



# REFLECTIONS ON A GLOBAL AGREEMENT ON PLASTICS

Perspectives on Key Issues

## Acknowledgement

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# Global agreement to end plastic pollution in the making

At the fifth United Nations Environment Assembly (UNEA-5.2), UN Member States adopted the resolution, “End Plastic Pollution: Towards an international legally binding instrument”. The resolution mandates the establishment of an Intergovernmental Negotiating Committee (INC) tasked with developing a legally binding global agreement on plastic pollution (which could include both binding and voluntary approaches). The resolution also requests UNEP to convene a forum in conjunction with the first session of the INC, building upon existing initiatives, where appropriate, open to all stakeholders to exchange information and activities related to plastic pollution.

With the resolution, Member States eventually responded to calls from policy makers, scientists, non-governmental and inter-governmental organisations, and businesses around the world in favour of a global agreement that tackles the plastics challenge. This endeavour has already been high on the environmental policy agenda for several years. The calls for a global agreement have been prompted by a growing understanding of plastics’ negative impacts on human societies, fuelled by pictures of the Great Pacific Garbage Patch, beaches and lands overflowing with single-use plastics, animals entangled in single-use plastic items, and scientific publications about the quantity of micro-plastics found in ecosystems, the air, animals and humans.

The resolution constitutes the flagship result of UNEA-5.2, and was seen by many observers as ground-breaking. It highlights the need for a comprehensive approach that addresses the full lifecycle of plastics and moves the plastics economy towards circularity. According to the mandate the instrument should, *inter alia*,

- Define common objectives and related obligations for the new agreement;
- Promote sustainable production and consumption of plastics, including product design, and environmentally-sound waste management, resource efficiency and circular economy approaches;
- Advance national and international cooperative measures to reduce plastic pollution, including the development, implementation and update of national and regional action plans to address plastic pollution as well as national reporting;
- Foster cooperation and coordination with relevant regional and international conventions, instruments and organisations, while recognising their respective mandates, avoiding duplication, and promoting complementarity of action as well as action by all stakeholders, including the private sector;
- Advance knowledge on plastic pollution, including scientific and socio-economic assessments, education, awareness-raising and information exchange;
- Support involvement and engagement of all stakeholders;
- Consider the need for a financial mechanism; and
- Set up schemes or instruments for capacity-building and technical assistance (UNEP, 2022).

## Global agreements and INC process examples

The establishment of an INC is the usual step in preparing any global agreement, and negotiations therein tend to last for several years. Prominent examples are the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC) that was convened in 1990, established the Framework Convention in 1992, and continued its work until the first Climate Conference of the Parties (COP) in 1995 (UNFCCC 1995). A more recent example is the INC on a global legally-binding instrument on mercury that was established in 2010, following two open-ended working groups. The INC convened five times until the Minamata Convention on Mercury was opened for signature at a Diplomatic Conference in Minamata in 2013. As in the case of climate change, the INC on mercury convened until the first Minamata COP took over in 2017 (Minamata Convention on Mercury 2019). It can be expected that an INC on a global agreement on plastics would likewise take several years before the agreement could be opened for signature, and another two to three years until the it could enter into force.

## Current issues and challenges in global plastics governance

Against this background, this paper summarises four key issues in global plastics governance: *First*, the gaps in the existing governance arrangements and the lack of a holistic approach to address the entire lifecycle of plastics, which explain the need for a global approach; *second*, the current unsustainable design, production, and end-of-life treatment of the linear plastic production model, which leads many stakeholders to call for a lifecycle understanding of plastics; *third*, gaps in knowledge and scientific uncertainties as well as the need to improve exchange between scientists and policymakers; and *fourth*, the need for a financial mechanism under a global agreement. Under each of these issues, the paper highlights points that require particular attention in the upcoming negotiations.

Overall, what is needed are significant improvements in terms of better and safe design of plastics, full recyclability, enhanced waste collection and tighter recycling systems, and the widespread deployment of more benign alternatives. While these steps can and should be supported through multi-faceted governance arrangements from the local to the global level, transformative steps need to be taken by producers, traders, consumers, and waste management businesses in all places. Transforming the plastic economy away from its linear production model and curbing its strong growth is a major, but not an unresolvable, challenge.

## Four key issues in global plastics governance

1

### *ISSUE #1*

Existing mechanisms do not cover all relevant sources of plastic pollution, nor address the entire lifecycle of plastics

2

### *ISSUE #2*

Current design, production, and end-of-life treatment of most plastics is unsustainable and harmful

