimisation of resource extraction) and the elimination of negative externalities, whose costs are otherwise borne by the public rather than those responsible for

**risks, hazards, or harms.**<sup>18</sup> This concept reinforces the notion of the economy as a wholly owned subsidiary of the environment, and the critical need for it to function within planetary boundaries.

Rather than simply perpetuating ‘business-as-usual’, true circularity uses a clearly defined priority order of action based on the Zero Waste Hierarchy to guide policymaking. This means that, in alignment with SDG12, the primary priority is to minimise the quantities of raw materials that are extracted, and products produced, followed by having clear eco-design, safety and sustainability criteria for those materials and products we still produce. Chemical recycling and waste-to-energy at scale are false solutions and would likely serve to continue perpetuating a de-facto linear economy. **Fundamentally, this treaty presents the first major global opportunity to create the enabling environment to foster true circularity that protects natural capital while eliminating negative externalities.**

**Over-reliance on NDC approach under Paris Agreement.** The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. NDCs are at the heart of the Paris Agreement, embodying

efforts by each country to reduce national emissions and adapt to the impacts of climate change.

Relatedly, at the heart of the plastics treaty agreement will be country-level national action plans that transpose international obligations and setting out the specific policies and measures taken or to be taken to reduce plastic pollution. Such plans will necessarily be tailored to the national context, setting out policies and measures to prevent and reduce each country’s contribution to plastic pollution based on the realities on the ground. There is however a significant risk that an overreliance on the NDC approach instituted under the Paris Agreement will lead to inefficacy. This is because Parties do not have an obligation to achieve their NDCs to address climate change – thus, in that respect, NDCs are not legally binding. There is also no mechanism for non-compliance, meaning they are essentially voluntary. **To this end, the plastics treaty national action plan framework must take heed from the shortcomings of the Paris Agreement’s NDCs to ensure robust reporting, legally binding requirements, and adequate means of implementation.**

**Limited/no scope on specific sectors.** Plastics are ubiquitous in a large proportion of economic sectors and consumer products, taking the form of raw materials, products, and/or pollutants. With hundreds of polymers currently in circulation, all with differing chemical profiles, forms and applications, there is an urgent need for dedicated programmes of work for specific sectors within the new agreement. Sector-specific programmes and strategies are required to engage full value chains and develop the policy measures needed to end plastic pollution in differing contexts and applications.



**There is also no mechanism for non-compliance, meaning they are essentially voluntary. To this end, the plastics treaty national action plan framework must take heed from the shortcomings of the Paris Agreement’s NDCs to ensure robust reporting, legally binding requirements, and adequate means of implementation.**



# Conclusions

**Achieving sustainable production and consumption of plastics is a necessary precursor to ending plastic pollution, and the incoming treaty is the best chance the global community is likely to have to achieve it. As such, negotiators have a tremendous responsibility to ensure it is developed and designed to be fit-for-purpose.**

This will require dedicated strategies and programmes of work for each major industrial sector in which plastics are used. This is due to the ubiquity of plastics in almost every sector and that the alternatives, trade-offs and solutions inherently vary depending on the markets, contexts, and applications in which they are used.

Aligning on both the objective(s) and priorities of the instrument as well as what a 'failed' treaty would look like would provide negotiators with something to strive towards, and something else to run away from. We must take heed from lessons learned in previous MEAs, especially with respect to the nature of provisions and means of implementation. Furthermore, it has become increasingly clear that without controls on virgin plastic polymer production, robust reporting obligations, adequate funding and chemical transparency, the treaty will not be effective at ending plastic pollution.

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