



Distr.: General  
28 October 2020

Original: English



**United Nations  
Environment Assembly of the  
United Nations Environment  
Programme**

---

**Ad hoc open-ended expert group  
on marine litter and microplastics  
Fourth meeting**

Online 9-13 November 2020

Item 4 (b) of the provisional agenda\*

**Identification of technical and financial resources or mechanisms  
(resolution 4/6, para. 7(b))**

**Report on the inventory of technical and financial resources or  
mechanisms for supporting countries in addressing marine plastic  
litter and microplastics**

**Note by the Secretariat**

1. The ad hoc open-ended expert group on marine litter and microplastics (AHEG) was established through the United Nations Environment Assembly resolution 3/7 paragraph 10. Its mandate was extended through resolution 4/6 paragraph 7, which also requested the group to, amongst other things, through subparagraph 7(b) to:

*“Identify technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics”*

2. In addition to this, given the topical relevance of “environmentally sound technological innovations, options, and measures for reducing the risk of discharges of litter into the marine environment” (resolution 4/6 subparagraph 2(d)), these will be included as one among other technical resources to be identified in this exercise.

3. The expert group requested the Secretariat, in the outcome document from the third ad hoc open-ended on marine litter and microplastics<sup>1</sup>, to produce one report covering both aspects that would:

(a) Consider existing bodies of work such as the Basel Convention, the Partnership on Plastic Waste, the Global Partnership on Marine Litter, Asia Pacific Economic Cooperation, and the Commonwealth Clean Ocean Alliance.

---

\* UNEP/AHEG/4/1

<sup>1</sup>Available at [https://papersmart.unon.org/resolution/uploads/aheg\\_3\\_outcome\\_document\\_0.pdf](https://papersmart.unon.org/resolution/uploads/aheg_3_outcome_document_0.pdf)

(b) Collect information from existing sources, look at funding resources and mechanisms such as bilateral donors, and development assistance through multilateral bodies including the World Bank, the International Monetary Fund, regional and sub-regional development banks, the United Nations system (including Multilateral Environmental Agreements), the Global Environment Facility and other relevant sources, including national sources, as well as information from the private sector, including for-profit institutions, non-profit, foundations, capital markets etc.

(c) Promote a better understanding of the current state of play of technical and financial resources and mechanisms, including a lifecycle approach, as well as of the financing flows between key donors/financial institutions and recipients at regional and national level, including with regard to challenges and barriers.

(d) Examine new opportunities through innovative financing, including public-private sector partnerships, blended finance, and other approaches, with the aim to identify ways to promote cooperation.

(e) Gather information on existing technical resources, environmentally sound substitutes and mechanisms, addressing aspects of the whole life cycle of marine plastic litter and microplastics, taking into consideration information from both the public and private sector as well as civil society.

(f) Take into consideration other work streams in particular the stock-taking exercise.

4. This document is an elaboration of the Inventory of technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics as presented in working document UNEP/AHEG/4/3, and provides the full report of the identification of technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics.

5. The ultimate objective of the exercise is to identify technical and financial resources or mechanism relevant for the prevention and reduction of both land-based and sea-based sources of marine litter, with a main focus on a) land-based (waste management) and near-shore (litter capturing) technologies and a priority on low-and medium-cost options, across the whole life cycle of plastics; b) funding and financial resources for addressing marine plastic litter, as well as engagement of non-traditional stakeholders. The exercise will be aligned with, and feed into, the stock-taking exercise mandated under resolution 4/6 subparagraph 7(a) and described in Working Document UNEP/AHEG/4/2. This report may be revised based on feedback received from consultations at the AHEG-4 in order to ensure it adequately responds to the request set out in subparagraph 7(b).

## **I. Introduction**

### **The purpose of this document**

6. Both technical and financial resources and mechanisms are fundamental requirements and serve as enabling conditions to combat marine plastic litter. This document aims to provide a summary of technical and financial resources and mechanisms available to support countries in addressing marine plastic litter and microplastics, taking into account feedback received by the AHEG-3 to build on previous work under 3/7, and as outlined in the report and its outcome document. The document does not claim to be exhaustive and should rather be seen as a 'living document', which is constantly evolving and will be added to. The topics of wastewater treatment as well as the impacts of marine plastic litter on human health or the environment are not within the scope of the reviewed resources.

### **Introduction to marine plastic litter and microplastics**

7. For the past 60 years, plastic has brought economic, environmental and social advantages. However, with almost half of plastic produced used just once before it is discarded,<sup>2</sup> the world has experienced an exponential rise in plastic waste.

8. The amounts of plastic waste generated are, on the whole, poorly collected and managed. These plastics gradually break down into small particles known as microplastics.<sup>3</sup> As a result, plastic pollution is becoming widespread both in the ocean and on land, where it is impacting our ecosystems and human health. The ocean is particularly at risk from plastic pollution. Since marine plastic litter is generated by both land-based and sea-based activities, tackling it requires a holistic approach. A broad overview of relevant approaches is set out in UNEP's 2016 report "Marine plastic debris and microplastics: global lessons and research to inspire action and guide policy change", which was mandated by the United Nations Environment Assembly at its first session in 2014.

9. Marine plastic litter and microplastics can have important impacts on governments, businesses and society. Businesses and governments experience direct economic costs, such as the costs of clean-up after a disaster, the cost to tourism of polluted beaches, or damage caused to vessels by plastic litter at sea. All groups also experience indirect costs, such as the impact of marine plastic litter on the marine environment, human health and productivity across various marine sectors and, ultimately, on the gross domestic product of a country.

### **The importance of technical resources and mechanisms for tackling marine plastic litter and microplastics**

10. Technical resources and mechanisms are sources of information, knowledge, expertise or support that could be drawn upon by a Member State or organization to define an effective policy to prevent or remediate marine litter and microplastics related issues. Examples include technical guidelines and technical reports, information on best practices, tool kits, training materials and calculation models. Mechanisms refer to platforms and databases that provide access to a bigger collection of various technical resources.

11. A systematic synthesis of technical resources and mechanisms will:

- (a) provide an overview and facilitate access to data and information, available from various sources, that are usually scattered;
- (b) provide information to help stakeholders interested in combating marine plastic litter to prioritize their actions, as well as to learn from success stories in similar contexts and implement successful strategies;
- (c) assist stakeholders and organizations in collaborating for increased efficiency, rather than competing, working in parallel or duplicating efforts.

### **The importance of financial resources and mechanisms for tackling marine plastic litter and microplastics**

12. Financial resources and mechanisms are defined as all resources or mechanisms that can be used by a Member State or an organization to finance activities to tackle marine plastic litter and microplastics. They include grants, loans, investments, blended finance, crowdfunding and donations, among others. These resources and mechanisms may be provided by multilateral or bilateral donors, governments, private not-for-profit and for-profit organizations, or individuals.

---

<sup>2</sup> World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company (2016). The new plastics economy: Rethinking the future of plastics. Available at: [ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics](https://ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics)

<sup>3</sup> Bergmann et al. (2019). "White and wonderful? Microplastics prevail in snow from the Alps to the Arctic" in Science Advances Vol. 5, no. 8. Available at: <https://advances.sciencemag.org/content/5/8/eaax1157>

13. Tackling marine plastic litter and microplastics requires the implementation of an array of policies, activities and technologies, many of which have high financial costs. Member States and organizations therefore face important financial barriers in implementing necessary measures. This challenge was emphasized during the first and second meetings of the ad hoc open-ended expert group on marine plastic litter and microplastics. The need to address the costliness of interventions was reinforced by responses to the marine plastic litter and microplastics stock-taking survey described in UNEP/AHEG/4/2, in which 46 per cent of respondents indicated that they considered initiatives to address plastic pollution to be very or extremely expensive (Figure 1).

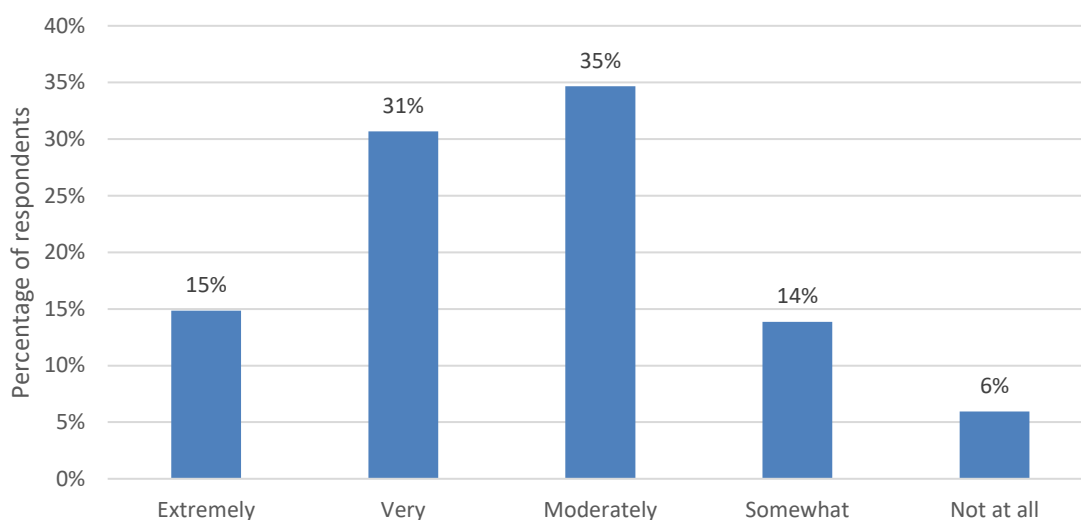


Figure 1: Perceptions of the costliness of initiatives to address plastic pollution (Source: data from the marine plastic litter and microplastics stock-taking survey)

14. To support Member States in addressing financial barriers and deciding on future actions related to financing, this document summarizes current financial resources and mechanisms available and provides recommendations for possible actions.

#### Existing challenges and barriers to addressing marine plastic litter and microplastics

15. During the first meeting of the ad hoc open-ended expert group on marine plastic litter and microplastics, held in Nairobi from 29 to 31 May 2018, participants noted numerous barriers to tackling marine plastic litter and microplastics.<sup>4</sup> The list of these barriers, especially those existing in developing countries, is long. They include inadequate financing, legal and regulatory deficits, low administrative capacities, lack of public awareness of good sanitary practices, and limited enforcement.

16. The barriers described at that meeting include many which are relevant to the discussion of technical and financial resources. This report builds on and addresses those barriers.

17. Financial barriers are related to situations in which high costs make a certain activity difficult to afford or implement. Technological barriers are related to the production, manufacturing and design of materials and products, distribution and consumption systems, and all aspects of waste collection, management and recovery. Information barriers pertain to data, research, transparency, and education and awareness.<sup>5</sup>

<sup>4</sup> Report of the first meeting of the ad hoc open-ended expert group on marine litter and microplastics. AHEG/2018/1/6. <https://papersmart.unon.org/resolution/uploads/k1801471.pdf>.

<sup>5</sup> Report of the first meeting of the ad hoc open-ended expert group on marine litter and microplastics. AHEG/2018/1/6. <https://papersmart.unon.org/resolution/uploads/k1801471.pdf>.

18. Barriers listed in the discussion paper on barriers to combating marine plastic litter and microplastics, including challenges with respect to resources in developing countries,<sup>6</sup> which are related to technological resources, closely linked data and research resources, and financial resources include the following (identified in bold are barriers which representatives placed particular emphasis during the discussions, as documented in the AHEG-1 report):

*a) Technological barriers*

- 1) **Infrastructure is needed for waste management and/or recycling.**
- 2) **There is a disconnect between innovation in production and after-use systems and infrastructure.**
- 3) **Coordinated development and adoption of labelling standards is lacking, which hinders product separation and the understanding of the content of products for reuse and recyclability purposes.**
- 4) **There is insufficient involvement of industry in solutions.**
- 5) **There is insufficient research into new business models enables plastic to remain in the system.**
- 6) There is insufficient understanding of how to increase the recycled content of products.
- 7) Rural areas are not well serviced, which also reduces the likelihood of viable recycling schemes
- 8) Industry design and consumption systems are not prioritised along the “3R waste hierarchy” of reduce, reuse, recycle.
- 9) New alternative materials may need to be collected in a separate waste stream.
- 10) Many government authorities, corporations and the public have little or no knowledge of the matters involved or of the best available technologies and best environmental practices required to address the issue of marine litter and microplastics.
- 11) A fragmented approach at the regional level to waste management, including wastewater treatment. This fragmented approach extends to the national level in many countries.
- 12) Poor or inadequate design of products to meet air- and water-quality standards in order to reduce emission of microplastics from wear and tear during product use, as well as evaluating compliance with such standards when conducting lifecycle and environmental impact assessments.

*b) Data and research barriers<sup>7</sup>*

- 1) **There is a lack of data at various levels on the sources and extent of plastics and microplastics in the marine environment, in organisms and on associated health and ecosystem risks.**
- 2) **Lack of data on plastic material flow and waste: a better understanding of the routes of plastic flows into the ocean is needed (categorized by, for example, geography, application, polymer type and size).**
- 3) **There is insufficient research and development of alternative materials, backed with life cycle analysis, to assess environmental consequences, and that are scalable and economically viable.**
- 4) **Many countries do not have any data or monitoring programs to set reduction targets or priority interventions.**
- 5) **Lack of harmonized implementation of monitoring methodologies to facilitate the development of quantitative and operational reduction targets.**
- 6) There is limited formal education on marine plastic litter and microplastics.
- 7) There is a need to identify and address cultural barriers to behavioural change, to facilitate the adoption of reusable delivery systems and to replace single-use plastics.

---

<sup>6</sup> Discussion paper on barriers to combating marine litter and microplastics, including challenges related to resources in developing countries (UNEP/AHEG/2018/1/2).

[https://papersmart.unon.org/resolution/uploads/unep\\_aheg\\_2018\\_1\\_2\\_barriers\\_edited\\_0.pdf](https://papersmart.unon.org/resolution/uploads/unep_aheg_2018_1_2_barriers_edited_0.pdf).

<sup>7</sup> Only those relevant to this report are listed

- 8) There is a lack of global standards for national monitoring and reporting on the consumption, use, final treatment and trade of plastic that will eventually become waste.
- 9) There is a need for greater reporting at the national level on consumption, production and end-of-life treatment of plastics.
- 10) There is a lack of transparent and inclusive decision-making; this prevents various societal actors and interest groups from engaging in discussions about responsible actors and the risks that society is willing to take.
- 11) Trade in plastic waste: greater transparency is required; international codes do not provide adequate information.
- 12) There is a lack of global reporting standards.
- 13) There is a lack of research and monitoring systems to determine if traded waste is mismanaged.

*c) Barriers related to financial resources:*

- 1) There is a lack of internalization of costs for recovery and recycling of plastics.
- 2) Fossil fuel subsidies keep plastic cheap as the cost of raw materials is sometimes lower than using recycled plastic.
- 3) There is no “polluter pays” principle in most countries relating to marine litter and none in “common” areas such as the high seas, which leaves the cost of dealing with plastic waste to Governments.
- 4) Global funding schemes not appropriate at the smaller council level.
- 5) There are cross-border investment challenges.
- 6) There is a lack of funds and implementation of market-based instruments and tax incentives to stimulate investment for local infrastructure for collection, treatment or disposal and environmentally and financially sustainable end-of-life treatment of plastic waste, especially in developing countries.
- 7) Separate fees for disposal of rubbish and fishing gear at port reception facilities, which encourages at-sea disposal/dumping.
- 8) There is a lack of implementation of market-based instruments and tax incentives to stimulate investment in facilities for environmentally and financially sustainable end-of-life treatment of plastic waste.
- 9) There is limited understanding of the costs of marine litter at the national, regional and international levels and a failure to internalize or make explicit the costs to human health and the environment.
- 10) Costs to human health not factored in, as they are as yet unknown.
- 11) There is a failure to establish sustainable and profitable end-markets for all end-of-life plastics, both domestic and international.

## **II. Methodology**

19. This report builds on previous work of the ad hoc open-ended expert group on marine litter and microplastics. It assesses the technical and financial resources and mechanisms available for countries to address marine plastic litter and microplastics, based on publicly available information as well as interviews with experts. The report methodology has made use of:

- (a) inventories of technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics, based on desk research;
- (b) inputs from the stocktake survey (UNEP/AHEG/4/2 and UNEP/AHEG/4/INF/6);
- (c) interviews and/or email communications with experts and stakeholders on financial and technical resources and mechanisms used.

## **III. Technical resources and mechanisms**

20. This section outlines the technical resources and mechanisms currently available to address marine plastic litter and microplastics and related challenges. In total, 138 technical resources and mechanisms were included in the review. For the interested user it is crucial to understand the types of technical resources and mechanisms that are available, on which topics, and from which sources. The targeted scale and geographic scope of these resources and mechanisms are also of importance.

**General observations on the coverage of existing technical resources and mechanisms**

21. For the different types of resources and mechanisms a distinction was made between “application cases/pilot project”, “state of knowledge report including policy recommendations”, “calculation model/tool”, “operational/technical guidelines”, “toolkit/guidance for decision makers”, “monitoring methodology”, “training”, “best practice”, “manual” and “inventory”. Regarding topics, a value chain perspective was taken, looking at the stages in the plastics life cycle with respect to “prevention of litter and waste”, “design and production”, “use and consumption”, “waste management” and “marine litter monitoring and capturing”. Work on each of these topics could contribute to increasing or reducing marine plastics litter and microplastics, with different actors being key at each stage and with different barriers to be faced.

22. Some general patterns in the coverage of the reviewed technical resources and mechanisms can be described. While all of them cover macroplastics, only 50 per cent include microplastics. Macroplastics are the main source of microplastics owing to their degradation over time. With respect to scale, about one-third of the reviewed technical resources and mechanisms address the national level, 21 per cent the regional level, 14 per cent the local/city level, 7 per cent the company/plant level, and 8 per cent the global level (Figure 2). In the case of 22 per cent the scale is not specified. Concerning geographic focus, all parts of the world can be considered to be well covered.

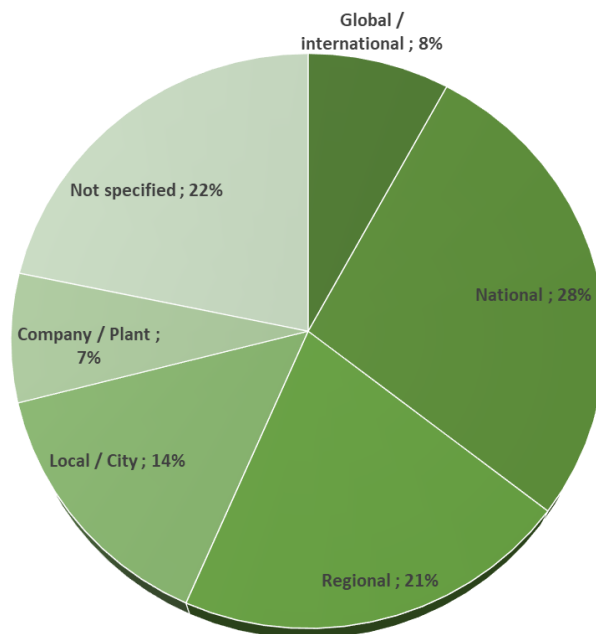


Figure 2: Scales addressed by the technical resources and mechanisms reviewed

23. With respect to the stage in source-to-sea movement, litter in and around rivers and lakes is often not extensively discussed while inland sources, the sea-land interface and the sea are well covered. This year UNEP will publish guidelines for the harmonization of methodologies for monitoring plastics in rivers and lakes.

### Plastics lifecycle stages covered by existing technical resources and mechanisms

24. All of the technical resources and mechanisms were classified according to the main plastics life cycle stages to which they are related. Thus, 70 per cent cover waste management (38 per cent) and marine plastic litter (32 per cent), 20 per cent prevention of litter and waste reduction, 6 per cent design and production, and 4 per cent use and consumption (Figure 3). Although many resources and mechanisms cover changing product design and consumer choices, these topics are often not directly related to prevention of marine plastic litter and microplastics.