3

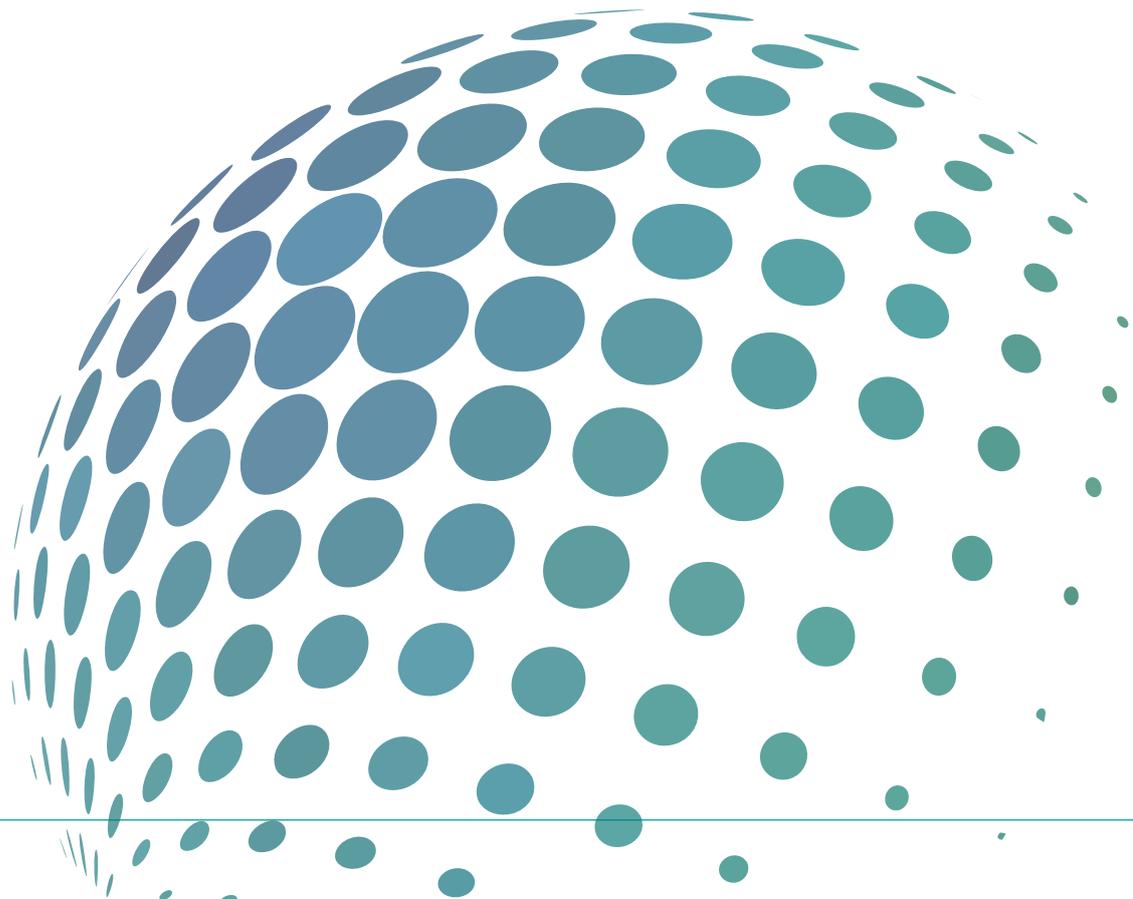
### *ISSUE #3*

Despite a growing body of scientific information, knowledge gaps and uncertainties remain

4

### *ISSUE #4*

Transition towards a more circular economy will require financial means and capacity building



## Existing mechanisms do not cover all relevant sources of plastic pollution, nor address the entire lifecycle of plastics

There is no binding framework effectively addressing plastic pollution on the global level and across the lifecycle. There has been a growing number of institutions, initiatives and other mechanisms dealing with plastic pollution (see Annex 1). However, existing governance arrangements dealing with plastic pollution leave considerable gaps that might be overcome by a well-designed global plastics agreement. While several international and regional institutions are in place, most focus on the waste-stage of plastics (downstream), and in particular on marine litter. This leaves a major gap at other stages of the lifecycle, in particular the design and production stage (upstream), and also disregards impacts on other areas including terrestrial ecosystems and human health. Many non-binding pledges and commitments with varying kinds of goals make it difficult to effectively monitor implementation. But most importantly, “none of the international policies agreed since 2000 includes a global, binding, specific and measurable target limiting plastic pollution” (UNEP, 2021, p. 6).

When it comes to binding agreements, the London Convention and Protocol, and Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL<sup>1</sup>) are particularly important, because they prohibit the dumping of garbage at sea. Since 2019, the Basel Convention’s Plastic Waste Amendments address the international trade in plastic waste. The amendments stipulate that only wastes that are sorted, cleaned and expected to be recycled can be traded. Mixed and potentially contaminated plastic waste can still be traded, but requires the prior informed consent of the importing country.

These binding agreements are supplemented by an increasing number of voluntary initiatives and commitments, such as the “Group of Friends (GoF) to Combat Marine Plastic Pollution” that was initiated by Norway, Antigua and Barbuda, and the Maldives in 2020, and to date counts 54 additional countries, the EU, and civil society organisations.

Among the most notable commitments are those by the G7 and G20 who have adopted several action plans and other means for dealing with marine litter. In 2015, the G7 Action Plan to Combat Marine Litter was adopted. It was reviewed and built upon in subsequent years. In 2018, the G7 Ocean Plastics Charter aimed at enhancing sustainable design, production and after-use markets, as well as improving collection and waste management. Moreover, it sets out to foster sustainable lifestyles and education, support research, innovation and new technologies, and gear up coastal and shoreline action. So far, 18 governments have signed the Charter, joined by 54 business organisations. The G20 Action Plan on Marine Litter was adopted in 2017. Two years later, Member States agreed to the G20 Implementation Framework for Actions on Marine Plastic Litter, which outlines the commitment to implement the Action Plan, deals with information sharing, and includes language on multi-stakeholder involvement. The G20 have since then established a reporting mechanism and published three reports on their actions against marine litter (Ministry of the Environment, Japan, 2021). As a fossil-based material with harmful emissions along the lifecycle, it has also been considered for uptake in government’s National Determined Contributions (NDCs) and been discussed as part of the COP process; it is also mentioned in National Action Plans for SDG

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<sup>1</sup> Short form for Marine Pollution

implementation, for example for SDG 12 Responsible Consumption and Production, or SDG 14 Life below Water and SDG 15 Life on Land.

The problem with these action plans and other pledges is that “all commitments to date lack a quantitative model that connects these actions to a measurable reduction in plastic emissions” (Borrelle et al., 2020). In other words, it is not possible to track implementation and assess the impact on global plastic pollution. Therefore, calls have been made that a cap on virgin plastic materials would be an effective and visible commitment by governments, facilitated by bans, phase-outs, and the promotion of virgin plastics alternatives (Simon et al., 2021). Minimising virgin plastics production and consumption could thus be modelled on the Montreal Protocol limiting the amount of ozone-depleting substances, or the Paris Agreement, which sets a measurable goal for limiting temperature increase by reducing GHG emissions.

## Related issues under discussion

Academics have for some time proposed a new and binding agreement addressing plastic pollution, and have thought about key elements of such an agreement that contribute to making it effective (see, for example, Raubenheimer & Urho, 2020a; Simon et al., 2021). These elements include, above all,

- **A focus on the entire lifecycle of plastics:** A broad consensus exists among academics and many policy- and decision-makers as well as other stakeholders that plastic pollution occurs in every stage of its lifecycle, and that its effective reduction requires measures at all stages. While single-use plastics (SUP) are the most visible cause of environmental pollution, plastics is also a material integrated into industrial products, processes and along value chains, particularly in the automotive, textiles and agri-food sectors. This means that a systemic shift towards circularity requires a lifecycle approach, addressing actors across sectors, to assure that plastic waste is drastically reduced. The need for a lifecycle approach is acknowledged by the resolution adopted at UNEA-5.2, which calls for a comprehensive lifecycle approach in several paragraphs. Yet, certain measures targeting the upstream sector in the plastics lifecycle, namely, the plastic producers, are likely to face strong industry resistance. The plastic producing companies, mainly large oil and gas companies, are already under increasing regulatory and economic pressure in the wake of climate change. Ambitious goals, targets and measures to reduce plastic pollution, for example, a cap on virgin plastic production, would further increase this pressure. A focus on upstream limits would therefore entail intense fossil industry resistance.
- **Specific and measurable goals and targets:** Measurable goals and targets against which progress can be measured are important to serve the purpose and effectiveness of a global agreement. Data collection mechanisms, basic metrics and monitoring processes need to be agreed on to create a baseline, targets and goals. The UNEA-5.2 resolution remains rather vague and generic in this regard. It mandates the INC to “specify the objectives of the instrument” but does not explicitly refer to specific and measurable goals and targets. Moreover, it calls upon the INC to “promote national action plans to work towards the prevention, reduction and elimination of plastic pollution” and to “develop, implement and update national action plans reflecting country-driven approaches to contribute to the objectives of the instrument”. Such action plans may, but need not, include specific and measurable goals and targets. This leaves room for interpretation and debate about negotiations on goals and targets.
- **A meaningful review and reporting mechanism:** This issue is strongly connected with the issue of goals and targets mentioned above, since measurable targets require follow-up in order to be meaningful, and are likely to increase the effectiveness of global agreements. The mandate of the INC in the UNEA-5.2 resolution includes general references to review and reporting mechanism; for example, the INC should develop provisions to “periodically assess the progress

