

# Closing the GAP Between the National and the Global: A Regional and Market-Based Approach to End Plastic Pollution

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# State of plastic recycling today

## Global plastic production and its fate (1950-2015)

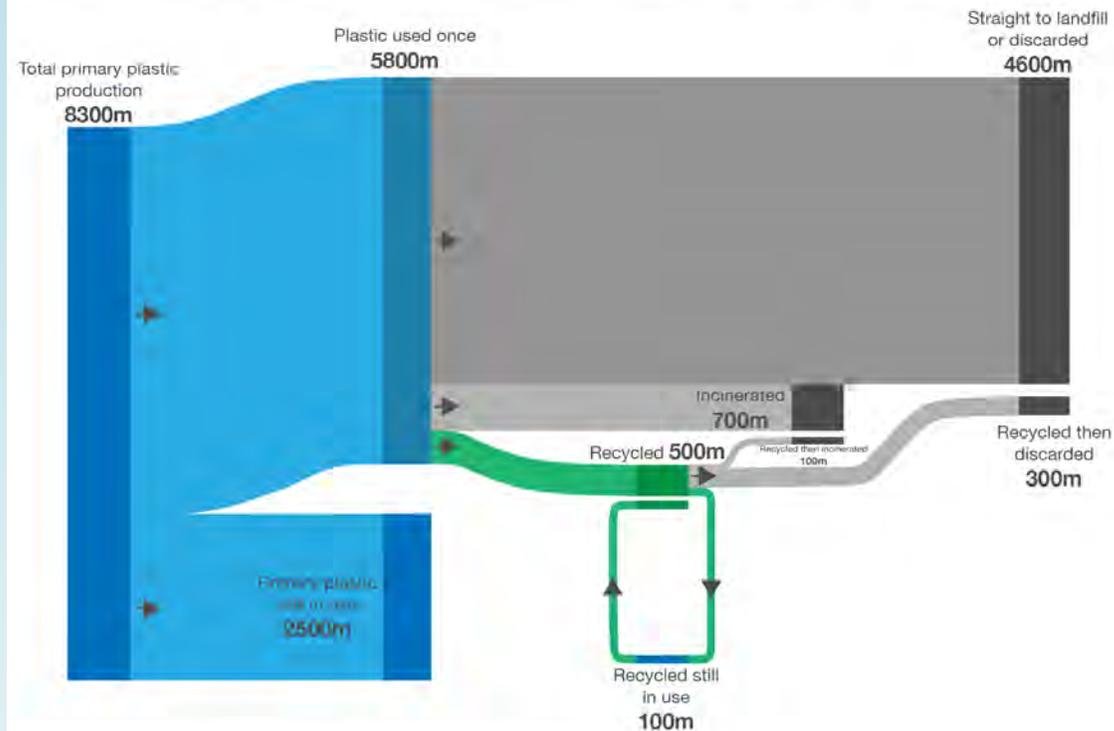
Our World  
in Data

Global production of polymer resins, synthetic fibres and additives, and its journey through to its ultimate fate (still in use, recycled, incinerated or discarded).

Figures below represent the cumulative mass of plastics over the period 1950-2015, measured in million tonnes.

### Balance of plastic production and fate (m = million tonnes)

8300m produced → 4900m discarded + 800m incinerated + 2600m still in use (100m of recycled plastic)

