

G20 Report on Actions against Marine Plastic Litter

Second Information Sharing based on the
G20 Implementation Framework



2020

Copyright © Ministry of the Environment, Japan, 2020

Disclaimer: The report does not necessarily provide exhaustive documentation of all activities by G20 members, other the countries and regions sharing the Osaka Blue Ocean Vision and key international organisations; rather it documents their on-going efforts and best practices at the time when compilation work was conducted between August 2020 and September 2020.

The information included in this report is based on voluntary submissions from the G20 members, other the countries and regions sharing the Osaka Blue Ocean Vision, and international organisations. For details of actions, please refer to the direct links in each description.

Photos: © Pixabay, Unsplash

2nd edition (As of 30 November 2020)

Acknowledgements

This report is the second compilation report on policies and measures with regards to marine plastics litter taken / to be taken by the participating countries, regions and organizations. This comprehensive report was produced under the responsibility of the Ministry of Environment, Water and Agriculture, Kingdom of Saudi Arabia, with the support of the Ministry of the Environment, Japan, and the Institute for Global Environmental Strategies (IGES) as a follow-up of the G20 Implementation Framework for Actions on Marine Plastic Litter established at the G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth, Karuizawa, Japan, held in June 2019. The first report was published in October 2019 based on the voluntary submission from the G20 members and outreach countries, under Japan G20 presidency. The scope of this year's report has been extended to a wider variety of countries in addition to the G20 members, including the countries and regions sharing the Osaka Blue Ocean Vision, to identify the holistic picture of marine plastic litter countermeasures at the global level. For this year's report, nine non-G20 countries newly contributed to the report by providing their inputs at a voluntary basis. From the G20 and outreach members, 16 countries continuously and newly submitted their actions for this year. In order to highlight key updates from 2019, the updated parts are underlined by the countries which took part in the first report. Since various international organisations are also actively engaged in the global marine plastic litter issues, the report covers the implementation status by ten international organisations and NGOs sharing the vision based on their reporting.

The original information on actions described in this document has been provided by the following members and countries:

【Countries】

Australia
Azerbaijan
Canada
Chile
Finland
France
Germany
Islamic Republic of Iran
Italy
Japan
Maldives
Myanmar
Netherlands
Norway
Philippines
Republic of Korea
Saudi Arabia
Singapore
Solomon Islands
Spain
Sri Lanka
Turkey
United Kingdom (UK)
United States of America (US)
European Union (EU)

【International organisations / NGOs】

Asian Development Bank (ADB)
Ellen MacArthur Foundation
Economic Research Institute for ASEAN and East Asia (ERIA)
Global Environment Facility (GEF)
International Resource Panel (IRP)
Ocean Conservancy
Organisation for Economic Co-operation and Development (OECD)
United Nations Environment Programme (UNEP), Asia and the Pacific Office
United Nations Industrial Development Organization (UNIDO)
World Bank (WB)

The provided information was coordinated and compiled by Ayako Mizuno, Chika Aoki-Suzuki, Emma Fushimi, Miki Inoue, Mizuki Kato and Yasuhiko Hotta of IGES.

With Saudi Arabia and Japan holding the G20 Presidency in 2020 and 2019, we would like to thank the number of countries, regions and organisations for their prompt submission and cooperation. We hope that this report will be helpful to promote policies and measures among the contributing countries and organisations by peer learning from best practices, as well as for the use of the wider international community.

Acronyms and Abbreviations

3Rs	Reduce, Reuse, Recycle
ADB	Asian Development Bank
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CE	Circular Economy
COBSEA	Coordinating Body on the Seas of East Asia
COVID-19	Coronavirus disease 2019
CSR	Corporate Social Responsibility
DMC (of ADB)	Developing Member Country of Asian Development Bank
EC	European Commission
EPR	Extended Producer Responsibility
EPS	Expanded Polystyrene
ERIA	Economic Research Institute for ASEAN and East Asia
FAO	Food and Agriculture Organization of the United Nations
G20	Group of Twenty
G7	Group of Seven
GPAP	Global Plastics Action Partnership
GEF	Global Environment Facility
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
IMO	International Maritime Organization
INTERPOL	International Criminal Police Organization
IRP	International Resource Panel
KSA	Kingdom of Saudi Arabia
MARPOL	International Convention for the Prevention of Pollution from Ships
MPL	Marine Plastic Litter
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PE	Polyethylene
PET	Polyethylene terephthalate
PO	Polyolefin
PS	Polystyrene
PVC	Polyvinyl chloride
PVDC	Polyvinylidene dichloride
R&D	Research and Development
REACH	European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
SDGs	Sustainable Development Goals
SME	Small and Medium-sized Enterprises
SUP	Single-Use Plastics

UN	United Nations
UNCLOS	United Nations Convention for the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
WB	World Bank



Table of Contents

- Acknowledgements..... i
- Acronyms and Abbreviations..... ii
- 1. Introduction 1
- 2. Policy framework for MPL2
 - 2.1. National Action Plan (Countries) / Action Plan (International organisations and NGOs).....2
 - 2.2. Legal framework.....12
 - 2.3. Indicators.....19
- 3. Measures and Achievements26
 - 3.1. Prevention and reduction of plastic waste generation26
 - 3.2. Environmentally-sound waste management and cleanup of marine plastic litter38
 - 3.3. Promotion of innovative solutions53
 - 3.4. Multi-stakeholder involvement and awareness-raising60
 - 3.5. Sharing scientific information and knowledge: R&D and Monitoring.....71
 - 3.6. Promotion of international cooperation80
- 4. Challenges.....101
- 5. Best Practices.....105
 - 5.1. National level.....105
 - 5.2. Local level110
 - 5.3. Private sector111
 - 5.4. International cooperation113
- 6. Further Information119

1. Introduction

Plastic has long played a significant role in human livelihoods in terms of its versatility and wide-ranging applications. However, as reported in the last few years, the amount of plastic in the world's oceans has been rapidly growing year by year, posing a threat to the environment and to our way of life. The problem of marine plastic litter (MPL) is expected to become even more serious in the future because of the rapid population growth, urbanisation and accompanying increased resource consumption. It is estimated that oceans will contain more plastic than fish by 2050 without immediate and sustained action according to a report by the World Economic Forum (2016). With the onslaught of the COVID-19 pandemic, there has been a surge in production and consumption of masks and protective equipment, which are mostly plastic products. The UNCTAD reported that this pandemic has resulted in increasing pollution from disposable products, such as plastic face masks and hand sanitiser bottles (UNCTAD, 2020). Indeed, there is a renewed realisation of the importance and value of plastic but that does not change the gravity of the plastic litter problem; if anything it is making more sense to adopt a life-cycle approach taking into consideration the national situations and specific barriers each country is facing. It goes without saying that the international community must continue to deal with these issues as a matter of urgency, and further global coordinated actions at multiple levels are required to address MPL issues in this challenging time.

Marine litter issues, especially MPL and microplastics, have been intensively discussed at various international fora, such as UNEA (United Nations Environment Assembly), G7 and G20. At the G20 Hamburg summit in July 2017, the "G20 Action Plan on Marine Litter" was successfully launched. In light of this Action Plan, the "G20 Implementation Framework for Actions on Marine Plastic Litter" was established at the G20 Ministerial Meeting in June 2019, Karuizawa. The "Osaka Blue Ocean Vision", which aims to reduce additional pollution by MPL to zero by 2050 through a comprehensive life-cycle approach, was first shared by G20 leaders at the G20 Osaka Summit in 2019 and has now been widely shared at various international fora as a common global vision. In order to achieve this vision, the G20 Implementation Framework was also endorsed by the G20 Osaka Leaders' Declaration and has received additional support from multiple members. The number of countries and regions sharing the Osaka Blue Ocean Vision has risen to 86 countries and regions as of September 2020.

Under the G20 Implementation Framework, the G20 members will facilitate implementation of actions by G20 members in line with the G20 Action Plan on Marine Litter based on respective national policies, approaches and circumstances. The G20 members will also share and update information on relevant policies, plans and measures taken/to be taken on a voluntary basis, and promote policies and measures by peer learning from best practices.

With this as a background, the first G20 report on Actions against Marine Plastic Litter was published in 2019, based on the voluntary submissions from the 20 countries/members in the G20 community, under Japan's G20 presidency. For efficient information-sharing and updating as well as for outreach to the wider international community, the first G20 Marine Plastic Litter portal site was also launched (<https://g20mpl.org/>).

In light of last year's outcomes, the second G20 report on Actions against Marine Plastic Litter was prepared in 2020, under the Kingdom of Saudi Arabia's G20 Presidency to promote policies and measures through information and knowledge-sharing based on the G20 Implementation Framework, among and beyond the G20. This report covers actions by the G20 members, countries and regions that have shared the Osaka Blue Ocean Vision, as well as by relevant key international organisations.

It is hoped that this report will contribute to accelerating the efforts by each country/member, and to finding opportunities for further international cooperation to reach a solution on MPL issues.



2. Policy framework for MPL

This section is organised based on three key components, “2.1. National Action Plan”, “2.2. Legal framework”, and “2.3. Indicators”, which make up the national policy framework for the MPL. Key policies or plans at national level are included in section 2.1.; legal measures on MPL in section 2.2.; and targets and indicators at the national level for measuring progress are described in section 2.3.

2.1. National Action Plan (Countries) / Action Plan (International organisations and NGOs)

Most of the reporting countries (19 out of 25 countries) have already formulated a strategy and action plan relevant to marine plastic litter at the national level, from the perspectives of plastic resource circulation and marine environment protection. Even in countries where these have not yet been established, there are plans or ongoing processes to develop such action plans and strategies targeting sea-based and land-based marine plastics litter (e.g. Chile, Iran, Myanmar).

International organisations and NGOs are also key players in tackling MPL. The vast majority of the respondents to the survey have action plans or organisational directives with regard to MPL, viewing it as an international problem in itself or as an integral part of broader issues. They aim to lead the discussion surrounding MPL on many fronts and tackle MPL from various angles, including providing technical assistance to the target countries, conducting clean-up activities, assisting with public-private collaboration, and promoting resource efficiency, innovation and plastic circularity.

Countries

Australia

■ National Action Plan

(a) 2018 National Waste Policy

Based on circular economy principles, the 2018 National Waste Policy includes strategies to reduce waste generation, improve resource recovery, increase recycled content in goods and infrastructure, and reduce the impact of plastic and packaging on the environment. A copy of the Policy is available at

<http://www.environment.gov.au/protection/waste-resource-recovery/national-waste-policy>

Azerbaijan

■ National Action Plan

(a) National Action Plan on “Reducing the negative impact of plastic packaging waste on environment in the Republic of Azerbaijan for 2019 - 2020” was approved by the Order of the President of the Republic of Azerbaijan (dated 7 February 2019, No. 935) and appropriate measures are being taken towards its implementation.

(b) National Strategy on “Improvement of solid waste management in the Republic of Azerbaijan for 2018 - 2022 years” was approved by the Order of the President of the Republic of Azerbaijan (dated 1 November 2018, No. 637).

(c) Development Concept on “Azerbaijan 2020: Look for future” was approved by the Order of the President of the Republic of Azerbaijan (dated 29 December 2012, No. 800).

(d) National strategy on “Hazardous waste management in Azerbaijan” was approved by the Decision of Cabinet of Ministers of the Republic of Azerbaijan (dated 25 August 2004, No. 117).

Canada

■ National Action Plan

- (a) In November 2018, Canadian Environment Ministers agreed to work collectively toward a common goal of zero plastic waste. To this end, they approved in principle a **Canada-wide Strategy on Zero Plastic Waste**, which outlines a vision to keep all plastics in the economy and out of landfills and the environment. The strategy aligns with the Ocean Plastics Charter—a key outcome of Canada's G7 Presidency in 2018—and was developed with input from industry, non-governmental organisations and Canadians. It outlines areas where changes are needed across the plastic lifecycle, from design to collection, clean-up and value recovery, and underscores the economic and business opportunities resulting from long-lasting and durable plastics.
- (b) Federal, provincial and territorial governments adopted a **Canada-wide Action Plan on Zero Plastic Waste** to implement the Strategy. The Phase 1 Action Plan, adopted in June 2019, will focus government efforts across a broad range of activities. They include achieving consistent extended producer responsibility programmes (which place responsibility on companies that manufacture plastic products or sell items with plastic packaging to manage the collection and recycling of these products at their end-of-life); a roadmap to address single-use and disposable plastics; support for recycling infrastructure and innovation in plastics manufacturing; and, tools for green procurement practices.
- (c) In July 2020, Environment Ministers approved the second and final phase of the Action Plan. The Phase 2 Action Plan outlines timelines for tangible, coordinated action to: improve consumer, business and institution awareness; reduce waste and pollution from aquatic activities including fishing and aquaculture; advance science on the impacts of plastics pollution and inform solutions along the value chain; support capture, clean-up and prevention of plastic pollution; and contribute to global action. Federal, provincial and territorial Ministers also agreed to work together to consider how to mitigate environmental impacts related to the increased amounts of waste generated by the use of personal protective equipment such as single-use masks, gloves and gowns due to COVID-19.

Chile

■ National Action Plan

- (a) Chile is currently developing a national marine debris management strategy and its action plan for the period 2020 - 2025. This strategy aims to:
- Identify the stakeholders that directly and indirectly generate waste from terrestrial and marine sources.
 - Establish and apply voluntary and mandatory environmental management instruments to prevent the generation of marine debris at its source and reduce its impacts.
 - Encourage research and innovation for the development and refinement of new methodologies and solutions for monitoring, prevention, reuse and

recovery of marine debris.

- Build capacity and knowledge among stakeholders involved in the generation and management of marine debris.
- Encourage the participation of the private sector to promote investment, trade and market creation in industries and activities that allow the prevention and proper management of marine debris.
- Promote international cooperation, the exchange of information at a regional and global level, and technical assistance to make progress toward reducing marine debris and its impacts.

Finland

■ National Action Plan

- (a) Reduce and Refuse, Recycle and Replace – A Plastics Roadmap for Finland (2018) points out the first steps towards a new, sustainable plastic economy. The Plastics Roadmap identifies measures used to reduce the harm caused by plastic waste and litter, help consumers deliver plastics to waste management, improve the efficiency of plastics recovery, recycling and product design, creating conditions for investments and innovations in the circular economy, and reducing the dependency on fossil raw ingredients by increasing bio-based and biodegradable solutions. <https://muovitiekartta.fi/in-brief/>
- (b) The National Waste Plan *From Recycling to a Circular Economy National Waste Plan to 2023* from Recycling to a Circular Economy (2018) sets out the objectives for waste management and waste prevention and the measures to reach the objectives. Detailed targets are set and measures presented for four key areas: construction and demolition waste, biodegradable waste, municipal waste, and waste electrical and electronic equipment.
- (c) Finnish Marine Strategy, including Monitoring Programme (2014 – 2020), Programme of Measures (2016 – 2021), and an updated status assessment of the Finnish marine environment (2018) with targets that guide towards good environmental status, GES (2018 – 2024).
- (d) EU and HELCOM Action Plans to be nationally implemented
- Communication from the European Commission to the European Parliament, A new Circular Economy Action Plan for a cleaner and more competitive Europe (COM (2020) 98 final),
 - Closing the loop - An EU action plan for the Circular Economy, CEAP (14972/15),
 - A European Strategy for Plastics in a Circular Economy(5477/18),
 - Regional Sea Convention level work: HELCOM Baltic Sea Action Plan and Marine Litter Action Plan,

France

■ National Action Plan

- (a) Action Plan for the Marine Environment (Marine Strategy Framework Directive - MSFD)
- (b) Biodiversity plan: Target – “0 plastic reaching the sea in 2025”
- (c) National Roadmap against Marine Litter 2019 - 2025
- (d) National Roadmap for a circular economy
(<https://circulareconomy.europa.eu/platform/fr/node/783>)

Islamic Republic of Iran

■ National Action Plan

- (a) The country has no National Action Plan on Marine Litter yet but a decision has been made to develop and implement a national action plan in the near future.

Japan

■ National Action Plan

- (a) National Action Plan for Marine Plastic Litter (formulated in 2019)

In May 2019, the “National Action Plan for Marine Plastic Litter” was formulated. The action plan listed effective countermeasures to realise a world without additional pollution from plastic in the following eight fields:

 - i. Sound waste management systems
 - ii. Prevention of littering, illegal dumping and unintentional leakage of waste into the oceans
 - iii. Collection of scattered waste on land
 - iv. Innovation in development of and conversion to alternative materials
 - v. Removal of plastic litter from the oceans
 - vi. Multi-stakeholder involvement and awareness-raising
 - vii. Sharing scientific information and knowledge: R&D and Monitoring
 - viii. International cooperation

Maldives

■ National Action Plan

- (a) National Strategic Action Plan 2019 – 2023

Strategic Action Plan (SAP) highlights the development targets and priorities of the government from 2019 to 2023. The SAP serves as the main implementation and monitoring tool to track the progress of the delivery of the Government's policies and development priorities. The document presents five sectors and 33 subsectors whereby “Jazeera Dhiriulhun” is the sector relevant to Ministry of Environment which encompasses a subsector as “waste as a resource”. This sector highlights key policies, strategies, actions and targets to be achieved by

waste sector. Waste as a resource incorporates four policies. Policy 1: Promote waste as a valuable resource for income generation. Policy 2: Improve chemical and hazardous waste management practices to ensure protection of people and the environment. Policy 3: Reduce plastics pollution by phasing out single use plastics. Policy 4: Instill environmental values in the society and promote environmentally friendly lifestyle.

- (b) Waste management policy - 2015

The aim of the waste management policy is to formulate and implement guidelines and means for solid waste management in order to maintain a healthy environment. Accordingly, the key elements of the policy include:

- i. Ensuring safe disposal of solid waste and encourage recycling and reduction of waste generated
- ii. Developing guidelines on waste management and disposal and advocate to enforce such guidelines through inter-sectoral collaboration.
- iii. Ensuring safe disposal of chemical, hazardous and industrial waste.

- (c) Draft National Single Use Plastic Phaseout plan: 2020 - 2023

In September 2019, at the 74th session of the United Nations General Assembly President Ibrahim Mohamed Solih announced the phaseout of single-use plastic in the Maldives by 2023. In this regard, a single-use plastic phaseout plan has been drafted with the aim of improving waste management and minimising marine plastic pollution. The plan is a national initiative to ban the import, production and consumption of certain single-use plastics into the Maldives, and promote the use of sustainable alternatives, in the effort to protect human health and the vulnerable marine environment of the country through policy measures. The key policy measures of the plan are:

- i. Ban on the import, production and sale of specific SUP products
- ii. Tariffs, taxation and subsidies
- iii. Strengthening national waste data and setting reduction targets for plastic packaging
- iv. Extended Producer Responsibility (EPR)
- v. Sustainable provision of alternatives
- vi. Education and awareness

Myanmar

■ National Action Plan

- (a) National Plastic Action Plan will be developed based on a series of pilot scientific field surveys conducted by World Bank to reduce and prevent plastic pollution for a better ecosystem and human health, to improve plastic waste management systems and develop laws, rules and regulations and directives related to plastic that are applicable for Myanmar with the assistance of the World Bank, the Ministry of Environment Japan (MOEJ) and the Asian Development Bank (ADB).