of implementation of the instrument” and “the effectiveness of the instrument in achieving its objectives”. In case of national reporting, it makes an important qualification that may weaken the ambition of any mechanism from the outset by mandating the INC “to specify national reporting, as appropriate”. The adjunct “as appropriate” potentially limits national commitments.

- **National action plans:** Many global environmental agreements rely on the formulation and implementation of national action plans related to each agreement’s objectives. They serve to increase transparency and accountability of parties to the agreements. This approach is also requested in two paragraphs of the UNEA-5.2 resolution. In general, provisions for national plans shall be worked out “to develop, implement and update national action plans reflecting country-driven approaches to contribute to the objectives of the instrument”. In particular, the resolution recommends “to promote national action plans to work towards the prevention, reduction and elimination of plastic pollution”. The reference to the elimination of plastic pollution suggests rather ambitious objectives for the national action plans.
- **Adequately equipped capacity-building mechanisms:** Capacity-building mechanisms for countries in need of support are cornerstones of almost any existing global environmental agreement. Such support typically involves technical assistance, knowledge exchange, technology transfer, and also the mobilisation of additional financial resources from domestic and international sources for the implementation of an agreement. This is also acknowledged at length in the mandate of the INC. As regards the mobilisation of financial resources, the mandate invites negotiating parties to consider the “need for a financial mechanism to support the implementation of the instrument, including the option of a dedicated multilateral fund”. The establishment of such a dedicated multilateral (and possibly stand-alone) fund is certainly the most far-reaching and ambitious solution for a financial mechanism in the context of a global plastics agreement (see issue #4 on finance).

## 2

### ISSUE #2

## Current design, production, and end-of-life treatment of most plastics is unsustainable and harmful

Plastic production continues to be on a steep growth path. In 2019, a total of 368 million metric tons (MT) of new plastic were produced (PlasticsEurope, 2020). In 2017, the Ellen MacArthur Foundation estimated new plastic production to increase almost fourfold by 2050 (Ellen MacArthur Foundation, 2017). Associated with such increase in production is the growing amount of mismanaged plastic waste, which is expected to roughly triple by 2060, compared to 2016 (Lebreton & Andrady, 2019).

Directly associated with the amount of mismanaged plastic waste is the amount of plastic entering terrestrial and aquatic ecosystems. A group of researchers developed scenarios on how much mismanaged plastic waste would enter the environment by 2040 (Lau et al., 2020). The business-as-usual scenario showed that 240 Mt of plastic waste would be mismanaged per year, up from 91 Mt in 2016, of which 29 Mt ended up as aquatic pollution, and 52 Mt as terrestrial pollution. In contrast, a transformative system change scenario was expected to reduce this amount by 78%. This, however, requires urgent, widespread and effective policies addressing the entire lifecycle at all levels. Though the transformative system change scenario was considered a best-case scenario, the

authors concluded rather pessimistically, “Even with immediate and concerted action, 710 million metric tons of plastic waste [would have] cumulatively entered aquatic and terrestrial ecosystems” (Lau et al., 2020).

The mismanagement of plastic waste comes with economic damages, but also with untapped economic opportunities. For packaging plastics across the value chain alone, the loss of economic value (and thus the unexploited market size) as a result of plastic leakage into the environment and low recycling rates is estimated at US\$80 billion to US\$120 billion a year (UNEP, 2021, p. 15). This, in turn, would suggest that a shift towards a more circular economy would keep these investments within the plastics economy. Currently, however, only 21% of all plastics are economically viable for recycling, with less than 10% actually being recycled (SYSTEMIQ & Pew Charitable Trust, 2020; UNEP, 2021). Increasing these recycling rates would not only reduce the need for virgin materials (with related positive effects for climate as well as the economy), it would also add value to the material at its end-of-life stage, thereby reducing the amount of plastic waste being incinerated or brought to landfills, from where it leaks into the (marine) environment.

One of the reasons that plastics are so widely used is their comparatively low production costs. The main reason for these low costs is that externalities (e.g., costs associated with greenhouse gas emissions from producing new plastic materials), which were calculated at about US\$ 40 billion for packaging alone (Ellen MacArthur Foundation, 2017, p. 12) are not mirrored in the production costs. In addition to causing harmful pollution, plastic production is exacerbating climate change. By 2050, an unabated growth of plastic production could lead to annual emissions of 2.75 billion metric tons of CO<sub>2</sub> equivalent. The cumulated emissions would use up to 13% of the global carbon budget that is expected to keep the global temperature from rising less than 1.5°C (Hamilton et al., 2019). There is currently no technological solution to minimise these emissions on the required scale. Without an internalisation of these costs, they will not be accounted for and, subsequently, they will be paid for by those who benefitted the least from plastic production: the (marine) environment, ecosystems, and inevitably the poor.

While unabated plastic pollution therefore comes at considerable costs, if policy measures are taken, economic opportunities of a more circular plastic economy can arise, providing a meaningful incentive for a system change. A recent report outlined both the risks of the present linear model, and highlighted the potential benefits of a transformative change. It concluded that an 80% reduction of otherwise expected marine litter is feasible, “without compromising social or economic benefits” (SYSTEMIQ & Pew Charitable Trusts, 2020, p.10). The authors noted that it will necessitate a major shift from the existing linear model based on producing virgin plastics from fossil fuel feedstock towards “new delivery models, plastic substitutes, recycling facilities, and collection infrastructure” (ibid.). It will be the job of political decision-makers to facilitate this transformation and to incentivise the necessary steps, in order to prevent further damages and reap the benefits of a more sustainable circular model.