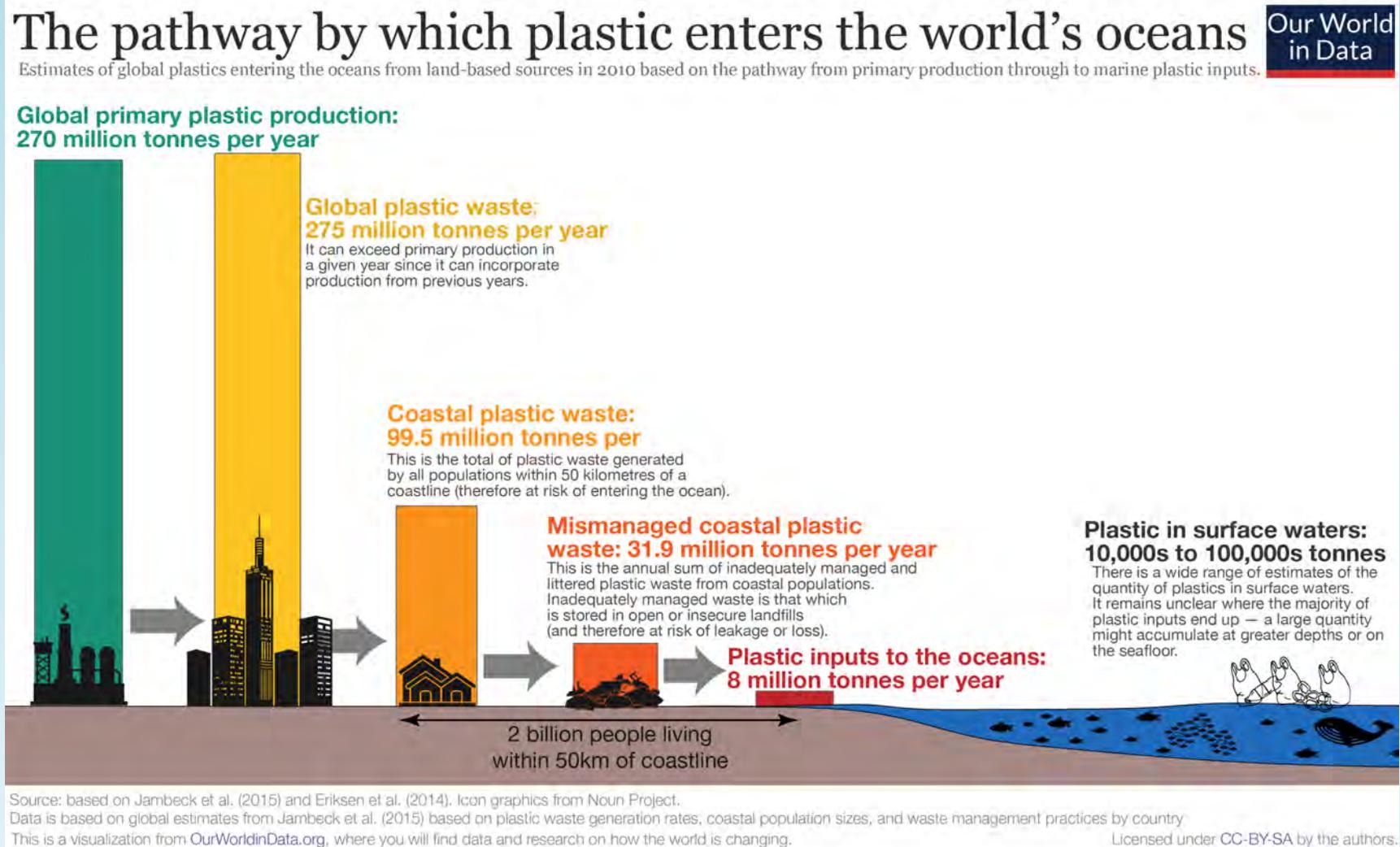


Source: based on Trevisan et al. (2017), Production, Use, and Fate of all Plastics (WRI) (2018)

This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing

Licensed under CC-BY-SA by Hannah Ritchie and Max Roser (2018)

# State of plastic recycling today



# State of plastic recycling today

After China stopped waste imports, other Asian countries stepped in

Thousand metric tons



Source: Resource Recycling/U.S. Census Bureau

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- China used to take in waste plastic on the pretext of recycling to make new products. In practice, much of it was landfilled.
- China, Indonesia, the Philippines, Vietnam, Thailand, and Malaysia were responsible for 55% of the mismanaged plastic waste ending up in the sea globally in 2010.
- China banned waste plastic imports in 2017, but that only caused waste plastic to go elsewhere.
- This has led to ASEAN countries such as Malaysia, Thailand, and Vietnam to similarly turn away plastic waste imports. Indonesia has implemented 100% inspection of scrap plastic imports since April 2018, and imposed a selective ban as well.