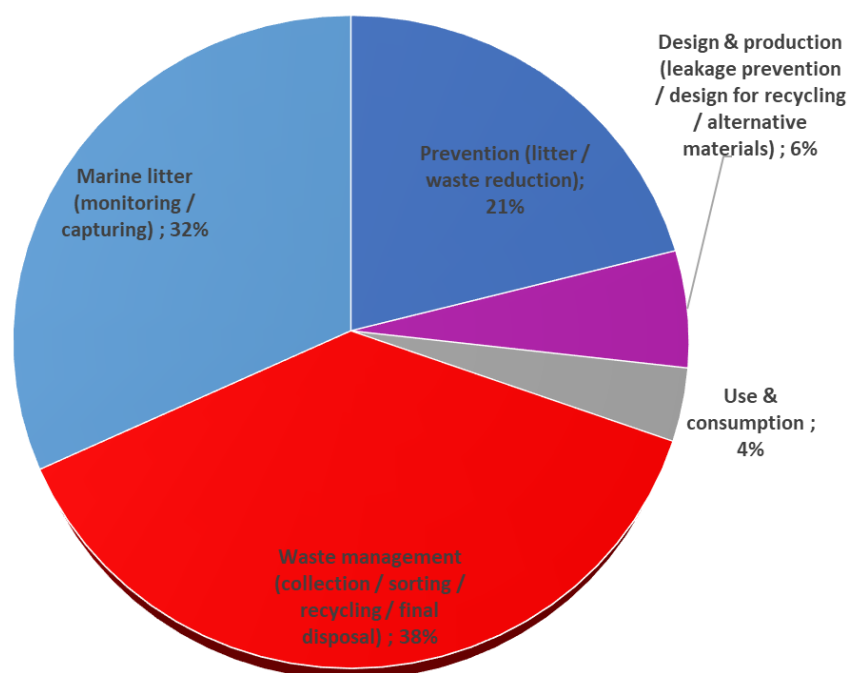


Figure 3: Plastic life cycle stages covered by the technical resources and mechanisms

25. **Waste management** resources and mechanisms were related to collection, sorting, recycling and final disposal, including landfills and waste-to-energy. They were provided chiefly by Asia Pacific Economic Cooperation (APEC), the International Solid Waste Association (ISWA), the Secretariat of the Basel, Rotterdam and Stockholm Conventions, the United Nations Development Programme (UNDP), UNEP, the United Nations Industrial Development Organization (UNIDO) and the World Bank. Waste management is covered by all types of technical resources and mechanisms except monitoring methodologies, which mostly concern marine plastic litter monitoring. The Basel, Rotterdam and Stockholm Conventions provides the most comprehensive platform, with operational and technical guidelines, fact sheets, toolkits, and guidance for policy and decision makers. Moreover, it offers concrete technical assistance activities such as training workshops (especially for developing countries). Reports on implemented pilot projects and best practices for plastic waste management can be found.

26. While collection, recycling and landfills are well covered, there is a major gap, especially in developing countries, in regard to innovative solutions for environmentally sound plastic disposal. In addition, solutions for recovered marine plastics are not addressed.

27. The share of technical resources and mechanisms that cover the monitoring and capturing of marine plastic litter is almost equal to the share that cover waste management. This topic is addressed by entities including the European Commission's Marine Strategy Framework Directive (MSFD) Technical Group on Marine Litter, the Global Partnership on Marine Litter (GPML), the International Union for Conservation of Nature (IUCN), the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), and the World Wide Fund for Nature (WWF).



28. Because monitoring methodologies are not widely harmonized, it is difficult to compare results. For instance, the methodology for Sustainable Development Goal (SDG) indicator 11.6.1, developed by UN-Habitat, mainly takes waste management related sources into account to quantify marine plastic litter, while the Plastic Drawdown methodology developed by Common Seas also considers sea-based sources and wastewater treatment plants. The Ministry of the Environment of Japan has started a harmonization process for marine microplastics monitoring by developing guidelines for sampling.
29. Often resources and mechanisms with a main focus on marine plastic litter (e.g. those provided by APEC and UNEP) promote waste management as an important solution in the short term. Most national, regional and local marine plastic litter action plans include waste management as a key task, often in combination with prevention and litter monitoring and capturing.
30. Another area where marine plastic litter and waste management are closely interlinked is tools to quantify and predict marine plastic litter, as developed by Common Seas, the German Development Agency (*Deutsche Gesellschaft für international Zusammenarbeit*[GIZ]), the ISWA taskforce on marine litter, IUCN and UNEP, UN-Habitat, and the University of Leeds, among others. Most of these tools were developed independently of each other without coordination. Some are more data-intensive than others. These tools are applicable at different scales from city to national level. Half of them include microplastics.
31. Other technical resources and mechanisms that cover litter monitoring and capturing consist of methodologies and/or operational and technical guidelines for monitoring and assessment and state-of-knowledge reports, including recommendations for decision makers and toolkits with specific guidance for political decision makers. While a number of detailed case studies, including lessons learned, are available (e.g. those provided by ISWA, UNEP and UNIDO), these types of technical resources and mechanisms are scarce in the case of marine plastic litter monitoring and capturing. Technical resources that address only marine plastic litter often provide high-level guidance, rather than applications to a specific local context, and implementation is not addressed. Not many technical resources address the link between marine plastic litter and cities, and specific case studies are not available.
32. In regard to **prevention of marine plastic litter and waste reduction**, a number of state-of-knowledge reports (including recommendations for decision makers and toolkits with specific guidance) are available. They are provided, for instance, by the Basel Convention Plastic Waste Partnership and the Secretariat of the Basel, Rotterdam and Stockholm Conventions, as well as by GPML. The United States National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program operates a platform with numerous resources on marine debris prevention activities, monitoring and assessment, action planning and removal. This topic is obviously very broad and includes measures related to all stages, that is, design and production, use and consumption, as well as waste management.
33. Concerning **design and production**, a number of reports are available on eco-design and alternative materials such as biodegradable plastics. They are provided, for instance, by GPML, the Japan Clean Ocean Material Alliance (CLOMA), the Ministry of the Environment of Japan, UNEP, UNIDO and WWF and are mainly related to bans on single-use plastics and litter prevention. A limited number of existing technical resources and mechanisms address losses and leakages from production sites. A noteworthy initiative is Operation Clean Sweep®(OCS) by PlasticsEurope, an international programme designed to prevent the loss of plastic granules (pellets, flakes and powders) during handling along the plastics value chain and their release to the environment.
34. The life cycle stage **use and consumption** is not widely covered as a main theme by the reviewed technical resources and mechanisms. This is probably because it is mainly addressed in isolated education and awareness-raising campaigns (not included in this review), rather than, for instance, in material that provides specific instructions on how to achieve behavioural change. However, use and consumption is addressed in some marine plastic litter reports with respect to banning single-use plastics and consumers' disposal and source separation patterns.

## Type of technical resources and mechanisms and specific examples

35. With respect to types of technical resources and mechanisms (Figure 4), state-of knowledge reports, including policy recommendations, make up the largest share (25 per cent) while 17 per cent contain application cases and 7 per cent best practice. In addition, 4 per cent are labelled as training materials, 11 per cent describe monitoring methodologies (mainly for marine plastic litter monitoring), 11 per cent describe calculation tools to quantify marine plastic litter, 9 per cent provide toolkits or guidance for decision makers, 9 per cent provide more specific technical or operational guidelines, and 4 per cent are actual manuals on a range of different topics.

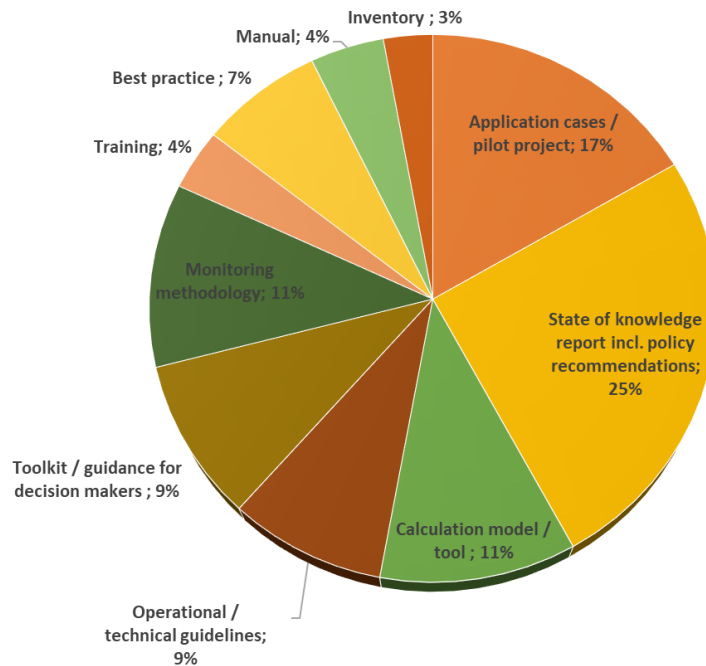


Figure 4: Types of technical resources and mechanisms

36. This section gives detailed information on the type of technical resources provided by organizations and / or as part of a mechanism, that is, an online platform and / or a data base offering access to a wider range of technical resources.

37. In total 35 **mechanisms** were included in this review, which are provided by entities such as the Basel, Rotterdam and Stockholm Conventions, the GPML, UNEP, the United Nations Environment Assembly (UNEA), IUCN, ISWA, the US Environmental Protection Agency, the Japan Clean Ocean Material Alliance, the Baltic Marine Environment Protection Commission (HELCOM), APEC, the G20, PlasticsEurope, WWF International, the European Environment Agency (EEA), the World Bank and the European Commission.

38. These mechanisms provide various technical resources, with a main focus on state-of knowledge reports including policy recommendations, guidance for policy and decision makers (toolkits) and very specific technical or operational guidelines, as well as manuals and training materials on a range of different topics.

39. The range of focus of the identified mechanisms varied from:

(a) Defined area: such as the United States Environment Protection Agency (EPA) trash free waters on the Americas, or the G20 inventory showing best practice to combat marine litter from G20 members, or the Baltic Sea Challenge for water protection, the Marine Debris website with resources for the APEC region, EEA on waste management topics and marine litter monitoring for EEA members, others include resources addressing issues around the globe, such as the UNEA portal with documents linked to the ad hoc open-ended expert group on marine litter and microplastics.

(b) Narrowing resources to a very specific topic: such as ISWA, World Bank and US EPA on waste management topics, the Extended Producer Responsibility Project by WWF on EPR schemes to increase recycling rates or the GPML, providing an inventory of local, regional, national action plans to reduce marine litter.

(c) Comprehensive focus: such as the Basel, Rotterdam and Stockholm Conventions. Its Secretariat provides a range of technical assistance activities to developing country parties and parties with economies in transition including to fulfil their obligations regarding plastic waste, e.g. on how to develop inventories, to draft legal amendments, to implement collection and recycling pilot projects, to train enforcement authorities, or to engage the informal sector). Their plastic waste inventory toolkit is currently under development and scheduled for completion and pilot testing in 2020/early 2021. This included guidance for the environmentally sound management of plastic wastes, including best practices. Pilot projects will be implemented under the recently established Basel Convention Partnership on Plastic Waste.

40. With respect to single **technical resources**, 103 were included in this review. Most of them have been published, while others will be made available soon. In total six **manuals** were included in this review, with waste related topics (with the exception of Helcom on litter monitoring). For example, the Basel Framework for the environmentally sound management of hazardous wastes and other wastes offers a practical manual on promoting the environmentally sound management of waste and guidance on waste prevention and minimization.

41. In total, ten technical resources showcasing **best practice** were included in this review, covering all stages of the plastic life cycle e.g. for plastics waste management (the Basel, Rotterdam and Stockholm Conventions, UNEP, APEC), the implementation of a single-use plastics ban (GPML), dumpsites closure (ISWA), waste prevention (European Commission), disposal of pleasure boats (Helcom), the mitigation of plastic waste by private business (WWF). The document "No Plastic in Nature: A Practical Guide for Business Engagement" published in 2019 by WWF International provides an evidence-based guide for companies seeking to employ effective strategies for mitigating plastic waste within their business.

42. Furthermore, seven **inventories** were included in the review, i.e. an inventory of action plans to reduce marine litter (GPML), a plastic waste inventory (the Basel, Rotterdam and Stockholm Conventions), an inventory containing meeting documents, commitments by governments / companies etc. related to the work of ad-hoc-open-ended expert group on marine litter and microplastics (UNEA) as well as an inventory on Waste Management, Prevention, Litter Capturing, Alternative materials provided by G20 under Japan's lead. Taking GPML's inventory as an example, it provides a solid overview of in total 19 local, regional, national action plans to reduce marine litter, three at national levels (Nigeria, Brazil, Indonesia), 11 regional, mainly for the different sea regions, as well as five local ones only for the US. The Duke University Nicholas Institute provided a Plastics Policy Inventory in an updateable database, covering public policy documents since January 2000. Two open databases (MedBioLitter and OpenLitterMap) rely on citizen participation and geolocation to build maps of marine, coastal and inland litter.

43. The seven technical resources included in this review containing **training** materials focus all on waste management. The World Bank online platform as well as the data base operated by the Basel, Rotterdam and Stockholm Conventions, for instance, provide next to state-of-the-knowledge reports and guidance for policy and decision makers (toolkits), also a wide range of training materials on waste management related topics. An interesting alternative approach to training and awareness raising is

provided by the comic book presented by the Oceanographic Institute of the University of Sao Paulo (“*Mariana e a batalha contra os SuperMacabros*” in Portuguese).

44. In total 13 **toolkits** and documents that provide specific **guidance for policy and / or decision makers** were included in the review. This type of technical resource is available mainly for litter monitoring, for instance, “Riverine Litter Monitoring - Options and Recommendations” (2016) or “EU Marine Beach Litter Baselines” (2019) both released by the European Commission MSFD Technical Group on Marine Litter or the “Draft Integrated Monitoring and Assessment Guidance”, published in 2015 by UNEP. The final report “Guidance on Monitoring of Marine Litter in European Seas” summarized the output of the work of the European Commission MSFD Technical Group on Marine Litter between 2012 and 2013. Amongst other things, it describes specific protocols and considerations to collect, report and assess data on marine litter, in particular beach litter, floating litter, seafloor litter, litter in biota and microlitter. Also, for waste prevention and waste management there are guidance documents available, e.g. “Preparing a Waste Prevention Programme - Guidance document” and “Preparing a Waste Management Plan - A methodological guidance note”, both released in 2012 by the European Commission. Moreover in 2013 ISWA published a guidance document on “Waste to Energy in Low- and Middle-Income Countries” to give an overview of the key pre-conditions which must be fulfilled in order to ensure short- and long-term feasibility of municipal solid waste (MSW) incineration. In addition, it aims to assist decision makers in the planning and implementation of MSW incineration facilities in low- and middle-income countries.

45. 12 documents with very specific **technical and / or operational guidelines** were included. Many of them cover marine litter monitoring, such as the “Guidelines on survey and monitoring of marine litter, released in 2009 by UNEP together with the Intergovernmental Oceanographic Commission (IOC). This document aims at assessing litter levels on beaches and within seas and oceans through long-term, broad scale comparative studies to support management at both national and international scales. In 2009 UNEP also published “Guidelines on the Use of Market-based Instruments to Address the Problem of Marine litter” to provide an overview of economic tools and strategies to encourage a change in behaviour that will lead to positive and lasting benefits on the marine and coastal environment. The report aims at giving practical guidelines to decision makers and relevant organizations on how to select, apply and implement economic tools, that is, market-based instruments, to address problems with marine litter. In 2019 GESAMP published the “Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean.” to provide recommendations, advice and practical guidance, for the establishment of programmes to monitor and assess the distribution and abundance of plastic litter. The intention of these guidelines is to promote a more harmonised approach to the design of sampling programmes, the selection of appropriate indicators, the collection of samples or observations, the characterisation of sampled material, dealing with uncertainties, data analysis and reporting the results as well as to inform the establishment of national and regional field monitoring programmes.

46. For the waste management sector these specific guidelines are mainly available on how to operate landfills, e.g. provided by the Secretariat of the Basel, Rotterdam and Stockholm Conventions and UNEP or by ISWA. The study “Marine Litter Prevention”, published in 2018 by the German development agency GIZ deals with the question of how decision-makers could improve their municipal solid waste management systems to prevent plastic leakage into waterways and the ocean. A methodological approach is elaborated to assess plastic waste leakage in qualitative and quantitative terms.

47. Out of the reviewed technical resources 23 contain **application cases and/or pilot projects**, covering developing countries and transition economies as well as developed countries from all geographic regions. The United States EPA, for example, has worked through the Commission for Economic Cooperation (CEC) to address marine litter in North American border watersheds through stakeholder engagement at the local level. Projects in the watersheds focused on installing stormwater trash capture devices in Vancouver, Canada, and Bellingham, Washington, United States and monitoring the devices to better identify sources and types of litter entering the watershed. In Tijuana, efforts focused heavily on raising awareness on single-use plastics and solid waste management. In 2019, UNIDO launched the 3-years project “Support for transitioning from conventional plastics to more environmentally sustainable alternatives” in South Africa. The project supports South Africa’s transition to more environmentally sustainable alternatives from conventional single-use plastics, in order to reduce the amount of plastic leaking into the environment in South Africa. The project consists of two

components: one will support the identification and implementation of opportunities for sustainable alternative materials, including bioplastics, and the second will support the implementation of the Industry Waste Management Plan of the plastic packaging industry by building up the capacity and integration of the informal waste sector; with a view to enhance waste separation at source to increase the quality and amount of collected recyclables. The Ministry of the Environment in Japan launched the “Plastics Smart” campaign encouraging cooperation and collaboration among a wide range of stakeholders, such as national, local public organizations, citizens, NGOs, businesses, and research institutes. The Plastics Smart online platform contains next to state-of-knowledge reports, a number of different case studies and small initiatives.

48. The majority of the technical resources reviewed represents **state-of-knowledge-reports including policy recommendations**. In total 37 were included in the review, covering basically all plastics life cycle stages and all geographical areas. One example is the UNEP report “Marine plastic debris and microplastics: global lessons and research to inspire action and guide policy change” (2016), summarizing the state of knowledge on sources, fate and effect of marine plastics debris and microplastics and describing approaches and potential solutions to address this issue. This report is accompanied by a stand-alone set of policy recommendations to guide decision-makers to take action that could be adapted to different contexts. In 2014 GESAMP published the report “Sources, fate and effects of microplastics in the marine environment: a global assessment”, aiming to provide an improved evidence base, to support policy management decisions on measures that might be adopted to reduce the input of microplastics to the oceans.

49. In 2009 UNEP and FAO released the report “Marine litter: abandoned, lost or otherwise discarded fishing gear (ALDFG)”, describing the impact of ALDFG, the reasons why fishing gear are abandoned, lost or otherwise discarded and a review of the existing measures to reduce ALDFG. This report also gives a number of recommendations relating to indicate ownership, mitigating measures, curative measures is described in this report.

50. In total 15 documents containing **monitoring methodologies** were included for review, all of them referring to monitoring of litter in different environmental zones, that is, the beach, oceans or rivers. The Marine Strategy Framework Directive (MSFD), for instance, requires European Member States to monitor marine litter and implement programmes of measures to reduce its occurrence. The document “Identifying Sources of Marine Litter” was published in 2016 by the EU Commission MSFD Technical Group on Marine Litter, identifying the origin and the pathways that lead to litter entering the marine environment, which is a crucial step in monitoring and effectively addressing marine litter. The TG Litter has published a report on the methodologies for identification of litter sources – a Matrix Score Technique based on likelihoods, which considers the possibility that specific items originate from more than one source. recommendations to help the process of identification of sources are given, from the early stage of data collection and site characterization to bringing in the knowledge of local stakeholders to better determine where litter is coming from and what needs to be done to prevent it. In 2016, the Japanese Ministry of the Environment has launched a still on-going project for the “Harmonization of Microplastics Monitoring Methodologies in the Ocean”. This project aims at making progress on harmonization of marine microplastics monitoring by developing recommendations and guidelines on net sampling and sample analysis methods, by developing a distribution map of microplastics on sea surface and identifying technical parameters to be harmonized.