Netherlands

■ National Action Plan

(a) In 2018 the Netherlands adopted a circular economy transition agenda for plastics. The aim is to close the loop for plastics by using them more intelligently and more economically, and by utilising more high-quality secondary raw materials and biomass. To accelerate the transition to a closed-loop plastics chain and reduce emissions of CO₂, the Plastics Transition Agenda has detailed four courses of action:

- i. Prevention: more with less and reduced leakage
- ii. Greater supply and demand for renewable plastics
- iii. Better quality and better environmental returns
- iv. Strategic cooperation, across the value chain

The implementation programme for this agenda includes seven projects that are intended to put these four developmental aspects into practice. Together with all actors, both public and private, efforts and investments will be made over the coming years with the aim of creating a fully circular plastics value chain by 2050.

(b) As part of the transition agenda for plastics, a specific policy programme has been developed for microplastics. This sub-programme is part of the prevention track and it focusses on:

- i. Banning deliberate additions of microplastics in products at the European level
- ii. Tackling the emissions of microplastics as a consequence of the breakdown of plastic litter
- iii. Cutting down on emissions of microplastics as the result of wear and tear on products such as car tyres, paint and clothing
- iv. Getting a better understanding and a better picture of the effects of microplastics in the human body

(c) In 2015, the Netherlands adopted the national Program of Measures, as part of the implementation of the EU Marine Strategy Framework Directive (MSFD). Based on top 10 beach litter items and taking into account existing waste management measures, three so-called Green Deals were adopted to tackle litter from beach recreation, shipping and fishing, where actions and obligations for government authorities, entrepreneurs, civil society organisations and private individuals are brought together. In addition, attention was given to education programmes, awareness-raising, specific plastic items like balloons and microplastics in cosmetics and measures to deal with riverine litter (Clean Rivers Initiatives). A knowledge-generating programme was launched to obtain knowledge on the distribution, composition and effects from riverine litter and microplastics.

(d) Subsequently, the Dutch and European plastic pacts were launched in 2019 and 2020 respectively. The goal is to bring together frontrunner companies and governments in the NL and EU to accelerate the plastics economy. The goals are to use:

- i. 20% less plastics (EUR PP 20% less virgin of which 10% absolute reduction)
- ii. Use at least 30% (in NL plastic pact 35%) of recycled plastics in new plastics
- iii. Design 100% recyclable and reusable products where possible

- iv. Increase the recycling rate by 25% (EUR PP), or achieve 70% recycling of all plastics used (NL PP)

Norway

■ National Action Plan

Norway is committed to achieving the goals of SDG 14.1 as well as the relevant UNEA resolutions and the UNEA-3 vision to end all discharge of marine plastic litter, and considers these political commitments as guiding the country's global and national efforts. The OSPAR Action Plan also states that discharge of litter with a negative environmental impact should be reduced. The Government of Norway has the general ambition to halt emissions into its seas and lakes.

Norwegian measures are also guided by ambitions set out in the EU plastics strategy and European Action plan on Circular Economy 2.0.

In 2016, the Norwegian Environment Agency assessed the Norwegian sources of marine plastic litter and microplastics and presented recommendations for new measures. These assessments have been updated in 2020. Plastic litter originating from fisheries and aquaculture, as well as consumer goods waste constitute most of the marine plastic litter in Norway.

(a) In June 2017 the government presented a white paper to the Parliament on waste policies in a circular economy. The White Paper also presents a Plastic Strategy in order to reduce marine litter and microplastics both on a national and international level. The Parliament endorsed the measures proposed by the Government in late February 2018.

(b) Currently, we are in the process of revising our national plastics strategy. It will address measures across the whole life-cycle of plastics and address plastic pollution to all environmental media. The strategy will be ready by the end of 2020.

Philippines

■ National Action Plan

(a) National Action Plan on Marine Litter - The National Plan of Action on Marine Litter (NPoA) is being prepared to address the growing concern on marine litter in the Philippines. The NPoA is in its finalisation stage. The four main actions considered are: (1) preventing and reducing marine litter from land-based sources, (2) preventing and reducing marine litter from sea-based sources, (3) monitoring and assessment of marine litter, and (4) activities supporting the implementation of Regional Action Plan on Marine Litter (RAP MALI) of the Coordinating Body on Seas of East Asia (COBSEA).

(b) 2.5. Coordinating Body on Seas of East Asia - Regional Action Plan on Marine Litter (COBSEA - RAP MALI) - COBSEA oversees the implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region (the East Asian Seas Action Plan). The East Asian Seas Action Plan aims to protect marine and coastal environment for the health and well-being of present and future generations. The Philippines is a member-country

of the COBSEA. The Environmental Management Bureau is the National COBSEA Focal Point.

Republic of Korea

■ National Action Plan

- (a) In accordance with Section 1, Article 24, 'Marine Environment Management Act', The Ministry of Ocean and Fisheries of Korea (MOF) establishes the 'National Marine Litter Management Plan' every five years to effectively collect and dispose of waste entering the ocean. The 3rd National Marine Litter Management Plan was established in December, 2018 to tackle the marine litter issue with improved and enhanced marine litter policies compared to the previous two national plans. The 3rd National Marine litter Management Plan consists of various policies ranging from collection of marine litter and risk assessment and research on microplastics.
- (b) The Ministry of Environment of Korea (MOE) also established a 'Comprehensive management plan for recyclable litter' according to the 'Act on the promotion of saving and recycling of resources', which highlights the role of stakeholders (government, manufacturers, consumers) in building an environmental-friendly production and consumption structure.
- (c) MOE also established 'the 1st National Resource Circulation Plan' according to the 'Framework act on resource circulation'. It aims to achieve a sustainable circulation economy through enhanced resource circulation. The major strategy of the plan is to establish waste to value infrastructure with public participation and to minimise the production of waste.

Saudi Arabia

■ National Action Plan

- (a) The Saudi Council of Ministers approved, in December 2017, the National Environmental Strategy (NES). The main outcome of the strategy was the establishment of five new environmental centers and an environment fund:
 - i. National Center for Environmental Compliance (NCEC)
 - ii. National Center for Wildlife Development (NCWD)
 - iii. National Meteorological Center (NMC)
 - iv. National Center for Development of the Vegetation Cover and Combating Desertification (NCDVCCD)
 - v. National Center for Waste Management (NCWM).

Solomon Islands

■ National Action Plan

- (a) National Waste and Pollution Control Strategy 2017 – 2026
- (b) National Implementation Plan for Stockholm Convention
- (c) National Biodiversity Strategic Action Plan
- (d) National Ocean Policy - Recognises marine pollution as

an ocean threat and stated its strategic action to develop proper sanitation and waste management systems throughout the country's coastal catchments and shipping industry.

Spain

■ National Action Plan

- (a) Marine Strategies, complying with the European Marine Strategy Framework Directive, include a Program of Measures on Marine Litter (2016 - 2021). The five Spanish Marine Strategies, one for each marine subdivision, were legally approved by Royal Decree 1365/2018, on 2 November 2018.

Sri Lanka

■ National Action Plan

- (a) National Policy on Waste Management addresses Marine plastic litter and micro plastics.
- (b) A National Action Plan on Plastic Waste management is being prepared. (Draft Completed)

Turkey

■ National Action Plan

- (a) In accordance with Zero Waste Project initiated in 2017, Law No. 7153 Amending the Environment Law, which was published in Official Gazette No. 30621 of 10 December 2018 and articles regarding the implementation of recovery contribution share, compulsory deposit-refund system and charging of plastic bags have been added into the Environment Law No. 2872. In Annex Article 11, which is added to the Environment Law, Recovery Contribution Share is defined in compliance with EPR principle. The products within the scope of the recovery contribution share and the fees to be applied per unit are set with the list no. (1) attached to the same Law. Accordingly, various products such as plastic bags, packaging, tires, batteries, oil, medicine and electronic goods are included in the scope of recovery contribution share.
- (b) The deposit-refund system will come into force and various beverage packages will be collected by this method as of 1 January, 2021 in Turkey. With the effective implementation of this system, it is aimed to collect packaging waste more efficiently and increase waste recycling rates. In this way, a positive impact on the economy will be achieved, quality raw materials for the industry will be offered. Currently several researches are being conducted how to implement and which method to be used for the mechanism.

- (c) Zero Waste Project has been adopted as state policy and placed as an action in 11th Development Plan (2019 - 2023). In line with the Zero Waste principle, which is based on resource efficiency and proper waste management in our country, it is aimed to increase the domestic waste recovery rate to the level of 35% from 13% by 2023.
- (d) National Waste Management and Action Plan (NWMAP)

(2016 – 2023) is the major policy document of Turkey on waste management. The purpose of the plan is to ensure the creation of a healthy and livable environment for the present and future generations by protecting and developing our natural resources and ecosystems; within the framework of sustainability principle, taking into consideration international norms and national priorities, developing strategies and legislation, minimising waste at source, classifying, collecting, transporting, temporary storage, recovery, disposal, reuse, purification, transformation into energy and final storage. National Waste Management and Action Plan covering the period of 2016 - 2023 outlines the current situation of Turkey, the issues that need to be improved in the management system, population and waste projections, contribution of the stakeholders involved in waste management, periodic waste management activities planned to be completed until 2023, investments in waste management and financing needs.

- (e) Studies have been initiated revising NWMAP for the years 2023 - 2035 in order to harmonise the existing management plans with the zero waste management system plan, to increase and to disseminate separate collection efficiency at the source, to determine the recovery and disposal methods.
- (f) Zero-waste project to minimise waste and improve separate collection in municipalities, schools, and commercial buildings was launched by MoEU in 2017. During the first quarter of 2020, 11 guidelines have been prepared by MoEU in order to lead the target groups for adoption of zero waste systems, including waste prevention precautions and separate collection. Guidelines have been prepared for municipalities, industrial facilities, airports, train and bus stations, shopping malls, business centres, commercial sites, educational institutions and dormitories, healthcare organisations, tourism facilities (hotels, restaurants, cafeterias), rural areas, residences and sites, public institutions and zero waste blue areas (coastal facilities, ports, marinas, beaches). On the other hand, preparation of a National Waste Prevention Plan has been initiated.

UK

■ National Action Plan

- (a) 25 Year Environment Plan
 - i. Eliminate avoidable plastic waste over the lifetime of the plan.
 - ii. Achieve good environmental status of the seas while allowing marine industries to thrive, and complete an ecologically coherent network of well-managed marine protected areas
 - iii. UK will do more to help developing nations tackle pollution and reduce plastic waste, including through UK Aid.
 - iv. Work through the UN, G7 and G20 to tackle marine plastics pollution at an international level.
 - v. Work with the International Maritime Organisation to address the control and prevention of ship-source pollution.

- (b) UK Marine Strategy

Now that the UK has left the EU, it will continue to use the UK Marine Strategy to strengthen and enhance the protection of the marine environment.

- i. The Marine Strategy Regulations (2010) require actions to achieve or maintain Good Environmental Status (GES) in the seas by 2020. For marine litter, this means working towards reducing the amount of litter and its degradation products in the marine environment and coastlines, and towards marine litter reaching levels that do not pose a significant risk to the environment and marine life. This Framework outlines many key steps being taken towards this aim.
- ii. The Regulations require the production of a "Marine Strategy" for all UK waters and that the approach is coordinated across all four UK Administrations. It also requires cooperation with other countries sharing UK seas.
- iii. The objective of the UK Marine Strategy reflects the UK's vision for 'clean, healthy, safe, productive and biologically diverse oceans and seas', it helps to deliver key international obligations and commitments to protect and preserve the marine environment under the UN Convention on the Law of the Sea (UNCLOS), the UN Sustainable Development Goal 14 "to conserve and sustainably use the oceans, seas and marine resources for sustainable development", the OSPAR North-East Atlantic Environment Strategy and the Convention on Biological Diversity.
- iv. It applies an ecosystem-based approach to the management of human activities. In doing so, the Strategy seeks to keep the collective pressure of human activities within levels compatible with the achievement of GES.

- (c) Resources and Waste Strategy for England

- i. Work towards all plastic packaging placed on the market being reusable, recyclable, or compostable by 2025
- ii. Ban plastic products where there is a clear case for it and alternatives exist
- iii. Stimulate demand for recycled plastic by introducing a tax on plastic packaging with less than 30% recycled plastic
- iv. Eliminate consumer single-use plastics from the central Government estate

- (d) National Litter Strategies

- i. England

The aim is to reduce the amount of litter that gets into our rivers and seas. The Litter Strategy for England was published in April 2017, setting out the aim to deliver a substantial reduction in litter and littering within a generation. The Litter Strategy brings together communities, businesses, charities and schools to bring about real change by focusing on three key themes: education and awareness; improving enforcement; and better cleaning and access to bins. A dashboard of different indicators is published each year to monitor the extent of litter

and littering in England.

ii. Scotland

Marine Litter Strategy: The aim of the strategy is to help realise the vision of clean, healthy, safe, productive and biologically diverse marine and coastal environment that meets the long-term needs of people and nature.

- Strategic Direction 1 – Improve public and business attitudes and behaviours around marine and coastal litter, in co-ordination with the national litter strategy.
- Strategic Direction 2 – Reduce marine and coastal based sources of litter, in coordination with land sourced litter being reduced by the national litter strategy.
- Strategic Direction 3 – Contribute to a low carbon economy by treating ‘waste as a resource’ and seizing the economic and environmental opportunities associated with the Zero Waste Plan.
- Strategic Direction 4 – Improve monitoring at a Scottish scale and develop measures for strategy evaluation
- Strategic Direction 5 – Maintain and strengthen stakeholder co-ordination at the UK, EU and international scales.

(e) Pre-production plastic pellets

Pre-production plastic pellets (nurdles) are the basic feedstock used in the production of plastic items. They can be lost from the supply chain and enter the environment. It is estimated that up to 53 billion nurdles are lost each year, and they are one of the biggest sources of microplastic in the marine environment. To address this issue UK is working with the British-Irish Council and with the British Plastics Federation to strengthen Operation Clean Sweep, an international initiative which aims to reduce plastic pellet loss to the environment. The scheme ensures that companies train staff to sweep up spills, have the facilities to dispose of spilt pellets and cover drains to prevent run-off.

(f) UK Plastics Pact

By 2025, the UK Plastics Pact will transform the UK plastic packaging sector by meeting four world-leading targets.

- i. 100% of plastic packaging to be reusable, recyclable or compostable
- ii. 70% of plastic packaging effectively recycled or composted
- iii. Eliminate problematic single-use items.
- iv. 30% averaged recycled content across all packaging

US

■ National Action Plan

- (a) The United States does not currently have a national action plan specific to marine plastic litter. There are several national-level laws, as described in 2.2. “Legal framework that provide a comprehensive legal framework to address marine plastic litter”. Domestic legislation also created an inter-agency body (the U.S. Marine Debris Coordination Committee, described below), that ensures cooperation across U.S. agencies to address marine debris more broadly. Further, through NOAA’s Marine Debris Program, the U.S. has developed eleven sub-national marine debris action plans that identify and prioritize activities to reduce marine debris impacts, coordinate local level implementation, and help better understand the scope and scale of the issue in the U.S. coastal and marine environment. The NOAA Marine Debris Program also has a national level strategic plan that drives priorities and actions.

EU

■ Action Plan

- (a) Emphasis on prevention of litter from both land- and sea-based sources is the cornerstone of EU policies against plastic pollution of oceans and the seas. Clean-up actions can be meaningful when litter accumulations create serious risks for marine or coastal biodiversity and habitats or negative socioeconomic effects. The EU is furthermore committed to close collaboration with its neighbours within the four Regional Seas Conventions around Europe and with other non-EU countries in global fora such as UN, G20 and G7.
- (b) The **Marine Strategy Framework Directive (MSFD, 2008/56/EC)** was the first EU legal instrument to explicitly address marine litter; it requires “Good Environmental Status” for marine litter to be achieved by 2020.
- (c) The **EU Strategy for Plastics in a Circular Economy** (2018) is the first EU-wide policy framework adopting a material-specific life-cycle approach integrating design, use, reuse and recycling. It also aims at an increasing the uptake of alternative materials where evidence clearly shows that they are more sustainable compared to the ones based on fossil resources. This supports efforts on decarbonisation and creating additional opportunities for growth. As part of the Strategy, the EU adopted a new **Directive on the reduction of the impact of certain plastic products on the environment (2019), targeting the top 10 single-use plastic products** most often found on Europe’s beaches and seas as well as fishing gear containing plastics and the Port Reception Facilities Directive, aiming to reduce the discharges from ship generated waste, including from fishing vessels.

Related URL:

https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516265440535&uri=COM:2018:28:FIN>

- (d) The European Commission has started preparatory work to **restrict microplastics intentionally added to products**, e.g. in cosmetics or detergents, as well as to **reduce emissions of microplastics from other sources**, such as tyres, textiles and pre-production plastic pellets. Industry has also started the production of bio-based and biodegradable alternative materials and fibres in tyres and textiles thus supporting the substitution of materials based on fossil resources.

International Organisations and NGOs

ADB

■ Action Plan

- (a) The regional technical assistance programme entitled “Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific” aims to support the development and/or implementation of the National Action Plans relevant to marine plastic litter of Indonesia, Myanmar, the Philippines, Thailand, and Viet Nam. The programme includes support for both the preparation of necessary technical inputs and for inclusive and participatory action planning processes (at national, provincial and city level); policy and regulatory reform to encourage a circular plastics economy; demonstration projects and preparation of investments in solid waste management systems (with a focus on 3R) and green business; knowledge sharing, regional cooperation and innovative financing. In terms of policy and regulation, the scope of the regional technical assistance programme includes:
- i. Creating enabling institutional and policy environments to reduce marine plastic pollution through government-led national and city action plans and National Finance Roadmaps.
- (b) Supporting national reviews of policy and regulatory frameworks, institutional arrangements, and capacity to improve integrated solid waste management and circular plastics economy
- (c) Supporting detailed design, drafting and rollout of policy reforms and institutional strengthening, including use of market-based instruments

Ellen MacArthur Foundation

■ Action Plan

The Ellen MacArthur Foundation, through its New Plastics Economy Initiative, is running two international programmes that offer a unique way to secure change across the value-chain. The programmes bring together more than 1000 organisations from across industry, policy and innovators driving action towards a common vision for a circular economy for plastics, in which plastic never becomes waste or pollution.

