



## Policy Brief

# TOWARDS AN INTERNATIONAL AGREEMENT ON PLASTIC POLLUTION: THE ROLE OF THE G20

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### *Task Force 3*

Governing Climate Targets, Energy  
Transition, and Environmental  
Protection



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# Abstract

Marine plastic pollution has become a critical issue on a global scale, bringing detrimental environmental impacts, including the death of marine species caused by plastic entanglement and ingestion. Southeast Asia is considered the biggest contributor of marine plastics. A recent study shows that the region (except Lao People's Democratic Republic) disposes into the ocean more than 55 percent of the world's total output of plastic waste. To address the issue, several international treaties have been enacted. The London Convention, the International Convention for the Prevention of Pollution from Ships (MARPOL), the Convention on the Law of the Sea (UNCLOS) and the Basel Convention are amongst the prominent treaties that address the issue. However, those regulations lack comprehensive discussions on the life cycle of plastics, legally binding agreements, monitoring methods or quantified targets on plastic pollution. Therefore, an international treaty that encompasses all components related to plastic pollution must be created.

Earlier this year, the United Nations Environment Assembly 5.2 adopted "End plastic pollution: towards an international legally binding instrument", a resolution seeking to organise an international negotiation committee to develop an international legally binding instrument on plastic pollution.

The Group of 20 (G20) has contributed to the resolution of the plastic pollution issue. In the G20 Hamburg Summit in 2017, the G20 Action Plan on Marine Litter was formulated. In June 2019, the G20 Implementation Framework for Actions on Marine Plastic Litter was established at the G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth. Maintaining the momentum, the Osaka Blue Ocean Vision was shared with G20 leaders and to other countries.

This policy brief investigates the gaps in the existing international treaties on marine plastic pollution and proposes components that need to be considered in a new treaty. These proposals will complement the G20 work on plastic pollution. Furthermore, since the G20 summit will be held in Indonesia in 2022, the focus of this policy brief will not only be relevant to G20 countries but also to Southeast Asia as the biggest contributor of marine plastics.

# Introduction

Plastic pollution has become a global environmental issue. The United Nations Environment Assembly adopted the “End plastic pollution: Towards an international legally binding instrument” resolution, on March 2, 2022. Based on this, negotiations to create an international treaty on plastic pollution will start from the second half of 2022. An intergovernmental negotiating committee will develop the content of the treaty and complete its work by the end of 2024 (IUCN, 2022a).

The need for a treaty is exacerbated by some of the impacts of plastics on marine ecosystems. Damage to coral reefs and seagrass beds (Kershaw et al., 2019) as well as death of marine creatures such as whales, dolphins, turtles, dugongs and other animals due to plastic entanglement and ingestion are reported in many countries. Although the impact on human health is still uncertain, microplastics are now found in human blood (Leslie et al., 2022).

Concerns about plastic pollution have rapidly increased in the past 10 years. In addition to news about the impacts of plastic on the marine ecosystem, scientific estimations of plastic leakage into oceans have raised awareness. Jambeck et al. (2015) estimate 4.8–12.7 million tonnes of plastic are discharged into oceans annually, and other researchers also estimate leakage from rivers to oceans (Borrelle et al., 2020) and leakage to rivers, lakes and oceans (Lebreton et al., 2017; Schmidt et al., 2017; Meijer et al., 2021). For example, plastic leakage from ASEAN countries accounts for 56.8 percent of global leakage (Meijer et al., 2021), which means ASEAN is a major source of plastic leakage into oceans. With high economic growth, the use of plastics increases. Many areas still have insufficient and improper waste collection and disposal facilities. Heavy rainfall also contributes to plastic leakage into oceans.

The G20 Action Plan on Marine Litter was launched in the G20 Hamburg Summit in July 2017. Two years after, the G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth established the G20 Implementation Framework for Actions on Marine Plastic Litter, which was endorsed by the G20 leaders. Lastly, the G20 Osaka Summit generated the Osaka Blue Ocean Vision to reduce additional pollution by marine plastic litter to zero by 2050 through a comprehensive life-cycle approach (G20, 2019a, 2019b).