51. Last but not least 15 **calculation tools** were included in this review. A broad range of calculation tools and footprint methodologies have been developed in the past two decades to inform the public, companies and policymakers about the magnitude of activities contributing to marine litter, such as Plastic Pollution Calculator by ISWA, or the (Plastic) Waste Flow Diagram, GIZ and the University of Leeds (UoL) and other products by e.g. Common Seas, UNEP and IUCN. Interestingly most of the tools were developed independently from each other without any coordination, some being more data intensive than others and applicable at different scales from local to city to national level, half of them including also microplastics. And only after completion it was tried to combine them and / or test them for similar case studies. For about a third of them documentation has not been publicly made available yet.

52. The IUCN “Review of plastic footprint methodologies”, released in 2019, found that the key focus is on the assessment of plastic usage, waste or recycling rates, with little focus on circularity. The

SEA Approach by the Ellen McArthur Foundation Companies, Plastic Scan by Searious Business, and the Plastic Disclosure Project (PDP) by the Ocean Recovery Alliance provide information on different plastic waste streams and recycling rates. But none of these methodologies include a plastic leakage assessment. The SYSTEMIQ-PEW Global Roadmap, the National Guidance for Marine Plastic Hotspotting and Shaping Action, Plastic Drawdown by Common Seas, the ISWA Plastic Pollution Calculator, and the PlastikBudget by Fraunhofer Umsicht, for instance, all focus on the leakage pathway and aim to allow for the establishment of a plastic leakage inventory for different plastic types and life cycle stages.

53. A difficult part in these calculations is the quantification of leakage of plastics (e.g. from dumpsites to waterways, leakage from collection or the share of land-based litter that reaches waterways) due to the lack of data. Stakeholders could be encouraged to develop and use metrics based on leakage/inventory rather than using only recycling rates. Moreover, several projects aim to develop an inventory approach to assess leakage for both macroplastics and microplastics, but they are not available for use yet.

## Challenges and barriers

54. This section discusses important barriers and challenges to combating marine plastics litter and microplastics observed a) during the inventory exercise and b) in the stock-taking survey results. It also compares them to the barriers previously identified in AHEG meetings. The prioritization of barriers could inform considerations of the global context for addressing marine plastic litter and microplastics.

(a) At AHEG-2 waste management was identified as one of the primary overarching barriers to combating marine plastic litter and microplastics. A number of legal, financial, technological and information barriers related to waste management were identified in the discussion paper cited above (UNEP/AHEG/2018/1/2) as barriers that deserved consideration for additional discussion by the UN Environment Assembly. Although waste management is extensively covered by technical resources from different sources, the problem of a mismatch between an increase in plastic production and consumption and available waste management infrastructure (especially in developing countries) is rarely addressed. This is particularly true in the case of remote and/or rural areas that receive plastic products but do not have adequate collection and recycling infrastructure.

(b) Integrated case studies at a local level that address both waste management and marine plastic litter by combining upstream and downstream measures are widely missing. Sharing expertise and best practices and scaling up local success stories should be encouraged and facilitated.

(c) AHEG-2 identified as a challenge the fact that industry design and consumption systems are not prioritized along the “3R waste hierarchy” of reduce, reuse, recycle. There are still no technical resources explicitly addressing new business models or alternative distribution systems (e.g. to reduce overpackaging). The use of new alternative materials is explored in a number of reports, along with the potential related problems of separate collection and the need for additional infrastructure. However, research and development for alternative materials that are scalable and economically viable is insufficient with respect to life cycle analysis and the assessment of environmental consequences.

(d) The previously identified challenge that coordinated development and adoption of labelling standards is lacking (which hinders product separation and understanding of the content of products for reuse and recyclability purposes) is still not sufficiently addressed by the reviewed technical resources. In addition, the involvement of industry in solutions is still limited, although industry associations such as PlasticsEurope are increasingly making efforts to help find solutions to marine plastic litter. Integrated case studies, whereby producers and waste management actors successfully communicate, may showcase improved circularity due to an increase in the recycled

content of products. Moreover, understanding the content of products for reuse and recyclability purposes could contribute to cleaner cycles.

(e) There are many successful national strategies. Responses at the national level will remain a core element in regard to resolving the problem of marine plastic litter and microplastics. However, regional and global efforts could be improved and better coordinated so as to complement national efforts in support of global responses. At the global level the role of waste trade and its rules/implementation (equal standards of recycling) are not adequately addressed in the technical resources and mechanisms reviewed, while global approaches do not always take into account national circumstances.

(f) Integrated studies on how waste trade from developed to developing countries impacts waste management systems and the marine plastic litter situation in developing countries are missing, which corresponds to the previously identified challenge that there is a lack of research and monitoring systems to determine whether traded waste is mismanaged. In addition, the lack of global standards for national monitoring and reporting on the consumption, use, final treatment and trade of plastic that will eventually become waste is not addressed by the technical resources and mechanisms reviewed. At the same time, at the national level opportunities exist for greater reporting on consumption, production and end-of-life treatment of plastics.

(g) A challenge identified in the Consolidated background paper of the discussion papers presented at the first meeting of the AHEG<sup>8</sup> is that many government authorities, corporations and the public have little or no knowledge of the matters involved, or of the best available techniques and best environmental practices required to address marine plastic litter and microplastics. There is a focus on this problem in an increasing number of toolkits, including specific guidance for political decision makers. Organizations such as the Secretariat of the Basel, Rotterdam and Stockholm Conventions provide technical assistance to the Parties with respect to plastic waste. Some marine plastic litter quantification tools, such as the one developed by GIZ (*Deutsche Gesellschaft für Internationale Zusammenarbeit*) and EAWAG (Swiss Federal Institute for Aquatic Science and Technology), are particularly designed to help local decision makers identify marine plastic litter hotspots. In addition, many of the state-of-knowledge reports on marine plastic litter and microplastics contain recommendations for decision makers. This creates an improved overall knowledge base which may eventually lead to a more transparent and inclusive decision-making process.

(h) The AHEG Consolidated background paper also identified cultural barriers to behavioural change as a challenge to facilitating the adoption of reusable delivery systems and replacing single-use plastics. This problem is not adequately addressed by the technical resources and mechanisms reviewed.

(i) The general lack of data on plastic material flow and waste is increasingly addressed by litter quantification tools in order to obtain a better understanding of the routes of plastic flows into the ocean. Some of the indicators are well developed and implemented (e.g. waste management indicators, beach litter indicator), others are not mature yet but are very valuable (e.g. riverine litter indicators). However, to calibrate these calculation tools primary data is needed for the calibration. There is also a lack of data in particular for freshwater environments, rivers and lakes. Also, the methodological developments in riverine litter are at early stages. However, rivers are crucial for understanding the relationship between the source and the sink of marine litter.

(j) The AHEG Consolidated background paper identified as a challenge that many countries do not have any data or monitoring programmes which can be used to set reduction targets or undertake priority interventions. National, regional and local marine plastic litter action plans could potentially play a role in supporting such target setting. For instance, the Mediterranean Regional Action Plan has a target of a 20 per cent reduction in beach litter by 2022. Several monitoring

---

<sup>8</sup> Consolidated background paper of the discussion papers presented at the first meeting of the ad hoc open-ended expert group on marine litter and microplastics, held in Nairobi from 29 to 31 May 2018. UNEP/AHEG/2018/2/2. <https://papersmart.unon.org/resolution/uploads/k1803257.pdf>

methodologies are available and guidance has been developed on uses and approaches, for instance through GESAMP. However, there is still a need for harmonized implementation of monitoring methodologies to facilitate the development of quantitative and operational reduction targets, as well as baselines against which progress can be measured.

## **Overview of results pursuant to the inventory of technical resources and mechanisms**

55. This section provides an overview of findings pursuant to the inventory of technical resources and mechanisms to address marine plastic litter and microplastics.

- Availability of data: the inventory of technical resources and mechanisms identified that primary data to calibrate the marine litter calculation models and tools are lacking, e.g. numbers on dumpsite leakage, leakage from production sites etc. Special focus could be placed on riverine litter monitoring. Earth observation technologies and remote sensing (drones, satellites, automated measurements at sea) could potentially help assess marine litter. Broad spatial and temporal information could provide data coverage not only on the marine environment but also on land and freshwaters.
- Collaboration and coordination are key for the development of new tools and methodologies for quantifying, monitoring and assessing marine litter. Harmonization of monitoring and assessment methodologies and definitions is crucial for policy making, target setting, and enhanced data collection and information sharing. Harmonized monitoring methodology and monitoring efforts could be improved to have holistic assessments on the sources, pathways, magnitude and impacts of marine litter. For example, marine litter and waste indicators are often expressed in different units.
- Although waste management is well covered, there is still possibility for basic waste prevention and downstream waste management efforts to reduce the inflow of plastic litter to waterways, especially in developing countries. Investment in prevention could yield better results than investing in clean-up. Although legal frameworks are often in place, the weak points are in many cases the enforcement and monitoring of existing laws. Moreover, tailor-made solutions for specific local, cultural contexts are necessary, especially for remote rural areas and Small Island Developing States given their vulnerabilities and limited capacities, as one size does not fit all.
- Innovative solutions for environmentally sound plastic disposal beyond large scale waste-to-energy and landfills could be further developed (especially in developing countries without existing recycling infrastructure). Also for addressing solutions for recovered marine plastics.
- Technical resources on alternative materials exist, e.g. on biodegradable plastics, but the inventory did not identify on how to improve plastics recycling by involving all value chain stakeholders, i.e. producers, local/regional authorities in charge of municipal waste collection, waste management companies, producer responsibility organizations, recyclers, manufacturing companies using secondary raw materials.
- As the market share of recyclables is currently under 6 per cent, the communication between all stakeholders and data transfer could be improved for an increased market uptake of secondary raw materials. The right incentives could be in place and information



made available to the different actors along the value chain to allow maximizing high-quality recycling, e.g. between producers and recyclers.

- Integrated studies on waste trade from developed to developing countries and how it impacts the waste management systems and marine litter situation in developing countries would be of value.
- More lessons-learnt and sharing of best practice as well as of failed projects would be valuable, especially in the field of international development cooperation in waste management, as there are many examples of “bad practice”.
- Resources on innovative approaches for awareness raising campaigns and education to change people’s behavior and overcome the barriers around marine litter in the long run would be of use.
- Many technical resources focus either on combating marine litter in the sea or on the sea-land interface, or on inland sources and waste management. However, integrated case studies at local level appear to be lacking where all problems and concerned stakeholders are addressed.
- Technical resources on new business models and new ways of consuming and distributing products with a focus on increased circularity and / or dematerialization were limited.
- More technical resources responding to the needs of cities would be of use, as they are often located near waterways, being condensed points of production, consumption and waste generation, but also of knowledge and skills.
- More technical resources addressing rivers and lakes . While rivers are important pathways delivering plastic litter to the marine environment, lakes are often contaminated with microplastics.

#### IV. Financial Resources and mechanisms

56. As concern about the impacts of marine plastic litter and microplastics has grown, so has the development of targeted financial resources and mechanisms to address that issue. This section outlines the financial resources currently available and expand on the barriers to financing as well as opportunities. To carry out the analysis, a non-exhaustive inventory of sources of finance for combating marine plastic litter and microplastics was developed.

57. The complete inventory can be found in Annex 2 and its contents are summarized in Figure 5 below. It should be noted that not all information was available for all sources identified, and that some may be relevant in more than one category (e.g. a financing source may target, and be counted under, both the waste management phase and the litter capturing phase).

<b>Total sources of financing identified</b>		74	
<b>Financing type</b>			
Multilateral	Bilateral	Private for profit	Private not-for-profit

21	26	6	15			
<b>Region targeted</b>						
More than one region	Africa	Asia and the Pacific	Europe	Latin America and the Caribbean	North America	West Asia
38	3	16	9	3	5	0
<b>Phase in the plastics lifecycle/value chain targeted</b>						
Production / manufacturing phase	Use phase	Waste management phase	Litter capturing	Prevention, minimization, reuse		
26	11	50	22	15		

Figure 5. Summary of inventory of financial resources for efforts to combat marine plastic litter and microplastics

### Principle sources of funding

58. **Multilateral:** A number of large funds have been created at the multinational level, providing millions and even billions of dollars for actions to tackle marine plastic litter and microplastics. Many are broader initiatives which include a focus on marine plastics, such as the European Investment Bank’s Joint initiative on the Circular Economy, which will invest at least EUR 10 billion in the circular economy in the European Union by 2023, or the Global Environment Facility’s USD 61 million fund, Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States program – or “ISLANDS”, which includes a focus on marine plastics. Meanwhile others focus primarily on preventing marine plastic litter, such as Clean Oceans, the EUR 2 billion global initiative with German, French and Spanish support, or ProBLUE, the World Bank’s global multi-donor trust fund with an initial focus on East Asia, among others. These funds frequently combine investments, guarantees, grants and long-term financing.

59. These funds usually have a global or regional focus, often focusing on Asia and the Pacific, however, funds are available in most regions. Financing is generally made available to national and local government institutions, corporate entities and research institutions. The Global Environment Facility is notable because its small grants programme makes funding of up to USD 50,000 available to community-based initiatives, including those of indigenous people, community-based organizations and other non-governmental groups. The fund has provided considerable funding to community-based initiatives tackling plastic pollution.

60. In addition, the World Bank has released Sustainable Development Bonds to raise funds and awareness on marine plastic litter and microplastics, including the USD 28.6 million Sustainable Development Bond on Sustainable Use of Oceans and Coastal Areas – the “Blue Economy”, and a USD 10 million bond to specifically highlight the challenge of plastic waste in oceans.

61. **Bilateral:** Several countries have devoted significant bilateral aid budgets to tackle the issues of marine plastic litter and microplastics, including Australia, Germany, Japan, Norway, Sweden, the United Kingdom and the United States. In the inventory of financial resources, bilateral financing was the most common type of financing identified, representing 44 per cent of the financial resources identified. Much bilateral aid focuses on countries in Asia and the Pacific, particularly on the five countries (China, Indonesia, the Philippines, Thailand and Viet Nam) from which it is estimated that about half of all the plastic waste that ends up in the ocean is released. Bilateral donors also focus on other developing countries with weak waste management systems as well as countries with which they have close links (for example, significant DFID funding to tackle plastic pollution is for Commonwealth countries). Bilateral funding largely takes place through grant funding. Direct investment in private projects is not possible for some projects due to internal requirements. Nonetheless, some programmes have taken innovative approaches to support private initiatives and leverage private funding.

62. A notable example is the Incubator Network to Accelerate Ocean Plastic Solutions, set up with funding from the United States and Australia and run by Circulate Capital, with SecondMuse and Ocean Conservancy. The project has been successful in attracting both private funding and that of other bilateral funds (the Network's first project, the Ocean Plastic Prevention Accelerator, also received Australian funding). The initiative aims to accelerate solutions to ocean plastic waste by partnering with existing incubators to build ecosystems of waste management and recycling innovators. Through another partnership with Circulate Capital, the United States Agency for International Development (USAID) has provided loan-portfolio guarantees to mobilize private investment to combat plastic pollution in oceans in the Indo-Pacific region.

63. The United Kingdom's Department for International Development (Dfid) has also tried innovative approaches to draw in private funding. For example, it has partnered with businesses such as Unilever and Coca-Cola, who have provided additional funding for its Waste Pilot programmes in Commonwealth countries. It has also used matched giving mechanisms, such as the Tearfund's Matched Giving Appeal, in which the United Kingdom government matched individual donations up to USD 2 million to support recycling in Pakistan. This approach helped these initiatives raise additional funding but also promoted public awareness and support.

64. Bilateral donors have been key to driving initiatives to combat marine plastic litter and microplastics. Nonetheless, they recognize the need for greater coordination, both at headquarter level and at country level, to avoid duplication of efforts and to maximize impact.

65. **Private not-for profit:** Private not-for profit financing mechanisms include voluntary donations, crowdfunding donations, corporate social responsibility funds, and grants. Many large foundations and charities have taken a keen interest in the topic, as have private companies, which are increasingly involved through social responsibility initiatives or their foundations. This is particularly true of many fast-moving consumer goods companies, many of which are coming under pressure for their contributions to plastic pollution. These include Coca-Cola, Amazon, Colgate-Palmolive, Nestle, Unilever and many more.

66. As with bilateral initiatives, there are multiple private initiatives with generally limited coordination. However, some initiatives have been set up in recent years to bring together private actors including businesses, civil society and research organizations to better coordinate funding and activities, such as the Trash Free Seas Alliance launched by the non-governmental organization Ocean Conservancy.

67. Finally, individual contributions through crowdfunding and voluntary donations play a role in providing additional funding, and almost a quarter (24 per cent) of actions recorded in the stock-taking exercise were at least partly funded by one or both of these. However, they were rarely the sole source of financing and, where they were the only source of funding, they tended to fund relatively smaller projects (actions funded by voluntary donations alone represented 6 per cent of actions and just 1 per cent of total funding recorded in the stock-taking survey). However, crowdfunding and voluntary donations should not be dismissed, since they play an important role in raising public awareness and support for initiatives, as well as funding smaller initiatives that might not be eligible for other types of funding.

68. **Private for profit:** Private for-profit finance mechanisms include bank loans, venture capital, equity financing and angel networks, among others. They play an increasingly important role in financing efforts to combat marine plastic litter and microplastics. Many initiatives, such as crowdfunding, impact investing and accelerator or incubator programs, involve mixed non-profit and for-profit approaches. Accelerators and incubators, such as the Incubator Network to Accelerate Ocean Plastic Solutions mentioned above, support companies and organizations to improve and grow their operations and sometimes provide funding (often in return for an equity stake). Impact investors focusing explicitly on the issue of marine plastic litter are also emerging. An example is Odyssey Impact Investments, which invests in solutions to climate change and single-use plastics

69. Microfinance institutions (some run as for-profit financial institutions and other as cooperatives or non-profits) are also relevant for funding small businesses that tackle plastic pollution. They may

provide training and micro-loans to help waste pickers, who are mostly women, to establish small and medium-sized enterprises (SMEs), or provide small loans to local businesses that use plastic waste to create and sell new products. For example, in the Philippines, the Payatas Environmental Development Programme and Vincentian Missionaries Foundation provided women with micro-loans and waste-specific business consultancy and extension services, which resulted in several successful SMEs.<sup>9</sup>

70. Overall, funding provided purely by private funds, investors and organizations remains a smaller proportion of funding than public funds. A study conducted by UNEP (2020, forthcoming) has estimated that 62 per cent of funding for marine plastic litter prevention comes from public sources, compared to 38 per cent from private sources (Figure 6). In the stock-taking survey, 8 per cent of actions were reported as being financed purely by the private sector, representing just 1 per cent of overall funding reported in the survey. Nonetheless, private funding was one element of combined financing for many actions. Projects which used at least an element of private funding represent 25 per cent of actions and 32 per cent of total funding reported.

71. Furthermore, given the limitations on increasing public spending, it is particularly important that international and public spending further leverages private funding in the future.

72. **Public national and municipal funding:** The inventory of financial resources completed for this study focuses on resources available to Member States and organizations from outside their own budgets. However, it is important to note that national and municipal public funding is by far the most important source of financing for efforts to tackle marine plastic litter and microplastics. The results of the stock-taking survey showed that actions funded solely by public money represented over 53 per cent of total funding (Figure 7). Furthermore, public funding was frequently combined with private money or donations to fund actions.