## Related issues

While science suggests that a (more) circular plastics economy can be expected to be most successful in preventing plastic use, limiting plastic waste and pollution of the environment, it is not certain that a global agreement on plastics would indeed target the entire lifecycle of plastics. Some countries and stakeholders would prefer a focus on the end-of-life stage, that is, improved waste management systems and ocean clean-ups. By contrast and amid projected increases in the volume of virgin plastic production, others caution that ever-more plastics would continue to leak into the environment if upstream solutions are neglected (e.g., reducing virgin plastic production or making plastic products more sustainable, reusable and recyclable). This would overstrain even growing and improved waste management capacities and exacerbate climate change. Against this background,

the emphasis of comprehensive lifecycle and circular approaches to reduce plastic pollution in the INC mandate is particularly noteworthy. At the very least, it does not rule out a priori the possibility that the agreement addresses all stages in the plastics value chain. Thereby, the mandate signals the ambition of spurring a new policy framework and economic model for circular plastics across all sectors. This can target all types of plastics, including SUP for packaging, as well as plastics as an integrated material in industrial products and processes.

# 3

## ISSUE #3

### Despite a growing body of scientific information, knowledge gaps and uncertainties remain

A quickly growing body of research, improved observation and surveying systems, and some broader assessments have significantly improved the knowledge base on plastic pollution, its sources and pathways as well as its effects on the environment. (UNEP, 2021). Yet serious shortcomings remain. To begin with, a meta-review of 114 review studies found that most reviews look at microplastics and environmental impacts of marine plastic pollution, and that there is a lack of more systematic meta-analyses (Aretoulaki et al., 2020). In addition, existing measurements and samplings to determine the exact amount of microplastics in air, soil and water are not harmonised, and thus not entirely comparable. What is needed are technical standards (UNEP, 2021).

Researchers have found a plethora of interactions between marine plastic pollution and wildlife. Based on a review of more than 1,800 scientific papers, the LITTERBASE project found evidence for interactions with more than 3,800 different species (Tekman et al., no date). Ingestion is the most widely reported effect, known from widely broadcast stories of whales starving with stomachs full of plastic bags. Plant, animal or microbe colonisation is also highly relevant; especially for coastal species plastic debris can extend their biogeography. Entanglement is another often-observed effect, and images of turtles or dolphins caught in lost fishing gear are some of the most recognisable impacts thereof. With the picture of such interactions becoming more complex over time, it becomes difficult to fully assess the widespread impact of unabated plastic pollution on the environment.

For humans, the chemical properties of plastics can be a particular reason for concern. In a comprehensive review of 10,000 substances used in plastic production, researchers identified more than 2,400 chemicals that are of potential concern (Wiesinger et al., 2021). These substances are either persistent, bioaccumulating or toxic. However, a considerable number of them are not well-researched and most are hardly regulated (others have been legally allowed to be used in food containers), posing an unknown risk to the health of consumers. For an overview of different strands of contact and impacts (biological, economic and societal), see Annex 2.

The existing science-policy interfaces (SPI) have led to a growing body of accessible knowledge on sources, pathways and effects of marine plastic litter. However, considerable uncertainties remain, and the landscape of science-policy interfaces requires improvement (Busch et al., 2021). Among the problems identified with the current SPI are the many gaps when it comes to regional assessments, such as a lack of lifecycle approaches, insufficient exchange between policy-makers and scientists, lack of baseline monitoring allowing for a sound overview of the situation and monitoring the effectiveness of attempted solutions, and issues with the coordination and harmonisation of different bodies and mechanisms.

In addition to the missing baselines and basic research, potential solutions also remain underresearched. This is the case not just for academia, but also for Research and Development financed by industry. Innovation ecosystems need to be invested in that can develop, test and monetise the systemic solutions needed for circularity, including the material switch away from plastics and new business models.

## Related issues

As a possible solution, a new or enhanced global science-policy interface on plastic pollution has been proposed (Busch et al., 2021). This could take different forms. It could be connected with a new binding agreement on plastic pollution; it could be organised by one or more intergovernmental organisations; or it could be an independent body, comparable to the IPCC and IPBES.

Two important decisions were taken at UNEA-5.2 in this regard. On the one hand, the resolution to end plastic pollution takes up considerations on a SPI. The resolution mandates the INC to negotiate provisions on “scientific and socio-economic assessments related to plastic pollution”. More precisely, it recommends exploring the “possibility of a mechanism to provide policy relevant scientific and socio-economic information and assessment related to plastic pollution”.

On the other hand, States adopted the resolution “Science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution” at UNEA-5.2. With this resolution Member States responded to a debate about a new intergovernmental SPI on chemicals and waste that evolved before UNEA-5.2. They decided to establish an independent intergovernmental global science panel, following the example of IPCC and IPBES, with the goal to “contribute further to the sound management of chemicals and waste and prevent pollution”. Even though the resolution does not explicitly refer to plastic pollution, it suggests that the issues of plastic pollution as well as chemicals and waste can be, or are, increasingly thought of together. This could result in a broad-scale and comprehensive scientific assessment and advisory mechanism that could cover all relevant aspects related to plastics, including design, production, use, and end-of-life as well as issues such as policy responses, socio-economic factors, and chemical additives. In addition, it could cover aspects related to a wide range of other chemicals of concern and waste management issues, including their impacts on human health and the environment, and the costs of inaction. Negotiations can also include the important aspect of making scientific insights as part of the innovation ecosystem relevant for enabling product and process innovations by industry. This would enable innovative and new industry players to solve the problems caused by today’s linear plastics system.

# 4

## ISSUE #4

### Transition towards a more circular economy will require financial means and capacity building

Despite numerous (including economic) benefits of leaving behind the current, mostly linear, model of plastic production, the transition process itself will require financial investments. Implementing new policies or activities as well as inventing and scaling up the use of new technologies will be costly (UNEA, 2020). Unfortunately, not all countries and stakeholders are equally well equipped to make these investments. In fact, a lack of resources, in particular in developing countries, strongly hinders success in preventing plastic pollution (Raubenheimer, 2016).