Source: [https://www.dw.com/image/48215588\\_7.png](https://www.dw.com/image/48215588_7.png)

# Existing international legal regimes

- There are two major international legal regimes which are directly relevant – the marine pollution control rules in UNCLOS, MARPOL, and the London Convention on Dumping, and the Basel Convention on the Transboundary Movement on Hazardous Wastes.

# Existing international legal regimes – UNCLOS / MARPOL / London Convention

- Art 192 UNCLOS: “States have the obligation to protect and preserve the marine environment”.
- Art 194 UNCLOS: “States shall take, individually or jointly as appropriate, all measures... to **prevent, reduce and control pollution of the marine environment** from any source... [and] ensure that activities under their jurisdiction or control... **does not spread**” to other countries and areas beyond their jurisdiction.
- Art 197 UNCLOS: States are to co-operate in “**elaborating international rules, standards and recommended practices and procedures** ... for the protection and preservation of the marine environment”
- Art 207 + 210 UNCLOS: States are to “adopt laws and regulations” and “other measures as may be necessary” to “prevent, reduce and control pollution of the marine environment by **dumping**” (at sea) and from **land-based sources**, including rivers, estuaries, pipelines and outfall structures.

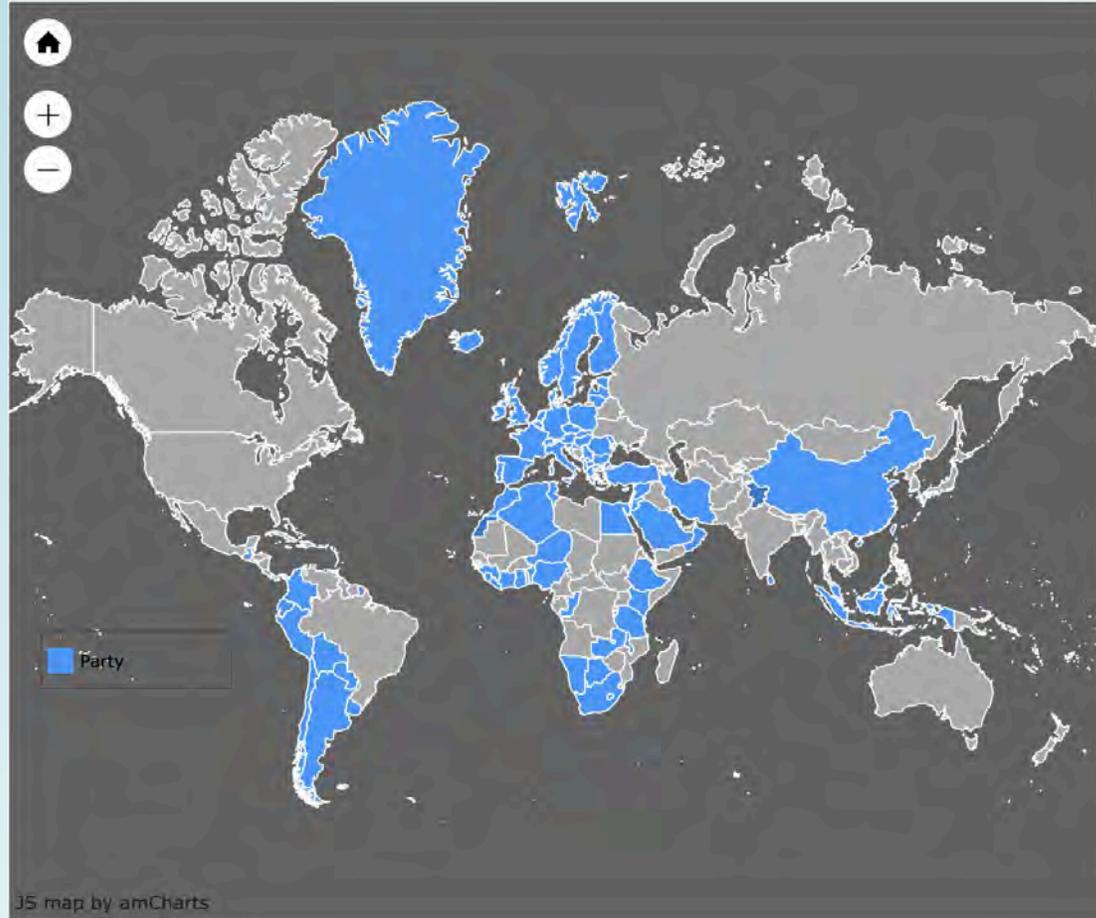
# Existing international legal regimes – UNCLOS / MARPOL / London Convention