(a) New Plastics Economy Global Commitment

The Global Commitment, led by the Foundation in collaboration with the United Nations Environment Programme, unites more than 450 businesses,

governments, investors and innovators globally behind one common vision and a set of ambitious 2025 targets to:

- i. Eliminate plastic packaging we don't need;
- ii. Innovate to keep plastic packaging in use;
- iii. Circulate materials to keep plastic in our economy and out of the environment.

Signatories of the Global Commitment include: 230 businesses - amongst which the largest fast-moving consumer goods (FMCG) companies, retailers and packaging producers; 20 national, regional and city-level governments; 40 universities, institutions and academics; 15 financial institutions; as well as NGOs, industry associations and others. Business signatories represent almost 25% of all plastic packaging produced globally, making the initiative the global reference point on tackling plastic waste.

Through annual reporting, the Global Commitment ensures unprecedented transparency on how the world produces, uses, reuses, and recycles plastic packaging. In addition, to inspire and drive mobilization of the tourism sector, the Global Tourism Plastics Initiative was also created to act as the interface for the tourism sector of the Global Commitment. The Global Tourism Plastics Initiative is led by the United Nations Environment Programme and the World Tourism Organisation, in collaboration with the Ellen MacArthur Foundation.

Related URL:

<https://www.ellenmacarthurfoundation.org/our-work/activities/new-plastics-economy/global-commitment>

(b) New Plastics Economy Plastic Pact Network

In complement to the Global Commitment, Plastics Pacts are national or multi-country initiatives, bringing together businesses, governments and civil society to drive ambitious, collective action towards a circular economy for plastics, working to the same common vision as the Global Commitment. Each Plastics Pact is led by a local organisation, and works towards time-bound targets, tailored to the national or multi-country context. Progress against the targets is reported annually.

Nine national and multi-country Plastics Pacts across Africa, Europe, Latin America, and North America have been launched to date - all sharing a common vision of a circular economy, in which plastic never becomes waste or pollution.

As part of the Foundation's Plastics Pact network, Plastics Pacts exchange circular economy insights and lessons learnt with Plastics Pacts in other countries, and with leading organisations globally.

Related URL:

<https://www.ellenmacarthurfoundation.org/our-work/activities/new-plastics-economy/plastics-pact>

The Global Commitment and Plastics Pact network work hand-in-hand. The Global Commitment creates global alignment across industry, governments and investors on a common vision that sets a direction of travel. Aligned with that same vision, Plastics Pacts bring together key actors at a national or regional (e.g. European) level to jointly drive the implementation of a circular economy for plastics for that country or region.

Both initiatives drive ambitious, voluntary action that supports

and is complementary to policy measures, and international treaties. They aim to contribute to several of the sustainable development goals (SDGs), including: 12, Responsible Consumption and Production; 13, Climate Action; and 14, Life Below Water.

ERIA

■ Action Plan

- (a) Regional Knowledge Centre of Marine Plastic Debris (RKC-MPD)

In October 2019, ERIA Regional Knowledge Centre of Marine Plastic Debris (RKC-MPD) was established under the support of Ministry of Environment, Japan.

The RKC-MPD serves as an information clearinghouse about marine plastic in ASEAN+3 countries, aiming to:

- i. Enforce the networking and raising awareness
- ii. Promote innovative actions in each country
- iii. Facilitating national and regional cooperation

There are four major activities performed by RKC-MPD:

- i. Development of RKC Foundation
- ii. Collection and analysis of information
- iii. Knowledge sharing (on going activity. It is conducted by developing the website <https://rkcmpd-eria.org/> as an information sharing platform about good practices that have been performed by ASEAN+3 countries to reduce the marine plastic)
- iv. Awareness raising and capacity building

GEF

■ Action Plan

- (a) The GEF-7 (the seventh replenishment of resources of the GEF Trust Fund) Programming Directions (2018 - 2022) stipulated a strategy addressing pollution reduction in marine environments with an emphasis on a circular economy approach. GEF investments are, therefore, designed to address all phases of the plastics lifecycle, including alternative sustainable materials, design for circularity, reuse, repair and refill systems, and waste collection and recycling strategies. Private-public partnerships are fundamental to pursuing circular solutions and are, therefore, also core components of GEF investments in reducing plastic pollution. To date GEF investments total over USD 23M for GEF-7 projects led by UNEP, UNIDO and ADB. These investments build on previous GEF investments in projects that indirectly reduced marine plastic pollution during previous funding cycles.

Project examples:

UNEP:

https://www.thegef.org/sites/default/files/web-documents/10547_MFA_PIF.pdf

UNIDO:

https://www.thegef.org/sites/default/files/project_documents/8da8f12a-cfde-e911-a83d-000d3a37557b_PIF_0.pdf

ADB:

https://www.thegef.org/sites/default/files/web-documents/10546_MFA_PIF_v1.pdf

Ocean Conservancy

■ Action Plan

- (a) **Overall Goal:** Meaningfully prevent and cleanup the largest and most impactful pathways of ocean plastic pollution.

OECD

■ Action Plan

Plastics and the environment are a priority for the OECD Environment Policy Committee (EPOC). Joint work is also underway between EPOC and the OECD Chemicals Committee.

Most of the work is led by the OECD Working Party on Resource Productivity and Waste. OECD's work focuses predominantly on preventing land-based sources of marine plastic pollution, including plastic waste management and prevention, upstream measures such as sustainable plastic design, and closing the loop through material recovery and recycling.

OECD's work programme on Plastics and the Environment has been ongoing for the past 4-5 years. It looks at policy efforts to reduce plastic waste and assesses the effectiveness of existing policies. Recent and ongoing work in this programme include the following topics:

- (a) Policies to strengthen the conditions for plastics recycling;
- i. OECD (2018) Improving Markets for Recycled Plastics: Trends, Prospects and Policy Responses; URL: <https://www.oecd.org/environment/improving-markets-for-recycled-plastics-9789264301016-en.htm>
 - ii. OECD (2019) Policy approaches to incentivise sustainable plastic design URL: https://www.oecd-ilibrary.org/environment/policy-approaches-to-incentivise-sustainable-plastic-design_233ac351-en
 - iii. OECD (2016) Extended Producer Responsibility: Updated Guidance for Efficient Waste Management URL: <https://www.oecd.org/environment/extended-producer-responsibility-9789264256385-en.htm>
 - iv. OECD (2018) Extended Producer Responsibility and the Impact of Online Sales URL: https://www.oecd-ilibrary.org/environment/extended-producer-responsibility-epr-and-the-impact-of-online-sales_cde28569-en
- (b) The state of plastic recycling technologies;
- i. Report forthcoming on plastic recycling technologies

- (c) Sustainable design of plastics from a chemicals perspective;
- i. OECD Global Forum OECD Global Forum on "Plastics in a Circular Economy: Design of Sustainable Plastics from a Chemicals Perspective" (28-30 May 2018).
URL:
<https://www.oecd.org/fr/securitechimique/gestion-risques/global-forum-on-environment-plastics-in-a-circular-economy.htm>
 - ii. Three accompanying background papers:
 - Considerations and Criteria for Sustainable Plastics from a Chemical Perspective
URL:
<https://www.oecd.org/chemicalsafety/risk-management/considerations-and-criteria-for-sustainable-plastics-from-a-chemicals-perspective.pdf>
 - Technical Tools and Approaches in the Design of Sustainable Plastics
URL:
<https://www.oecd.org/chemicalsafety/risk-management/technical-tools-and-approaches-in-the-design-of-sustainable-plastics.pdf>
 - Working paper on Policy Approaches to Incentivise Sustainable Plastic Design
URL:
<https://www.oecd.org/chemicalsafety/risk-management/technical-tools-and-approaches-in-the-design-of-sustainable-plastics.pdf>
- (d) The implications for waste prevention of policies targeting single-use plastics;
- i. Report forthcoming on policies targeting single-use plastics
- (e) The mitigation technologies and policy measures to address detrimental impacts of secondary microplastics pollution;
- i. Two workshops held on Microplastics from Tyre wear and Microplastics from Synthetic Textiles
URL:
<http://www.oecd.org/water/oecdworkshoponmicroplasticsfromtyrewearknowledgeandmitigationmeasureandpolicyoptions.htm>
<http://www.oecd.org/water/OECDWorkshoponMicroplasticsfromSyntheticTextilesintheEnvironmentKnowledgeMitigationandPolicy.htm>
 - ii. Report forthcoming on the issue.
- (f) Notably, the OECD is currently developing a Global Plastics Outlook. This publication aims to provide insights into economic drivers and projections of plastic waste, its associated environmental and economic impacts, state-of-the-art technologies for the mitigation of marine plastic litter, as well as the policy mixes that will be effective in curbing plastic related pollution and waste generation. The Global Plastics Outlook will also feature ongoing work to assess and quantify innovation in plastics to improve circularity and reduce leakage into the

environment, as well as an updated review of secondary plastics markets.

UNEP

■ Action Plan

Global and regional resolutions and plans led by UNEP and/or a body whose Secretariat is hosted by UNEP:

- (a) Recent resolutions of the United Nations Environment Assembly (UNEA), including:
 - i. Marine litter and microplastics (UNEP/EA.3/Res.7)
 - ii. Marine plastic litter and microplastics (UNEP/EA.4/Res.6),
 - iii. Addressing Single-Use Plastic Products Pollution (UNEP/EA.4/Res.9)
 - iv. Addressing water pollution to protect and restore water-related ecosystems (UNEP/EA.3/Res.10)
 - v. Environmentally sound management of waste (UNEP/EA.4/Res.7)
 - vi. Protection of the Marine Environment from Land-Based Activities (UNEP/EA.4/L.12)
 - vii. Implementation plan "Towards a Pollution-Free Planet" (UNEP/EA.4/Res. 21)
- (b) The Coordinating Body on the Seas of East Asia (COBSEA) Regional Action Plan on Marine Litter
- (c) UNEP Northwest Pacific Action Plan (NOWPAP) Regional Action Plan on Marine Litter (RAP-MALI)
- (d) Basel Convention Plastic Waste Amendments (decision BC-14/12, <http://www.basel.int/tabid/8426/Default.aspx>)
- (e) Basel Convention Plastic Waste Partnership (decision BC-14/13, <http://www.basel.int/tabid/8096/Default.aspx>)

UNIDO

■ Action Plan

- (a) UNIDO's approach to address the challenge of marine plastic litter focuses on supporting Member States to promote circular economy practices in industry and society through policy suggestions, strengthening capacity in industry, including technical cooperation and technology transfer, and awareness development.
- (b) UNIDO's circular economy practices could aim at designing out waste to retain plastics within the economy; regaining the value embodied in plastics that leaked out of the economy as waste; and continuing efforts for recovering plastics already in oceans, in particular in services, on beaches, ports and coastal waters emerge as strategies worthwhile to consider on the way to a circular plastics economy and an end to the global marine plastic litter challenge.
- (c) Especially, in the **product design** stage, the following might be considered: a) scrutinising the necessity of packaging altogether, including of plastics; b) selection of renewable, bio-degradable and compostable materials and additives that are not or less toxic for essential plastic packaging or single-use plastic products; c) designing for

less material use to decrease waste; d) designing packaging and products that use a single or small number of polymers that are easy to separate during recycling.

- (d) Policy measures to incentivise circular economy practices in design could consist of supporting implementation of innovations in design of existing and new products, and support to innovations and start-ups in particular related to new, biodegradable and compostable plastics. A number of initiatives could trigger both supply side motivation for circular product designs and preference for such products on the demand side, such as measures for creating markets for recycled plastics and improving markets for bio-based plastics; differentiated taxes on virgin and recycled plastics; introduction of standards for recycled content; improving information on recycled content in products in combination with educational campaigns for consumers. Furthermore, support for development of effective infrastructure for collection and separation of waste streams and empowering local authorities with sufficient financial and technical resources could induce product designs for ease of recyclability.

https://www.unido.org/sites/default/files/files/2019-06/UNIDO_Addressing_the_challenge_of_Marine_Plastic_Litter_Using_Circular_Economy_0.pdf

WB

■ Action Plan

- (a) Tackling plastic pollution and keeping our oceans healthy is directly linked to the World Bank's mission of alleviating extreme poverty as billions of people, especially the poorest, rely on oceans for jobs and food.
- (b) The World Bank follows a comprehensive approach to help client countries address marine litter and plastics pollution at the local level, by providing technical assistance, knowledge development and financing, and more specifically, to elaborate national inventories and develop and implement roadmaps to meet their targets. Building on its global presence, the World Bank works with both the public and private sector on local, national and regional levels to reduce and prevent marine litter. The approach revolves around three main blocks, from stopping the leakage from land and marine-based sources in the short term to promoting the transition to a circular economy in the medium to long term.
- (c) Such support is fully aligned with the World Bank's global agenda for promoting a sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystem. The World Bank's engagements in the blue sectors in countries follow a Blue Economy Framework (BEF). The World Bank, in collaboration with various development partners (Canada, Denmark, the European Commission, France, Germany, Iceland, Norway, Sweden and the United States), has established the Global Program for the Blue Economy (PROBLUE), a Multi-Donor Trust Fund that supports implementation of Sustainable Development Goal 14 (SDG 14) and focuses on four key pillars, namely:
- Sustainable management of fisheries and aquaculture;
 - Marine pollution prevention, including litter and**

plastics;

- The sustainable development of key oceanic sectors;
- Building the capacity of governments to manage their marine and coastal resources in an integrated fashion to deliver more and sustainable benefits to countries and communities.

Since its launch, PROBLUE has supported 30 activities in all regions, and committed about USD 20 million to support World Bank's client countries in their efforts to address marine plastic pollution.

- (d) The World Bank also develops critical global analytical tools to help governments make informed and strategic policy and investment decisions, such as:
- The *Pathways out of Plastics' Pollution* analytical work, which aims at helping countries better understand, design, and sequence effective, efficient and implementable packages of policy instruments to manage plastic pollution and prevent plastic waste from damaging marine and terrestrial ecosystems.
 - The analytical work *Bridging the Institutional Gap in Integrated Solid Waste Management* aims at providing solutions for bridging the gap between goals and implementation capacity in integrated solid waste management (ISWM) between central and subnational levels of government.

2.2. Legal framework

Legal frameworks are structured in relation to MPL issues in most of the reporting countries (23 out of 25 countries). Such frameworks usually take a holistic approach, ranging from directives on waste management to legislation on specific products and pollution prevention at sea.

Countries

Australia

- (a) Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris is listed as a key threatening process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Australia's Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans, includes a range of management approaches for research and monitoring, public outreach and education, preventing and reducing debris from land-based sources as well as addressing marine-based sources and removing accumulated marine debris from the coastal marine environment.

- (b) The Australian Government has introduced landmark legislation into Parliament to ensure Australia takes responsibility for its waste.
 - i. The Recycling and Waste Reduction Bill 2020 will provide a national framework to manage waste and recycling across Australia, now and into the future. It implements the export ban on waste plastic, paper, glass and tyres agreed by Commonwealth, state and territory governments in March this year.
 - ii. The legislation also incorporates the existing Product Stewardship Act 2011 with improvements to encourage companies to take greater responsibility for the waste they generate, including through better product design and increased recovery and reuse of waste materials.

Azerbaijan

- (a) Draft law on “Packaging and circulation of packaging wastes” has been developed. It is currently under consideration by the relevant authorities.
- (b) Decision on “Amendments to the Rules for cleaning the territory of cities and other settlements in accordance with sanitary, hygienic and environmental standards, temporary storage, regular transportation and disposal of household wastes” entered into force on 22 May 2020.
- (c) Order on “Establishment of Balakhani Industrial Park in Baku” was approved by the President of the Republic of Azerbaijan.
- (d) Laws on “Production and household wastes” and “Environmental protection” was approved accordingly in 1998 and 1999 years.

Canada

- (a) The Government of Canada has over 10 federal acts, regulations and agreements that contribute to the prevention of marine plastic litter, including microplastics. In particular, the Canada Shipping Act and the Canadian Environmental Protection Act, 1999 (CEPA 1999) prohibit the discharge or disposal of litter in Canadian waters. The Fisheries Act prohibits the deposit of deleterious substances into domestic waters frequented by fish and prohibits serious harm to fish and fish habitats. In addition, the Species at Risk Act contains a provision for the protection of Critical Habitat for listed species, including the marine environment for aquatic species at risk. Notably, the Microbeads in Toiletries Regulations prohibit plastic microbeads-containing toiletries, such as bath and body products, skin cleansers and toothpaste. In November 2016, Canada amended the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations to define as “hazardous” any waste, including household waste that is considered hazardous or controlled by an importing country that is a Party to the Basel Convention. A Canadian exporter must seek a permit before exporting hazardous waste to another country.
- (b) Canada also implements its obligations under several legally binding international agreements that contribute to preventing waste and litter, including the Basel

Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the International Convention for the Prevention of Pollution from Ships (MARPOL), and the London Convention and Protocol to prevent marine pollution by dumping at sea. Canada also adopted other international frameworks for action such as: the G7 Action Plan to Combat Marine Litter, the G20 Action Plan on Marine Litter and Implementation Framework, International Maritime Organization Action Plan to Address Marine Litter from Ships, and the plastics-related United Nations Environment Assembly resolutions.

Chile

- (a) Since 2016 Chile has an Extended Producer Responsibility (EPR) Law. Currently, the regulation on EPR for packaging is being developed. Additionally, a law which prohibits the delivery of plastic bags by commerce was adopted in 2018, while a law which regulates single-use plastics is being discussed in Parliament. In addition there is Chilean Plastics Pact, the Chilean Plastics Pact (PCP) led by Fundación Chile and the Ministry of Environment was signed in April 2019, with the purpose of rethinking the future of plastics by bringing together all actors in the value chain such as companies, public sphere and NGOs. The initiative is part of the Plastics Pact Global Network launched in 2018 by the Ellen MacArthur Foundation in the United Kingdom.