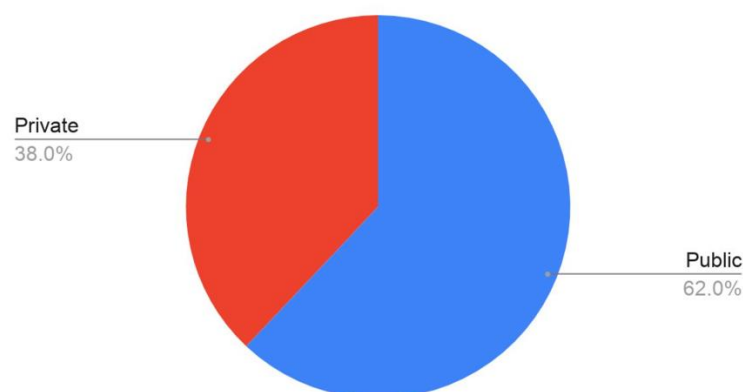


Figure 6. Estimated share of private vs public funding for marine plastic litter and microplastics interventions worldwide (Source: UNEP, 2020)

73. Research conducted by UNEP (2020, forthcoming), has estimated that funds for this purpose from the public sector grew from USD 360 million in 2015 to USD 800 million in 2018 (Figure 8). Nevertheless, additional public funds are required to tackle this issue.

<sup>9</sup> Krushelnytska, O. (2018). Solving Marine Pollution: Successful Models to Reduce Wastewater, Agricultural Runoff, and Marine Litter (No. 130154, pp. 1-40). The World Bank..

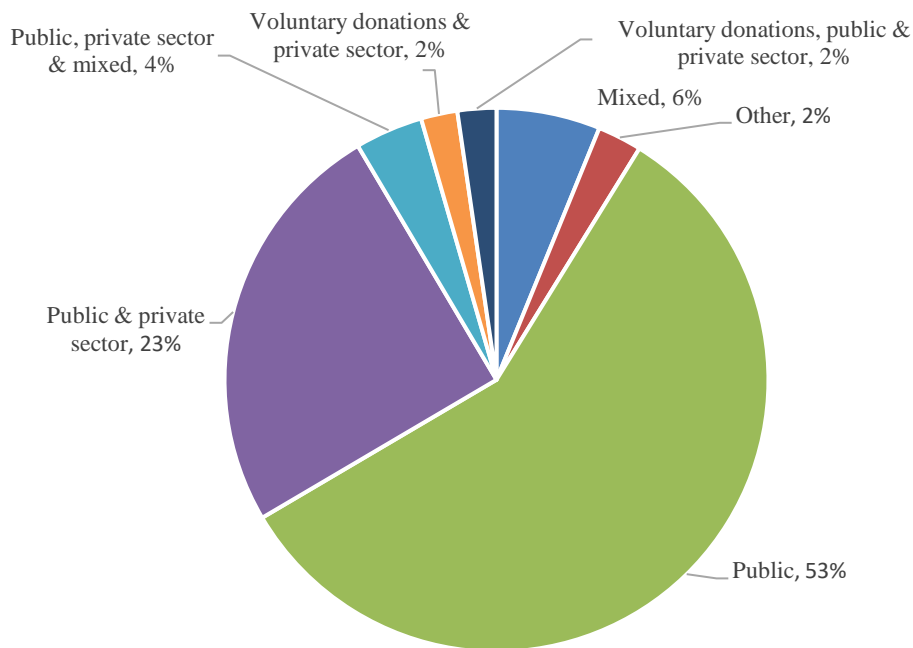


Figure 7: Percentage of financing recorded in the stock-taking from each funding source (Source: stock-taking survey data)<sup>10</sup>

74. Public money is invested heavily in waste management. Funds could be raised through broad-based revenue raising or through specific taxes or levies, such as dedicating the proceeds from plastic bag levies specifically to initiatives designed to tackle marine plastic litter (as discussed in further detail in section F). Increasingly, countries are both dedicating their own funds, and receiving varied international financing, to combat plastic pollution. This could lead to a lack of coordination and alignment with national priorities.

75. **Combined funding:** 34 per cent of actions reported in the stocktake survey were implemented using a combination of funds of various types. The importance of combined public and private funding should be noted. Around 29 per cent of funds provided came from mixed public and private sources, in some cases combined with additional sources such as voluntary donations. This trend is likely to increase in the future due to the growing need to use public funds to leverage private investment.

<sup>10</sup> Funding sources representing less than 2 per cent of total funding recorded in the stock-taking survey are not shown. This includes funding from purely private sector sources, which represented just 1 per cent of the funding recorded. However, combined private sector and other funding types are shown in Figure 6.

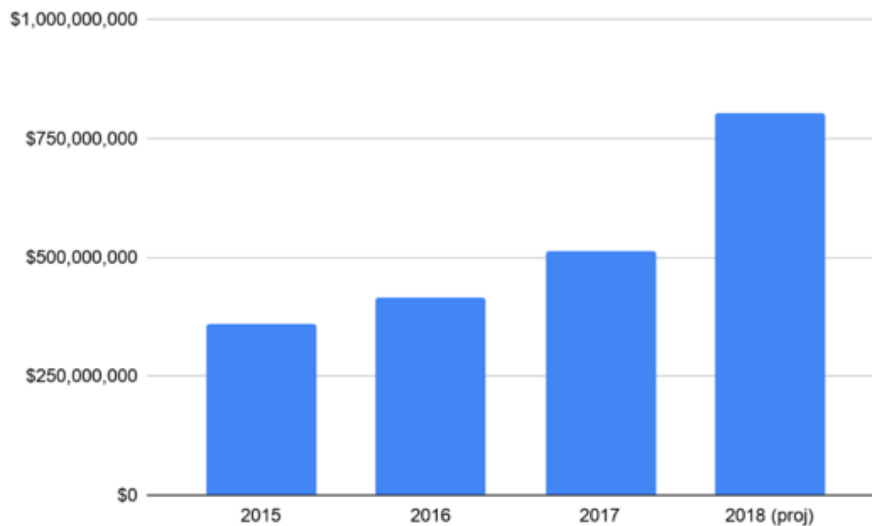


Figure 8. The growth in public funding for initiatives to tackle marine plastic litter and microplastics (Source: UNEP, 2020)

### The focus of funding

76. **Stage in the plastics value chain targeted:** Given the urgency of dealing with enormous quantities of existing plastic pollution, many donors and others have prioritized waste management, including recycling. This focus is clear in both the inventory conducted for this study, in which 50 out of 74 financial resources included a focus on waste management, and in the analysis of funding recorded in the stock-taking exercise (Figure 9).

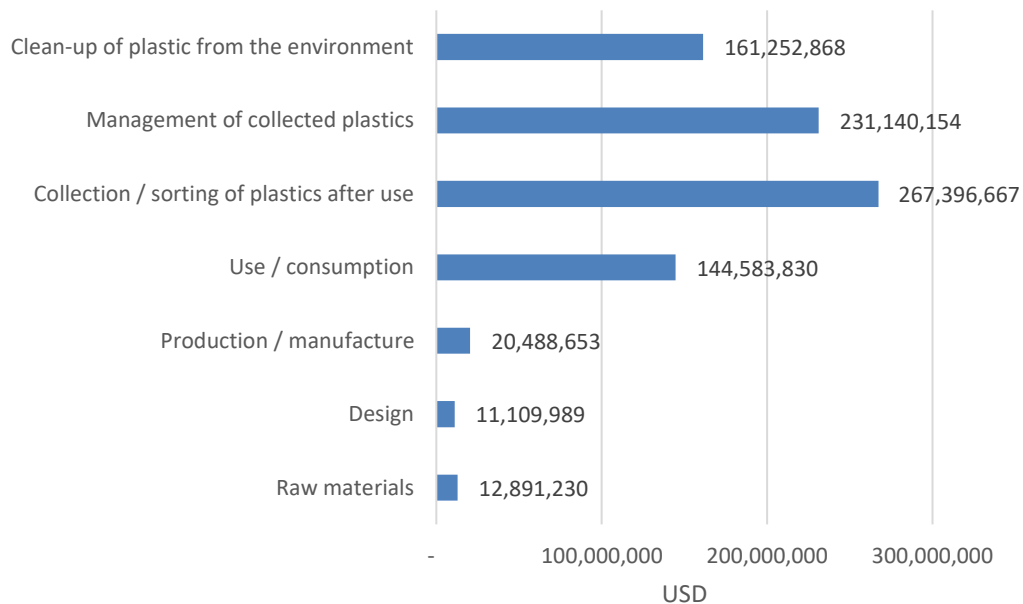


Figure 9. Total funding to initiatives with at least a partial focus on each element of the plastic lifecycle or supply chain (Source: Stock-taking Survey data)

77. A relatively small proportion of funds, on the other hand, were found that had been dedicated to preventing the problem of plastic litter before it occurs, such as investing in design, production and manufacturing for circularity, as seen in the stocktaking survey in Figure 9. In the inventory of financial resources, 26 resources were documented which included a focus on production and manufacturing, around half the number identified with a focus on waste management. Facilitating the identification and removal of particularly problematic products, polymers or additives from the market (from a risk-based perspective) could be considered as well as circularity approaches for priority products, polymers and additives through, for example, design and production for environmentally sound recycling.

78. **Type of initiative:** Technology and processes (including research and development; new product design; new materials and processes; and changes in practice, operations, environmental management and planning) represented the smallest share of actions (15 per cent) but the largest share of financing (41 per cent), likely representing the relatively high cost of such interventions (Figure 10). It is likely that further financing may need to be mobilized in this area, since costly technology and operations projects form an important part of tackling marine plastic litter and microplastics. However, significant challenges exist in financing such projects. Public authorities often struggle to find sufficient funds for the large investments required, while private investors perceive such projects as high risk. Finally, bilateral donors also sometimes face difficulties in supporting such projects where they are private sector owned, due to their internal restrictions.

79. Actions relating to legislation, standards and rules represented the second largest proportion of funding reported (34 per cent), likely reflecting the importance of establishing rules, standards and legislation in order to enable and support all other action types. Actions related to working with people (encouraging or enabling others through education, training, communication, awareness raising, behaviour change programmes and so on), on the other hand, represented the largest share of actions, at 44 per cent, but a smaller share of funding (21 per cent), likely reflecting the relatively lower cost of such initiatives.

80. Monitoring and analysis actions (collecting evidence around plastic discharge to the ocean/waterways) received the least financing (3 per cent), despite representing 17 per cent of actions.

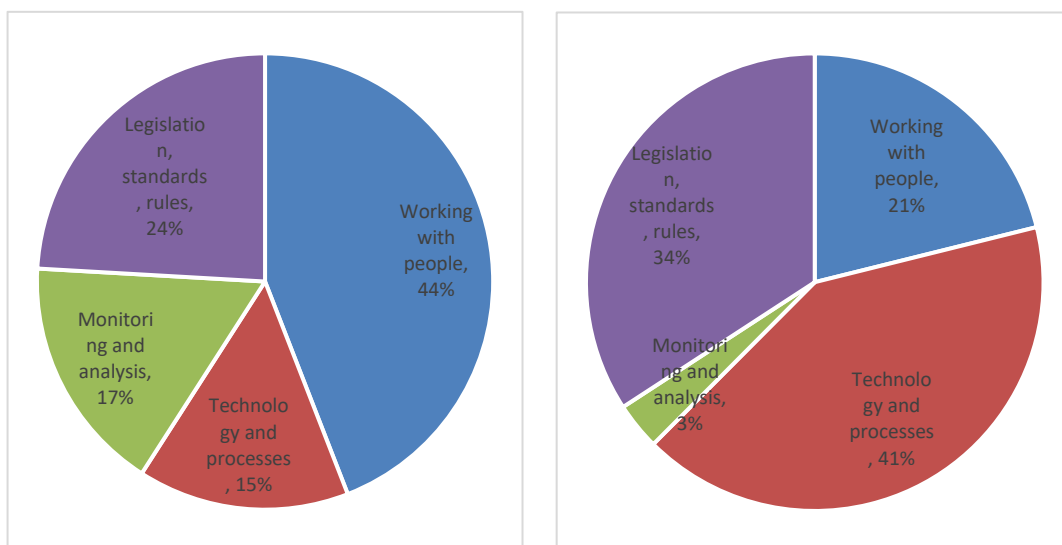


Figure 10. Proportion of actions reported by types of action (left) and proportion of total funding reported by type of action (right) (Source: Data from stock-taking Survey)

81. **Sectors prioritized:** Responses to the stock-taking survey revealed that initiatives targeting tourism received the highest amount of funding, followed by food and beverages, and retail (Figure 11). Those sectors with high proportions of funding correspond with high polluting sectors such as food and beverages, packaging, personal healthcare and retail, as well as those highly impacted by marine plastic litter, such as tourism, and sectors that are both, such as fishing. However, some high polluting sectors, including textiles and agriculture, have relatively little financial resources dedicated.<sup>11</sup>

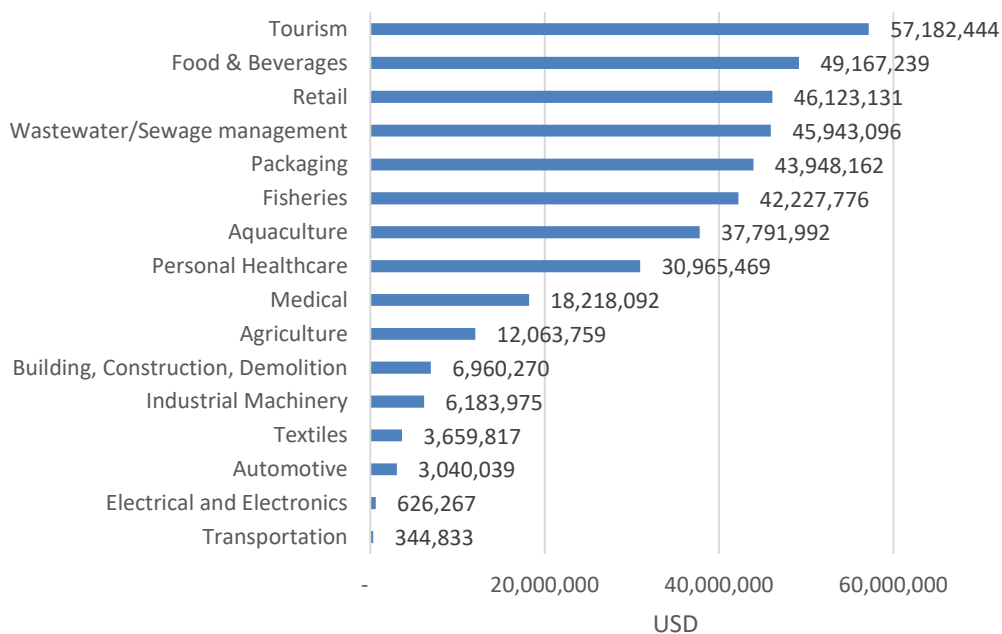


Figure 11. Total funding to initiatives with at least a partial focus on each sector (Source: Stock-taking Survey data)

82. Previous research conducted by UNEP<sup>12</sup> used “natural capital valuation” to express the environmental and social impacts of plastics in monetary terms in 16 consumer goods sectors (Figure 12). Overall, the total natural capital cost of plastic used in the consumer goods industry is estimated at over USD 75 billion per year, with food companies making the largest contribution. Companies in the toy, athletic goods, and footwear sectors have the highest proportion of their revenues at risk, since they have the highest levels of natural capital cost per USD 1 million of annual revenue.

<sup>11</sup> UNEP (2014). *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*. United Nations Environment Programme. <http://wedocs.unep.org/handle/20.500.11822/25302>

<sup>12</sup> United Nations Environment Programme (2014) *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*. Available at: <http://wedocs.unep.org/bitstream/handle/20.500.11822/9238/-Valuing%20plastic%3a%20the%20business%20case%20for%20measuring%2c%20managing%20and%20disclosing%20plastic%20use%20in%20the%20consumer%20goods%20industry-2014Valuing%20plasticsF.pdf?sequence=8&isAllowed=y>



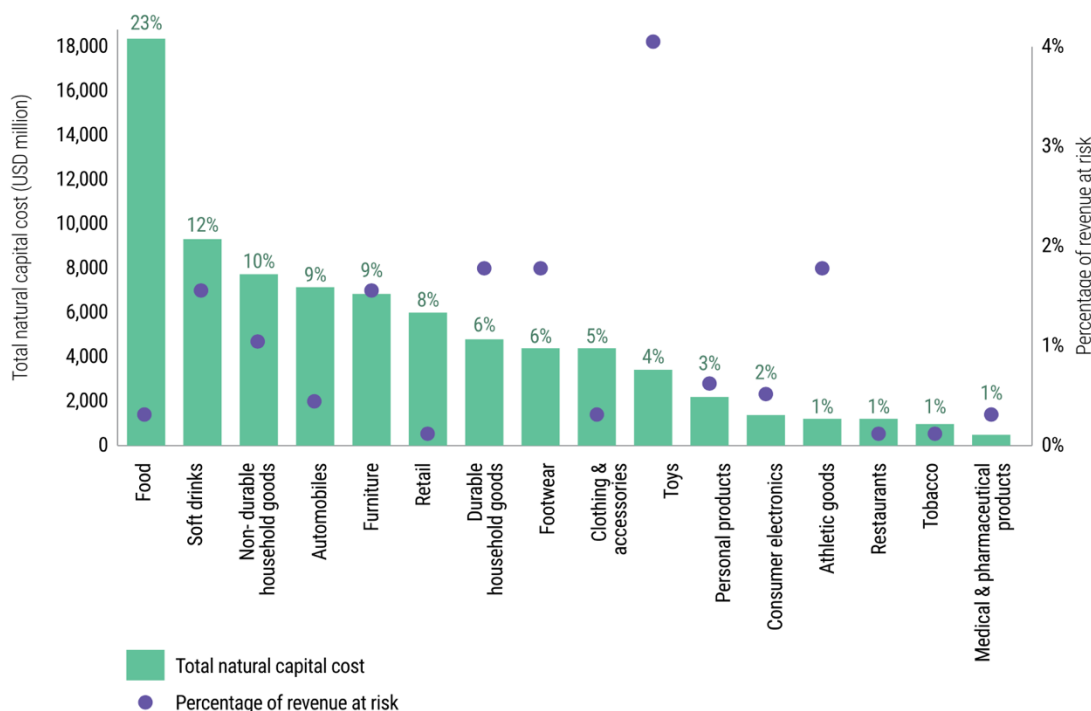


Figure 12. Total natural capital cost and intensity of consumer goods sectors in relation to plastic (Source: UNEP, 2014, based on Trucost calculations derived from World Bank, PlasticsEurope, Eurostat and US EPA datasets)

83. When comparing the natural capital costs of plastic use in each consumer goods sector with the amount of financing currently focused on these sectors there is a discrepancy in sectors including automobiles, textiles, and agriculture. These sectors have received little donor attention in relation to reducing plastic pollution.

84. In the agriculture sector plastics have become ubiquitous on many farms, from hay bales wrapped in plastic and plastic bags used to store grain, to plastic mulch (plastic sheets used to heat soil and suppress weeds) and microplastics in sewage sludge applied as fertilizer. Research shows that the sector is both an important polluter and vulnerable to the impacts of plastic pollution on soils and on farm animals. Yet, the sector received relatively little funding in the actions reported in the stock-taking exercise. At the same time, many of the entities providing finance to combat marine plastic pollution are already involved in funding large programmes related to agricultural development and food security.

85. **Gender:** It is notable that very few financing initiatives take an explicit approach to gender in the context of plastic pollution. There are some exceptions (e.g. USAID’s loan-portfolio guarantee with Circulate Capital designed to help mobilize investment to combat plastic pollution in oceans throughout the Indo-Pacific region, one focus of which is to empower women entrepreneurs in the environmental field).