- Regulation 3 of MARPOL Annex V, strictly prohibits “the disposal into the sea of all plastics, including but not limited to synthetic **ropes**, synthetic **fishing nets** and plastic **garbage bags**”. Regulation 7 also requires garbage reception facilities at ports and terminals.
- Art IV London Convention: Prohibition on the dumping of “persistent plastics” which “may float or may remain in suspension in the sea in such a manner as to **interfere materially with fishing, navigation or other legitimate uses of the sea.**”
- What about plastic pollution occurring in international waters, beyond the reach of national laws?

# Existing international legal regimes – Basel Convention

- Basel Convention parties agreed to list plastic waste generally under Annex II of the Basel Convention, subjecting it to its prior informed consent control mechanisms. This comes into force on 1 Jan 2021.
- However, the listing includes an exception for PE, PP, and PET “destined for recycling in an **environmentally sound manner** and **almost free from contamination** and other types of wastes” : these **terms in bold** are not defined.
- Art 11 of the Basel Convention also encourages parties to enter into their own bilateral, multilateral, and regional agreements. The latter includes the Bamako Convention (Africa) and the Waigani Convention (South Pacific). Both conventions prohibit their member states from importing hazardous waste from anywhere outside their area of coverage.
- The Basel Convention has a Protocol on Liability and Compensation, concluded in 1999. However, it has not entered into force, since it lacks the 20 ratifications needed to do so. It only provides for “liability and... compensation for damage **resulting from the transboundary movement** of hazardous wastes and other wastes **and their disposal**”. This means that damage from post-disposal activities are not included.

# Existing international legal regimes – Basel Convention



- Basel Ban Amendment: This came into force in 5 Dec 2019 for the 99 parties which have ratified this specific Amendment.
- The amendment bans OECD countries from exporting any hazardous waste to other countries.
- Ostensibly helps African countries which can neither process the plastic nor want it, but some South Asian countries rely on the hazardous waste trade in recyclables to support their domestic industries.
- In ASEAN, only Malaysia and Indonesia have ratified.

# UNEP's GAMP (Global Architecture for Marine Plastics)

- At the first UN Environment Assembly Ad hoc open-ended expert group on marine litter and microplastics in 2018, UNEP provided an assessment report entitled “Combating marine plastic litter and microplastics: an assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches” (UNEP/AHEG/2018/1/INF/3). It proposed three options:
  1. Maintaining the status quo
  2. Review and revise existing frameworks to address *marine* plastic litter and microplastics and add a component to coordinate industry
  3. A new global architecture with a multi-layered governance approach
- In option 3, the report included a proposed GAMP (see right).

The structure of the agreement would include priority actions and, at a minimum:

1. Objectives
2. Principles
3. Definitions
4. Prevention, control and removal measures (e.g. minimum standards and binding targets, trade)
5. Monitoring and Assessment Programmes
6. Calculation methods for agreed targets and measurements (e.g. production, consumption, trade, reduction processes)
7. Compliance, non-compliance and reporting
8. Other mechanisms to be established (e.g. funding, implementation and compliance, compensation, information exchange, stakeholder engagement)
9. Regional and international cooperation
10. Enhancement of public awareness and education
11. Countries in need of differential treatment (e.g. developing countries, SIDS)
12. Review processes (e.g. science, control measures, effectiveness)
13. Meeting of the parties
14. Secretariat
15. Signature
16. Entry into force

Due to the complexities in addressing microplastics, a dedicated section may be required with measures specific to the issue, including global standards, targets and reporting requirements for microplastics. Annexes are more easily amended and are therefore suited to guidelines and priority products, polymers and additives.