Finland

- (a) According to the Finnish Waste Act littering is forbidden. The Act and its decrees regulate e.g. the responsibilities of different actors involved in waste management, set the prerequisites for recycling and sanctions for littering and include regulation regarding information-sharing and communications.
- (b) The Land Use and Building Act, Flood Risk Management Act and Water Services Act include regulations regarding flood management, wastewater management and the management of urban runoff to reduce marine plastic litter and microplastics in the environment.
- (c) The Environmental Protection Act regulates economic activities and businesses producing litter. It sets the framework conditions for issuing environmental permits, which include regulations regarding e.g. wastewater treatment.
- (d) The renewal of EU Waste directives as a part of the EU Circular Economy Action Plan (2018) and their national implementation by October 2020
- (e) EU Single-use Plastics Directive (Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment) and the corresponding national legislation,
- (f) EU Directive on Port Reception Facilities (Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on port reception facilities for the delivery of waste from ships, amending Directive 2010/65/EU and repealing Directive 2000/59/EC) and the corresponding national legislation,

- (g) EU Marine Strategy Framework Directive (Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy) and "Commission Decision on Good Environmental Status, GES" (Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU) and the corresponding national legislation,
- (h) HELCOM Recommendation 28E/10: Application of the No-Special-Fee System to Ship-Generated Wastes and Marine Litter Caught in Fishing Nets in the Baltic Sea Area,
- (i) HELCOM Recommendation 22/3: Unified Interpretations to Ensure a Harmonized and Effective Implementation of the Strategy for Port Reception Facilities for Ship-Generated Wastes and Associated Issues.

In addition, ongoing development of EU policy (changes to REACH decree) to limit intentionally added microplastics in products which is foreseen to enter into force in 2021.

France

- (a) The legislation for energy transition for green growth (2015) set up the prohibition of non-compostable plastic bags for 2017 and progressively extended recycling to all plastic packaging by 2022.
- (b) The legislation for the Reclaiming biodiversity, nature and landscapes law (2016) included a ban on microbeads in cosmetics in 2018 and a ban on cotton-buds in 2020.
- (c) The legislation for a trade relations balance in the agricultural sector, and a healthy and sustainable diet (EGAlim, 2018) has planned a ban on plastic stirrers and straws in 2020, and a ban on food containers in collective catering by 2025.
- (d) The legislation against waste and for a circular economy (2020) has defined a goal of zero single-use plastic by 2040, with targets for deposits, recycling and reuse.

Germany

- (a) IMO Action Plan to address Marine Plastic Litter from Ships
- (b) Directive (EU) 2019/883

Islamic Republic of Iran

- (a) Waste Management Law (2004):

This law is developed to fulfil the 50th Principle of the Islamic Republic of Iran Constitutional Law (which links current and future generations to the environment and makes it a public duty to protect the environment) and in order to protect the environment from harmful effects of waste materials. The Waste Management Law contains 23 articles with nine paragraphs.

- (b) Waste Management bylaw (2005):

The Waste Management Law supplemented by an executive bylaw that contains specific provisions for the various types of waste in respect to waste avoidance, reduction, recycling, and disposal as well as collection and transport.

- (c) The Law of taking taxes for productions that causes creation of dangerous materials: Recently established in 2019, contains six articles whereby parties to this resolution should act fully upon all articles. This law obtains tax for a list of goods that cause creation of litter, such as different kinds of tyres, toys made of plastic and so on. Stakeholders who reuse the goods, are not forced to pay tax.
- (d) Draft "Guideline for reducing plastic consumption in the country": This Guideline contains 11 articles with 14 paragraphs. Within Article 2, all manufacturers and importers of plastic bags or raw materials of such commodities are required to submit 0.5 per thousand worth of goods to the National Environmental Fund while selling or entering the country. Within Article 2, plastic bag manufacturing units are required to reduce 27% of plastic bags produced annually, and replace them with environmentally friendly products. Within Article 5, the use of any plastic bag is prohibited in all government agencies. Within Article 7, any commercial advertising using plastic bags is prohibited.
- (e) Guideline for environmental aspects in packaging, distribution and consumption of mineral plaster and cement products: This guideline contains 12 articles with 3 paragraphs. Within Article 2, packaging, distribution and consumption of all gypsum and cement minerals packed in weights up to 50 kg is permitted only using paper packaging.
- (f) Guideline for biodegradable plastics use: This guideline contains 16 articles with 2 paragraphs. Within Article 2, a Biodegradable plastic replacement programme was prepared for some packaging goods proposed by the Department of Environment (DOE) and should be implemented by the Ministry of Industry. Within Article 5, the Standards Organization is asked to monitor the relevant national standards, applied to additives for the production of biodegradables. Within Article 14, all units producing biodegradable plastics that comply with the provisions of this Directive shall have the maximum facilities provided for the establishment and continued operation of industrial plants in accordance with Articles 12 and 17 of the Implementing Regulations of the Waste Management Act.

Related Regional protocols, action plans and projects:

According to Article 9 of the Iran's Civil Code, all treaties between the government of Iran and other governments, in accordance with the Constitutional Law, shall have the force of law. Therefore, the following conventions/protocols that have been ratified by Iran's Parliament are enforceable:

- (g) Protocol for the protection of the Caspian Sea against pollution from land-based sources and activities to the framework Convention for the protection of the marine environment of the Caspian Sea (Tehran Convention) was signed in 2011 but it is not entered into force yet.

- (h) Protocol for the Protection of the Marine Environment against Pollution from Land-Based Sources (1990) to the Kuwait Regional Convention for Co-Operation of the Marine Environment from Pollution (1978)
- (i) Convention on the Transboundary Movement of Hazardous Wastes and their Disposal (Basel Convention)
- (j) London Protocol on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
- (k) Annex V of MARPOL Convention

Italy

- (a) 2017: National legislative measure aiming at reducing the consumption of lightweight plastic carrier bags.
- (b) 2017: National legislative measure: ban on plastic cotton buds sticks by 2019 and ban of plastic microbeds in cosmetics by 2020.
- (c) 2015: National legislative measure to reduce the improper discarding of small and micro waste (receipts, chewing gum, tissues, cigarette butts, etc.) in the environment.
- (d) In particular, municipalities shall install special containers for the collection of cigarette butts in the streets, in parks and high social gathering places. Tobacco producers shall implement information campaigns, in collaboration with the Ministry of Environment, Land and Sea, with the aim to raise consumer awareness about the harmful consequences for the environment resulting from the littering of cigarette butts.
- (e) Programme of measures according to Article 13 of the MSFD (D.P.C.M. 10/10/2017)
 - i. Design and implementation of measures to improve the management of litter generated by fishing and aquaculture activities, including discarded equipment, favouring, where possible, its reuse, recycling and recovery.
 - ii. Study, design and creation of a collection and disposal chain for litter accidentally collected by fishermen.
 - iii. Implementation of training and awareness measures to increase knowledge and promote the education of the public and economic operators to prevent and combat marine litter.

Japan

- (a) The Waste Management and Public Cleansing Act is the legislation to protect living environments and improve public health through waste generation control and appropriate waste treatment. Under the Waste Management and Public Cleansing Act, municipalities are obliged to formulate a basic waste management plan. In accordance with the national policy, the plan formulated by municipalities is required to show specific methods and target figures, such as "reduction of emissions per capita", "recovery rate of resources from waste", and "reduction of waste for final disposal", as well

as target values for cost efficiency of waste treatment.

- (b) The Container Recycling Law aims to reduce the amount of general waste and inform on how to effectively use resources. It clarifies the division of each role - consumers are responsible for "emission control" and "separate emissions"; municipalities are for "separate collection"; and businesses for "re-commercialisation (recycling)".

Maldives

- (a) Environment Protection and Preservation Act

Under the Environmental Protection and Preservation Act, disposal of waste, oil, poisonous substances and other harmful substances within the territory of the Republic of Maldives is prohibited. Waste shall be disposed of only in areas designated for the purpose by the government. in accordance with sanitary, hygienic and environmental standards, temporary storage, regular transportation and disposal of household waste. This Act entered into force on 22 May 2020.

- (b) Waste Management regulations

The key elements of the regulations include: ensuring safe disposal and transfer of solid waste, and encouraging recycling and reduction in waste generated, developing guidelines on waste management and disposal and advocating enforcing these guidelines through inter-sectoral collaboration as well as ensuring safe disposal of chemical, industrial and hazardous waste.

- (c) Import Export bill no: 31/79 (7/2020)

The new amendment for the Import Export bill has been ratified recently and is effective from 1 August 2020. It states that single-use plastics that are being identified by the government of Maldives will be banned from January 2021. Moreover, import duty on identified plastics have also been increased.

Myanmar

- (a) The Environmental Conservation Law was enacted in 2012 and the Environmental Conservation Rules were promulgated in 2014 respectively. The National Environmental Policy of Myanmar was launched in 2019 and it provides long-term, strategic guidance for achieving sustainable development with the vision of a clean environment and healthy, functioning ecosystems; sustainable economic and social development, as well as mainstreaming environmental protection and management.
- (b) The Myanmar National Waste Management Strategy and Master Plan (2018 - 2030) was developed and it aims to build capacity for sustainable waste management and promote development of a conducive policy framework and strategies that transit from a conventional waste management paradigm to sustainable waste management based on waste hierarchy and the 3Rs (reduce, reuse and recycle), in coordination with other national environmental policies.
- (c) The mission of the Myanmar National Waste Management Strategy and Master Plan is "to develop and implement a holistic and integrated waste management strategy based

on principles of inclusiveness, zero waste, zero emissions and circular economy to achieve a greener, cleaner and healthier environment in Myanmar.”

- (d) Focusing on Myanmar’s coastlines, a decree on the sustainable development of coastal areas was promulgated in 2018 by the Ministry of Hotels and Tourism in order to reduce the accumulation of marine debris caused by the loss of fishing gear and waste from hotels and housing along the coastline.

Netherlands

- (a) The EU Marine Strategy Framework Directive aims to protect more effectively the marine environment across Europe. This is the legal framework for the national Program of Measures.
- (b) There are various legal frameworks that deal with plastics. Existing regulations focus on effective waste management (EU Waste Framework Directive), packaging (EU packaging and packaging waste directive, national EPR schemes) and plastic bags (EU plastic bag directive). In 2021 the implementation of the single-use plastics directive will be added to this.

Norway

- (a) **“Pollution Control Act”**

Act of 13 March 1981 No.6 Concerning Protection Against Pollution and Concerning Waste. Littering, is illegal according to the Pollution Control Act.

Related URL:

<https://www.regjeringen.no/en/dokumenter/pollution-control-act/id171893/>

Norway has a very comprehensive policy framework regulating waste through the Pollution Control Act and detailed Waste Regulations and as part of the European Economic Area, Norway is bound by European rules and regulations, including targets relevant to this issue.

Related URL:

<https://www.regjeringen.no/en/dokumenter/waste-regulations/id512073/>

- (b) **“The marine resources Act”**

Act of 6 June 2008 No. 37 relating to the management of wild living marine resources.

The Marine Resources Act, which regulates fisheries, also forbids dumping of fishing gear. If fishing gear is lost or has to be cut, there is an obligation to try to recover it and to report the loss.

- (c) **“The Product Control Act”** regulates products from causing environmental disturbance, and damage to health, as well as national provisions for eco-design.

Related URL:

<https://www.regjeringen.no/en/dokumenter/product-control-act/id172150/>

Further regulations pertaining to different sources of microplastics emissions will be considered as part of the existing Norwegian legal framework.

Philippines

- (a) 2.1 RA 9003 and DAO 2001-34 –declared the policy of the State to adopt a systematic, comprehensive and ecological solid waste management programme which shall:
- Ensure the protection of public health and environment;
 - Utilise environmentally-sound methods that maximise the utilization of valuable resources and encourage resources conservation and recovery;
 - Set guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimisation measures, including composing, recycling, re-use, recovery, green charcoal process, and others, before collection, treatment and disposal in appropriate and environmentally-sound solid waste management facilities in accordance with ecologically sustainable development principles;
 - Ensure the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of the best environmental practices in ecological waste management excluding incineration; and others

As the leading policy on waste management, RA 9003 and its Implementing Rules and Regulation (DAO 2001-34) provide the overall direction for the country’s waste management. While it indirectly addresses the issue of marine litter, Sections 17, 32, 33, and 40 all discuss the need for proper waste storage to avoid leakage of waste in its intermediate and final disposal stages (MRFs, and SLF accordingly).

- (b) 2.2. RA 9275 –The Clean Water Act shall apply to water quality management in all water bodies, primarily applying to the abatement and control of pollution from land based sources. The water quality standards and regulations and the civil liability and penal provisions under this Act shall be enforced irrespective of sources of pollution. Section 27e also explicitly prohibits transport or dumping into sea waters of sewage sludge or solid waste as defined under Republic Act No.9003
- (c) 2.3. RA 9993 - Under the Philippines Coast Guard Law of 2009, part of the duties of the coastguard is to enforce laws, and promulgated and administer rules and regulations for the protection of marine environment and resources from offshore sources or pollution within the maritime jurisdiction of the Philippines (Section 3[m])
- (d) **Local Regulation of Plastic and Plastic Products** – Recognising that plastic product usage is dependent on local context, Local Government Units have likewise passed resolutions that ban, control or regulate the use of single-use plastics. These resolutions vary in their scope and targets, ranging from different materials (e.g. plastic shopping bags, food containers, cutleries) and activities (food consumption, market/grocery/shopping).

Republic of Korea

- (a) Section 1, Article 24, 'Marine Environment Management Act', 2008
- (b) Act on the Promotion of Saving and Recycling of Resources, 2017
- (c) Framework Act on Resources Circulation, 2018

Saudi Arabia

- (a) The Saudi Council of Ministers issued new environmental regulations for the environment which empowers the Kingdom of Saudi Arabia into achieving its 2030 vision by using international best practices. The new environmental regulations contain nine main categories that include 49 articles to protect the environmental media, natural resources, protect vegetation, marine environment and wildlife. It also sets up a clear mechanism for environmental compliance and environmental violations.

Singapore

- (a) Singapore addresses marine litter as part of a holistic approach to tackling pollution and waste. This includes legislation and regulations on pollution control and waste management, as well as an integrated solid waste management and collection system to minimise waste at source. The applicable legislation and regulations, as of October 2019, include:
 - i. Environmental Protection and Management Act (EPMA)
 - ii. Environmental Public Health Act (EPHA) and subsidiary legislation
 - iii. Sewerage and Drainage Act
 - iv. Sewerage and Drainage (Trade Effluent) Regulations
 - v. Prevention of Pollution of the Sea Act (PPSA)

Solomon Islands

- (a) Environment Act 1998
- (b) Environment Regulation 2008
- (c) Shipping (Marine Pollution) Regulation 2011
- (d) Solomon Islands Maritime Authority Act 2018

Spain

- (a) The five Spanish Marine Strategies, one per each marine subdivision, were legally approved by Royal Decree 1365/2018, 2 November 2018.
- (b) Furthermore, Spain is preparing a framework legislation on waste that includes specific provision in order to reduce de plastic pollution for complying with the transposition of the European legislation on single-use plastic (Directive (UE) 2019/904). In that regard it proposed the following:
 - i. By 2030, 70% reduction of the consumption of

some single-use plastic products (food containers and cups for beverages), taking into account the quantity placed in the market in 2022.

- ii. A reduction in the consumption of other different plastic products as such as plastic trays for food, plastic ring packs holding together multipacks of canned beverages, among others)
 - iii. By July 2021, the restriction of cosmetic and hygienic products containing plastic microbeads added intentionally
 - iv. The development of EPR for agricultural plastic
 - v. A specific tax for all plastic packaging placed on the market
- (c) In the framework of circular economy Spain is also working in a specific action plan on plastic in the long term. At the moment, it is not possible to provide any further information in this matter.

Sri Lanka

Regulations are available on plastic management.

- (a) Prohibition of the manufacture of polythene or any polythene product of twenty (20) microns or below in thickness for in-country use; or (ii) the sale, offer for sale, offer free of charge, exhibition or use of polythene or any polythene product which is twenty (20) microns or below in thickness within the country: Provided that polythene or any polythene product of twenty (20) microns or below in thickness may be permitted to be used with the prior written approval of the Authority for the purposes specified in the Schedule hereto
- (b) Prohibition of the manufacture of food wrappers from polythene as a raw material for in-country use; and (ii) the sale, offer for sale, offer free of charge, exhibition or use of food wrappers manufactured from polythene as a raw material within the country.
- (c) Prohibition of the manufacture of any bag of high density polyethylene as a raw material for in-country use; and (ii) sale, offer for sale, offer free of charge, exhibition or use of any bag manufactured from high density polyethylene as a raw material within the country.
- (d) No person shall burn openly or cause to, allow or permit the open burning of refuse or other combustible matters inclusive of plastics. Any person who fails to comply with the regulations above shall be liable to an offence and punishable under Section 31 of the National Environmental Act, No. 47 of 1980.
- (e) Prohibition of the use of all forms of polyethylene, polypropylene, polyethylene products or polypropylene products as decoration in political, social, religious, national, cultural or any other event or occasion.
- (f) Prohibition of the manufacture of food containers, plates, cups and spoons from expanded polystyrene for in country use ; and (ii) the sale, offer for sale, offer free of charge, exhibition or use of food containers, plates, cups and spoons manufactured from expanded polystyrene within the country

Turkey

- (a) Environmental Law
- (b) Municipal Law
- (c) The Procedures And Principles Regarding The Charging of Plastic Bags (December, 2018)
- (d) Packaging Waste Control Regulation
- (e) Zero Waste Regulation (July, 2019)
- (f) Regulation on Reception of Ship-Sourced Wastes (December, 2004)
- (g) By-law on Recovery Contribution Share for packaging and certain products (2020)
- (h) The General Communiqué on Recovery Contribution
- (i) Circular on Marine Litter Provincial Action Plans' Preparation and Implementation (10 June 2019)
- (j) Circular on App to Track Waste from Maritime Activities (July, 2020)
- (k) Turkish National Marine Monitoring Programme which is based on both national legislation and international conventions.

US

(a) U.S. Marine Debris Act

- i. The U.S. Marine Debris Act, originally passed in 2006, established a national Marine Debris Program within NOAA to identify, determine sources of, assess, prevent, reduce and remove marine debris, and to address the adverse impacts of marine debris on the economy of the United States marine environment and navigation safety. The Act also sets forth directions for the U.S. Coast Guard to address ship-based waste in accordance with MARPOL requirements.
- ii. In 2012, the Act was amended to include provisions for NOAA to address marine debris resulting from natural disasters and severe weather events, in recognition of the high volume of debris that can be caused by such events.
- iii. In 2018, the Act was further amended to expand work across the US government, most notably with the US Department of State, to engage foreign governments, especially those of high marine debris source countries, to better address marine debris through strengthened solid waste management. The 2018 Act also mandated that the US government consider addressing marine debris in all future trade agreements.
- iv. The Act also created the Interagency Marine Debris Coordinating Committee (IMDCC), the federal interagency coordinating body responsible for addressing marine debris. IMDCC is made up of six agencies named in the Marine Debris Act, led by

NOAA, as the chair, and EPA as vice-chair. The Department of Defense, Department of Homeland Security, Department of the Interior, and Department of State participate as members.