86. This lack of gender focus is important because plastic pollution is recognized as having different and disproportionate impacts on women. The chemicals involved in plastic production have been found to have particularly worrying risks for women, including the risks of cancer and reproductive problems. Such risks also apply to women exposed to plastic fumes in other factories where plastic is used, such as in automotive production. For example, women exposed to plastic fumes in factories have been found to

have a 400 per cent increased risk of breast cancer.<sup>13</sup> Furthermore, women workers and women-owned businesses are highly represented in certain sectors particularly effected by plastic pollution, such as tourism. Women make up 60-70 per cent of the labour force in the hotel sector. Over half of businesses in Indonesia, Malaysia, the Philippines, and Thailand, are run by women, and more than 70 per cent of businesses are run by women in Nicaragua and Panama (compared to an average of 20 percent in other sectors).<sup>14</sup> Women workers and women-run businesses are therefore particularly vulnerable to any events, like surges in plastic pollution, which deter visitors. Finally, while formal waste collection is predominantly represented by men, women participate in large numbers in informal waste collection, where they face poor working conditions.<sup>15</sup> Women and men in both informal and formal waste collection face social stigma and economic deprivation. In addition, child labour is prevalent in informal waste collection and sorting.

87. As a result, funders may wish to consider in greater detail the gender implications of their funding and consider increasing funding explicitly designed to reduce the impact of plastic pollution on women as well as empowering women to tackle the issue.

### **Organizations receiving funding**

88. Funds are evenly spread between public and private recipients, although funding flows for each are different. Governments are more likely to receive multilateral funding, whereas companies are more likely to be eligible to receive finance in the form of investment or loans. Grants in the form of prize money are also available in some cases. Many bilateral donors are not able to give money directly to private companies, but they may support them indirectly through support for incubators or accelerators. The results of the stock-taking survey show that the largest proportion of funds reported in the study (45 per cent) are allocated to actions implemented jointly by both public and private actors (Figure 13).

---

<sup>13</sup> Brophy, J.T., Keith, M.M. Watterson, A., Park, A., Gilbertson, M. and Maticka-Tyndale, E. (2012). Breast cancer risk in relation to occupations with exposure to carcinogens and endocrine disruptors: A Canadian case-control study. *Environmental Health* 11, 87. <https://link.springer.com/article/10.1186/1476-069X-11-87>

<sup>14</sup> World Tourism Organization (2019). *Global Report on Women in Tourism, Second Edition*. <https://www.e-unwto.org/doi/epdf/10.18111/9789284420384>. <https://oceanconservancy.org/wp-content/uploads/2019/06/The-Role-of-Gender-in-Waste-Management.pdf>.

<sup>15</sup> Circular, G.A. (2019). *The Role of Gender in Waste Management: Gender Perspectives on Waste in India, Indonesia, the Philippines and Vietnam*. Commissioned by Ocean Conservancy. <https://oceanconservancy.org/wp-content/uploads/2019/06/The-Role-of-Gender-in-Waste-Management.pdf>.

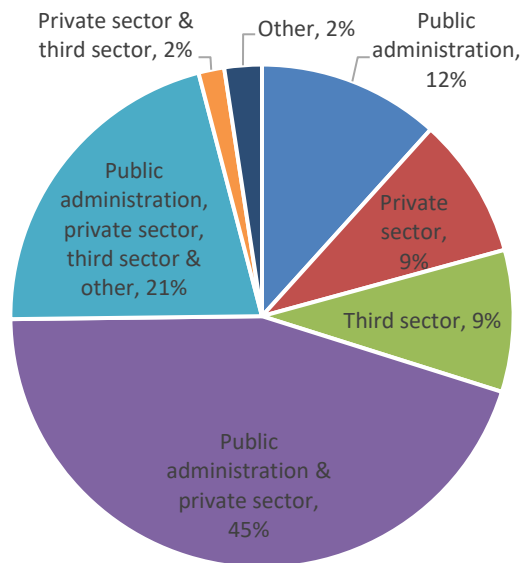


Figure 13. Proportion of total funds allocated by type(s) of organization implementing the action (Source: Data from stock-taking survey)

89. One notable trend is an increasing interest in funding cities and municipalities through grants or low interest loans, such as Dfid Waste Pilots, The Trash Free Seas Alliance and Closed Loop Partners. This trend is a positive development given that cities and municipalities are on the forefront of waste management.

90. On the other hand, the inventory of financial resources suggests that quite limited funds are available to community-based organizations and indigenous communities, with notable exceptions including the Global Environment Facility (GEF) Small Grants Programme, as well as some national programmes, such as the Canadian Sustainable Fisheries Solutions and Retrieval Contribution Support Program.

### Geographical focus

91. The majority of funding (64 per cent) reported in the stock-taking survey was for actions at national level. Jambeck *et al.* (2019)<sup>16</sup> estimated that about half of all of the plastic that ends up in the oceans comes from just five countries: China, Indonesia, the Philippines, Thailand and Viet Nam. As a result, funders have tended to focus their efforts there, and the majority of funding reported in the stock-taking survey was for actions in countries in Asia and the Pacific (69 per cent) (Figure 14). Similarly, almost half (44 per cent) of the financial resources identified in the inventory which targeted a specific region were for Asia and the Pacific.

<sup>16</sup> <https://science.sciencemag.org/content/347/6223/768>

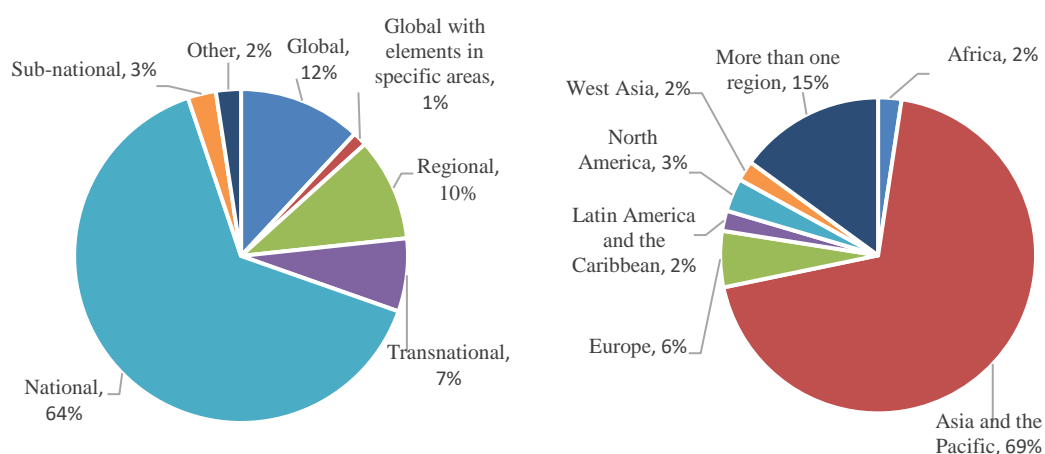


Figure 14: The geographic spread of financial resources by geographic area of focus (left) and by region (right) (Source: Data from stock-taking survey)

92. The majority of documentation about financing opportunities identified during the inventory exercise was in English. Material is also often available in the language of the donor country, in the case of bilateral funds, and in the languages of target regions or countries where financing has a specific geographical target. In some cases, international financing may be more difficult to access where government bodies or other organizations are not comfortable submitting applications in English.

## Challenges and barriers

93. Several of the challenges and barriers outlined during the first meeting of the ad hoc open-ended expert group on marine plastic litter and microplastics, held in Nairobi from 29 to 31 May 2018 are particularly relevant to this analysis of financial resources. In particular, this study reaffirms the importance of the following barriers:

- (a) **Financial costs falling exclusively or largely on governments:** There is insufficient implementation of the “polluter pays” principle, and businesses and others are not forced to internalize the costs of recovering and recycling the plastics they produce and use in their products. Therefore, the costs of managing plastic waste falls largely to governments, including municipalities. The problem is particularly severe in “common” areas such as the high seas.
- (b) **Governments have limited funds to take on these costs:** Countries face limitations in government funding and staffing to address the issue, and a lack of access to data to help inform the prioritization of the resources that are available. Partly as a result, most countries do not have a single authority or body responsible for overseeing the management of marine plastic litter, which has proved a limitation. In particular, countries noted a lack of funds for infrastructure for collection, treatment or disposal of plastic waste. The problem is particularly severe in developing countries, but has also been identified as a barrier in developed countries, for example in implementing the Mediterranean Action Plan under the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).
- (c) **Challenges in accessing private finance and investment:** Countries identified a lack of private finance and investment, and challenges in accessing cross-border investment, in plastic waste management. This is partly due to a lack of implementation of market-based instruments and tax incentives to stimulate such investment. The problem was particularly acute for some countries. For example, small island developing states are particularly vulnerable to marine plastic litter and microplastics, but their limited on-island production and waste management

infrastructure, such as port reception facilities, combined with their geographical distance from other waste collection centers, means that they are unlikely to attract private investment.

(d) **Some financial incentives continue to encourage damaging practices:** Such incentives include fossil fuel subsidies, which keep the cost of raw materials lower than that of recycled plastics, and separate fees for disposal of rubbish and fishing gear at port reception facilities, which encourages at-sea dumping of fishing gear and other plastic waste. In addition, it was noted that public procurement policies have not supported market transformation.

(e) **A lack of markets for end-of-life plastics:** In the absence of global standards, there has been a proliferation of widely different approaches to recovery, sorting and reprocessing technologies, across the informal and formal sectors and between developing and developed countries, preventing the emergence of financially viable and effective markets for end-of-life plastics. There has also been a lack of market-based instruments and tax incentives to stimulate investment in the facilities required for environmentally and financially sustainable end-of-life treatment of plastic waste.

(f) **A failure to make explicit the costs of marine plastic litter and microplastics.** There has been a limited understanding of the costs of marine plastic litter and microplastics at the national, regional and international levels, and a corresponding failure to internalize or make explicit the costs to human health and the environment. In particular, the costs to human health are not fully understood and therefore have not been adequately recognized and factored into decision making and financing.

94. In addition, this study raises several other challenges for consideration:

(a) **Limited coordination in bilateral funding:** There is little coordination of bilateral funding in overall funding strategies or in project funding at a national level. This results in replication of efforts and funding and limits the alignment of funding with national or regional priorities and plans.

(b) **Continued need to increase private investment:** Despite increased efforts and funds designed to mobilize private financing, there are still enormous gaps in private investment in projects that would help reduce marine plastic litter and microplastics. One reason for this is the perceived lack of financial incentive. Many investors see high risks and a lack of viable business models. To a certain extent this challenge must be met outside financing mechanisms, given, for example, the continuing production of cheap virgin plastic and fossil fuel subsidies which undercuts recycled plastics. It could be addressed through other mechanisms such as taxation or bans. Nonetheless, the perceived lack of profitability in the sector could be tackled through greater cooperation between the public and private sectors. For example, development banks could offer **concessional** capital and guarantees to reduce risks for private investors and governments may contribute to better enabling environments for such projects.

(c) **Difficulties in bilateral aid being used to support private sector projects:** Some donors who have an interest in supporting private sector projects may be limited by internal requirements. Other possibilities, such as capacity-building to create a pipeline of bankable projects, may be more feasible.

(d) **Challenges for countries in accessing multilateral funds:** Some countries encounter difficulties in meeting the requirements for funding, particularly from multilateral sources. **Lessons** can be learned from climate finance, in which donors have recognized countries' problems with accessing international funding and have developed supporting mechanisms to help countries do so, such as the Green Climate Fund Readiness Program.

(e) **Difficulties in coordinating national budgets and plans with varied international funds and initiatives:** Countries are increasingly dedicating their own funds and receiving significant international funds to combat marine plastic litter and microplastics. This could lead to

a lack of coordination and alignment with national priorities on tackling marine plastic pollution. National action plans may facilitate alignment with priorities.

(f) **Little donor attention on some sectors with significant plastic footprints:** These sectors include textiles and agriculture, which receive relatively little attention compared to others (see paragraphs 83-84), despite their role in contributing to marine plastic litter and (in the case of agriculture) facing considerable risks as a result of plastic pollution.

(g) **A lack of explicit focus on gender:** In most cases, financing efforts do not appear to explicitly address gender elements of plastic pollution despite important impacts of plastic pollution on women (see paragraphs 85-86).

(h) **Limited funds available to initiatives by community-based initiatives and indigenous communities:** This may limit the ability of these communities to respond to plastic pollution and find innovative solutions. Lack of such funding may also limit the support available to groups excluded from national and international projects.

### **New opportunities for innovative financing of efforts to address marine plastic litter and microplastics**

95. Given the needs for vastly increased investment in this space, stakeholders are looking to innovative financing mechanisms. These include the following.

96. **Joint public-private initiatives:** Increasingly, actors providing finance recognize the need for players of all kinds to collaborate in addressing this complex and highly global issue. As a result, some public-private initiatives have developed to leverage the strengths of public and private actors and to coordinate efforts and funding. They include the Trash Free Seas Alliance, the Commonwealth Marine Plastics Research and Innovation Framework and the Global Plastics Action Partnership.

97. **Blended finance:** Blended finance involves private and public, or not-for-profit, entities partnering in order to finance initiatives. This could include subsidized loans offered to companies tackling marine litter and plastic pollution at below market rates. Alternatively, a public or not-for-profit entity could guarantee all or part of a loan in case of default, making investment less risky and thereby encouraging private investment. It might also invest in capacity-building initiatives or initial grants to help a company or initiative reach the stage at which it is ready for traditional investment.

98. **Blue bonds:** A bond is a debt product used by companies, governments and municipalities to raise funding for projects. Recently, Blue Bonds have been employed to fund marine and ocean projects, with the first such bond launched by the Seychelles in 2018. The World Bank has also issued a Sustainable Development Bond for the Blue Economy. Such bonds could be guaranteed by development banks and supported by initiatives from other funders and development agencies, making them more attractive to investors. There may be significant potential for others, particularly cities and municipalities, to make greater use of such Blue Bonds.

99. **Plastic offset programs:** Similarly to carbon offset programmes, plastic offset programs allow a company to measure its plastic “footprint” and to then offset that footprint through contributions to litter prevention, recycling or clean-up. Such mechanisms are still in quite early stages, especially since there is not yet any agreed methodology for measuring a company or organization’s plastic footprint.

100. **Specific plastics taxes or levies:** Plastics taxes and levies already exist in the form of plastic bag levies in many countries. The proceeds of these levies are often specifically designated to initiatives designed to tackle marine plastic litter. These funds could either be used for government initiatives or opened up to civil society and other organizations to submit proposals. Strong communication and transparency on the use of funds is vital to maintain public support. It has been reported that in South Africa consumers’ acceptance of the plastic bag levy decreased partly due to unclear administration of the finances raised through the levy as well as poor results of the investments made, in terms of recycling

and the creation of green jobs.<sup>17</sup> In the future such plastic taxes and levies could be applied more broadly to plastics, particularly single-use plastics. Moves are already being made in this direction. The European Commission, for example, proposed a plastics tax in 2018.

101. **Advanced disposal fees:** These fees put a surcharge on consumer goods to subsidize their otherwise cost-prohibitive recycling after they are used by customers.

102. **Extended producer responsibility (EPR) schemes:** EPR is an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.<sup>18</sup> This can mean companies take responsibility for treating or disposing of post-consumer products, or that they are made responsible for the cost. If they are made responsible for the cost, EPR schemes can generate funds for plastic waste management and recycling efforts. Most Organisation for Economic Co-operation (OECD) countries and many emerging economies have EPR programmes in place for various products such as electronic equipment, batteries and vehicles. These schemes have not generally been introduced specifically for plastics, but many existing EPR programmes, especially for electronic waste, help to ensure the proper waste treatment of plastics in those products. In 2018 the European Commission made proposals for EPR schemes to cover the costs of waste management, clean-up and awareness-raising measures to reduce certain kinds of litter including food and drink containers.

103. **Innovative insurance instruments:** A study by UNEP's Principles for Sustainable Insurance and the Global Partnership on Marine Litter (GPML)<sup>19</sup> examined the possibility that insurers could develop products to support cities or tourism areas in managing surges in plastic pollution. Insurers are already piloting parametric insurance policies based on factors such as air pollution,<sup>20</sup> and similar approaches could be considered for marine plastic litter and plastic pollution. Such cover could be used to fund both clean-up efforts and measures to deal with the impacts of marine plastic litter and plastic pollution.

104. **Environmentally preferred purchasing programs:** It is important for governments and large companies to consider how their procurement policies can be an indirect source of financing to tackle marine plastic pollution and microplastics. For instance, they could introduce policies that mandate certain levels of recycled plastics in their purchases to stimulate the recycled plastics market.

## Overview of findings pursuant to the inventory of financial resources and mechanisms

105. Member States and other stakeholders may consider the following actions and opportunities to improve the mobilization of financial resources to tackle marine plastic litter and microplastics:

(a) **Increased coordination among donors and at a regional and national level:** There exists an opportunity to increase coordination among donors, especially bilateral donors. In particular, an

---

<sup>17</sup> Nahmann, A. (2010). Extended producer responsibility for packaging waste in South Africa: Current approaches and lessons learned. *Resources, Conservation and Recycling* 54(3), 155-162.  
<https://doi.org/10.1016/j.resconrec.2009.07.006>

<sup>18</sup> Organisation for Economic Co-operation and Development (OECD) (2016). *OECD Policy Highlights: Extended Producer Responsibility. Guidance for Efficient Waste Management*.  
<https://www.oecd.org/environment/waste/Extended-producer-responsibility-Policy-Highlights-2016-web.pdf>.

<sup>19</sup> UNEP (2019). *Unwrapping the risks of plastic pollution to the insurance industry. The first global insurance industry study on managing the risks associated with plastic pollution, marine plastic litter and microplastics*.  
<https://www.unepfi.org/psi/unwrapping-the-risks-of-plastic-pollution-to-the-insurance-industry/>

<sup>20</sup> For instance, Swiss Re is offering insurance against haze outbreaks in Singapore.  
<https://corporatesolutions.swissre.com/innovative-risk-solutions/non-physical-damage-business-interruption/hazeshield.html>.

initial focus on coordinating financing in Asia and the Pacific, where extensive funding currently focuses, could be particularly impactful.

- (b) **Increased alignment of financing with national priorities:** The effectiveness of international and bilateral financing could be improved by ensuring that it is aligned with national priorities in recipient countries. Organizations providing financing for initiatives to tackle marine plastic litter and microplastics could look to recipient countries' experience in improving the coordination and alignment of climate finance. Lessons can be learnt from national climate finance mechanisms, such as the Environmental Investment Fund (EIF) in Namibia and the Rwanda Green Fund (FONERWA), which coordinate international funding and national policies and planning processes.
- (c) **Support for countries in accessing multilateral and international funds:** One opportunity to increase the accessibility of existing funds and develop a pipeline of suitable projects may be to launch an initiative to support key countries in accessing multilateral and international funds. An initiative focused on marine plastic litter and microplastics, modeled on initiatives like the Green Climate Fund Readiness Program, could be considered. Focus countries could be identified based on evidence of current and expected contributions to ocean plastic pollution.
- (d) **An increased focus on leveraging public funding to create a pipeline of “bankable” projects for private investment:** It is important to leverage private investment to tackle marine plastic litter. To do so, public financing could be used to improve the capacity of projects and companies to prepare them for private investment. In addition, increased use of options such as blended finance could increase private investment, by making investments more attractive and less risky for the private sector. Global, regional or national programs could provide funding and capacity building activities focused specifically on creating such a pipeline of projects.
- (e) **Efforts to address perverse incentives for virgin plastic use:** Efforts to remove perverse incentives allowing new plastic to remain a cheaper source of raw material compared to recycled plastic continue to be important.
- (f) **Opportunities in inclusive financing:** There are opportunities for increased efforts to achieve inclusive financing to tackle marine plastic litter and microplastics. Donors could consider financing for community-based organizations and indigenous communities. In addition, funders could assess the gender implications of their existing funding programs and consider increasing funding explicitly designed to reduce the impact of marine litter and plastic pollution on women, as well as to support women to tackle the issue..
- (g) **Increased financial resources for strategic initiatives to remove the most damaging plastic types from our economy and bring about a circular approach for others:** Although waste management is extremely important to tackle the crisis in our ocean, long-term financial resources to tackle other strategic priorities are needed. Resources could be allocated to removing from our economies the polymers, plastic product types and plastic additives that are currently causing the greatest damage to marine environments. Secondly, increased financial resources could accelerate the shift to a circular economy for plastics. An evidence-based approach should be adopted to ensure that financial resources are allocated as a priority to those plastics types causing the greatest damage to the ocean. Such a focus could be integrated into regional or global programs proposed under point (d).
- (h) **Efforts to address funding gaps in certain sectors, including textiles and agriculture:** Efforts could be made to engage companies in certain sectors with responsibility for high levels of plastic pollution. They could be encouraged to contribute funds towards addressing the plastic problem within their sector. In addition, many multilateral and bilateral donors, as well as public bodies, are making significant investments in agricultural development. They could consider including plastic pollution issues in existing financing or developing new financing directly to address plastics in agriculture.