# Strengths and weaknesses of GAMP

## Strengths

- GAMP's inclusion of a waste hierarchy through the 6Rs (reduce, redesign, refuse, reuse, recycle, recover), is itself groundbreaking, as it establishes that not all attempts to treat plastic waste are equal.
- GAMP recognizes the dearth of global standards and regulations, and the lack of regional and international co-operation.

## Weaknesses

- Still treats the question as a “marine plastic” question and does not address the source of pollution, ie. plastic production
- GAMP only aims to “*reduce* the quantities and impact of marine plastic litter and microplastics”.
- GAMP emphasizes *self-determined* national reduction targets.

# Importance of regional cooperation

- Regional cooperation can balance out the different interests of countries in the region and bring them towards a more ambitious goal through “coalitions of the willing”.
- Also avoids “port-shopping” – waste exporters diverting waste to neighbouring ports.
- Falkner: “small groups of countries find it easier to reach agreements than large-n settings, mainly because fewer countries’ interests and circumstances need to be taken into account, [and] fewer... side-deals need to be struck”.
- Further, different regions have different attitudes to plastic waste.
- Regions which have little plastic in their economies (Africa, Pacific) may be more open to outright bans.
- On the other hand, the “sachet economy” phenomenon in Southeast Asia (single-use quantities of household essentials are sold at a price below bulk rates to make products perceived as better quality to impoverished communities) means that a plastic ban would not be feasible in this region.
- Finally, this is also an extension of the CBDR principle – states should be able to progress based on their relative capabilities and be grouped with similar countries.

# Importance of market mechanisms

- Lipman: “the primary difference in capacity between [developed and developing countries] is one of resources, not know-how. Converting industry to non-toxic methods requires an **initial outlay of capital** which many developing countries cannot afford.”
- Lack of financial resources in developing world means implementing proper waste management on land is not always possible.
- State-state direct financial transfers does not provide sufficient funds (see the general failure of developed countries to meet the 0.7% GDA for ODA benchmark, lack of funds in UNFCCC funds, etc) since there is no incentive.
- Market mechanisms are designed to provide an incentive for public and private sector investors to provide funds.

# Global Architecture for Plastics Plus (GAP+)

## GAP+ Framework Agreement

**Phase 1: 2020 - 2030**  
Peaking phase

**Phase 2: 2030 - 2040**  
Initial reduction phase

**Phase 3: 2040 - 2050**  
Acceleration phase

Binding commitment to eliminate virgin plastic

Binding commitment to eliminate new plastic waste

Binding commitment to minimise plastic flows

Binding commitment to form and join regional plastic agreements

Adoption of global standards and indicators

### Regional Plastic Agreements

Regional net zero plastic production

Regional net zero new plastic waste

Regional (net) zero plastic flows

Regional plastic inventories

Global market-based co-operation mechanisms

National plastic inventories and reduction plans

National civil liability legislation

Access criteria (Adoption of global standards + progress indicators)

Global fund for compensation and technology transfer

# Elements of the GAP+

## Global commitments

- Eliminating the production of virgin plastic
- Eliminating new plastic waste
- Minimising plastic trade flows
- Form and join regional agreements
- Adopt global standards and indicators of progress

## Region-based commitments

- Set a timeline towards:
  - net zero plastic production
  - net zero plastic waste and waste flows
- Set up regional plastic inventories

## National commitments

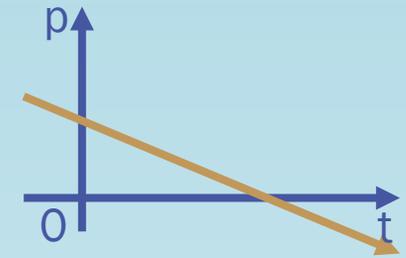
- National plastic inventories
- National civil liability legislation/regime