- v. IMDCC is primarily responsible for sharing information, assessing and implementing best management practices, and coordinating interagency responses to everyday marine debris and severe marine debris events.
- vi. IMDCC ensures coordination of federal agency research priorities, monitoring techniques, educational programs, and regulatory actions.
- vii. IMDCC is also responsible for recommending priorities and strategies, both nationally and internationally, to identify, determine sources of, assess, reduce, prevent and mitigate the adverse impact of marine debris on the marine environment, natural resources, and vessels.

(b) Clean Water Act (EPA)

- i. The Clean Water Act allows for states to list waters impaired by pollutants, including trash. Unless planned measures can be taken to address impairments (including trash), the Act requires that states or US EPA develop Total Maximum Daily Loads for those pollutants.

(c) Resource Conservation and Recovery Act (EPA)

- i. The Resource Conservation and Recovery Act (RCRA) charges EPA to protect human health and the environment from potential hazards of waste disposal; conserve energy and natural resources; reduce the amount of waste generated; and ensure that waste is managed in an environmentally sound manner by establishing minimum national criteria for solid waste facilities. RCRA regulations are generally implemented by states and/or at the local-level, with state or local governments having the option to put forth regulations that are more stringent than the national standards. These national standards are critically important to ensuring the sound management of solid waste nationwide. Facilities that do not meet these standards are considered open dumps that must close. EPA implements the conservation mandate in RCRA through its Sustainable Materials Management Program. Sustainable materials management (SMM) is a systemic approach to using and reusing materials more productively and effectively over their entire life cycles. By looking at a material's entire life cycle, we can find new opportunities to reduce environmental impacts, conserve resources and reduce costs. Recycling and waste diversion programs also are primarily implemented at the state and local levels.

EU

- (a) The EU's long tradition of legislation on waste (starting in the 1970s and over the years developed into a comprehensive body of legislation) plays an important role in preventing marine litter. As part of the shift towards a circular economy, an important review of the waste legislation took place and the ensuing legislative proposals adopted in 2018 introduced the world's most ambitious waste-management targets and strengthened provisions on waste prevention. Today EU's waste policy includes:

- i. Horizontal legislation setting the main definitions and principles
- ii. Laws on how waste should be treated
- iii. Legislation on specific products or so-called waste streams (many of which will be further modernised in the years to come)

Related URL:

https://ec.europa.eu/environment/waste/target_review.htm

- (b) Other EU instruments that help tackle marine litter include the Marine Strategy Framework Directive (2008), a new Directive on Port Reception Facilities for the delivery of waste from ships (2019), the EU's International Ocean Governance Agenda (2016) and the Urban Waste Water Treatment Directive.

Related URL:

https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0883>

https://ec.europa.eu/maritimeaffairs/policy/ocean-governance_en

https://ec.europa.eu/environment/water/water-urbanwaste/legislation/index_en.htm

- (c) Marine Strategy Framework Directive

The Marine Strategy Framework Directive (MSFD, 2008/56/EC) was the first EU legal instrument to explicitly address marine litter; it requires "Good Environmental Status" for marine litter to be achieved by 2020, i.e. that "properties and quantities of marine litter do not cause harm to the coastal and marine environment". Assessment of the status, target setting, monitoring, reporting and implementation of measures related to marine litter and microlitter are carried out in accordance with relevant MSFD provisions and have been further specified within a Decision by the European Commission (2017/848/EU). The Commission assessment of the measures submitted by the EU Member States was published in July 2018; in 2020 the Commission published a report on MSFD implementation. MSFD activities against marine litter are supported by the MSFD Technical Group on Marine Litter, bringing together experts from Member States, Regional Sea Conventions, NGOs, umbrella organisations and scientific project leads. It acts as an advisory group to the policy process and links science with policy, providing guidance and recommendations on relevant issues such as monitoring methodologies, harm caused by marine litter and sources of marine litter. Importantly, it has been tasked to develop

baseline quantities and threshold values for marine litter and microlitter pursuant to the abovementioned Commission Decision. The EU Marine Beach Litter Baselines report was published in early 2020. Furthermore and for the first time worldwide, the EU has adopted a threshold value related to litter: the number of beach litter items should be less than 20 for every 100 metres of coastline.

Prioritisation of measures and evaluation of their success must be based on scientifically sound monitoring and assessments. The Technical Group on Marine Litter is now starting additional efforts to link monitoring and measures even more.

Prioritisation of measures and evaluation of their success must be based on scientifically sound monitoring and assessments. The Technical Group on Marine Litter is now starting additional efforts to link monitoring and measures even more.

Related URL:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0562&from=EN>

https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

http://mcc.jrc.ec.europa.eu/dev.py?N=41&O=434&titre_chap=TG%20Marine%20Litter

https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=434&titre_chap=TG%2520Marine%2520Litter

<https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=452>

<https://ec.europa.eu/jrc/en/publication/european-threshold-value-and-assessment-method-macro-litter-coastlines>

2.3. Indicators

Following the establishments of ambitious policies and strategies, indicators are also reported by more than half of the reporting countries (15 out of 25 countries). The downstream based indicators are reported by most of the participating countries (15 out of 25 countries). In terms of the upstream based indicators, there are still gaps among countries depending on national circumstances, such as the scale of use of innovative technologies and materials including R&D investment (e.g. reported by Azerbaijan, Chile, Canada). Indicators related to consumer and youth awareness raising and education are also reported by countries (i.e. Sri Lanka, Myanmar).

Generally, international organisations and NGOs which responded to the survey reported some indicators to measure the progress but have not laid out timebound numerical targets with their activities, with the one exception of the Asian Development Bank.

Countries

Australia

(a) Packaging targets

In April 2018, Australia's Environment Ministers agreed to reduce the amount of waste generated and make it easier for products to be recycled. Ministers endorsed a national target of 100 per cent of Australian packaging being recyclable, compostable or reusable by 2025 or earlier.

In 2018, to help achieve this target, the Australian Packaging Covenant Organisation (APCO) established the 2025 National Packaging Targets to create a new sustainable pathway for the way we manage packaging in Australia. The three industry-led targets, to be achieved by 2025, are:

- 70% of plastic packaging being recycled or composted
- 50% of average recycled content included in packaging
- The phase out of problematic and unnecessary single-use plastics packaging.

- (b) The Australian Government supports APCO's ongoing work to deliver a suite of resources for industry to assess and improve the design and manufacturing of their packaging. These include the Sustainable Packaging Guidelines, Food Services Packaging Sustainability Guidelines, Quick Start guidelines for design for recovery and PET.

Azerbaijan

- Improvement of plastic package waste management;
- Strengthening the recycling system;
- Expanding the use of alternative packaging materials;
- Harmonisation of legislation with international law;
- Awareness-raising.

Canada

- Canada has adopted a goal of zero plastic waste by 2030.
- The Ocean Plastics Charter, championed by Canada during its 2018 G7 Presidency, includes actions across the plastics lifecycle to reduce plastic waste and pollution. Specific Ocean Plastic Charter targets:
 - Working with industry towards 100% reusable, recyclable, or where viable alternatives do not exist, recoverable plastics by 2030;
 - Working with industry towards increasing recycled content by at least 50% in plastic products where applicable by 2030;
 - Working with industry and other levels of government to recycle and reuse at least 55% of plastic packaging by 2030 and recover 100% of all plastics by 2040; and
 - Working with industry towards reducing the use of

plastic microbeads in rinse-off cosmetic and personal care consumer products, to the extent possible by 2020, and addressing other sources of microplastics.

- (c) In 2018, Environment Ministers endorsed a broader aspirational Canada-wide waste reduction goal (for all waste, including plastics). In 2014, every Canadian threw away on average 706 kg of waste. The goal will reduce this number by 30% per person by 2030, with a 50% reduction by 2040.

- (d) The Government of Canada is leading by example and has committed to divert at least 75% of plastic waste from federal operations by 2030.

- (e) Canada has also endorsed relevant international commitments, including the United Nations Sustainable Development Goals target 14.1 to prevent and significantly reduce marine litter by 2025 and the Osaka Blue Ocean Vision that aims to reduce additional marine plastic pollution to zero by 2050.

Chile

- The targets on recovery of plastic packaging by EPR regulations have made progress from 3% to 45% in 12 years on household packaging and from 15% to 55% for non-household packaging.
- Prohibition was implemented on the use of plastic bags in commerce from February 2019, with the exception of micro, small and medium-scale companies, for which the prohibition entered into force in August 2020.

- (c) Regarding the regulation on EPR for packaging, the project includes these targets:

Targets for household packaging

Year	Food cartons	Metal	Paper and Card-board	Plastic	Glass
1st	5 %	6 %	5 %	3 %	11 %
2nd	8 %	9 %	9 %	6 %	15 %
3rd	11 %	12 %	14 %	8 %	19 %
4th	15 %	15 %	18 %	11 %	22 %
5th	19 %	17 %	23 %	14 %	26 %
6th	23 %	21 %	28 %	17 %	31 %
7th	27 %	25 %	34 %	20 %	37 %
8th	31 %	29 %	39 %	23 %	42 %
9th	36 %	32 %	45 %	27 %	47 %
10th	40 %	36 %	50 %	30 %	52 %
11th	50 %	45 %	60 %	37 %	58 %
From the 12th year	60 %	55 %	70 %	45 %	65 %

Targets for non-household packaging

Year	Metal	Paper and Cardboard	Plastic
1st	23 %	48 %	13 %
2nd	32 %	54 %	19 %
3rd	42 %	60 %	25 %
4th	51 %	65 %	32 %
5th	61 %	71 %	38 %
6th	64 %	74 %	42 %
7th	66 %	78 %	46 %
8th	68 %	81 %	51 %
From the 9th year	70 %	85 %	55 %

Finland

- (a) Environmental targets of the Finnish Marine Strategy (2018 – 2024) concerning marine litter, with indicators addressed to each target:
- Reception of waste is efficient and user-friendly in all ports
 - The number of cigarette butts on Finnish urban beaches is reduced significantly (by 2024)
 - Urban waste water treatment facilities remove a very significant portion of microplastics
 - Quantity of plastics in the marine environment decreases 30 % (by 2024) from the 2015 level
- (b) EU level thresholds for good environmental status related to marine litter under the Marine Strategy Framework Directive and Commission Decision on GES are under development. For beach litter the threshold for GES has been set at 20 items per 100 meters of beach.
- (c) 21 annually updated quantitative indicators for follow-up the implementation of the National Waste Plan to 2023, e.g. quantities of waste in different sectors, recycling rate of packaging waste, etc.

France

- (a) Examples of targets for the legislation against waste and for circular economy:
- By 5% of reused packaging by 2023
 - 10% of reused packaging by 2027
 - 50% less single-use plastic bottles by 2030
 - 100% recycled plastic by 2025

Germany

- (a) Threshold values for Marine Litter are under elaboration at the EU level

Japan

- (a) “National Action Plan for Marine Plastic Litter” includes five indicators for monitoring progress:
- Amount of plastic waste generated, recycled, heat recovered, incinerated without energy recovery, and land filled
 - Amount of marine litter collected by clean-up

activities

- Amount of collected land-based litter, illegal dumping, and scattered waste
- Budget scale of innovative technologies and materials including R&D investment
- Several experts from other countries given technical capacity development

Maldives

- (a) The following targets are the indicators of the ‘Strategic Action Plan 2019 – 2023’:
- By 2023, phase-out of importation, production and use of single use plastics in the country is enforced
 - By 2023, at least 65% of students recognise the importance of reduce, reuse and recycle
 - By 2022, a system exists for consumers to refurbish and donate or sell end of life products
 - By 2021, guidelines on the handling, storage and transportation of non-medical waste and chemicals are enforced on inhabited islands
 - By 2023, a legislative framework on the sound management and safe disposal of chemicals is enforced
 - By 2023, a National Recycling Strategy is developed and implemented for plastics, metals, glass and other recyclables
 - By 2020, a national policy framework on pollution prevention is developed

Myanmar

The National Waste Management Strategy and Master Plan have identified the six major goals with 13 targets and 59 activities to meet zero waste at 2030. These goals and targets are:

Goal	Targets	Short-term	Mid-term	Long-term
		(2018 - 2020)	(2021 - 2025)	(2026 - 2030)
Goal A - Extending sound waste collection services to all citizens and eliminating uncontrolled disposal and open burning	(i) Achieve sound waste collection services for all citizens	70%	85%	100%
	(ii) Eliminate uncontrolled dumping and burning in cities and mandate the operation of environmentally sound disposal facilities	Major City Development Committee (Yangon, Mandalay and Nay Pyi Taw)	50 % of all other Township Development Committees in the country	100 % of all other Township Development Committees in the country

Goal	Targets	Short-term	Mid-term	Long-term
		(2018 - 2020)	(2021 - 2025)	(2026 - 2030)
Goal B - Extending sustainable and environmental sound management of industrial and other hazardous wastes	(i) Mandate separate collection and sound treatment of hazardous waste, including infectious medical waste and agro-chemical waste, from non-hazardous waste	Major City Development Committee (Yangon, Mandalay and Nay Pyi Taw)	50 % of all other Township Development Committees in the country	100 % of all other Township Development Committees in the country
	(ii) Mandate sound collection and environmentally friendly treatment of all industrial waste and agro-chemical waste	Major City Development Committee (Yangon, Mandalay and Nay Pyi Taw)	50 % of all other Township Development Committees in the country	100 % of all other Township Development Committees in the country
Goal C - Substantively prevent waste through 3Rs (reduce, reuse, recycling) and thereby establish a resource circular society	(i) Mandate the development of city waste management strategies and action plans with actual waste reduction targets by all City Development Committee (CDCs) and Township Development Committees (TDCs)	25%	50%	80%
	(ii) Mandate the introduction of targets for diverting food waste from landfills	15%	35%	60%
	(iii) Mandate separate collection and set waste recycling targets for industrial, medical and other wastes	15%	35%	60%
Goal D - Ensure sustainable financing mechanisms	(i) All City and Township Development Committees conduct full cost accounting for waste service	50%	75%	100%

Goal	Targets	Short-term	Mid-term	Long-term
		(2018 - 2020)	(2021 - 2025)	(2026 - 2030)
	(ii) All City and Township Development Committees establish cost reflective tariffs for waste management services	50%	75%	100%
Goal E - Awareness Raising, Advocacy and Capacity Building	(i) Increase in the number of townships that have implemented standard awareness-raising programmes for their residents	25%	50%	100%
	(ii) Increase in the number of schools in townships that have established environmental education programmes for their students	25%	50%	100%
Goal F - Compliance, Monitoring, Enforcement and Recognition	(i) City and Township Development Committees establish benchmark performance indicators	50%	75%	100%
	(ii) Increase in the number of successful enforcement actions filed against non-compliant entities by City and Township Development Committees	50%	75%	100%

Netherlands

(a) The regional sea convention for the North-East Atlantic, OSPAR, has developed several common indicators to monitor marine litter: a) beach litter; b) the stomach contents of fulmars to assess changes in the quantities of floating litter in the North Sea (this also gives an indication of the impact on biota) and seabed litter.

(b) For the plastic pacts and the transition agenda for plastics the entire supply chain of plastics is studied, looking at recyclability of plastics, reduction in usage (through reuse or refuse), the amount of recycling taking place and what form (chemical or mechanical) and the inputs used (recyclate, virgin, biobased).

Norway

- (a) As part of the OSPAR, Norway currently assesses **beach litter, seabed litter and plastic particles in fulmar stomachs** as common indicators. These allow the abundance, trends and composition of marine litter in the OSPAR Maritime Area to be determined for different marine components (coast, seafloor and floating) and gives also an indication of the extent marine species are impacted. Updated assessments for beach litter and plastic particles in fulmar stomachs have been agreed in 2019. Development of an indicator for microplastics in sediment continues. The aim is that updated assessments of all the OSPAR marine litter indicators ready in 2023.

Related URL:

<https://oap.ospar.org/en/ospar-assessments/committee-assessments/eiha-thematic-assessments/marine-litter/beach-litter-monitoring/>

<https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/pressures-human-activities/marine-litter/composition-and-spatial-distribution-litter-seafloor/>

<https://oap.ospar.org/en/ospar-assessments/committee-assessments/eiha-thematic-assessments/marine-litter/plastic-particles-in-fulmar-stomachs-north-sea/>

- (b) Apart from this, there are no national indicators that specifically target marine plastic litter. However new indicators are being considered that also will look at the problem from a more upstream perspective.

Philippines

Specific measures and targets specifically addressing Marine Litter have yet to be released. However, the DENR and relevant stakeholders are already working towards this within the National Plan of Action on Marine Litter. The Plan of Action provides the country strategy for addressing the local sources of marine litter. Most of the following measures are covered/considered in the NPoA and will be accordingly implemented once the NPoA is completed and approved.

Republic of Korea

- (a) Total amount of marine litter collected (2015~2019)

(unit: ton)

	2015	2016	2017	2018	2019
Sum	69,129	70,840	82,176	95,631	108,644

Saudi Arabia

- (a) The NESI sets different national KPIs that are related to waste management, and these will help in measuring the progress of decreasing MPL:
- Number of dumpsites in need of rehabilitation
 - Percentage of sewage water treated in compliance with quality standards
 - Diversion rate from landfills and dumpsites

Sri Lanka

- (a) Once the National Action Plan on Plastic Waste Management is implemented, national indicators will be monitored:
- Number of beach clean-up programmes
 - Number of plastic traps established
 - Number of beach caretakers recruited.
 - Quantity plastic raw material imported
 - Percentage of violators of regulations and rectification of that
 - Percentage of increase in recycling facilities
 - Number of single-use plastic items banned
 - Number of Waste Dumps rehabilitated
 - Number of new sanitary Landfills constructed
 - Number of plastic inventories prepared

Turkey

- (a) Recycling rate
- (b) Reduction of plastic bags and plastic waste
- (c) Number of people trained
- (d) Number of public buildings established zero waste system
- (e) Population benefit from municipal waste management facilities
- (f) Number of public awareness campaigns on marine litter and microplastics
- (g) Amount of marine litter collected during clean-up activities

EU

- (a) Indicators for marine litter occurrence and impact in the marine environment are provided through Descriptor 10 of the MSFD. It specifies criteria for litter on the coastline, in the water surface layer and on the seafloor, as well as microlitter in all matrices and the impacts of litter through ingestion, entanglement and other adverse effects. Baselines are derived as part of comparable assessment frameworks that are used to prioritise actions and to measure the success of mitigation measures.