Based on the Osaka Blue Ocean Vision, various good practices by governments, international organisations and nongovernmental organisations (NGOs) are compiled in annual reports. In 2021, 36 countries and 13 international organisations and NGOs reported their actions, consisting of national action plans, legal frameworks, indicators, prevention and reduction of

plastic waste generation, environmentally sound waste management, marine plastic litter clean-up, promotion of innovative solutions, education and awareness raising, as well as monitoring and scientific research (Ministry of Environment, Japan, 2021).

The G20 would be a suitable forum to discuss the future international treaty on plastic pollution. This policy brief aims to show how Indonesia and the other G20 members this year align their perspective and lead the argument towards the new treaty..

# Existing International Treaties

A brief review of existing international treaties is presented as follows.

## **LONDON CONVENTION**

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, recognised as the London Convention, is amongst the pioneers of global treaties in protecting the marine environment. It came into force in 1975 and has since been ratified by 87 countries (IMO, 2019a). The convention prohibits waste dumping into the marine environment from land-based sources. Annex I of the convention lists the prohibited wastes, which includes plastic. Paragraph 4 specifies persistent plastics and other persistent synthetic materials, such as netting and ropes, which may float or remain suspended in the sea in a manner that could interfere materially with fishing, navigation or other legitimate uses of the sea.

## **INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL)**

MARPOL addresses marine pollution caused by the operational and unintended activities of ships. Wastes include oil, noxious liquid substances in bulk, harmful substances carried by the sea in packaged form, sewage from ships, plastics and emissions from ship exhaust (IMO, 2019b). Annex V (Prevention of Pollution by Garbage from Ships) of the convention lists wastes that should not be disposed from ships into oceans, including plastics.

## **CONVENTION ON THE LAW OF THE SEA (UNCLOS)**

UNCLOS is a legal framework regulating marine activities in various areas such as territorial seas and contiguous zones, archipelagic states, exclusive economic zones, high seas and many more (United Nations, n.d.). It was adopted in 1982 to replace the Geneva Conventions (IUCN, 2022b).

## **BASEL CONVENTION**

The Basel Convention manages the transboundary movements of hazardous and other wastes. It came into force in 1992 and has been ratified by 175 parties. By far, it is the most comprehensive treaty that regulates hazardous wastes (UNEP, n.d.). It defines prior notice and informed consent to hazardous and other wastes. It also allows parties to prohibit the import of hazardous waste. Annexes defining the classification of plastic wastes were revised in 2019 and entered into force in 2021. Some types of plastic waste are freely traded, whilst

some types such as plastic waste with contamination are required to have prior notice and consent.

## **REGIONAL SEA CONVENTIONS AND PROGRAMMES**

Some regional sea conventions have developed action plans on marine litter. The Barcelona Convention for the Mediterranean adopted the Regional Plan on Marine Litter Management in the Mediterranean in 2013, which was entered into force in 2014. The Convention for the Protection of the Marine Environment of the North–East Atlantic (OSPAR Convention) developed the Regional Action Plan for Marine Litter in 2014 (OSPAR Commission, 2014). Some other regional sea programmes also developed action plans on marine debris. For instance, the Coordinating Body on the Seas of East Asia (COBSEA) made the Regional Action Plan on Marine Litter in 2008 and revised it in 2019 (COBSEA, 2019).

# Identifying Gaps

Some international treaties try to regulate the dumping of plastic waste into the environment, especially into oceans. However, they are not sufficient to stop plastic leakage into the environment, including oceans. In many developing countries, waste collection services are limited to urban areas, although leakage mostly originates from rural and remote areas (WEF, 2020). Microplastics have reportedly leaked from landfill sites (He et al., 2019). Without centralised sewage systems or wastewater treatment, microbeads and plastic particles generated from washing clothes leak into rivers and oceans (WHO, 2019).