## V. Summary

106. Tackling the issue of marine plastic litter and microplastics requires the implementation of an array of policies, activities and technologies. Many of these come with high financial costs as well as barriers related to technical knowledge. Member States and organizations therefore face important financial and technical barriers in implementing necessary measures. Technological barriers are related to the production, manufacturing and design of materials and products, the distribution and consumption systems and all aspects of waste collection, management and recovery. Financial barriers relate to both the availability of financial resources and organizations' and states' ability to access them. This combined review of technical and financial resources and mechanisms provides an overview of existing data and information as well as funding options to combat marine plastic litter. Both technical and financial resources and mechanisms are fundamental requirements and serve as enabling conditions to combat marine plastic litter. This review could therefore help stakeholders to prioritize actions and investments.

107. There is a lack of detailed data on the trajectory of plastic waste from the moment the waste is generated until the moment that they end up in the marine environment. The role of littering, uncontrolled dumping, release from disposal sites should to be better understood, as well as the fate of plastics in lakes and rivers. Data collection could to be innovated using new technologies such as earth observation and ought to be standardized in order to generate comparable data at local, national, regional and global level. This should allow to further improve and develop the various existing models on plastics dispersion.

108. There is not only the task of cleaning up the legacy of waste and marine plastic litter in coastal areas and dumpsites but, of equal importance, the task of combatting the creation of future waste. In the search for e.g. technical solutions, a strong emphasis may be on land-based activities, which generate the major part of marine plastic litter, and to look upstream at the dumping of waste in waterways carrying the waste to the oceans. Although waste management has received a lot of funding and a lot of attention in technical resources examined, the enforcement of waste legislation and the application of waste prevention measures and implementation of recycling technologies are still considered major barriers to successfully deal with marine plastic litter, especially in developing countries.

109. Future work will have to look closely into the precise points of intervention with respect to waste management, and into how to solve issues such as low levels of investment in waste collection, sorting, processing, recycling and disposal infrastructure or the low level of consumer awareness of sustainable consumption habits and of waste separation and disposal issues.

110. Opportunities exist to adapt and increase financing efforts to address strategic initiatives to remove the most damaging plastic types from our economy and bring about a circular approach for others. At the same time, greater coordination and cooperation among actors providing finance is vital. This includes coordination between donors, as well as closer collaboration between the private and public sectors – an important trend that is already well underway. Innovative financing opportunities, from blended finance to innovative insurance instruments, will also depend on such collaboration. Finally, in order to ensure an inclusive and fair transition, inclusive financing and a clear gender focus will be required.

111. Finally, it is important to note that the majority (> 95 %) of the reviewed technical resources is only available in English, making it for some countries harder to easily read and implement suggested measures etc. Informational on international financial resources is also often not widely available in various languages. The availability of resources or mechanisms in various languages could be improved.

## ANNEX 1. Inventory of financial resources to tackle marine plastic litter and microplastics

The resources in this inventory are presented in alphabetical according to the name of the organization providing finance. The inventory is intended to provide a wide-ranging but by no means exhaustive list of financial resources available. It includes financial resources available to third parties and does not include organizations' internal budget allocations. It should be noted that much of the information provided in the inventory is based on desk research, using the words of the resource itself, and information should be verified with the funding organization.

Name of project / mechanism / fund	Name of organization /s providing finance	Type/source of finance	Partners	Mechanism	Region	Country	Lifecycle phase <sup>21</sup>	Summary
Closed Loop Infrastructure Fund	Amazon, 3M, Coca-Cola, Colgate-Palmolive, Danone, Johnson & Johnson, Keurig Dr Pepper, Pepsico, P&G, Nestle Waters, Unilever, Walmart and Starbucks	Private for profit	Closed Loop Partners	Project finance	North America	US	Waste management phase, recycling	In April 2014, a coalition of Fortune 100 companies announced the creation of the Closed Loop Fund as a signal of their commitment to responsible waste management and as part of an effort to increase recycling rates across the United States. The CLF aims to raise and invest \$100 million over a five-year period, which is to be deployed in the form of 0-percent-interest loans to municipalities and below-market-interest loans to private companies. The loans are targeted at projects that will develop local recycling infrastructure.

<sup>21</sup> Production / manufacturing phase; Use phase; Waste management phase (waste collection , recycling, landfills, dumpsites); Litter capturing; Prevention, minimization, reuse

Pacific Ocean Litter Project (POLP)	Australian Aid	Bilateral	None	Grants	Asia and the Pacific	SPREP and Pacific island nations	ecodesign/alternative materials; Prevention, minimization, reuse	Australia is investing \$16 million over six years (2019-2025) in the Pacific Ocean Litter Project (POLP), which will help SPREP and Pacific island nations with the Marine Litter Action Plan. While the Plan covers all kinds of marine litter, POLP will have a focus on reducing the sources of single-use plastics (straws, PET bottles, polystyrene takeaway containers, and plastic bags) in the marine environment. The Project will focus on Reduce and Refuse approaches to waste management, rather than Recycle or Return approaches. Other projects in the Pacific region are already looking at how to support recycling and return of existing plastic and other waste.
Basel Convention Partnership on Plastic Waste	Basel Convention	Multilateral	Working group administered by the Secretariat of the Basel, Rotterdam and Stockholm Conventions	Grant	Global	Not specified	Ecodesign / alternative materials; waste management	The recently established Basel Convention Partnership on Plastic Waste will fund pilot projects
Cutting River Plastic Waste Global Network	Benioff Ocean Initiative (Marc and Lynne Benioff)	Private not for profit	Coca-Cola Foundation	Grants	Global	Global	Litter capturing	A global network of dedicated, passionate, and collaborative problem-solvers combating the flow of plastic waste from rivers to the ocean. This global network will consist of several interdisciplinary teams working around the world to pilot technologies for physical capture of plastic waste in highly-polluted rivers, and to catalyze policy-based, infrastructural, and societal change to reduce plastic waste inputs to those rivers. A global solution for the problem of plastic waste entering the ocean requires deployment of diverse interventions in rivers, so each intervention will be tailored to the equally diverse riverine and cultural environments where plastic waste is found. Recipients of funding were selected through a competitive request for proposals process that took place May-July 2019. The Benioff Ocean Initiative received proposals for 30 projects across 5 continents and 16 countries. Due to the high volume of exciting and innovative proposals, we expanded the program from 1 to 9 projects, creating a global network of organizations working collaboratively to eliminate river plastic waste.

								Each year a cycle of funding focuses on a new oceans issue, so the precise topic varies from year to year.
Innovative Solutions Canada Program - Environment and Climate Change Canada Plastics and Clean Technology Challenges	Canada's Environment and Climate Change (ECCC), National Research Council of Canada	National government	None	Grant	North America	Canada	Production / manufacturing phase; prevention, minimization, reuse	Through the Innovative Solutions Canada Challenge Stream, the Government of Canada invites small and medium-sized enterprises (SMEs) to propose innovations that address specific government challenges.  Innovation challenge categories include: food packaging, construction waste, sustainable alternatives to plastic packaging, diverting end-of-life vehicles plastics from landfills, in-situ sensing technology for monitoring microplastics in the marine environment
Sustainable Fisheries Solutions and Retrieval Contribution Support Program	Canadian Federal Government - Fisheries and Oceans Canada	National government	None	Grants	North America	Canada	Waste management; litter capturing	Program intended to support efforts to prevent, mitigate and safely dispose of ghost gear. Its focus will be on four pillars, according to an emailed statement from the department: gear acquisition and piloting of technology to prevent gear loss; third party-led retrieval of ghost gear, disposal and recycling; and international support.
Blended Finance Partnership to Combat Ocean Plastic Pollution	Circulate Capital, U.S. Agency for International Development (USAID)	Private for profit and bilateral	Ocean Conservancy	Blended finance	Asia and the Pacific	At least 50% of the total investments covered by the USAID guarantee will be used for loans in Indonesia,	Waste management	Circulate Capital, the investment management firm dedicated to incubating and financing companies and infrastructure that prevent ocean plastic in South and Southeast Asia (SSEA), today announced a blended finance partnership with the U.S. Agency for International Development (USAID) to combat ocean plastic pollution. Through this new agreement, USAID will provide up to a \$35 million, 50% loan-portfolio guarantee through the Development Credit Authority (DCA)

						The Philippines, Vietnam and Sri Lanka		to incentivize private capital investment and new business development in the recycling value chain in South and Southeast Asia.
Circulate Capital Ocean Fund	Circulate Capital. Investors include Coca-Cola, Dow Chemicals, PepsiCo, Danone, Unilever, Procter & Gamble and Chevron Phillips Chemical.	Private for profit	None	Debt and equity investments	Asia and the Pacific	Any countries in South and South East Asia	Waste management	<p>Circulate Capital will make debt and equity investments of \$2-10 million into startups and established businesses across the entire plastics value chain, from innovations in material through to advanced recycling technology.</p> <p>The fund is in final due diligence on three deals, and expects to announce its first investment in early 2020. It will initially focus on Indonesia and India, but will also consider deals across South and Southeast Asia.</p>
Closed Loop Partners	Closed Loop Partners	Private for profit		venture capital, growth equity, private equity, project finance	North America	US	Ecodesign/alternative materials; Waste management phase, recycling	<p>Closed Loop Partners is a New York based investment firm comprised of venture capital, growth equity, private equity, project finance and an innovation center focused on building the circular economy.</p> <p>Funds include: infrastructure, beverage, venture fund, fashion and private equity</p>

Oceans Multi-Donor Trust Fund	Denmark, Norway	Multilateral	World Bank	Trust Fund	Asia and the Pacific	Indonesia	Waste management phase	The Oceans, Marine Debris and Coastal Resources Multi-Donor Trust Fund (OMC-MDTF) will provide strategic support for the implementation of Indonesia's National Ocean Agenda, including technical assistance and capacity building, multi-sector coordination and piloting of innovative responses to key challenges.
Plastic Waste Free Islands – Mediterranean	Didier and Martine Primat Foundation	Private not for profit	IUCN; Cyprus Sustainable Tourism Initiative (CSTI); Together Cyprus; Observatory of Menorca (OBSAM).	Grant	Europe	Menorca and Cyprus	Production / manufacturing phase; waste management phase; prevention, minimization, reuse	With support from the Didier and Martine Primat Foundation, IUCN launched the Plastic Waste Free Islands project in 2019. The overarching goal of the project is to reduce plastic leakage to the ocean from two islands in the Mediterranean Sea. The project also aims to repurpose waste into commercially viable products for sale, thereby generating job opportunities and income for local communities. Key regional bodies will also develop and endorse a blueprint for looking at entire value chains, from production to disposal, and at also plastic usage and wastage in different sectors (such as tourism and fisheries). These regional bodies will also be able to identify further opportunities to scale up the blueprint's application, which can be used by any island country.
European Maritime and Fisheries Fund (EMFF)	EU	Multilateral		Co-finance projects alongside national funding	Europe	EU countries	Litter capturing	The fund: helps fishermen in the transition to sustainable fishing, supports coastal communities in diversifying their economies, finances projects that create new jobs and improve quality of life along European coasts, supports sustainable aquaculture developments, makes it easier for applicants to access financing.  The fund assists various projects to fight marine litter. Examples can be found here: <a href="https://ec.europa.eu/easme/en/news/reading-summer-five-maritime-projects-fight-marine-litter">https://ec.europa.eu/easme/en/news/reading-summer-five-maritime-projects-fight-marine-litter</a>
Interreg Baltic Sea Region Programme 2014-2020	EU / European Regional Development Fund	Multilateral		Grants	Europe	Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Sweden,	Not specified	The Programme is an agreement between EU member states Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Sweden and the northern parts of Germany as well as partner countries Norway, Belarus and the northwest regions of Russia.  Funding is offered within four thematic priorities: capacity for innovation, management of natural resources, sustainable transport, and

						Germany, Norway, Belarus, Russia		EU strategy support.  Clear waters and blue growth are two key topics of focus under natural resources.
Marine Litter Projects funded under FP7 and Horizon 2020	European Commission	Multilateral		Grants	Europe	Various	Waste management phase; litter capturing	The EU is dedicating substantial resources to better understanding and combating marine litter through a number of RTD or other projects, including enlargement neighbourhood funding (e.g. the H2020 initiative for the depollution of the Mediterranean) and regional ( e.g. Interreg) funding. A list of relevant projects can be found here: <a href="https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/Focus_on_marine_litter_FP7_and_H2020.pdf">https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/Focus_on_marine_litter_FP7_and_H2020.pdf</a>
The Joint Initiative on Circular Economy ( JICE)	European Investment Bank	Multilateral	Partnership with the European Union's largest national promotional banks and institutions	loans, equity investment, guarantees, innovative financing structures and technical assistance	Europe	EU	Production/ manufacturing ; use phase; waste management phase	<p>The European Union produces about 2,5 billion tons of waste per year. The Joint Initiative on Circular Economy (JICE) is a partnership between the European Union's largest national promotional banks and institutions and the European Investment Bank to invest at least €10 billion in the circular economy by 2023. This will support projects that prevent and eliminate waste, increase resource efficiency and promote circular business models.</p> <p>It focuses on 1) Preventing and eliminating waste, 2) Increasing resource efficiency, and 3) Promoting circular business models</p> <p>The initiative will target all stages of the production value chain and the lifecycle of products and services.</p> <ul style="list-style-type: none"> <li>• Circular design and production: applying strategies to design out waste prior to commercialisation.</li> <li>• Circular use and life extension: enabling the reuse, repair, re purposing, refurbishing or remanufacturing of products already in use.</li> <li>• Value recovery: recovering materials and other resources from waste, recovering waste heat and/or reusing treated wastewater.</li> <li>•Support: facilitating circular strategies through the deployment of</li> </ul>

								information and communications technology, digitalisation and services.
Rethinking plastics – circular economy solutions to marine litter	European Union (EU), German Federal Ministry for Economic Cooperation and Development (BMZ)	Multilateral	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Expertise France (EF)	Grant	Asia and the Pacific	China, Indonesia, Japan, Philippines, Singapore, Thailand, Vietnam	Waste management phase; prevention, minimization, reuse	The project supports a transition towards sustainable consumption and production of plastic in East and Southeast Asia to contribute to a significant reduction of marine litter. In China, Indonesia, Philippines, Thailand and Vietnam the project supports activities for the transition to a circular economy with a focus on waste prevention and management. In addition, cooperation in Japan and Singapore particularly focuses on green public procurement.
Task Force Beyond Plastic Med.	Founder members: Prince Albert 2 of Monaco Foundation, Surfrider Europe Foundation, the Tara Expeditions Foundation and the MAVA Foundation	Private not for profit	Honorary member: The International Union for Conservation of Nature (IUCN)	Grants	Global	Countries in the Mediterranean region	Use phase; waste management; prevention, minimization reuse	BeMed initiative, which supports concrete projects aimed at reducing plastic pollution in the Mediterranean. Since it was established in 2015, BeMed has supported 23 projects in 11 countries around the Mediterranean.
Integrated Waste Management and Marine Litter Prevention in the Western Balkans	German Federal Ministry for Economic Cooperation and Development (BMZ)	Bilateral	Ministries from Albania, Bosnia and Herzegovina and Montenegro		Europe	Albania, Bosnia and Herzegovina and Montenegro	Waste management phase	The Integrated Waste Management and Marine Litter Prevention in the Western Balkans project operates in Albania, Bosnia and Herzegovina and Montenegro, implementing measures in selected areas along the Adriatic Sea such as estuaries. The focus of implementation is on regional cooperation and knowledge sharing between national institutions, communities and companies. The aim is to conserve natural and economic resources. At a regional level, the project also seeks to establish a common understanding of the issue and associated action plans. A learning and exchange platform enables skills to be built up



								across national boundaries. At a national level, the project supports legislative processes to reduce marine litter, with a particular focus on plastics. At the same time, implementation and monitoring structures will be strengthened. The ability to estimate economic follow-on costs and to set priorities for the respective country plays an important part in political debates. At a local level, the project aims to put into practice measures to reduce the leakage of plastics into the Mediterranean Sea. Partner communities and organisations in Albania, Bosnia and Herzegovina and Montenegro receive support in the form of the requisite equipment (such as containers for collecting recycling materials separately), which helps to improve the collection of recycling materials and waste.
Waste Management and circular economy – conserving resources	German Federal Ministry for Economic Cooperation and Development (BMZ)	Bilateral	World Bank; EU Commission	Grant	Global	Global	Waste management phase	This project aims to integrate concepts for resource-efficient, climate-friendly and effective waste management and circular economy into development policy action and to promote their implementation in national and international initiatives. One focus is: The project develops approaches to reducing the amount of plastic and other waste that enters the oceans and promotes exchange forums with regional organisations or stakeholders from partner countries to implement measures. It cooperates with the World Bank and other international institutions for this. In cooperation with the EU Commission, the project advises Indonesia, the Philippines, Thailand and China, in particular, on systems for better collection and recovery of packaging and other waste as well as on sustainable plastic production and consumption. In selected partner countries, the project implements training and advisory measures to create environmentally friendly value chains for electronic waste.
Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States program	Global Environment Facility (GEF)	Multilateral	UN Environment, UNDP, FAO and the IDB	Grants	Global	Small Island Developing States	Waste management	Backed by \$61 million in funding from the Global Environment Facility (GEF), with partner co-financing of over \$389 million, the Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States program – or "ISLANDS" – will support island states across the Caribbean, the Pacific, and the Indian Ocean to manage the growing impacts of chemicals and wastes on their unique environments. The program addresses chemicals and marine plastics.

– or "ISLANDS"								
The GEF Small Grants Programme - International Waters Focus Area	Global Environment Facility (GEF)	Multilateral	Implemented by UNDP and executed by UNOPS	Grants	Global	Full list of eligible countries: <a href="https://sgp.undp.org/component/countytypes/?view=countrytypes&amp;Itemid=152">https://sgp.undp.org/component/countytypes/?view=countrytypes&amp;Itemid=152</a>	Waste management phase; prevention, minimization, reuse; ecodesign / alternative materials	International Waters portfolio - SGP's IW portfolio promotes sustainable international waters management through regionally connected community-based activities. In GEF-5, SGP will focus its IW activities on freshwater surface waterbodies such as rivers and lakes, as well as regional seas and coastal areas. SGP may also pilot community-based underground water management in partnership with other programs and initiatives. Eligible activities for SGP funding may include: * Conservation and rehabilitation of coastal habitats (mangroves, coral reefs, seagrass and other types of wetlands) * Fresh water resource use and management; * Land-based pollution prevention and reduction; * Sustainable fisheries management; * Protection and sustainable use of ecosystem services and goods; * Protection of forests and reforestation in river basins; * Creation of alternative livelihoods to reduce pressure on fisheries and other natural resources; * Capacity development and knowledge sharing among communities on water management Also, some projects related to plastic pollution fall under biodiversity and chemicals.
AFLDC: Capacity Strengthening and Technical Assistance for the Implementation of Stockholm	Global Environment Facility (GEF)	Multi-lateral	UNEP, UNIDO	Grants	Africa	African Least Developed Countries (LDCs) of the	Waste management phase	The Objective of the project is to strengthen and build the capacity required in LDCs and SIDS in the ECOWAS sub region to implement their Stockholm Convention NIPs in a sustainable, effective and comprehensive manner, while building upon and contributing to strengthening a country's foundational capacities for the sound management of chemicals.