International Organisations and NGOs

ADB

- (a) **Strategy 2030, which sets the course for ADB to respond effectively to the Asia and Pacific region's changing needs, has a monitoring framework that includes indicators and targets for each of its operational priorities.** The following are the most relevant Strategy 2030 operational priority results against marine plastic litter. These will be monitored under ADB's corporate results framework and will be reported annually in the Development Effectiveness Review:

- i. Pollution control infrastructure assets implemented
 - ii. Pollution control and resource efficiency solutions promoted and implemented
 - iii. Solutions to conserve, restore, and/or enhance terrestrial, coastal and marine areas promoted and implemented
- (b) Each ADB project and technical assistance has a Design and Monitoring Framework with targets and indicators aligned to Strategy 2030. **The following are performance indicators with targets in the regional technical assistance on “Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific”:**
- i. By 2020, multi-donor financing partnership facility for healthy oceans and blue economy established and operational
 - ii. By 2022, at least two policy, regulatory or institutional interventions drafted; at least four marine plastic pollution reduction projects supported; and at least five knowledge products developed and disseminated
 - iii. By 2023, at least two new investments supporting marine plastic pollution reduction included in ADB pipeline; at least two government-led action plans endorsed for approval; ocean health issues and actions mainstreamed into at least two ADB-supported subregional cooperation programs; at least four government-led action plans on marine plastic pollution drafted; at least two pilot demonstration projects on a plastic circular economy and marine plastic pollution reduction implemented; at least three high-level forums on healthy oceans and plastic circular economy, including through subregional cooperation; at least six knowledge sharing and capacity building activities on healthy oceans and plastic circular economy implemented; and at least 200 (40 per participating DMC) government officials (40% of whom are women) reported improved knowledge of marine plastic pollution issues and solutions.

Ellen MacArthur Foundation

- (a) As part of the Global Commitment and the Plastics Pact network, businesses and governments have committed to take action to:
- i. Eliminate unnecessary and problematic packaging
 - ii. Shift from single use to reuse (where relevant)
 - iii. Ensure all plastic packaging is reusable, recyclable or compostable
 - iv. Increase the reuse, collection, and recycling or composting of plastic packaging
 - v. Increase the amount of recycled plastics used in plastic packaging and products

GEF

- (a) The GEF-7 Programming Directions established an indicator directly related to the marine litter issues, as defined “Indicator 5.3: Amount of Marine Litter Avoided.”

Ocean Conservancy

Ocean Conservancy’s marine debris strategy is organised around three pillars, with all three firmly grounded in science:

(a) People:

Empowering and engaging citizens and NGOs, globally, to prevent plastics from entering the ocean, e.g. 1,000,000 people engaged globally to remove more than 23 million pounds of trash for the International Coastal Cleanup in a single day (2018).

(b) Private Sector:

Compel and enable the private sector to play a greater role in implementing effective, long-term solutions to reduce ocean plastics inputs and impacts, e.g. Trash Free Seas Alliance, Global Ghost Gear Initiative

(c) Policy:

Advance public sector policy to reduce ocean plastic inputs and impacts, e.g. Plastics Policy Playbook

NOTE: Ocean Conservancy’s specific targets and indicators are currently under review/revision and so are not included here.

OECD

- (a) To date, the OECD does not have a plastics-specific indicator.

- (b) See here for indicators and data on Municipal Waste generation and treatment in OECD countries: https://www.oecd-ilibrary.org/environment/waste-management-and-the-circular-economy-in-selected-oecd-countries_9789264309395-en

UNEP

- (a) UNEP Medium Term Strategy 2018 - 2021, Programme of Work 2020 - 2021, Subprogramme 5 on Chemicals, Waste and Air quality has the following indicators of progress:
- i. SP5(b) i: Increase in the number of countries that have used UNEP analysis or guidance in implementing waste prevention and sound management policies and good practices in accordance with relevant multilateral environmental agreements, SAICM, and other relevant international agreements
 - ii. Increase in the number of private companies/industries that have used UNEP analysis or guidance in implementing policies and good practices for waste prevention and sound waste management
 - iii. Increase in the number of civil society organisations that have taken action to enhance waste prevention and improve waste management using UNEP analysis or guidance
- (b) PoW Project Document No. 522.4 Policy support, technical assistance, demonstration sites made available to countries in support of the global Governance framework to address marine litter and microplastics:

- i. A global governance framework accessible to governments to address marine litter
 - ii. Number of countries that have access to national source inventories on marine litter and microplastics management
 - iii. Number of national/regional or river basin action plans prepared with engagement of countries
 - iv. Number of countries that agree to share demonstrations on good practice for marine plastic waste reduction
- (c) PoW Project Document No. 521.1 Promotion and Delivery of Environmentally Sound Waste Management Technologies and Methods and in-Country Technical and Advisory Support:
- i. Strategies, action plans, or relevant instruments on environmentally sound waste management supported
 - ii. Number of pilot demonstration on environmentally sound waste management supported
- (d) PoW 14 Basel Convention Technical Assistance:
- i. BRS-Norad-1 Project: to prevent and significantly reduce marine litter and microplastics by strengthening national capacity in Bangladesh, Ghana and Sri Lanka
 - ii. BRS-Norad-2 Project: to improve management of plastic waste in partner countries through increased knowledge, capacity and engagement among decision-makers and stakeholders on the control of transboundary movements and environmentally sound management (ESM) of plastic waste in line with the provisions and guidelines of the Basel Convention, in particular the Plastic Waste Amendment
 - iii. Plastic Waste in Remote and Mountainous Areas Project: to improve understanding of the plastic waste situation in remote and mountainous areas, with a focus on Kyrgyzstan, enhance knowledge of lessons learned and best practices in the ESM of plastic waste in remote and mountainous areas, enhance their ability for informed decision-making through the availability of options and recommendations, increase awareness of the plastic waste challenge and the steps needed to address it
 - iv. Small Grant Programme (SGP) on Plastic Waste: A series of projects on plastic waste are being undertaken by the Basel and Stockholm Conventions Regional Centre, funded by Norad. The projects aim to improve the management of plastic waste in partner countries and thus contribute towards preventing and significantly reducing marine pollution
- (e) PoW 19 Basel Convention Plastic Waste Partnership:
- i. Project groups: (1) Plastic waste prevention and minimization, (2) Plastic waste collection, recycling and other recovery including financing and related markets, (3) Transboundary movements of plastic waste, and (4) Outreach, education and

awareness-raising

- ii. Pilot projects of the Plastic Waste Partnership (<http://www.basel.int/tabid/8494/Default.aspx>)

WB

- (a) Indicators used by the World Bank depend on the individual projects and activities. Here are a few examples:
- i. Rate of recycling and reuse of plastics (%)
 - ii. Cities with improved waste management services (number)
 - iii. Tourist beaches free of marine litter (number)
 - iv. Marine pollution from non-point sources (t) (agriculture, storm water)
 - v. Marine pollution from point sources (t) (industrial effluents and wastewater)
 - vi. Fishing nets collected and recycled from targeted fleets (mt)
 - vii. Countries with improved Blue Economy policy and institutional framework improved (number)



3. Measures and Achievements

3.1. Prevention and reduction of plastic waste generation

On-land actions taken by most of the reporting countries include Extended Producer Responsibility (EPR) (19 out of 25 countries reported) and addressing the use of single-use plastics on a regulatory and/or voluntary basis (23 out of 25 countries reported). Some countries, such as Chile, have a specific law on EPR, which prohibits the delivery of plastic bags by commerce.

For countries that contributed to the first report, seven out of 15 countries reported progress from last year. Seventeen new actions and two quantitative achievements are newly reported by the countries that participated in the 2019 report.

However, compared with downstream measures which are described in section 3.2., there are still gaps in the level of upstream implementation. Countries such as Australia and France are actively working on promoting environmentally-friendly product design, and regulating the use of microbeads for cosmetic and personal care products (12 out of 25 countries reported on the microbeads restriction).

Actions at sea reported by countries include actions on fishing gear and capturing trap/filter on drainage / rivers. These actions are still in progress, and are being implemented in 20 countries for fishing gear and 16 countries for drainage /river trap/filter.

Achievements reported by international organisations and NGOs suggest that plastic waste prevention measures are delivering concrete results (GEF projects expected to reduce 350,000 metric tons of marine litter between 2018 - 2022), and other country-based prevention projects being implemented (by UNIDO in Bangladesh, Egypt, Ghana, Kenya, Nigeria and South Africa).

Countries

Australia

■ Measures

(a) Ban on exports of waste plastic, paper, glass and tyres

On 13 March 2020, the Australian Government, along with all states and territories and local governments, agreed to introduce a ban on the export of waste plastic, paper, glass and tyres, and that the ban would be phased in over four years, starting with glass on 1 July 2020.

After consulting with key industry stakeholders, the start date for the ban has been revised to 1 January 2021, as restrictions related to COVID-19 made it impossible for the Australian Parliament to pass legislation in time for the 1 July 2020 deadline.

Once these measures have been implemented, they be followed by a ban on mixed plastics from 1 July 2021, whole used tyres from 1 December 2021, single resin/polymer plastics from 1 July 2022, and mixed and unsorted paper and cardboard from 1 July 2024.

■ Achievements

(a) Microbeads

In 2016, Australia's Environment Ministers announced a voluntary phase-out of microbeads. In April 2018, 94% of cosmetic and personal care products were assessed as microbead free, and Environment Ministers committed to eliminating the final 6% and to examine options to broaden the phase out to other products

Azerbaijan

■ Measures

- (a) Draft laws on “Harmonization of plastic waste management to international practice” and “Banning the import, production and sale of disposable plastics” were agreed with appropriate bodies and submitted to the Government for approval. As a result of measures taken to expand the use of alternative packaging, the interest of the private sector in this area has increased. Evaluation work on the construction of bioplastic plant launched in the country. Regular measures have been taken to raise the environmental awareness. Target groups were identified and brochures, posters, books and materials for educational institutions were published. Educational workshops, flash mobs, seminars were held, and regular meetings were organised in the media. Events and calls for the alternative plastic bags were organised in the markets.

■ Achievements

- (a) Production of alternative packaging (paper, textile) has been launched as a result of the measures taken and awareness-raising activities. New enterprises were established. Sales of textile, paper and bioplastic products, that replace plastic packaging, have expanded.

The situation is improving compared to FY2019.

Canada

■ Measures

- (a) Canada has a comprehensive agenda to reduce plastic waste and pollution that embraces a resource efficient and circular economy approach to address the entire plastics value chain. This includes activities that help to prevent and reduce plastic generation such as:
- Banning harmful single use plastics, where warranted and based on science
 - Reducing plastic waste from federal operations, by diverting 75% of plastic waste by 2030; eliminating unnecessary use of single-use plastics; and, purchasing more sustainable products
 - Working with industry to improve product design and the recovery of all plastics
- (b) In June 2017, the Government of Canada published the Microbeads in Toiletries Regulations, listing microbeads on Schedule 1 of the Canadian Environmental Protection Act. The regulations prohibit the manufacture, import, and sale of toiletries used to exfoliate or cleanse that contain plastic microbeads, including non-prescription drugs and natural health products started on 1 January 2018 with a complete ban as of July 2019.
- (c) The federal, provincial and territorial governments are also working together to:
- Achieve consistent extended producer responsibility programs across Canada
 - Develop a roadmap to address single-use and disposable plastics
 - Establish national performance requirements for

plastics (e.g. standards for recycled content and bio-based plastics)

- Support recycling infrastructure and innovation in plastics manufacturing
- Develop guidelines and tools for green procurement practices

■ Achievements

- (a) Many of the initiatives launched since Canada's G7 are still in the development or early stages and are being monitored. Canada will continue to report progress and measure the performance of these initiatives. Some examples of success have begun to emerge.
- (b) As of July 2019, the manufacture, import and sale of all toiletries that contain plastic microbeads, including non-prescription drugs and natural health are prohibited in Canada. The Microbeads in Toiletries regulations help protect the environment by reducing the quantity of plastic microbeads entering Canadian aquatic ecosystems.
- (c) Through the Zero Plastic Waste Initiative, eight industry and non-profit organisations have received over CAD1.6 million that advance innovative and sector specific solutions to improve the sustainable design and production of plastics and strengthen secondary markets.

Chile

■ Measures

- (a) Chile has implemented several plans, policies and programs to prevent the generation of plastic waste and to increase its recycling, including a campaign to prevent the use of plastic straw (<http://www.chaobombillas.cl/>).

■ Achievements

- (a) In the first year of the plastic bag ban implemented in 2018, the Ministry of the Environment estimates that 2.2 billion plastic fewer bags were given to customers than in the previous year.

Finland

■ Measures

- (a) National Plastics Roadmap (2018) identifies measures used to reduce the harm caused by plastic waste and litter, help consumers deliver plastics to waste management, improve the efficiency of plastics recovery, recycling and product design, creating conditions for investments and innovations in the circular economy, and reducing the dependency on fossil raw ingredients by increasing bio-based and biodegradable solutions.
- (b) National Waste Plan to 2023 - from Recycling to a Circular Economy (2018) sets out the objectives for waste management and waste prevention and the measures to reach the objectives. Detailed targets are set and measures presented for four key areas: construction and demolition waste, biodegradable waste, municipal waste, and waste electrical and electronic equipment.

- (c) A Green Deal on actions to restrict the use of plastic carrier bags between the MoE and the Finnish Commerce Federation to implement the 'Plastic Bags Directive' (2016). The aim is that by 2025 only 40 plastic carrier bags per person per year would be used.
- (d) EU Single-use Plastics Directive (Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment) which is directly applicable legislation in all EU Member States (incl. Finland).
- (e) Ongoing development of EU policy (changes to REACH decree) to limit intentionally added microplastics. Please see more on European Chemicals Agency (ECHA) web page: <https://echa.europa.eu/fi/hot-topics/microplastics>.

■ Achievements

- (a) A broad network of various types of actors was set up by the Ministry of the Environment for the implementation of the Plastics Roadmap. Various types of activities and a number of reports, e.g. on degradation of biopolymers (biobased plastics) in the Baltic Sea, have been published.
- (b) Progress in implementation of the National Waste Plan to 2023 (cf. indicators). Updating of the plan will be done during 2020. The renewed Waste Framework Directive as well as the Directive on the reduction of the impact of certain plastic products on the environment require new content to the National Waste Plan. The notion in the Government Programme "We will create a vision for the waste management sector that supports recycling and circular economy targets and that extends into the 2030s. Our goal is to increase the recycling rate to at least the level of the EU's recycling targets" will also be implemented.
- (c) Finland joined the European Plastics Pact.
- (d) The Green Deal on plastic carrier bags has resulted in shops putting a price on plastic bags, enhancing the use of multi-use bags and informing about the need to restrict the use of bags.
- (e) Good collaboration within EU on marine litter, including marine litter monitoring, and development of the Single-Use Plastics Directive based on the data on most commonly found plastic litter objects on beaches collected due to the marine monitoring obligations of the Marine Strategy Framework Directive.
- (f) Good collaboration on the regional sea level within HELCOM on monitoring, development of indicators, as well as on addressing the problem and targeting measures to combat it under the HELCOM Marine Litter Action Plan from 2015.

France

■ Measures

- (a) On-land actions:
 - i. Ban on plastic carrier bags
 - ii. Reinforcement of extended producer responsibility schemes and development of new ones (cigarette

butts, wipes, fishing gears, etc.)

- iii. Active participation in the writing and adoption of the European directive on single use plastics
 - iv. Ban on single-use plastic items listed in the European directive as well as cotton-buds and microbeads
 - v. Contribution to European negotiations to prevent microplastics in products (REACH regulation)
 - vi. Establishment of a roadmap for circular economy (100% of plastics to be recycled in 2025, with targets for a better collection of plastics, targets for a better recyclability of plastic products, etc.), and a study of a nation-wide deposit system for plastic bottles and other beverage containers;
 - vii. Identification of solutions to expanded polystyrene and support fishermen toward these solutions
 - viii. Prevention of leakage of preproduction plastic pellets into the environment through an involvement of the industries
- (b) Actions on rivers and waste and rain water:
 - i. Launch of actions to prevent the leaks of plastic filtering sieves from water treatment plants into the environment
 - (c) Actions on the seashore and at sea:
 - i. Good practices provided to fishermen and mussel farmers to prevent waste from net cuttings and from mussel farming

■ Achievements

- (a) On-land actions:
 - i. Development of extended producer responsibility schemes (still ongoing) and extension of the scope of separate collection of plastic packaging for all households (the recyclable-bin is accepting all kind of plastic packaging, instead of just the bottles and jars) : already 2/3 of the national population is sorting that way, and it will be 100% in 2022)
 - ii. Prohibition of plastic carrier bags
 - iii. Prohibition of microbeads in cosmetics and cotton-buds
- (b) Actions on the seashore and at sea:
 - i. Fishing for litter initiatives (by fishermen) are occurring but will be further developed

Germany

■ Measures

- (a) In December 2019, the federal cabinet voted to ban the use of plastic bags with a thickness between 15- 50 micrometers. As a next step, the law has to pass the German Parliament.
- (b) As to the prevention and reduction of lost fishing gear, legislation has been adopted at the level of the European Union applicable to German fishing vessels according to which the fishing gear has to be marked allowing the

identification of the gear owner (Article 8 of Regulation (EC) no. 1224/2009). Fishing vessels need to have on board the necessary equipment to recover lost fishing gear. In the case of the loss of the gear, the master of a fishing vessel is obliged to attempt to retrieve the gear. Where this is not possible the master has to inform their flag state authorities within 24 hours. If the fishing vessel operates in the waters of another state, the flag state authorities are to inform the competent authorities of the coastal state (Article 28 of Regulation (EC) no. 1224/2009).

■ Achievements

- (a) In 2016, the German federal ministry for environment, nature protection and nuclear safety and the German Retail Organization (HDE) reached an agreement on the reduction of the use of plastic bags (thickness between 15-50 micrometers). As a result, the use of plastic bags was reduced from 68 bags per person per year in 2015 to 20 bags per person per year in 2018. Once the law addressing the complete ban is in effect, this number will be further reduced.

Islamic Republic of Iran

■ Measures

- (a) A prohibition is imposed on the use of plastic water bottles in all the offices of DOE (headquarters and 31 provincial offices) across the country since mid-January 2018.

Italy

■ Measures

- (a) **Plastic-free campaign (#PFC)** is an initiative aimed at reducing single-use plastics in public and private offices.

On 12 June 2018 the Italian Minister of the Environment, Land and Sea launched the initiative "Plastic Free Challenge (#PFC)", a challenge that aims to involve as many people, companies and institutions as possible, to commit themselves to eliminating single-use plastics. The Minister extended the appeal to other national and local institutions (Ministries, Regions, Municipalities, etc.) and invited everyone to tweet their commitment to free themselves from plastics with the hashtag #PFC.