In order to address the vital needs for capacities, academics have proposed some key elements for a financial mechanism under a global agreement (Raubenheimer & Urho, 2020a; Busch et al., 2022). Funding acquired thereunder should:

- Mobilise and deliver resources to offer support in funding actions and activities that support the development, formulation and implementation of the commitments agreed to under the agreement, and assist countries in meeting their obligations, particularly those countries that lack the necessary capacities – institutional, administrative and technical – in order to enable them to fulfil their commitments under the global agreement;
- Target the entire lifecycle of plastics, with a probable emphasis on the design and production stages, as these currently receive less focus than activities that aim at improving waste management services or recycling;
- Support enabling activities (e.g., comprehensive national inventories/assessments, plans and strategies; and essential administrative and institutional capacities)
- Contribute to knowledge-related activities (such as the abovementioned science-policy interface, investments in research and development, innovation, and probably a clearing-house mechanism); and
- Promote steps towards a more sustainable circular plastics economy (e.g., innovative and more sustainable designs of plastic products and production processes; product standards, improvements of collection, recycling and recovery processes, and of infrastructure)

Given the size of the challenge and finance needs, two other considerations are often highlighted when it comes to financial means. On the one hand, business actors will need to make substantial contributions and investments in order to provide sufficient financial resources to combat plastic pollution. On the other hand, governments will need to scale up their efforts to mobilise funding at the domestic level, including investments from business actors, as they will not be able to rely only on international and business sources of funding. To enable investment by innovators, governments need to create favorable framework conditions, including policy commitments towards circular plastics and material alternatives, as well as funding, and disincentivise linear plastics production and use.

## Related issues

The concrete design, scope and size of a financial mechanism under a global agreement on plastics will be the content of extensive deliberations within the INC. In this context, negotiating parties will have to make decisions, above all, on the governance and administration of a possible financial mechanism (independent, as part of the agreement, embedded within an existing international organisation like UNEP, or through a multi-purpose organisation like the Global Environment Facility, GEF), the forms of financial support (grants, non-grant instruments, blended finance, etc.), and the form of contributions (mandatory or voluntary). The resolution leaves this open to the negotiating parties but it is remarkable that it at least regards the most far-reaching option (an independent financial mechanism like the Multilateral Fund for the Montreal Protocol) as worthwhile for consideration.

Greater discussion (both within academia and among policy-makers) has focused on using regulatory and market-based instruments to raise the much-needed funding from domestic (and private) sources. These include, above all, Extended Producer Responsibility (EPR) schemes, but also bans, caps, targets, standards, taxes or tax exemptions, fees, levies, penalties, charges, liability schemes, information campaigns and education. In an EPR scheme, plastics producers

or distributors are forced to contribute to waste management or other externalities. Ideally, this incentivises businesses to avoid or minimise externalities; while costs typically originate at the end of life of products, longer-term effects incentivise change in design and use phase of products. Even the possibility of a global EPR scheme or a global tax on plastic has been deliberated and proposed in this discussion (see Raubenheimer & Urho, 2020b; Busch et al., 2022). The UNEA-5.2 resolution itself does not mention any specific policy or instrument. Yet, it can be expected that during the negotiations, Member States will discuss options of how and to what extent a global agreement can foster the adoption and implementation of (some of) these policies and instruments. Three basic options exist (Busch et al., 2022). Governments could:

- Design a global agreement that prescribes the use of (some of) these policies and instruments;
- Agree upon goals that motivate governments to adopt (some of) these policies and instruments on their own initiative; and/or
- Establish supporting mechanisms and processes that help parties in developing and implementing these policies and instruments.

## Further issues under discussion

**The involvement of non-governmental stakeholders:** Non-governmental stakeholders have expressed a desire to be involved in the development of a global agreement on plastics. Two things need to be considered in this regard. First, agreements developed in a multi-stakeholder setting tend to have broader ownership. This could offer the opportunity, for example, of involving industry to play their part in reducing plastic pollution. However, there is no example to date of a legally binding multi-stakeholder agreement. Hence, unless countries and stakeholders can agree on a legally binding agreement in which governments do not necessarily have the final say, it is likely that the outcome would be a voluntary agreement. Second, this is the major reason that voluntary agreements (such as the multi-stakeholder Strategic Approach to International Chemicals Management, or SAICM) are usually less powerful or abided-by than intergovernmental agreements.

**Involvement of business:** There seems to be a general agreement that business actors will need to play a key role in delivering on the overall objective to halt plastics pollution (Cowan & Tiller, 2021; Busch et al., 2022). Integral to the Extended Producer Responsibility (EPR) approach is that with a wider application thereof, funds would become available for both downstream and upstream measures. In order to comply with the regulations, business actors would need to either design waste “out of the system”, or else pay for re-collection systems or recovery and end-of-life treatment of plastic waste. Even though large parts of business actors themselves support a global agreement on plastic pollution, it is hard to imagine that companies would be in favour of a truly encompassing global EPR scheme. The activities of business actors often target “end-of-life” solutions rather than systemic interventions that require necessary actions upstream to reduce and control plastic production, and consequently plastic waste generation. Regarding manufacturing, 20 large polymer producers, many of which are global players in oil and gas markets, such as Exxon Mobile and SaudiAramco, are responsible for the majority of plastics production. As carbon-based products, plastics actually add revenue to oil productions’ waste and side products, making them more profitable. A global plastics agreement could diminish the economic prospects of the plastic producers while they already face tighter and transformative regulations in the energy sector amid increasingly urgent and alarming concerns about climate change. Voluntary commitments by brands to reduce plastics use have often proven to be ineffective. It is therefore important to distinguish between business actors that are interested in prolonging the current plastics regime as long as possible, and those open to changing the system towards circularity and seizing its economic opportunities. Proponents and negotiators

of the global agreement also need to be aware of the intense lobbying efforts of key industry players that seek to keep profitable business cases around linear plastics in place.

**Plastics vs. marine litter vs. marine litter and plastic pollution:** The question of wording relates to the above-mentioned controversy of whether a global agreement should focus on the entire lifecycle of plastics or the end-of-life stage only; pollution of the environment in general or only of the marine environment. The different resolutions proposed at UNEA-5.2 mirrored this controversy. The resolution of Peru and Rwanda, which eventually shaped decisively the resolution that was ultimately adopted, proposed a very comprehensive and circular approach to plastic pollution, including measures targeting upstream and downstream activities, and addressing plastic pollution in the entire environment. By contrast, the proposals by India and Japan were more selective of the sectors and ecosystems they addressed. Focusing on end-of-life stage and the marine environment only would have significantly less direct and transformational implications for the current plastics economy.