The estimated volume of plastic leakage varies. In 2010, it was estimated 4.8 million–12.7 million tonnes of plastics were leaking into oceans each year (Jambeck et al., 2015). Over a decade later, annual plastic leakage was estimated at 0.8 million–2.7 million tonnes (Meijer et al., 2021). There is not enough evidence to identify the actual volume of leakage. A challenge is to establish a standardised method to estimate the volume of plastic leakage into the environment. Such statistics are a key indicator of national reporting and progress evaluation of countermeasures by national and international policy.

Existing international treaties lack a comprehensive approach that covers the whole life cycle of plastic (Bodle and Sina, 2019; Stockhaus et al., 2021). Existing treaties cover only a part of plastic pollution, excluding a huge proportion of land-based pollution. A holistic approach should be adopted in the new treaty.



# Measures in New International Treaty

Based on the identified gaps, the G20 countries could initiate a new international treaty that covers the following components:

- a. Overarching relevant international treaties and initiatives with common but differentiated responsibilities.
- b. National reporting mechanisms to compile global efforts and data and to evaluate progress. Such mechanisms would be critical to harmonise leakage estimations around the world. If other treaties or guidelines have reporting formats, it may be better to harmonise them.
- c. Scientific panels to harmonise monitoring methods and conduct periodic reviews of plastic impacts on ecosystems and human health and other relevant topics.
- d. Capacity building for developing countries (e.g. monitoring of rivers or oceans, wastewater treatment facilities to capture microplastics from clothes washing and institutional arrangements for inter-municipal cooperation on waste management).
- e. Mandatory requirements, including a ban on primary microplastics (e.g. microbeads of plastics), except biodegradable plastics.

These components could be brought for further consideration and discussion in the G20 process. A new treaty is essential not only for “victim” countries but also for plastic exporters amongst G20 countries to avoid distortions in competition and barriers to international trade.

G20 countries could also lead the research and development of alternative materials to replace conventional plastics and provide capacity support for the international reporting mechanism, monitoring, related facilities and policy enforcement.

# Policy Recommendations and Implications

## PROPOSAL 1: COVERING THE LIFE CYCLE OF PLASTICS

### Rationale:

- The new international treaty on marine plastic pollution should consider the life cycle assessment of plastics. Replacing plastics with alternative materials does not necessarily make them more environmentally friendly. Even conventional polyethylene bags can be more environmentally friendly than paper bags and compostable bags in terms of fossil fuel and freshwater use as well as solid waste and greenhouse gas emissions (Chaffee and Yaros, 2014).

## PROPOSAL 2: HARMONISING THE MONITORING METHOD

### Rationale:

- Many monitoring methods calculate plastic leakage in oceans. Unfortunately, many researchers use different methods without any quality control and assurance. The new international treaty should have a harmonised monitoring method to generate more effective and efficient data information. The International Standards Organisation (ISO) has developed the first standardisation procedure for the analysis of microplastics (ISO-TC-147 Water/ISO-TC-61), but more work needs to be done (Hinzmann et al., 2022). The monitoring method should encompass the transboundary issue of marine plastics, in which export activities might be included to determine the source of the plastic pollution.

## PROPOSAL 3: CONDUCTING REGULAR NATIONAL REPORTING

### Rationale:

- National reporting can be a fundamental strategy to gather important data. Countries are expected to report various kinds of information related to plastic waste, such as volume of plastic waste generation, estimated leakage of plastics to the environment, measures to prevent use of plastics, measures to collect and dispose of plastics waste and measures to reduce leakage of plastics from production processes. A challenge for the movement might be differences in monitoring methods. However, once the

monitoring method is harmonised (as proposal 2), this action can encourage countries to regularly report their progress on plastic pollution reduction.

## **PROPOSAL 4: ESTABLISHING A SCIENTIFIC PANEL**

### **Rationale:**

Globally, the issue of plastic pollution is becoming massive and recognised, with great efforts being made in research and the organisation and mobilisation of existing knowledge for management and policymaking (see, for instance, Hinzmann et al. [2022]), Having a scientific panel like the Intergovernmental Panel on Climate Change (IPCC) can be a means to accommodate and centralise knowledge on the complex issue of plastic pollution. A scientific panel on plastic pollution can provide comprehensive information on the issue not only from the natural science perspective but also from political, economic and social perspectives.

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