The Ministry of the Environment has therefore adopted a set of measures aimed at the elimination of single-use plastics, including:

- Elimination of plastic beverage bottles from vending machines
- Installation of natural or sparkling water dispensers
- Free distribution to employees of reusable aluminum bottles
- Replacement in vending machines of plastic cups with paper ones, and of plastic stirrers with wooden ones
- Elimination of single-use products in the Ministry's kindergarten. The initiative is voluntary. Dozens of local authorities and institutions have already joined the initiative and the number is still increasing. The list of the participants at the challenge is published

on the website of the Ministry of Environment.

- (b) Memorandum of Understanding with the Italian Olympic Games Committee

In 2019 the Minister of Environment, Land and Sea signed a memorandum of understanding with the Italian Olympic Games Committee (CONI). The agreement aims at promoting sustainability in sports events in particular by reducing plastic waste.

- (c) Memorandum of Understanding with FORMEZ PA

In 2019 the Minister of Environment, Land and Sea signed a memorandum of understanding with FORMEZ PA. The agreement aims at promoting the plastic-free campaign in public administrations.

- (d) National Plan for Sustainable Plastics

The government has started activities to develop a national plan for sustainable plastics.

- (e) European Plastic Pact (EPP):

In March 2020 Italy joined the European Plastic Pact.

Japan

■ Measures

- (a) From July 2020, a charge for plastic shopping bags was started
- (b) Enforcement of sound environmental design including weight-saving for single use containers and packages
- (c) Industry self-regulation on microbeads contained in rinse-off scrub products

■ Achievements

- (a) Amount of waste plastic generated (situation is improving compared to FY2017)

	FY2015	FY2016	FY2017	FY2018	FY2019
Generated plastic	9,150kt	8,990kt	9,030kt	8,910kt	Under investigation

(Reference)

"The status of production, disposal, recycling and treatment of plastic products" (Plastic Waste Management Institute JAPAN)

Maldives

■ Measures

- (a) Import duty imposed on certain single-use plastics identified in the SUP phaseout plan
- (b) From January 2021, ban on certain single-use plastics identified in the SUP phaseout plan
- (c) Education and awareness campaign to prevent and reduce the usage of single-use of plastics and to promote sustainable lifestyles

- (d) Strengthening national waste data and setting reduction targets for plastic packaging
- (e) Sustainable provision of alternatives for plastic
- (f) Establishing an efficient collection system for other plastics

■ Achievements

- (a) (In 2020) Draft national policy and legal framework to ban the import, production and the usage of single-use plastic. Implementation of the policy is now in the final stage.

Myanmar

■ Measures

- (a) In June 2019, the Government of Myanmar adopted the Bangkok Declaration on Combating Marine Debris in the ASEAN Region. The recently adopted Myanmar National Waste Management Strategy and Action Plan for Myanmar for 2018 - 2030 lists plastic as one of the priority waste streams and generally promotes a 3Rs (reduce, reuse and recycle) approach.
- (b) In order to implement Goal-14 of the Sustainable Development Goals, the National Coastal Resources Management Committee was established in 2016 to step up efforts for conservation of the coasts, implementation of Integrated Coastal Management.
- (c) With the World Bank's technical assistance under the Regional Marine Plastics Framework and Action Plan through PROBLUE Trust Fund, plastics policy options and a roadmap (draft) have been developed through the survey and assessment of product alternatives for the top 10 priority plastic items leaking into the environment in Myanmar, which will be included in the national plastic action plan. It identified 14 policy options and grouped them into short-term, mid-term, and long-term measures.
- (d) State and Regional Plastic Waste Management Plans are developed by State and Region Environmental Conservation Department staff with the cooperation of other relevant departments and stakeholders.

■ Achievements

- (a) The Government of Myanmar endorsed and issued the National Waste Management Strategy and Master Plan (2018 - 2030) with technical support by UN Environment and IGES/CCET. It emphasises the importance of holistic waste management promotion, actions to maximise proper collection and disposal of industrial waste, medical waste and other policies and a monitoring framework.
- (b) State and Regional Plastic Waste Management Plans are developed by State and Region Environmental Conservation Department staff with the cooperation of other relevant departments and stakeholders.

Netherlands

■ Measures

- (a) Policy programme on micro plastics:
 - i. Prevention and cleaning up of litter, specifically in rivers
 - ii. Behavioural change pilots (waste collection infrastructure, communication nudges etc.) are done in collaboration with regional and local governments to prevent litter. Extended Producer Responsibility on 'throw-away plastics' (SUP-directive, see below)
 - iii. Car tyres: communication campaign on tire pressure and tyre type. Lobby towards the EU for including wear in the EU tyre label
 - iv. Clothing: Research Institute for Health and the Environment (RIVM) recently published a study on the possible measures to prevent microplastics from clothing
 - v. Currently, discussions are being carried out on next steps with the sector: microplastics from paints will be researched in 2020
- (b) In the European Union, the single-use plastics (SUP) directive will help in preventing microplastics from litter, as it addresses the 10 most common sources of plastic waste on European beaches. The SUP directive prohibits some plastics products from entering the European market, targets others with EPR, puts labelling restrictions on some products and helps to raise awareness amongst consumers.
- (c) The Netherlands aimed for an EU ban on microplastics in cosmetics and detergents to reduce the emission of microplastics into the marine environment. This has been included in the EU plastic strategy of January 2018 and the Commission has started a process to restrict the use of intentionally added micro plastics. Following that, the EC has also announced that a policy will be formulated to prevent unintentional microplastics from wear & tear.
- (d) Concerning balloons, in addition to awareness campaigns, the Cabinet encourages local governments to restrict the simultaneous launching of large numbers of balloons and disseminate information on possible alternatives.

- (e) The Netherlands also believes stimulating the circular economy of plastics can help prevent litter. To promote reuse of plastics products both the Plastic Pacts (NL and EUR) have working groups on reuse, which conduct experiments with reusable plastic products and business models.

- (f) The introduction of a deposit system on plastic bottles in 2021 will also help the prevention of litter.

■ Achievements

- (a) The OSPAR assessments for beach litter, seabed litter and plastic in the stomachs of fulmars show that litter (including mostly plastic) is common on the beaches, in the water column and on the seabed of the North Sea. At North Sea level, there are still no indications of a significant decrease in beach and seabed litter but significant decreases have been observed in plastic in the stomachs

of northern fulmars for both the wider North Sea area and for birds washed up on the Dutch coast. In addition, a significant decrease has been observed, for the first time, in the total number of litter items on Dutch beaches.

Amount of waste plastic generated (situation has slightly improved in 2018 compared to 2017)

	2015	2016	2017	2018
Generated plastics	n/a	n/a	519 metric tons of plastic packaging brought to the market. 51% is recycled (263 metric tons)	523 metric tons of plastic packaging brought to the market. 68,6% of this is separately collected (359 metric tonnes, 52% recycled (272 metric tons).

(Reference)

Stichting afvalfonds verpakkingen (2019) Monitoring verpakkingen – resultaten inzameling en recycling 2018

Norway

■ Measures

(a) Extended Producer Responsibility (EPR)

To date, EPR systems exists on plastic packaging and drinking bottles and beverage cans, on e-waste. Norway is currently assessing new EPR systems for other plastic single-use products in line with the EU SUP-directive and plastic equipment used in fisheries and aquaculture.

(b) Plastic carrier bags

Norway is bound by the EU directive to reduce the use of plastic carrier bags. In 2017, the largest actors in the Norwegian grocery, retail and trade sectors agreed to meet the national obligations in the directive through the establishment of the Norwegian Retailers 'Environment Fund (HMF) owned and operated by the relevant private actors.

Members of the fund are required to place a fee on all plastic carrier bags they sell. The fund finances both national and international initiatives aimed at reducing and preventing plastic pollution e.g. through clean-up projects and support for technology and innovation.

The fund's stated goals are threefold:

- Prevent and clean up plastic pollution, not least in relation to marine littering
- Reduce the use of plastic carrier bags
- Increase resource efficiency by supporting measures to increase plastic recycling

By 2018, the **majority** of actors in the grocery, retail and trade sectors were already part of the fund, and **80-90%** of all plastic carrier bags **sold** in Norway were subject to this fee through the fund.

(c) Single use plastic products

Norway will introduce the relevant measures outlined in the EU Directive of 5 June 2019 on the reduction of the impact of certain plastic products on the environment

(SUP-directive) such as bans on certain plastic products, extended producer responsibility schemes including for cleaning up costs, marking requirements etc. The Norwegian Environment Agency produced a report on "Reduced littering of single use plastics" that assessed those single-use plastic items with the biggest environmental impact. The total amount of single-use plastic items on the Norwegian market has increased rapidly over the past years, to an estimated 59,629 tonnes annually

Norway is also considering a plastic pact with relevant industry actors that provide single-use plastic items/plastic packaging.

(d) Restriction of microbeads for cosmetics etc.

The proposal by ECHA to regulate intentionally added microplastics in cosmetics and other products will become Norwegian law eventually, so not relevant to introduce specific national measures in that regard. However, regulations to reduce microplastics emissions from artificial turf has had a public hearing and is now being considered. Norway has also advocated regulations to reduce microplastic emissions from textiles in relation to washing machines under the EUs Eco-design Directive. Measures are also being considered to reduce emissions from paint, leisure boat ports and car tyres.

Norway, in close cooperation with the EU, will promote more sustainable plastics use and design of products that will stay for longer in the plastics value chain – striving towards a more circular economy for plastics.

Philippines

■ Measures

- (a) **Refill Revolution** - is a series of one-day refilling event in selected venues in Central Luzon that was started in 2018 by the Environmental Management Bureau (EMB) in selected areas in Central Luzon. This programme aims to cut back plastic production, consumption, and packaging wherein participants can refill their plastic bottles and containers with household products as long as these containers are clean, dry and have a lid.

Republic of Korea

■ Measures

- (a) Enhance management of sea-based sources
- Introduce a deposit system for fishing gear and buoys
 - Strengthen management of derelict fishing gear
- (b) Enhance management of land-based sources
- Build waste filtering curtain at rivers and estuaries
 - Manage and minimise microplastic usage in daily products
 - Reduce the usage of packing materials, and single-use plastic products
- (c) Enhance management of foreign-based sources
- Cooperation with neighboring countries
 - Launch international marine plastic litter task force

team

■ Achievements

- (a) Enhance management of sea-based sources
 - i. Introduce a deposit system for fishing gear and buoys
 - Run a project for supporting voluntary recovery of waste Styrofoam buoys: Fishermen voluntarily dispose of waste Styrofoam buoys, while the nation supports their disposal, simultaneously carrying out information management such as monitoring usage and collection amounts
 - ii. Strengthen management of derelict fishing gear
 - Push forward a project for voluntary recovery of waste fishing gear: Expand and implement voluntary recovery projects currently underway for waste Styrofoam buoys to waste fishing gear
 - Strengthen the management of substandard fishing gear: A total ban on manufacturing, use, import and distribution of substandard fishing gear which results in ocean dumping
 - Expand the distribution of biodegradable fishing gear, improve performance of biodegradable fishing gear by type of fish and study its commercialisation: Develop eco-friendly fishery equipment including fishing gear and nets etc. (develop new designs and alternative materials)
- (b) Enhance management of land-based sources
 - i. Build waste filtering curtain at rivers and estuaries
 - Install additional barriers in sea areas where a huge amount of land-based waste is generated resulting from floods and typhoons and improve the efficiency of debris barriers
 - ii. Manage and minimise microplastic usage in daily products
 - Korea banned microplastic usage in cosmetics and medical products, so in line with this policy, Korea government will conduct research on microplastic usage in daily products and come up with management measures
 - iii. Reduce the usage of packing materials, and single-use plastic products
- (c) Enhance management of foreign-based sources
 - i. Cooperation with neighbouring countries
 - Through Northwest Pacific Action Plan (NOWPAP) which is one of UNEP's regional sea programmes, four member states (Korea, Japan, China, Russia) share marine litter data and discuss how to tackle marine litter problem in the Northwest Pacific region.
 - ii. Launch international marine plastic litter task force team
 - In August 2019, the Ministry of Oceans and Fisheries launched an international marine litter

task force team in collaboration with the Ministry of Environment and multiple national research organisations. It will focus on identifying the detrimental effect of foreign-based marine litter and responding to the issue through effective countermeasures.

Saudi Arabia

■ Measures

- (a) The national centre for waste management is promoting the circular economy activation, EPR is a major part of this programme.
- (b) There has been communication with different stakeholders to prevent and reduce plastic waste generation.

■ Achievements

- (a) Department of marine and coastal areas under GAMEP achieved these actions:
 - i. Issuing the general strategy of the Public Transport Authority and its strategic partners in KSA to implement and enforce international maritime conventions, codes and protocols issued by the International Maritime Organization for the years 2019 - 2023.
 - ii. National coordination with the Regional Commission for the Conservation of the Environment of the Red Sea & Gulf of Aden (PERSGA), the Regional Organization for the Protection of the Marine Environment and the Human and Environmental Affairs Sector of the General Secretariat of the Gulf Cooperation Council States
 - iii. Activation of the national plan in case of marine accidents
 - iv. Preparing legal framework plans including:
 - The national plan to combat pollution of the marine environment with oil spills and other harmful substances in emergency cases
 - The national plan for confronting marine disasters in the water of KSA
 - The Regional Convention for the Conservation of the Environment of the Red Sea & Gulf of Aden (Jeddah Agreement), 1982
 - The protocol for regional cooperation to combat oil spill and other harmful substances in emergency situations 1982

Singapore

■ Measures

- (a) To encourage businesses to minimise their contribution to plastic waste, Singapore's National Environment Agency (NEA) will require businesses that place packaging on the Singapore market to submit packaging data and plans to reduce, reuse and/or recycle packaging under the mandatory packaging reporting framework to be implemented in 2020. This will include single-use plastic

packaging. The mandatory packaging reporting will also lay the foundation for an Extended Producer Responsibility (EPR) framework for managing packaging waste, including plastics, which will be implemented no later than 2025. The first phase of the EPR framework will be implemented in the form of a Deposit Refund Scheme for beverage containers by 2022. The Resource Sustainability Act also provides legislative effect to the EPR for e-waste, and a Producer Responsibility Scheme will also be implemented from 1 July 2021. Plastics from regulated products such as ICT equipment and large home appliances will have to be properly treated or recycled.

- (b) NEA has stepped up engagement with stakeholders and businesses to educate the public to use fewer disposables. NEA has also taken the lead by disallowing the use of disposables for cooked food stalls in new hawker centres for dine-in and new cooked food stallholders who commence their tenancies at existing NEA-managed hawker centres, as well as encouraging operators of private food establishments to use reusables where possible.

Solomon Islands

■ Measures

(a) Single-Use Plastic ban

Solomon Islands has initiated the process to ban single-use plastics since November 2019 through initial stakeholder consultation. The proposed Ban on Single Use Plastics timetable and strategy for implementing these bans is currently under development.

(b) Container Deposit Legislation

Through the EU funded PACWASTE PLUS regional project implemented through SPREP, Terms of Reference (TOR) are currently being developed to review the existing feasibility study on Container Deposit Scheme for the Solomon Islands and to develop a technical guide note for drafting a legal framework on Container Deposit Legislation for Solomon Islands.

(c) Support Provincial Governments to develop Provincial Waste Management Plans

MECDM continues to assist provincial governments to develop their Waste Management Plans by conducting consultation workshops and waste audits to collect information and data and assessments for suitable landfill sites.

■ Achievements

- (a) Prevention and reduction of plastic waste generation
 - i. Development and completion of the Honiara City Council Waste Management Plan
 - ii. Establishment and launch of the Solomon Islands Recycling and Waste Management Association in November 2019.

Spain

■ Measures

Programme of measures on Marine Litter (2016 - 2021) – Marine Strategies

(a) Prevention. Sea-based sources

- i. Implementation of a non-special fee cost recovery system for waste collection from vessels in regional ports (already implemented in national ports since 2011). This is in line with the new European Directive 2019/883 of the Parliament and of the Council on port reception facilities for the delivery of waste from ships. The new European Directive will be transposed to national legislation and implementation will follow accordingly
- ii. Promotion of projects and initiatives for:
 - Innovation in materials for fishing sector processes and technologies
 - Improving waste management on board in fishing vessels or aquaculture facilities
 - Analysis of the possibility of recycling specific fishing materials as EPS boxes or fishing nets
 - Improving waste facilities in fishing and recreational ports

Funds are managed by Biodiversity Foundation through a call for projects (PLEAMAR) in the framework of European Maritime and Fisheries Fund Spanish Operative Programme.

- iii. Improvement of waste management in ports

(b) Prevention. Land-based sources

- i. Study on the characteristics and amounts of microplastics from wastewater treatment plants
- ii. Research on ecological aspects of microplastics. Co-financing Pilot action JPI Oceans 2015 - 2018. Projects: BASEMAN, EPHEMARE, PLASTOX
- iii. Study on sources of microplastics (national scope)

Published:

https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/23-414-5-010_informe_identificaciondefuentesyestimaciondeaportesdemicroplasticos_tcm30-486438.pdf

Additionally, methodologies to monitor macrolitter and microplastics in rivers are being developed, as rivers are a main pathway of litter into the sea

- iv. Rainwater management measures, with the aim of improving the retention of plastics. These measures include the installation of floating retention systems in rainwater spillways, the construction of storm tanks in large cities or the installation of separate networks in new developments

Sri Lanka

■ Achievements

- (a) With successful regulations on banning polythene at festivals, polythene waste generated from festivals has been drastically reduced.
- (b) A ban on polystyrene lunch boxes and utensils was successful, so this category of waste has also been drastically reduced.

Turkey

■ Achievements

- (a) As part of the Zero Waste project, an initiative was started on 1 January 2019 with the aim of reducing the amount of plastic usage per capita in Turkey from 440 to about 90 by the end of 2019. Thanks to a great response by the general public unnecessary plastic bag consumption has been significantly reduced. According to evaluations made of related data for 2019, it can be seen that the plastic bag usage / consumption rate has decreased by approximately 80%. The 80% decrease in the use of plastic bags in 2019 shows that, when considered only in terms of waste management, the amount of plastic waste, which was around 280,000 tons in 2018, was reduced to around 90,000 tons. Other contributions to this decrease in the amount of plastic waste are: reduction in greenhouse gas emissions by 8258 tonnes, reduction in carbon footprint by 1,248,000 tonnes, 3.466.667MWh in energy savings, 2,129,141 barrels of oil saved and 2,268,761 households-worth of energy savings.
- (b) Within the scope of the practice launched in 2019, plastic bags are sold at 25 kuruş, including taxes, regardless of their size and content, and this amount continues to be applied as 25 kuruş in 2020 without any changes. With a reduction of approximately 78% achieved in 2019, 2020 practices continued. In the first 6 months of 2020, it was calculated with the data obtained from the representatives of the food retail sector that the reduction rate was 76%, and the reason for this decrease was the use of plastic bags (78% reduced to 76%). It is considered that there was an increase in the retail shopping rates of citizens following the world-wide COVID-19 pandemic.