Preferable are actions directed both upstream and downstream, and targeted at terrestrial and marine ecosystems. This is because even a very high catchment and recycling rate as well as improved and expanded waste management capacities would not solve the problems caused by plastic pollution and plastics in general. Recycling, for example, is done most frequently by mechanically disintegrating plastics' polymer structure. This often causes a loss of material quality, resulting in "downcycling". This means that rather than enabling circular use, the use of recycled plastics is limited and effectively increases plastics' proliferation – for example, in the form of carpets or "fast-fashion" textiles made of low-quality plastics. Likewise, harmful chemicals in plastic products would be neglected if only downstream measures were taken. In this regard, it is remarkable that the UNEA-5.2 resolution does not have a single reference to chemicals as part of the problem and challenges related to plastic pollution

## Way forward

The four key challenges in global plastics governance will have to be addressed in the coming negotiations. While there seems to be a joint understanding of the urgency of tackling the challenges emerging, national perspectives on this topic differ.

National perspectives on each of the issues under discussion will largely depend on national circumstances. A key question is whether a country has fossil fuel feedstock or production facilities. Many governments still see (single-use) plastics as a source of economic growth and job creation and support this industry, for example by fossil subsidies. It is important to acknowledge that plastic alternatives (materials as well as systems) are also a source of employment, and many do not cause harmful short- and long-term impacts.

Other determining questions include the following: Is the country a recipient of plastic waste for recycling? How well developed are its collection systems and recycling capacities? Will a country be eligible for funds under any financial mechanism under a new global agreement? Does a country have coastal shores and does it rely heavily on the tourism industry?

At the same time, the growth trajectory of the past years must be broken – if not to curb environmental pollution and health impacts, then as part of the climate commitments under the Paris Agreement. As a fossil-based material, the production as well as open burning and incineration of plastics already is considerable, and current emission projections for the plastic lifecycle would lead to missing the targets formulated in the Paris Agreement.

Plastics is a trans-boundary issue because both production and pollution are global in nature. Therefore, while national, regional and municipal action is needed, a global agreement on plastics is important to allow for alignment at international level.

As a recent assessment published by the UN Environment Programme put it: “Multiple synergistic system interventions are needed upstream and downstream of plastic production and use” (UNEP, 2021, p. 15). In this regard, global governance action is a prerequisite for comprehensive impact; but for achieving circularity, a shared understanding and commitment of tackling plastics’ current challenges on all levels is necessary.

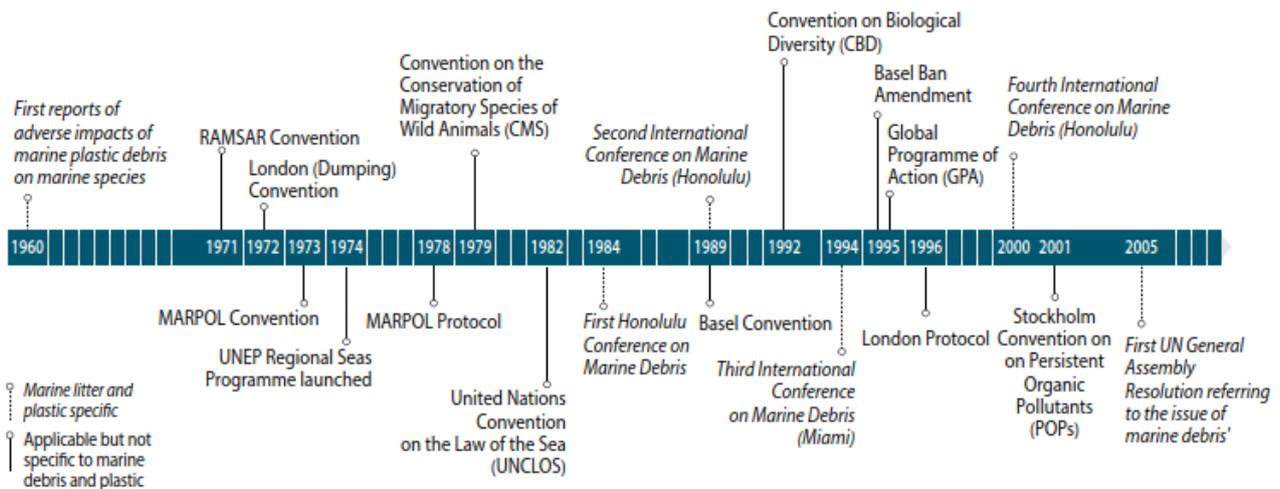
## Timeline for negotiations

In the follow-up to the resolution, UNEP has convened an ad hoc Open-Ended Working Group (OEWG) from May 30 to June 1 in Dakar, Senegal, to prepare for the INC. The OEWG discusses the INC’s timetable, organisation of work and rules of procedure. The actual INC is scheduled to commence its work in November 2022. The work is to be concluded after a total of 5 INC sessions. UNEP will then convene a diplomatic conference of plenipotentiaries for the purpose of adopting and opening the instrument for signature. This conference is scheduled for the first half of 2025.

# Annex 1: Timeline for selected international marine litter and plastic pollution initiatives, laws and policies

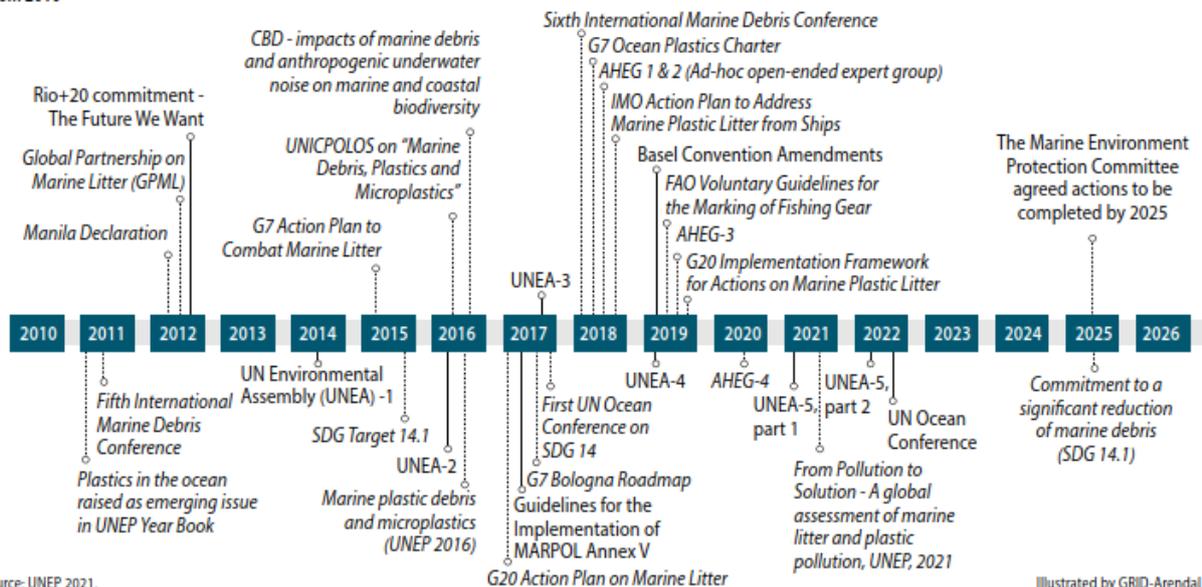
## Timeline for selected international marine litter and plastic pollution initiatives, laws and policies