Criteria for market-based mechs entry

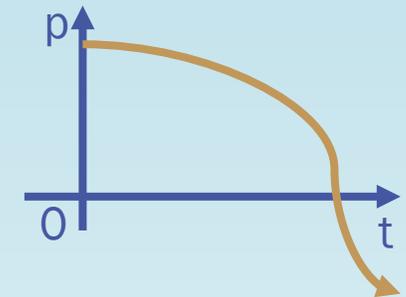
# The Global Commitments

- **Eliminating the production of virgin plastic**
  - Peak production of virgin plastics by 2030
  - Begin reductions by 2050
  - Reduce production to zero by end-century or earlier
- **Eliminating new plastic waste by end-century or earlier**
- **Minimising plastic trade flows** - states to reduce and minimise plastic waste flows in a gradual manner, based on the respective capabilities and conditions in each state
- **Trajectory and modalities to be set regionally**
  - "Physical Internet" of shared packaging containers and material
  - Promoting localism: choosing locally-sourced products which need to travel less and need less packaging
  - Regional centre of excellence for the environmentally sound management of plastics
  - Bilateral agreements with other states or regions to manage plastic waste in an environmentally sound manner

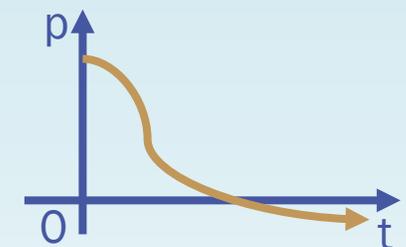
Linear reduction



Back-loaded reduction



Front-loaded reduction



# Market-based cooperation mechanisms

MBCMs are defined here as projects and activities which:

- achieve one of the 6Rs (reduce, redesign, refuse, reuse, recycle, recover) for plastic waste;
  - on a real, permanent, additional (ie the activity would not have happened without the MBCM project), and verified (RPAV) basis;
  - does not cause a negative impact on the Sustainable Development Goals (SDGs), and/or provides SDG co-benefits;
  - and results in monetary compensation for the participants executing the project from a foreign source.
- Rather than create a brand new mechanism under the GAP+, the GAP+ will rely on existing standards organisations in the private sector certify MBCM projects.
  - The GAP+ will establish the necessary criteria which these standards bodies must meet to have their projects recognized as MBCMs, including RPAV and SDG co-benefits.
  - This is similar to the International Civil Aviation Organisation (ICAO)'s approach to carbon crediting in its Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) mechanism.
  - MBCMs are intended to supplement, not supplant national and regional action.

# Global compensation and technology transfer fund

- As mentioned above, the Basel Convention's Protocol on Liability and Compensation is not in force, and does not provide compensation for post-disposal activities such as damage from recycling operations as a result from inadequate management of residues and emissions.
- Pure environmental damage is not directly claimable either – only the cost of the measures taken to reinstate the environment (if any) are.
- If the total cost of damage from an accident exceeds the financial guarantee limits, then the country where the damage is caused has to foot the remainder of the bill. No safety net is provided.
- Therefore, a standing fund is needed to fill in where the Basel Convention does not provide for compensation.
- The fund will initially receive seed funding from the World Bank and regional multilateral development banks, and receive one-quarter of MBCM proceeds.
- The fund would prioritise rehabilitating plastic-damaged ecosystems, but also include tech development and transfer (TDT) and capacity-building.
- In general, the financing mechanism adopted by the fund should be through concessionary loans, to prevent the premature depletion of the fund. Green bonds may be considered as well.
- However, in exceptional cases, such as where the beneficiary is an LDC, then an outright grant may be warranted.

# Closing remarks

- The above serves as a starting point for the global community to consider how to begin regulating the upstream issues where “marine plastic” is concerned – most marine plastic debris is land-source pollution.
- At the end of the day, environmentally unsustainable practices cannot be replaced by socially unsustainable ones – such as bioplastics which are made from crops which compete with human and livestock nutrition, or pushing the responsibility for environmentally and ecologically sound waste management to other countries.

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