Convention National Implementation Plans (NIPs) in African Least Developed Countries (LDCs) of the ECOWAS Subregion						ECOWAS Subregion		The immediate objective is to create an enabling environment in the ECOWAS Sub region by establishing/amending laws, regulations, policies and standards, strengthening institutions for the remediation of contaminated sites, introducing BAT/BEP to industrial processes, managing municipal wastes, health-care wastes, supporting the phasing out of agricultural use of POP pesticides through the promotion of best agricultural practices including the use of Bio-botanical pesticides, promoting locally designed technologies development.
Establishing a circular economy framework for the plastics sector in Ghana	Global Environment Facility (GEF)	Multilateral		Grants	Africa	Ghana	Not specified	Establishing a circular economy framework for the plastics sector in Ghana
Circular Economy Regional Initiative (Near Zero Waste)	Global Environment Facility (GEF)	Multi-lateral	EBRD, private sector companies	Grants	Europe	Albania, Bosnia-Herzegovina, Montenegro, North Macedonia, Serbia, Turkey	Production / manufacturing phase; waste management phase	Circular Economy Regional Initiative (Near Zero Waste). Circular Economy Investments, in the Western Balkans and Turkey, with a strong focus on SMEs. Circular Economy Capacity Building aimed at the corporate sector to complement and maximize impact and ensure sustainability.
Caribbean Regional Fund for Wastewater Management (CREW) project	Global Environmental Facility	Multi-lateral	Implemented with the IDB and UN Environment	Below-market interest rate loans and credit enhancement for local commercial	Latin America and the Caribbean	18 countries in the Caribbean	Waste management	Financial mechanisms established in the first phase. In Belize and Guyana, National Wastewater Revolving Funds worth \$5m and \$3m respectively will provide below-market interest rate loans for wastewater treatment projects. In Jamaica, Credit Enhancement Facility worth \$3m will provide credit enhancement for local commercial bank financing of wastewater projects. The government of Jamaica pledged an additional \$12M, with total financing expected to grow substantially. 13 projects are planned involving either rehabilitation or construction of wastewater facilities. In Trinidad and

				bank financing				Tobago, the National Wastewater Revolving Fund (NWRF) was established with US\$2 million from the GEF to support the efforts of the Government of Trinidad and Tobago (GORTT) to address the urgent issues confronting the wastewater sector.
Green Fund of Trinidad and Tobago	Government of Trinidad and Tobago	National government	None	Funds collected through a designated tax and allocated to projects as grants	Latin America and the Caribbean	Trinidad and Tobago	Litter capturing	<p>Introduced in 2001 under Miscellaneous Taxes Act □ Secured by legislation: Funds kept separate from other taxes but represented in National accounts. 0.1% tax on Gross Sales or receipts – on every dollar spent in T&amp;T. Administered by the Ministry of Finance, advised by the Ministry of the Environment. Green Fund only used for Conservation, Remediation and Restoration activities</p> <p>Three projects to date: 1) Reforestation Project: TT \$1.9 million (US \$0.5 million), 2) Plastic collection and recovery: TT \$852,000 (US \$143,000), 3) Nariva Swamp Restoration Project: TT \$68 million (US \$11 million)</p>
IFC financing	IFC	Multi-lateral		Loans	Global	Global	Waste management phase; production/ manufacturing phase	IFC private sector financing includes financing for companies involved in plastics recycling, waste management and production of alternative materials
GloLitter Partnerships Project	Initial funding for the project is from the Government of Norway	Bilateral	International Maritime Organization (IMO) and the Food and Agriculture Organization of the United Nations (FAO)	Grants	Global	Ten countries, from five high priority regions (Asia, Africa, Caribbean, Latin America and Pacific) will	Waste management	<p>A global project to prevent and reduce marine plastic litter from shipping and fisheries. The GloLitter Partnerships Project aims to help shipping and fisheries move to a low-plastics future. GloLitter will assist developing countries identify opportunities to prevent and reduce marine litter, including plastic litter, from within the maritime transport and fisheries sectors, and to decrease the use of plastics in these industries, including identifying opportunities to re-use and recycle plastics.</p> <p>The project will consider the availability and adequacy of port reception facilities; look at enhancing awareness of the marine plastics issue within the shipping and fisheries sectors, including seafarers and</p>

						be selected to spearhead the project.		fishers; and encourage fishing gear to be marked so it can be traced back to its owner if discarded. The GloLitter project will include private sector participation through a global industry alliance and is seeking partners from major maritime and fisheries companies. At country level, GloLitter will expand government and port management capacities and instigate legal, policy and institutional reforms. Regional cooperation will also be enhanced.
Global Plastics Action Partnership (GPAP)	Initial funding from UK Government (DEFRA). Additional funding from the Canadian Government, and funding from Pepsico, Coca-Cola, Nestle and Dow Chemicals.	Bilateral, with additional private sector funding	Initiated by the Platform for Accelerating the Circular Economy (PACE). Hosted at the World Economic Forum.	Grants	Global	Currently: Indonesia, Ghana, Viet Nam. Other examples could be added to this list, depending on the capacity and additional resourcing brought into the Partnership.	All	<p>The Global Plastic Action Partnership (GPAP) was forged as a structured global platform for plastic action that enables public, private and civil society leaders and their initiatives to come together. Our common goal is to drive the transition towards a circular plastics economy while helping to restore our natural systems and creating growth opportunities.</p> <p>This investment will support the delivery of ambitions under the Commonwealth Clean Ocean Alliance. The Partnership provides a public-private collaboration platform to help translate political commitments to address plastic pollution into tangible strategies and investible actions plans. The outputs will be: a global plastics collaboration platform; support for national action partnerships to develop fact-based action plans; mobilizing funding of plastics action projects; engaging and leveraging existing expertise among partners; exchanging knowledge and learning to advance systems change. The first collaboration is with the Government of Indonesia. Collaborations in two other coastal nations (one in West Africa and a small island developing state) will be announced in coming months. Other examples could be added to this list, depending on the capacity and additional resourcing brought into the Partnership.</p>
Seychelles Blue Bond	Issued by Seychelles Government	National government	World Bank, Global Environment Facility	Blue bond	Africa	Seychelles	Not specified	The sovereign blue bond was issued with a ceiling value of US\$15 million, with a maturity of 10 years. The blue bond, as well as the program of marine and ocean-related activities it will support, was prepared with assistance from the World Bank and the Global Environment Facility. This support includes a partial World Bank guarantee (\$5 million) and a concessional loan from the Global Environment Facility (\$5 million), which will partially subsidize payment of the bond coupons. These credit enhancement instruments

								allowed for a reduction of the price of the bond by partially de-risking the investment of the impact investors, but also by reducing the effective interest rate for Seychelles by subsidizing the coupons. The proceeds will be used to capitalize a Blue Grants Fund (\$3 million) and a Blue Investment Fund (\$12 million), each of which will provide financing for marine and ocean-related activities that contribute to the transition to sustainable fishers. These proceeds will be managed by the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT), which will administer grants from the Blue Grants Fund, and the Development Bank of Seychelles (DBS), which will administer loans from the Blue Investment Fund. The two funds are designed to complement each other.
"MARINE" Initiative	Japan	Bilateral	None	Grants	Asia and the Pacific	Developing countries, focus on South East Asia	Ecodesign/alternative materials; waste management phase; litter capturing	Toward realization of the "Osaka Blue Ocean Vision" that aims to reduce additional pollution by marine plastic litter to zero by 2050, which was shared at the G20 Osaka Summit, Prime Minister Abe announced that Japan will support developing countries' efforts including their capacity building and infrastructure development in the area of waste management at the summit. To this end, the Government of Japan has launched the "MARINE Initiative" to advance effective actions to combat marine plastic litter at a global scale focusing on (1) Management of wastes, (2) Recovery of marine litter, (3) Innovation, and (4) Empowerment.
Promotion of Countermeasures Against Marine Plastic Litter in Southeast Asia and India	Japan	Bilateral	UNEP	Grants	Asia and the Pacific	Several countries in Southeast Asia, India	Production site leakage / losses; waste management phase	'Promotion of Countermeasures Against Marine Plastic Litter in Southeast Asia and India,' will develop a model for plastic leakage and monitor leakage hotspots along the Ganges and Mekong rivers. The initiative will also enhance information and knowledge on how to develop and implement countermeasures against marine plastic litter. Selected cities and local and provincial governments in India will also receive support to stop plastic pollution.

Clean Oceans Initiative	KfW Group on behalf of the German Federal Government, the European Investment Bank (EIB) and the Agence Française de Developpement (AFD)	Multilateral	Spanish Promotional Bank (ICO)	Long term loan financing for the public sector (sovereign and sub-sovereign), Investment grants, Long term financing to corporates, Project finance, Technical Assistance programmes	Global	Global, but particular focus on operations in riverine and coastal areas in developing countries in Asia, Africa and the Middle East. Includes Sri Lanka, Togo, Benin, Argentina, South Africa, China	Waste management	Clean Oceans Initiative to support the development and implementation of sustainable projects that will reduce pollution in the world's oceans over the next five years. This partnership will provide EUR 2 billion long-term financing for projects aiming at reducing marine litter, especially plastics, as well as untreated wastewater discharge, with a view to crowding-in private sector investment. The Clean Oceans Initiative will notably target the following sectors: <ul style="list-style-type: none"> <li>- Collection, pre-treatment and recycling of waste and particularly plastics collected on land, from rivers and from the sea;</li> <li>- Improved waste management in ports and harbours to support the reduction of marine littering from ships and transport on water;</li> <li>- Support to plastic prevention measures, market development for recycling plastics and other materials and public awareness building;</li> <li>- Support to the implementation of wastewater treatment plants that enable reduction in the discharge of plastics and other pollutants to rivers and oceans.</li> </ul>
Nessling Foundation Scientific Research Grants	Maj and Tor Nessling Foundation	Private not for profit	None	Grant	Global	Any country, but must have a link to Finland's environmental objectives	All	The Foundation primarily awards funding for solution-oriented postdoc projects and doctoral thesis projects whose results have a systematic and scalable impact on the progress of environmental protection. They also support the communication and implementation of researched environmental information to society. The topics covered by the grant include water risks and chemicalization and pollution.
Ocean Solutions Accelerator	Marc and Lynne Benioff as well as other private donors.	Private not for profit	Programme of the Sustainable Ocean Alliance	Equity investment	Global	Global	Ecodesign / alternative materials; litter capturing	The Ocean Solution Accelerator partners with founders to provide the guidance and resources needed to scale their businesses. They provide startups with US\$25,000 investment and access to an 8-week leadership and development program in the San Francisco Bay Area. Committed to accelerating 100 ocean technology startups by 2021.

The Saint Lucia National Conservation Fund (SLUNCF)	Massy Stores Saint Lucia	Private not for profit	SLUNCF	Grants	Latin America and the Caribbean	St Lucia	Waste management phase	Incorporated in 2016, the Saint Lucia National Conservation Fund (SLUNCF) is dedicated to the conservation, restoration, and effective management of Saint Lucia’s biodiversity and natural resources. The Saint Lucia National Conservation Fund (SLUNCF) has announced a Call For Proposals for Projects on the Management of Plastic Waste.
AI for Earth Grant	Microsoft	Private not for profit	None	Grant	Global	Global	All	AI for Earth awards grants to support projects that use AI to change the way people and organizations monitor, model, and manage Earth’s natural systems. Focus areas: climate, agriculture, biodiversity, and water.
Innovation Challenge - Ocean Plastic	National Geographic Society	Private not for profit	Sky Ocean Ventures	Grant and investment	Global	Global	Production / manufacturing phase; prevention, minimization, reuse	<p>Three teams from Chile, France, and Germany have been announced as the winners of the National Geographic and Sky Ocean Ventures Ocean Plastic Innovation Challenge. Launched in February 2019, the Ocean Plastic Innovation Challenge is a competition that asked problem solvers from around the globe to develop novel solutions to tackle the world’s plastic waste crisis. The three winning teams (Circular Economy: Algramo (Chile), Design: Qwarzo (France), Data Visualisation: #PerpetualPlastic (Germany)) have been recognized for their work in addressing the global issue of plastic pollution by providing alternatives to single-use plastic products, encouraging businesses to adopt a sustainable circular economy approach and developing visualizations to depict the issue of plastic pollution to catalyze action.</p> <p>Whilst NatGeo provides funding for a vast range of projects, it recently conducted the Innovation Challenge for Ocean Plastic. Reducing Ocean Plastic Pollution - RFP will support projects that are directly addressing the threat of plastic pollution in our waterways—before it reaches the ocean - coming soon.</p>



Waste Minimisation and Innovation Fund	New Zealand Ministry of Environment	National government	Auckland Council	Grant	Asia and the Pacific	New Zealand	Prevention, minimization, reuse	<p>The purpose of the Waste Minimisation Fund is to boost New Zealand's performance in waste minimisation. There is considerable scope to reduce waste and increase the recovery of useful resources from waste. Lifting our performance in recovering economic value from waste also provides environmental, social and cultural benefits and reduces the risks of harm from waste.</p> <p>This will require investment in infrastructure and systems for waste minimisation and developing educational and promotional capacity. The purpose of the fund is to provide some of the funding to ensure that this occurs. The waste disposal levy provides the revenue for the fund.</p>
Marine litter and microplastics: Promoting the environmentally sound management of plastic wastes and achieving the prevention and minimization of the generation of plastic wastes	NORAD	Bilateral	Basel, Rotterdam & Stockholm Conventions (BRS)	Grants	Global	Global but focus on Bangladesh and Ghana	Waste management phase; Prevention, minimization, reuse	<p>The Norad-funded project Marine litter and microplastics: Promoting the environmentally sound management of plastic wastes and achieving the prevention and minimization of the generation of plastic wastes (BRS-Norad-1 project) seeks to prevent and reduce marine litter and microplastics by strengthening capacity in Bangladesh and Ghana as well as at the regional and global levels.</p> <p>The objectives of the project are tightly aligned with those of many development agencies tackling the problem of plastic waste, marine litter and microplastic: 1) Prevent and significantly reduce marine litter and microplastics from sources in partner countries; 2) Infrastructure and systems for waste management, including material recycling, for waste from land-based activities in partner countries are improved; 3) Global commitments and national and regional instruments to prevent marine litter and microplastics are strengthened. The "Norad-Project" is implemented in Ghana and Bangladesh, in cooperation with Basel and Stockholm convention regional centers in Indonesia and Nigeria.</p>
Further actions to address plastic waste under the Basel Convention	NORAD	Bilateral	Basel, Rotterdam & Stockholm Conventions (BRS)	Grants	Global	BRS partner countries	Waste management	To assist partner countries to improve their management of plastic waste (BRS-Norad-2 project)

Pilot projects on plastic waste as part of the Basel Convention's small grants programme	NORAD	Bilateral	Basel, Rotterdam & Stockholm Conventions (BRS)	Grants	Global	Not specified	Waste management	A number of pilot projects on plastic waste will be implemented via the regional centers in 2020-2022 via the Basel Convention's small grants programme.
ProBLUE	Norway, Sweden, Iceland, France, Germany, Canada, European Commission and the United States.	Multilateral	World Bank	Trust Fund	Global	Global. Early commitments in East Asia.	Not specified	<p>A global Multi-Donor Trust Fund, that was launched in 2018, with a strong focus on marine litter. Some of the early commitments will be for East Asia, as one of the first movers. PROBLUE is a new Umbrella Multi-Donor Trust Fund (MDTF), housed at the World Bank, that supports healthy and productive oceans. PROBLUE supports implementation of Sustainable Development Goal 14 (SDG 14) and is fully aligned with the World Bank's twin goals of ending extreme poverty and increasing the income and welfare of the poor in a sustainable way. PROBLUE is part of the World Bank's overall Blue Economy program, which takes a multi-pronged, coordinated approach to ensuring the protection and sustainable use of marine and coastal resources.</p> <p>PROBLUE focuses on four key themes:</p> <ul style="list-style-type: none"> <li>the management of fisheries and aquaculture</li> <li>the threats posed to ocean health by marine pollution, including litter and plastics</li> <li>the sustainable development of key oceanic sectors such as tourism, maritime transport and off-shore renewable energy</li> <li>building the capacity of governments to manage their marine and coastal resources in an integrated fashion to deliver more and long-lasting benefits to countries and communities, including the role of nature-based solutions to climate change.</li> </ul>

Global Partnership on Marine Litter	Various over several years including Norway, Netherlands, Sweden, France, Germany, Canada, and the United States.	Multilateral	Multi-stakeholder partnership - any entity working to prevent and reduce marine litter can join the Partnership	Grants	Global	Global	All	The Global Partnership of Marine Litter (GPML) is a multi-stakeholder partnership that provides a unique mechanism to bring together all actors working to prevent marine litter and microplastics, with the aim of sharing knowledge and experience and advancing solutions to this pressing global issue. Its mission is to protect the global marine environment, human wellbeing and animal welfare by addressing the global problem of marine litter, in line with Target 14.1 of the Sustainable Development Goals: “by 2025, prevent and significantly reduce marine pollution of all kinds (...)”.
Plastic Waste Free Islands	Norwegian Agency for Development Cooperation (NORAD); The Didier and Martine Primat Foundation	Bilateral; private not for profit	IUCN	Grant	Global	Six small island developing states (SIDS) - three from the Pacific and three from the Caribbean	Production / manufacturing phase; waste management phase; prevention, minimization, reuse	With support from the Norwegian Agency for Development Cooperation (NORAD), IUCN launched the Plastic Waste Free Islands project in 2019. The overarching goal of the project is to reduce plastic leakage to the ocean from six small island developing states (SIDS) - three from the Pacific and three from the Caribbean. The project also aims to repurpose waste into commercially viable products, thereby generating job opportunities and income for local communities. Key regional bodies will also develop and endorse a blueprint for looking at entire value chains, from production to disposal, and also at plastic usage and wastage in different sectors (such as tourism and fisheries). These regional bodies will be able to identify further opportunities to scale up the blueprint’s application, which can be used by any island country.
Norwegian Development Programme to Combat Marine Litter and Microplastics	Norwegian Government	Bilateral	Partners include IUTN, SINTEF, WWF, FAO, GEF, UNEP, GRID-Arnedal, Research Council of Norway, World Bank,	Grants	Global	Global	Production / manufacturing phase; prevention, minimization, reuse; waste management phase; litter capturing	In 2018, the Norwegian government launched a new development programme to combat marine litter and microplastics. The programme is intended to contribute to Sustainable Development Goal (SDG) 14.1 which states that by 2025, the world should prevent and significantly reduce marine pollution of all kinds. Currently funds 34 projects.  The main objective of the Norwegian development programme to combat marine litter and microplastics is to prevent and greatly reduce the extent of marine litter from large sources in developing countries. To achieve this, funding is set to focus on four outcomes: 1) Management of plastic waste in partner countries is improved. 2) Selected coastal areas and rivers are cleared of waste and the waste is

			WHO, among others.					sustainably managed. 3) Private sector performance regarding sustainable production and use, and responsible waste management, is improved. 4) Global commitments and national and regional instruments to prevent marine litter are strengthened.
Norwegian Ministry of Climate and Environment funds towards international cooperation on the topic of marine litter and microplastics	Norwegian Ministry of Climate and Environment	Bilateral	UNEP, GRID-Arendal	Grants	Global	Various	All	Funds towards international cooperation on the topic of marine litter and microplastics hosted by the Ministry of Climate and Environment. The total sum amounts to 25 million NOK annually for collaboration with the private sector (primarily on a national level) and to support global policy-making to address marine litter and microplastics. For 2020, 5 million NOK has been allocated as core funding to GRID-Arendal's newly established programme on waste and marine litter, with a focus on the Arctic, the work of the UNEA, the policy-related developments of the Basel Convention as well as communication activities related to marine litter.
Odyssey Impact Investments	Odyssey Impact Investments	Private for profit	None	Private equity fund	Global	Not specified	Not specified	Odyssey Impact investments is an investment company based in Luxembourg with a global scope of activities. It structures and manages alternative investment vehicles that offer professional investors private equity investment opportunities with a quantifiable impact and market-level returns. All of their investments focus on climate change mitigation and single-use plastic reduction.
The Recycling Partnership	Over 40 private companies	National government		Grants	North America	US	Waste management phase	Formerly known as the Curbside Value Partnership, the Recycling Partnership facilitates public-private partnerships and provides grants and technical assistance to improve local recycling programs. The Recycling Partnership works across the full recycling supply chain, from local government to industry to end markets, haulers, material-recovery facilities, and converters, with the goal of making recycling easier for Americans. The Recycling Partnership is supported by a broad group of consumer-goods, packaging, and other manufacturers, as well as waste managers and industry associations working to make access to recycling easier.