Between 1960 and 2009



## Timeline for selected international marine litter and plastic pollution initiatives, laws and policies

From 2010

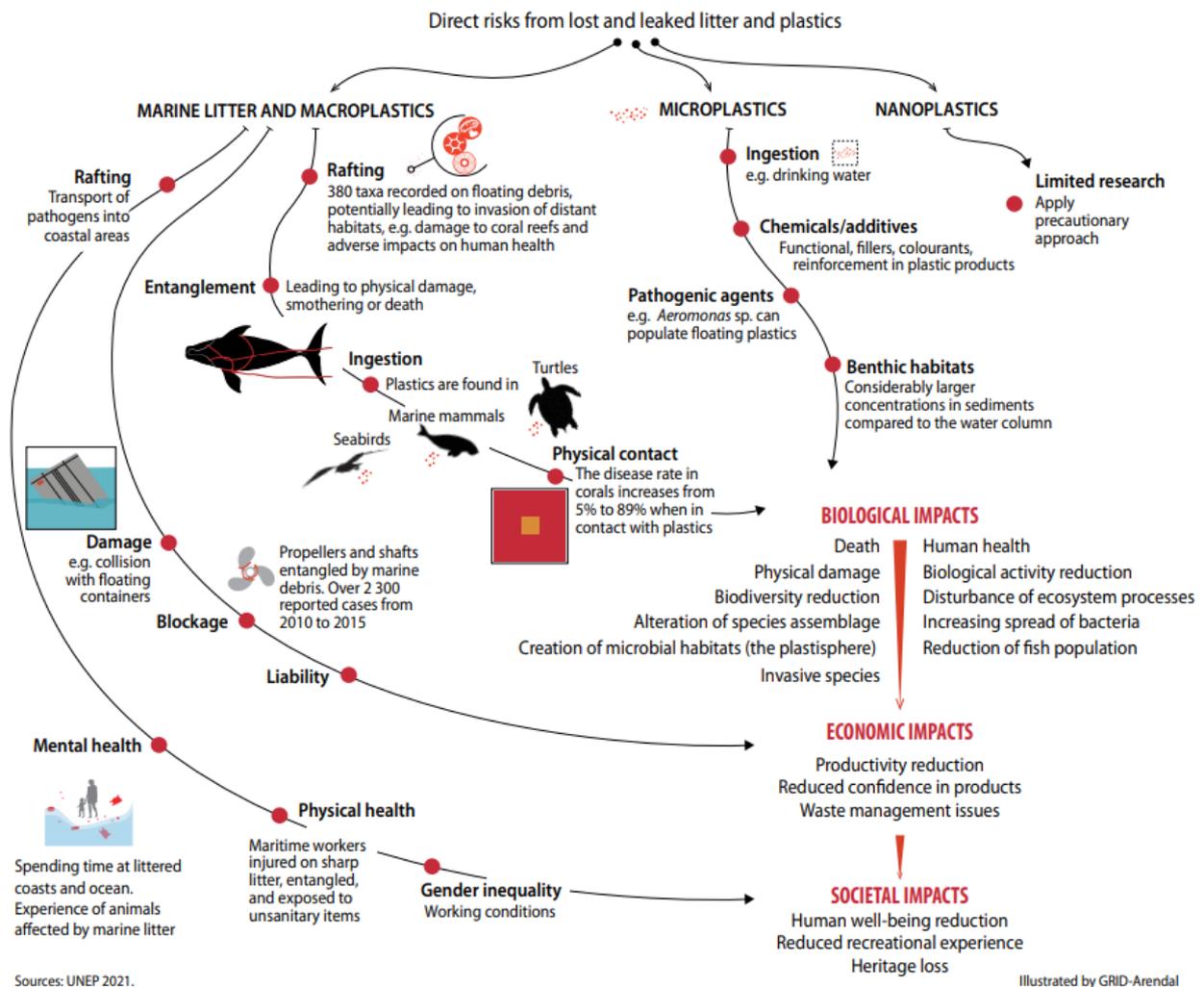


Source: UNEP 2021.

Source: UNEP 2021: 87.

Illustrated by GRID-Arendal

# Annex 2: Direct risks from lost and leaked litter and plastics



Source: UNEP 2021: 23.