Korea Green Growth Trust Fund	Republic of Korea	Bilateral	World Bank	Grants (in support of World Bank's investments)	Global	Global	Not specified	The Korea Green Growth Trust Fund is a partnership between the World Bank Group and the Republic of Korea, established in 2011 to support countries as they shift to green development path.
Norwegian Retailers' Environment Fund	Retailers which are members of the fund	Private not for profit	None	Grants	Global	All	Waste management phase; Prevention, minimization, reuse; litter capturing	<p>The Norwegian Retailers' Environment Fund contributes to reducing pollution from plastic littering, increasing recycling and reducing the consumption of plastic bags in Norway. They have allocated 20 million NOK to international projects last year.</p> <p>The Norwegian Retailers' Environment Fund gets NOK 0,5 from each plastic bag bought from the Fund's member retailers. It is earmarked environment measures that support the Fund's purposes. Member retailers cover over 80% of the plastic bags sold in Norway.</p>

Project to tackle marine litter and plastic pollution in Southeast Asia (SEA)  (Two submissions on the same were merged in this table)	Sweden International Development Agency (Sida)	Bilateral	UNEP and the Coordinating Body on the Seas of East Asia (COBSEA)	Grants	Asia and the Pacific	Countries in South East Asia	Waste management phase; Prevention, minimization, reuse	10 September 2018: The UN Environment Programme (UNEP, or UN Environment), the Coordinating Body on the Seas of East Asia (COBSEA) and the Government of Sweden have announced a project to tackle marine litter and plastic pollution in Southeast Asia (SEA). The project will work to minimize marine litter, raise awareness on plastic pollution and improve the region's waste management systems. The project, funded by the Sweden International Development Agency (Sida) and implemented by UN Environment and COBSEA, will involve stakeholders throughout the plastic value chain, from the plastic producers to the waste managers to those in coastal communities suffering most the impacts of plastic pollution, to ensure less plastic leaks through waste management systems working with research institutions, companies, government bodies and civil society to reduce the use of the most harmful and difficult to recycle plastic, boost collection and recycling of high-value plastic such as PET, and generate region-wide public awareness and support for better plastic pollution policies. The scientific basis for addressing marine litter will be strengthened, by collecting and analyzing data on plastic leakage and marine litter at local, national and regional levels. UNEP, COBSEA and partners will use this baseline data to help all stakeholders in the plastic lifecycle develop evidence-based policies and plans that will reduce the amount of marine litter flowing from the region.
Marine Plastics and Coastal Communities (MARPLASTICCs)	Swedish International Development Cooperation Agency (SIDA)	Bilateral	IUCN	Grants	Global	Kenya, Mozambique, South Africa, Thailand, Viet Nam	All	MARPLASTICCs uses an integrated lifecycle approach which supports a global transition from a linear take-make-dispose model to a circular plastics economy

Baltic Solutions to Plastic Pollution	Swedish Postcode Lottery Foundation	Private not for profit	IUCN	Grant	Europe	Countries in the Baltic region	All	With the support of the Swedish Postcode Foundation, the Global Marine and Polar Programme (GMPP) endeavours to demonstrate the impacts of plastic pollution in the Baltic region on climate change, biodiversity and food safety. GMPP has brought together a network of scientists to conduct desk and field research and laboratory experiments, and to provide sound scientific evidence of the negative environmental and social impacts of plastic pollution in the region. Based on this evidence, and together with leading regional experts and grassroots organisations, GMPP will then investigate policy-leveraging mechanisms to provide entry points for recommendations.
Funding stream for ocean conservation and science	The David and Lucile Packard Foundation	Private not for profit	None	Grant	Global	The United States, Mexico, Chile, Indonesia, China and Japan	Not specified	One of the David and Lucile Packard Foundation's long-term goals is to restore the health and productivity of the world ocean, on which all life depends. The foundation's stated aims for the funding stream are: Help the United States, Mexico, Chile, Indonesia, China and Japan to ensure that fishing and marine aquaculture are sustainable and to protect places that are vital to maintaining biodiversity and wild fish stocks. Promote global markets for sustainable seafood. Eliminate illegal, unreported and unregulated (IUU) fishing—referred to here as illegal fishing—around the world. Protect seabirds and shorebirds and their habitats. Understand and proactively address the impacts of greenhouse gas emissions on the ocean. It has funded projects directly on plastic pollution, such as Monterey Bay Aquarium Research Institute research on microplastics and ocean plastic pollution.
'Meriroskahaaste' challenge prize - contest for ideas to reduce the amount of litter in the Baltic Sea	The S Group (Finnish Retail Cooperative)	Private for profit	Finnish Environment Institute (SKYE)	Grant (prize money) for winner. Crowdfunding campaigns for finalists.	Europe	Countries in the Baltic region	All	The goal of the 'Meriroskahaaste' marine litter challenge prize was to find solutions to decrease the amount of litter ending up in the Baltic Sea. The winning trio – Paptic Ltd, VTT's PlastBug team, and the 'Pidä Saaristo Siistinä' environmental association – received a total of 32,000 euros of prize money for adding momentum to the saving of the Baltic Sea.

Incubator Network to Accelerate Ocean Plastic Solutions	U.S. State Department	Private not for profit	Circulate Capital, SecondMuse, Australian Government's Department of Foreign Affairs and Trade.	Incubator network	Asia and the Pacific	Countries in South and South East Asia	Not specified	<p>Initiative to accelerate solutions to ocean plastic waste by partnering with existing incubators to build ecosystems of waste management and recycling innovators. The Company and SecondMuse developed The Incubator Network in partnership with Ocean Conservancy, a leading ocean protection nonprofit; it is supported by a new grant from the U.S. State Department. The Incubator Network's first collaborative project, the Ocean Plastic Prevention Accelerator, is also supported by the Australian Government's Department of Foreign Affairs and Trade.</p> <p>The Company anticipates unlocking more than \$20 million in funding for The Incubator Network from foundations, corporations, and development agencies. The Company made the announcement earlier today at the G7 Oceans Partnership Summit in Halifax, Canada.</p> <p>By partnering with existing incubator initiatives, The Incubator Network seeks to rapidly scale the number of innovators in the sector, enabling eco-systems, and support for those innovations.</p>
Ocean Plastic Prevention Accelerator (OPPA)	U.S. State Department and Australian Government's Department of Foreign Affairs and Trade	Private not for profit	Supported by Certified B Corporation, The Incubation Network and Second Muse	Venture capital	Asia and the Pacific	Indonesia	Waste management	<p>Ocean Plastic Prevention Accelerator (OPPA) is building a social innovation ecosystem to address ocean plastic leakage within Indonesia. Through various program activities, OPPA is creating a collaborative network for innovative solutions to address challenges in the local waste management system and recycling sector.</p> <p>Provides an accelerator programme and venture support to facilitate waste-related ventures to start and grow in Surabaya.</p>
Tearfund's Matched Giving Appeal	UK Department for International Development (DFID)	Bilateral	Tearfund	Matched giving	Asia and the Pacific	Pakistan	Recycling	<p>Today, Tearfund launches its Matched Giving Appeal to help build new recycling hubs in Pakistan that will prevent further damage to the environment, protect people's health and provide jobs. Backed by the Department for International Development, donations to Tearfund's Matched Giving Appeal will be doubled by the UK government, up to £2 million. This means that Tearfund will be able to make a bigger difference in some of the world's poorest places. Match funding from the UK government will be used by Tearfund's partners in Pakistan.</p>



The Sustainable Manufacturing and Environmental Pollution (SMEP) programme	UK Department for International Development (DFID)	Bilateral	In partnership with the Trade, Environment and Sustainable Development Branch (TED) of the United Nations Conference on Trade and Development (UNCTAD)	Grants	Global	Developing countries, focus on Sub-Saharan Africa and South Asia	Production / manufacturing phase	<p>The Sustainable Manufacturing and Environmental Pollution (SMEP) programme is a £25million research programme funded by DFID-UKaid over a period of 5 FYs. It aims at reducing the levels of pollution generated by manufacturing processes in developing countries.</p> <p>The programme will aim to achieve its objectives by implementing the following activities:</p> <ul style="list-style-type: none"> <li>o Funding research to develop the evidence to support practical solutions with a high chance of take up and impact;</li> <li>o Developing and testing innovative technology-based solutions that improve the environmental impacts of manufacturing;</li> <li>o Identifying and developing suitable supporting business models and policies to adopt innovative technology-based solutions.</li> <li>o Development and testing of new symbiotic production processes that reduce environmental waste and establish new sources of wealth and growth.</li> <li>o Funding R&amp;D activities to address the problem of plastic ocean pollution, which was recently highlighted as a key issue in developing countries.</li> <li>o Co-design/ development of toolkits to be used by policy makers and planners.</li> </ul>
Waste Pilots	UK Department for International Development (DFID)	Bilateral	Funds also provided by businesses such as Unilever and Coca-Cola, as well as waste management firms and regional and national governments in developing nations.	Funding for pilot projects	Global	Developing commonwealth countries. Active in Ghana, Bangladesh and Uganda.	Waste management phase, recycling	<p>Up to £3m to pilot improved waste management approaches in cities in developing Commonwealth countries. Three pilot projects (up to £3m) have been designed in Ghana, Bangladesh and Uganda to test approaches to increasing plastic recycling rates.</p> <ul style="list-style-type: none"> <li>i. Ghana: Working with businesses to reduce plastic waste in Accra, as part of the World Economic Forum hosted Global Plastics Action Partnership.</li> <li>ii. Bangladesh: Increasing the proportion of plastic waste generated by the capital Dhaka that can be reused by industry, particularly garment manufacturing.</li> <li>iii. Uganda: Support for the Kampala Plastics Recycling Partnership, which includes private companies such as Coca-Cola, the Ugandan Government and other stakeholders, to improve the sustainable management of plastic waste in Greater Kampala.</li> </ul>

Commonwealth Clean Ocean Alliance Technical Assistance Facility	UK Government	Bilateral	None	Technical assistance packages	Global	Commonwealth countries	Prevention, minimization, reuse; Ecodesign / alternative materials; recycling; litter capturing	<p>Technical assistance will be made available to Official Development Assistance (ODA) eligible CCOA member countries to help them meet the ambitious political commitments made under the CCOA to reduce plastic pollution. The technical assistance package will be developed with each country to tailor it to their needs.</p> <p>Those political commitments are:</p> <ul style="list-style-type: none"> <li>i. Take steps to eliminate all avoidable single-use plastic waste;</li> <li>ii. Significantly reduce single-use plastic carrier bags by 2021;</li> <li>iii. Ban the sale and manufacture of microbeads in rinse-off cosmetic and personal care products by 2021.</li> </ul>
The Commonwealth Marine Plastics Research and Innovation Framework	UK Government	Bilateral	India, Canada, Unilever, Waitrose, The British Plastics Federation, the Ellen MacArthur Foundation, the Waste and Resources Action Programme (WRiAP), RPC Group Plc and Mott MacDonald	Jointly-funded interdisciplinary research and innovation programmes developed through the Framework, and activities developed and delivered by individual partnering countries and organisations	Global	Commonwealth countries	All	<p>The Commonwealth Marine Plastics Research and Innovation Framework will provide a platform and overarching structure for bringing together governments, industry, researchers and practitioners from across the Commonwealth to work together to tackle this global issue. The initiative will comprise both new jointly-funded interdisciplinary research and innovation programmes developed through the Framework, and activities developed and delivered by individual partnering countries and organisations. An important aspect of the Framework will be providing a forum for sharing research plans and emerging findings with all partners, increasing coordination and adding value to individual programmes. The Framework will also support the development of links between researchers and innovators across the Commonwealth, driving new partnerships and strengthening capacity. The Framework will be delivered both by and for the Commonwealth.</p> <p>It will consist of jointly-funded interdisciplinary research and innovation programmes developed through the Framework, and activities developed and delivered by individual partnering countries and organisations</p>

Commonwealth Marine Litter Programme (CLIP)	UK Government, DEFRA	Bilateral	Centre for Environment Fisheries and Aquaculture Science (Cefas)	Funding for capacity building	Global	Commonwealth countries in South Pacific, Caribbean, Asia and Africa	Litter capture	The Commonwealth Marine Litter Programme (CLIP) is led by the UK through the Centre for Environment Fisheries and Aquaculture Science (Cefas). The programme is supporting a number of ODA-eligible Commonwealth countries to develop national litter action plans focusing on plastics entering the ocean, with an emphasis on capacity building and developing plastics monitoring programmes. Once completed (by 2020) outcomes from this programme will be shared with all CCOA members, and the national litter action plans will be made available for other countries to adapt and implement.
APEC Sub-Fund for Marine Debris Management and Innovation (MDMI)	United States	Bilateral	APEC	Grant	Global	All APEC members	Waste management; litter capturing	The APEC Support Fund Sub-fund for Marine Debris Management and Innovation (MDMI) supports capacity building activities to: promote the development of solid waste management infrastructure; inform the development of policies, regulations and practices to improve waste management and marine debris management; promote the development of technical innovations to create value from plastic waste; increase access to financing and promote the development of innovative financing mechanisms; and promote new technologies for reducing the prevalence and environmental impact of marine debris.
Loan-portfolio guarantee to mobilize outside private investment to combat plastic pollution in oceans throughout the Indo-Pacific region	United States Agency for International Development (USAID)	Bilateral	In partnership with impact-investment firm Circulate Capital	Loan portfolio guarantee	Asia and the Pacific	The fund will deploy at least 50 percent of the total investments in Indonesia, Philippines, Vietnam, and Sri Lanka	Waste management	USAID announced a \$35 million, 50-percent loan-portfolio guarantee with Circulate Capital that will help mobilize outside private investment to combat plastic pollution in oceans throughout the Indo-Pacific region.  The partial-loan guarantee from USAID is a tool designed to attract private capital to a blended-finance fund and offer protection to investors by lowering the downside risk of loss, which makes investment in developing markets more appealing. The initiative already has secured more than \$100 million in private-sector commitments from the world's leading businesses. Circulate Capital will invest the portfolio in companies, innovations, and infrastructure projects that will strengthen recycling and waste management systems - central to reducing and mitigating the effects of marine debris in oceans. The assistance will also create new business opportunities, incubate marketplaces, and empower women entrepreneurs in the environmental field.

Municipal Waste Recycling Program	USAID	Bilateral	Development Innovations Group (DIG) administers the program	Grants	Asia and the Pacific	Indonesia, The Philippines, Vietnam and Sri Lanka	Waste management phase	<p>USAID's Municipal Waste Recycling Program is designed to reduce land-based sources of marine plastics pollution in Indonesia, the Philippines, Sri Lanka, and Vietnam. With proximity to two oceans, the cities of these countries are critical to reducing mismanaged plastics waste. Funded under the Making Cities Work IDIQ, the program provides grants and technical assistance for promising solid waste management and waste recycling efforts in urban and peri-urban areas, enhances the effectiveness of such programs and makes recommendations for future investments in municipal waste recycling.</p> <p>The Municipal Waste Recycling Program grants support innovative and/or scalable solid waste management and recycling activities that promote social inclusion, empower women and youth, generate jobs and economic growth, and strengthen resilience.</p>
Global Environmental Facility Funds	Various donor countries	Multilateral	The World Bank serves as the GEF Trustee, administering the GEF Trust Fund	Grants, financing / investments	Global	Developing countries and countries with economies in transition	Production / manufacturing phase; use phase	<p>GEF funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements.</p> <p>GEF-7 will explore the important synergies between the International Waters and the Chemicals and Waste focal areas to address specifically the challenge of marine litter and micro-plastics. Waste consisting of plastics can contribute to the POPs challenge as POPs contained in plastics can be released in the environment including oceans, if not properly managed. Marine litter in the form of micro-plastics to a significant extent derives from land-based activities and should also be seen in the context of waste management issues dealt with under this focal area. Recognizing the need to transform the entire life cycle of plastics to reduce marine plastic pollution, the GEF will invest in a few strategic Circular Economy initiatives to promote the adoption of closed loop production and consumption patterns instead of traditional linear take-make-waste approaches. Investments will be focusing on public/private investments to transform the plastic life cycle.</p>
Trash Free Seas Alliance	Various donors	Private not for profit	Alliance members	Research and implementation grants	Global	Over 100 countries globally	Not specified	Launched by Washington-based NGO Ocean Conservancy in 2012, the Alliance brings together leaders from the private sector, civil society organizations, and academia to identify pragmatic and measurable solutions to the ocean plastic crisis. The group has collectively

								committed more than \$100 million in funding for research and incubation of scalable solutions to the ocean plastic crisis and eliminated 500,000 tons of virgin plastic from products and packaging annually. Collectively, Alliance members will work in over 100 countries and 1,000 cities to advance marine debris and waste management solutions through policy, education, research, and collaborative initiatives, engaging 1 million people annually in direct, on the ground action to combat marine debris and raising awareness on the threats of marine debris to over 1 billion people globally.
World Bank support for national governments	World Bank	Multilateral	None	Loans	Global	Countries include Thailand, Indonesia, Cambodia, Philippines, Myanmar and Vietnam	Not specified	Loans for several national governments (currently including Thailand, Indonesia, Cambodia, Philippines, Myanmar and Vietnam) to support the development and implementation of policies and regulations, enhance analytic capacity, and finance critical investments. Alternatively, the World Bank may implement these activities on behalf of national governments.
Sustainable Development Bond on Sustainable Use of Oceans and Coastal Areas – the “Blue Economy”	World Bank	Multilateral	Credit Suisse Securities (Europe) Ltd., through its Impact Advisory and Finance Department, acted as the sole manager of the transaction.	Sustainable Development Bond	Global	Global	Not specified	The World Bank (International Bank for Reconstruction and Development, IBRD rated Aaa/AAA) issued a USD 28.6 million 5-year Sustainable Development Bond as part of ongoing efforts to raise awareness for the vital role fresh and saltwater resources play for people, livelihoods, and the planet.
World Bank bond to highlight challenge of	World Bank (International Bank for Reconstruction and	Multilateral	Morgan Stanley & Co. LLC. was the sole	Sustainable Development Bond	Global	Global	Not specified	The World Bank plays a convening role in multi-sectoral efforts to beat plastic pollution. These efforts include: Supporting analytical studies which identify important gaps in infrastructure as well as behavior change; Supporting policy reforms and financing investments in solid waste management; Strengthening regulatory reforms and fiscal mechanisms; Leveraging private sector investment and blended

plastic waste in oceans	Development , IBRD)		distributor of the bond					financing models; Facilitating coordination and collaboration; Fostering global best practices and knowledge sharing.
World Wildlife Fund (WWF) Conservation Finance and partners subsidized credit facility to reduce biodiversity impacts of hotels operating on the Thai coastline	World Wildlife Fund (WWF) Conservation Finance	Private not for profit	Credit facility was launched by Kasikorn Bank, the second largest commercial bank in Thailand	Subsidised credit facility	Asia and the Pacific	Thailand	Waste management; litter capturing	World Wildlife Fund (WWF) Conservation Finance and its partners designed a \$40 million subsidized credit facility to reduce biodiversity impacts of hotels operating on the Thai coastline. This credit facility was launched by Kasikorn Bank, the second largest commercial bank in Thailand. It offers discounted interest rates of up to -1.5% of the minimum lending rate for hotels committed to reducing their impacts on marine biodiversity and improving their environmental management. The facility offers long-term loans to finance investments mainly in wastewater treatment, solid waste management, and water consumption management. To participate, the hotels must adopt an Environmental Management System and green certification.