## Annex 3: Bibliography

- African Ministerial Conference on the Environment (AMCEN). 2019. Report of the ministerial segment. AMCEN/17/9. [https://wedocs.unep.org/bitstream/handle/20.500.11822/30786/AMCEN\\_17L1.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/30786/AMCEN_17L1.pdf?sequence=1&isAllowed=y)
- Aretoulaki, E., Ponis, S., Plakas, G. & Agalinos, K. 2020. A systematic meta-review analysis of review papers in the marine plastic pollution literature. *Marine Pollution Bulletin*, 161, A, 111690.
- Borrelle, S.B., Ringma, J., Law, K.L. et al. 2020. Predicted growth in plastic waste exceeds efforts to mitigate plastic pollution. *Science*, 369, 1515–1518.
- Busch, P.-O., Schulte, M.L. & Wintermeyer, F. 2022. Global agreement to prevent plastic pollution: Exploring financing needs and opportunities. Copenhagen: Nordic Council of Ministers.
- Busch, P.-O., Schulte, M.L. & Simon, N. 2021. Strengthen the global science and knowledge base to reduce marine plastic pollution. Copenhagen: Nordic Council of Ministers.
- Caribbean Community (CARICOM), with assistance of Alicia Nicholls. 2019. CARICOM Heads adopt St. Johns Declaration to address plastic pollution in Caribbean Sea. <https://caribbeantradelaw.com/2019/07/06/caricom-heads-adopt-st-johns-declaration-to-address-plastic-pollution-in-caribbean-sea/>.
- Cowan, E. & Tiller, R. 2021. What shall we do with a sea of plastics? A systematic literature review on how to pave the road toward a global comprehensive plastic governance agreement. *frontiers in Marine Science*. <https://doi.org:10.3389/fmars.2021.798534>
- Ellen MacArthur Foundation. 2017. The new plastics economy: Rethinking the future of plastics & catalysing action. <https://ellenmacarthurfoundation.org/the-new-plastics-economy-rethinking-the-future-of-plastics-and-catalysing>
- European Commission. 2020a. Circular Economy Action Plan: For a cleaner and more competitive Europe. [https://ec.europa.eu/environment/circular-economy/pdf/new\\_circular\\_economy\\_action\\_plan.pdf](https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf)
- European Commission. 2020b. Leading the way to a global circular economy: State of play and outlook. [https://ec.europa.eu/environment/circular-economy/pdf/leading\\_way\\_global\\_circular\\_economy.pdf](https://ec.europa.eu/environment/circular-economy/pdf/leading_way_global_circular_economy.pdf).
- Governments of Ecuador, Germany, Ghana and Vietnam, & UNEP. 2021. Pre-meetings of the Ministerial Conference on marine litter and plastic pollution – Informal summary. <https://conferencemarinelitterplasticpollution.org/documents/>.
- Governments of Peru and Rwanda. 2021. Draft resolution on an internationally legally binding instrument on plastic pollution. [https://ministerialconferenceonmarinelitter.com/.cm4all/uproc.php/0/UNEA-5.2%20Global\\_Agreement\\_.pdf?cdp=a&\\_=17ba640bc3b](https://ministerialconferenceonmarinelitter.com/.cm4all/uproc.php/0/UNEA-5.2%20Global_Agreement_.pdf?cdp=a&_=17ba640bc3b).
- Hamilton, L. A. et al. 2019. Plastic & climate: The hidden costs of a plastic planet. <https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-FINAL-2019.pdf>
- Lau, W.W.Y., Shiran, Y., Bailey, R.M. et al. 2020. Evaluating scenarios toward zero plastic pollution. *Science*, 369, 1455–1461.
- Lebreton, L. & Andrady, A. 2019. Future scenarios of global plastic waste generation and disposal. *Palgrave Communications*, 5(1). [https://www.researchgate.net/publication/330542951\\_Future\\_scenarios\\_of\\_global\\_plastic\\_waste\\_generation\\_and\\_disposal](https://www.researchgate.net/publication/330542951_Future_scenarios_of_global_plastic_waste_generation_and_disposal)
- Minamata Convention on Mercury. 2019. History of the negotiations process. <https://www.mercuryconvention.org/en/about/history>.

- Ministerial Statement at ministerial conference on marine litter and plastic pollution. 2021. <https://conferencemarinelitterplasticpollution.org/documents/>
- Ministry of the Environment, Japan. 2021. G20 Report on actions against marine plastic litter. Third information sharing based on the G20 Implementation Framework. 2nd Edition. <https://www.env.go.jp/press/files/en/938.pdf>
- PlasticsEurope. 2020. Plastics – the facts 2020. <https://plasticseurope.org/knowledge-hub/plastics-the-facts-2020/#:~:text=Plastics%E2%80%94the%20Facts%20is%20an,turnover%20in%20the%20plastics%20industry.>
- Raubenheimer, K. 2016. Towards an improved framework to prevent marine plastic debris. Doctor of Philosophy Thesis. Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong. <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=5747&context=theses>
- Raubenheimer, K. & Urho, N. 2020a. Possible elements of a new global agreement to prevent plastic pollution. Copenhagen: Nordic Council of Ministers. <https://www.norden.org/en/publication/possible-elements-new-global-agreement-prevent-plastic-pollution>
- Raubenheimer, K. & Urho, N. 2020b. Rethinking global governance of plastics – The role of industry. *Marine Policy*, 113. <https://doi.org/10.1016/j.marpol.2019.103802>
- Secretariat of the Pacific Regional Environment Programme (SPREP). 2018. Pacific Regional Action Plan: Marine litter 2018-2025. [https://www.sprep.org/attachments/Circulars/prap\\_marine\\_litter.pdf](https://www.sprep.org/attachments/Circulars/prap_marine_litter.pdf).
- Simon, N., Raubenheimer, K., Urho, N. et al. 2021. A binding global agreement to address the lifecycle of plastics. *Science*, 373. <https://www.science.org/doi/abs/10.1126/science.abi9010>
- SYSTEMIQ & Pew Charitable Trusts. 2020. Breaking the plastic wave: A comprehensive assessment of pathways towards stopping ocean plastic pollution. [https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave\\_report.pdf](https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_report.pdf)
- Tekman, M.B., Gutow, L., Macario, A., Haas, A., Walter, A. & Bergmann, M. LITTERBASE. Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung. [https://litterbase.awi.de/litter\\_detail](https://litterbase.awi.de/litter_detail) Accessed on June 1st 2022.
- United Nations Environment Assembly (UNEA). 2020. Chair's summary of the work of the ad hoc open-ended expert group on marine litter and microplastics for consideration by the United Nations Environment Assembly at its fifth session. <https://wedocs.unep.org/bitstream/handle/20.500.11822/34635/K2100061.pdf?sequence=11&isAllowed=y>
- UNEP. 2022. Draft resolution. End plastic pollution: Towards an international legally binding instrument. [https://wedocs.unep.org/bitstream/handle/20.500.11822/38522/k2200647\\_-\\_unep-ea-5-l-23-rev-1\\_-\\_advance.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/38522/k2200647_-_unep-ea-5-l-23-rev-1_-_advance.pdf?sequence=1&isAllowed=y)
- UNEP. 2021. From pollution to solution: A global assessment of marine litter and plastic pollution. <https://wedocs.unep.org/bitstream/handle/20.500.11822/36963/POLSOL.pdf>,
- UNEP. 2020. Assessment of options for strengthening the science-policy interface at the international level for the sound management of chemicals and waste. <https://wedocs.unep.org/bitstream/handle/20.500.11822/33808/OSSP.pdf?sequence=1&isAllowed=y>
- UNFCCC. 1995. A brief introduction to the Climate Change Convention. <https://unfccc.int/resource/ccsites/zimbab/conven/text/intro.htm>
- Wiesinger, H., Wang, Z. & Hellweg, S. 2021. Deep dive into plastic monomers, additives, and processing aids. *Environmental Science & Technology*, 55, 13, 9339-9351. <https://pubs.acs.org/doi/10.1021/acs.est.1c00976>
- World Trade Organization. 2020. Communication on trade in plastics, sustainability and development by the United Nations Conference on Trade and Development (UNCTAD). <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/Jobs/TE/63.pdf&Open=True>



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