UK

■ Measures

- (a) In 2018, the UK introduced a ban on the sale and manufacture of microbeads in rinse-off personal care products which will prevent billions of plastic pieces from entering the ocean.
- (b) In 2015, England introduced a GBP0.05 charge on the sale of single-use carrier bags from large retailers. Plastic carrier bag sales have dropped by more than 95% in England's main supermarkets since the 5p charge was introduced in 2015. As a result of the charge, GBP178 million has been donated to charitable causes, with GBP9.2 million donated in the last year alone (data 2020).

- (c) From October 2020, England will introduce a ban, with exemptions, on the supply of plastic straws, cotton buds, and stirrers.

- (d) The UK is a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. The requirements of the Basel Convention have been fully implemented in UK law through the European Waste Shipment Regulations and the UK Transfrontier Shipment of Waste Regulations. Recognising the difficulties experienced by some countries in managing plastic waste, the Environment Bill contains regulation-making powers which will allow Government to ban the export of waste, including plastic waste, to non-OECD countries. We will consult with industry, NGOs and local authorities on the date that the proposed ban should be achieved.

- (e) The UK is a Contracting Party to the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic. As part of OSPAR, the UK develops and implements actions under the OSPAR Regional Action Plan for Marine Litter and participates in monitoring programmes to assess regional trends in marine litter.

- (f) The UK is a signatory to the International Convention for the Prevention of Pollution from Ships (MARPOL) under the International Maritime Organisation (IMO), the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. MARPOL Annex V seeks to eliminate and reduce the amount of garbage being discharged into the sea from ships and includes a ban on the disposal into the sea of plastics and fishing gear, in addition to other types of garbage.

- (g) The UK is committed to reforming the existing producer responsibility regime for packaging and packaging waste and to introduce extended producer responsibility and a deposit return scheme for drinks containers. Containers proposed to be included within the scope of this scheme include plastic PET bottles. Consultations on final proposals will take place in early 2021 and following the consultations, the UK will take new regulations through Parliament to introduce these new measures.

- (h) Microbeads

- i. In 2018 the UK launched one of the world's toughest bans on the sale and manufacture of microbeads in rinse-off personal care products, helping to prevent billions of tiny plastic pieces from entering the ocean every year
- ii. The microbead ban was developed based on evidence of harm to the marine environment from microplastics, evidence of microbeads directly entering the marine environment through the water treatment process and created a level playing field for businesses
- iii. While some countries have opted to ban only those plastic particles added for exfoliating and cleansing purposes, the UK's objective is to minimise marine microplastic pollution in all forms and therefore the ban covers all microplastic particles in rinse-off personal care products

- (i) Microplastics

- i. There has been substantive research which reports the presence and impacts of microplastics in the marine environment. However, little is known about the sources, release and impact of microplastics in the freshwater environment and their transport to marine compartments
- ii. The UK's priority research needs are to further understanding of the effects of these materials on freshwater environments. To achieve this, evidence reviews have been commissioned. The outcomes from these will be used in the development of policy options to help mitigate the impact of microplastics and microfibres in the aquatic environment
- iii. The UK is also working with the Environment Agency and the UK's water industry to establish methods to detect, characterise and quantify microplastics entering wastewater treatment works to evaluate the efficiency of treatment processes for their removal from domestic wastewaters and to assess their fate and biological effects in receiving rivers. The Drinking Water Inspectorate has also commissioned research on removal of microplastics by drinking water treatment processes

■ Achievements

- (a) Plastic carrier bag sales have dropped by more than 95% in England's main supermarkets since the 5p charge was introduced in 2015. According to the Marine Conservation Society's Great British Beach Clean, the number of plastic bags dropped by almost 40% between 2015, when England introduced a 5p single-use carrier bag charge, and 2016.
- (b) In 2018 the UK launched one of the world's toughest bans on the sale and manufacture of microbeads in rinse-off personal care products, helping to prevent billions of tiny plastic pieces from entering the ocean every year.

US

■ Measures

- (a) **EPA Marine Litter Related Voluntary Work**
 - i. Trash Free Waters – is a voluntary programme that emphasises stakeholder engagement to assist US and international communities with addressing primarily land-based sources of marine litter. Within the US, there have been well over 200 place-based projects that have been or are being implemented. These include projects addressing outreach/education, trash capture, source reduction efforts, monitoring, research, and more. Trash Free Waters also develops tools and resources that provide useful information to help stakeholders keep trash out of waterways. Tools include a [best practices compendium](#) so that municipalities, NGOs, and others can get information on costs and effectiveness of various management practices; a litter control policy and

[program document](#) for the Gulf states; a forthcoming Compendium of effective stormwater permit trash provisions for use by stormwater permit writers and stormwater planners; and a forthcoming trash assessment protocol that allows for detailed characterization of trash pollution to inform management practices, permit provisions, and impaired waterbody listings; in addition to other information resources

Related URL:

<https://www.epa.gov/trash-free-waters/aquatic-trash-prevention-national-great-practices-compendium>

https://www.epa.gov/sites/production/files/2017-02/documents/atlas_of_gulf_states-litter_control_policy_and_programs.pdf

(b) **NOAA Marine Debris Program Prevention Grants**

- i. NOAA's Marine Debris Program supports projects across the country that use outreach and education as a way to prevent marine debris. These projects aim to change behavior, especially among youth, and provide them with hands-on experiences that deepen their understanding of the marine debris problem. Additional projects support engagement with industry partners to reduce the loss of fishing gear, and the occurrence of abandoned and derelict vessels

■ Achievements

(a) **Resource Conservation and Recovery Act (EPA) Voluntary Programs**

WasteWise

- i. Some of the 2019 EPA WasteWise national award winners include: CenturyLink Field, Rooms To Go, Ravitz Family Markets, Price Rite Supermarkets, Inc., City of Chesapeake Garage, Chumash Casino Resort, Central Michigan University, and Beth Israel Deaconess Medical Center. These organisations were recognised for their leadership in waste prevention and diversion. The 2019 national award winners reported preventing and diverting over 69,500 tons of waste in 2018 that would otherwise have been disposed in landfills or incinerated

EU

■ Measures

(a) **Plastics Bag Directive**

The 'Plastic Bags Directive' (2015) amends the Packaging and Packaging Waste Directive 94/62. The Directive requires Member States to take measures to achieve a 'sustained reduction in the consumption' of lightweight plastic carrier bags, such as national reduction targets and/or economic instruments (e.g. fees, taxes) and marketing restrictions (bans), provided that the latter are proportionate and non-discriminatory. The Directive sets targets that annual consumption would not exceed 90

bags per person by 2019, 40 by 2025, and/or that by end of 2018 such bags would not be free of charge at the point of sale. Compared to the baseline scenario (2010) this is a 50% reduction in consumption by 2019 and a 80% reduction by 2025.

(b) Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive)

This Directive will significantly reduce the amount of marine litter from single-use plastics (SUP) and fishing gear by 2030. As regards SUP, the Directive includes the following measures:

- i. Extended Producer Responsibility (EPR) schemes to ensure that producers will help cover the costs of waste management and clean-up, data gathering and awareness-raising for the following single-use plastic products: tobacco products with filters, drink bottles, packets and wrappers, wet wipes, drinks cups (including their cover and lids), food and beverage containers, balloons and lightweight carrier bags
- ii. Product design measures for drink bottles related to tethered caps and lids, and a binding target of at least 25% of recycled plastic for PET beverage bottles from 2025 onwards and 30% recycled content for all plastic bottles by 2030
- iii. Consumption reduction measures for single-use plastic versions of drinks cups (including covers and lids), and food containers
- iv. Ban on single-use plastic versions of cotton bud sticks, balloon sticks, cutlery, plates, straws and stirrers; and beverage containers and cups made of expanded polystyrene (including their caps/covers and lids)
- v. General ban on oxo-degradable products
- vi. 90% separate collection target for waste from single-use plastic bottles either by Deposit Refund Schemes or improved EPR schemes by 2029 (interim target of 77% by 2025)
- vii. Marking requirements for sanitary towels, wet wipes, tampons and tampon applicators, tobacco products with filters and cups for beverages, indicating how waste should be disposed of, presence of plastic in the product and resulting negative environmental impact
- viii. Awareness-raising measures on food containers, cups for beverages, balloons, packets & wrappers, beverage containers, tobacco product filters, wet wipes, lightweight plastic carrier bags

With respect to fishing gear, the Directive foresees the introduction of EPR schemes for producers of fishing and aquaculture gear containing plastic before 31 December 2024 who will have the financial responsibility to cover the costs of its separate collection, subsequent transport and treatment. National collection targets for fishing gear are to be set up at the Member State level, as well as the mandatory monitoring and reporting of fishing gear (placed on the market and collected as waste) with a view to a later EU-wide collection target. The Directive also calls for the development of a harmonised standard relating to the circular design of fishing gear. These measures are complemented by providing financial

incentives for ships, including fishing vessels, to maximise delivery of waste gear and marine litter to shore, foreseen under the Port reception facilities Directive. This includes the setting up and operation of a cost recovery system for waste from ships, which requires application of an indirect fee to be paid by all ships irrespective of actual delivery. This will contribute to ensuring the full integration of plastic material from fishing gear into the waste and recycling stream, the involvement of producers of plastic material for fishing gear in managing waste fishing gear returned to shore and higher recycling rates for high quality fishing gear material. The EU is also currently looking at the development of a harmonised standard for circular design of fishing gear, to encourage its preparation for reuse, and to facilitate its end-of-life recyclability.

Related URL:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904&from=EN>

(c) Microplastics

- i. With further impetus from the new Circular Economy Action Plan, the Commission has started work to restrict microplastics intentionally added to products, e.g. in cosmetics paints or detergents, by requesting the European Chemicals Agency to review the scientific basis for considering a restriction under REACH. The European Chemicals Agency said that “health & environmental risks justify an EU-wide restriction”. ECHA scientific committees are currently assessing the measures. The proposed EU-wide restriction could cover intentionally added microplastics in multiple applications including agriculture, horticulture, cosmetic products, paints, coatings, detergents, maintenance products, medical and pharmaceutical applications
- ii. As a step further, in the new Circular Economy Action Plan, the Commission committed to address the presence of microplastics in the environment by addressing also unintentional releases of microplastics by developing labelling, standardisation, certification and regulatory measures. Where reduction of the emissions at source is not possible, measures at later stages of the life-cycle will be envisaged. This action will be launched in 2021. The Commission will also look at harmonising methods for measuring unintentionally releases of microplastics, and at closing the gaps on scientific knowledge related to the risks and occurrence of microplastics in the environment, drinking water and foods. So far, the sources that have received the most attention are also the largest contributors in today’s European context i.e. 1) synthetic textiles during their entire life-cycle 2) tyres related to tyre abrasion and 3) pre-production plastic pellets during their entire life-cycle

(d) Emerging plastic waste-related sustainability issues

As a follow-up action of the new Circular Economy Action Plan (CEAP) and to address emerging sustainability issues, the Commission has committed to develop a policy framework on sourcing, labelling and use of bio-based

plastics as well as on the use of biodegradable and compostable plastics. This will aim to ensure that labelling a product as 'biodegradable' or 'compostable' does not mislead the consumer to dispose it in a way that causes littering or pollution due to unfavourable environmental conditions or insufficient time for degradation. This action is foreseen for 2021.

- (e) The evaluation of the current EU legislative framework for Food Contact Materials (FCM)

Preparatory work for a review of the food contact materials legislation has started, with an evaluation to assess whether the current EU legislative framework for Food Contact Materials (FCM) is fit for purpose and delivers as expected. It covers the functioning of the FCM Regulation in its entirety, as well as the rules and tools provided for by this legislation, such as specific implementing measures. It will also examine the situation concerning materials for which there are no EU measures and which are subject to permitted national measures. This also relates to the bio-based and biodegradable alternative materials for plastics in food contact materials.

Related URL:

https://ec.europa.eu/food/safety/chemical_safety/food_contact_materials_en

■ Achievements

- (a) The situation has improved compared to the year 2018.

International Organisations and NGOs

ADB

■ Measures

- (a) Supporting DMCs to identify, prepare and boost implementation of government and private sector actions to reduce marine plastic pollution, including through for example policy and regulatory reform (market-based approaches, recycling standards, regulations), green value chains and circular business models, 3R infrastructure and technologies.

GEF

■ Achievements

- (a) At the midpoint of the GEF-7 period (2018 - 2022), the GEF has funded the four projects totaling over USD 23 million listed in "promotion of international cooperation" section totaling an anticipated over 350,000 metric tons of marine litter avoided.

Ocean Conservancy

■ Measures

- (a) Serving as an environmental advisor on the recently launched "Beyond the Bag" initiative, a multi-year collaboration across retail sectors that aims to identify, test and implement innovative new design solutions that serve the function of today's single-use plastic retail bag, delivering ease and convenience for consumers while striving to lessen the impact on the environment. Partners: Closed Loop (managing), CVS Health, Target, Walmart, Kroger, Walgreens, Ideo (innovation), and Conservation International.
- (b) Serving on the PACE (Platform to Accelerate the Circular Economy) Advisory Council to develop high-quality calls for action for Davos 2021 on reduction, recycling, and reuse.
- (c) Informed by the data collected through the International Coastal Cleanup, Ocean Conservancy has launched a number of advocacy campaigns, such as "Skip the Straw" and "Quit the Cutlery", which encourage people who do not need them to avoid single-use straws, cutlery, and similar items.
- (d) Ocean Conservancy is a founding member of the recently announced US Plastics Pact, led by the Ellen McArthur Foundation.

OECD

■ Measures

- (a) See the following reports relevant to waste prevention:
 - i. OECD (2017) Tackling Environmental Problems with the Help of Behavioural Insights
<https://www.oecd.org/env/tackling-environmental-problems-with-the-help-of-behavioural-insights-9789264273887-en.htm>
 - ii. OECD (2014) Greening household behaviour
https://www.oecd-ilibrary.org/environment/greening-household-behaviour_5jxrc1lp4gln-en (this also includes a chapter on waste)
 - iii. OECD work on waste prevention and minimisation:
<https://www.oecd.org/env/waste/prevention-minimisation.htm>
- (b) Furthermore, the OECD is currently developing a third iteration of the Household Survey. This will also feature questions regarding waste generation and provide insights into the matter.

UNIDO

■ Measures

- (a) UNIDO organises international conferences, forums and workshops to promote the concept of circular economy practices. UNIDO participates in or collaborates with international frameworks and partnerships, including the

G20 Implementation Framework and the Global Plastic Action Partnership, as well as establishing close relations with industry associations globally and locally.

■ Achievements

- (a) Currently, UNIDO has marine plastic litter related projects in Bangladesh, Egypt, Ghana, Kenya, Nigeria and South Africa (in alphabetical order).
 - i. **Bangladesh:** With funding from Norway, UNIDO implements the project of “Integrated approach towards sustainable plastics use and (marine) litter prevention in Bangladesh”
 - ii. **Ghana:** With funding from the Global Environment Facility, UNIDO supports the Ghana government to establish a Circular Economy framework with an integrated approach from policy and regulations, and works with industry
 - iii. **Egypt, Nigeria (and Kenya):** With funding from Japan, UNIDO conducts a plastic value chain study to identify the current status of the industry and key players to work with, and to identify technological needs and gaps in terms of alternative material, innovative packaging technology, or recycling technology that matches with each country’s contexts
 - iv. **South Africa:** With funding from Japan, UNIDO implements the project of “Support for transitioning from conventional plastics to more environmentally sustainable alternatives”

WB

■ Measures

- (a) Thanks to its reach, the ability to provide financing to countries and the support for interventions at every stage of the plastic life cycle, the World Bank is able to provide significant support globally to tackle marine litter and pollution. It has projects of about USD 2 billion under development that incorporate a focus on preventing plastic pollution from land-based and sea-based sources. These projects span many sectors, from fisheries to tourism, with most focusing on improving solid waste management (SWM) in the short term, while paving the way for longer term solutions in the transition to a circular economy.
- (b) Together with the International Finance Corporation, its private sector arm, the World Bank engages with the private sector along the entire plastics’ value chain, from scaling up innovations on material design to recycling, helping to develop new business models that avoid plastic becoming waste. This includes exploring and collaborating with the various private sector actors and initiatives active in countries, as actors and as part of the solutions, from extended-producer responsibility (EPR) to bringing in the innovations on materials and technologies. The World Bank also helps crowd-in private sector investment, for example by mapping plastic value chains and connecting key stakeholders. Such dialogue on EPR, that fosters innovation and unlocks private sector interventions, has been started in two countries in Asia and will be ongoing in other regions soon.

(c) The World Bank also helps countries raise awareness and promote behaviour change to prevent plastic waste generation. For example, PROBLUE has supported a plastic campaign in a Caribbean country to phase out single-use plastics through social media and training of port officials.

(d) In addition, the World Bank works across countries to support regional solutions. In Southeast Asia for example, support is provided to the Association of Southeast Asian Nations (ASEAN) in the development of regional recycling markets by carrying out studies to help assess the current barriers for markets for recycled plastics; and to help promoting private sector investment in redesigning products/packaging and alternative materials.

3.2. Environmentally-sound waste management and cleanup of marine plastic litter

Waste management improvements and clean-up activities have continued to be actively implemented by most of the reporting countries since last year. As seen in section 2.3., the downstream-based indicators are reported by most of the participating countries (15 out of 25 countries). These indicators include the amount of waste generated, reused, collected, recycled, and properly disposed of, and the amount of marine litter cleaned up (e.g. Chile, Saudi Arabia). In relation to the waste management related indicators, some of the countries reported indicators on enforcement against non-compliance entities.

Most of the reporting countries (23 out of 25 countries) reported that there already are ongoing actions on improvement of waste management and recycling systems, as well as clean-up activities by rivers and on the coast. Although these downstream-based actions are actively implemented in most of the countries, remaining challenges related to waste management are reported by some countries (e.g. Sri Lanka, Myanmar). Further details can be found in section 4.

For countries that contributed to the first report, eight out of 15 countries reported progress from last year. 17 new actions and six quantitative achievements were newly reported by the countries participating in the 2019 report.

Among the international organisations and NGOs, Ocean Conservancy reported the most notable cleanup results with its international programmes such as International Coastal Cleanup (ICC), and the Global Ghost Gear Initiative (GGGI). ADB and the World Bank, on the other hand, have supported its target countries in environmentally-sound waste management.

Countries

Australia

■ Measures

- (a) National Action Plan to implement the 2018 National Waste Policy

On 8 November 2019, Australian environment ministers agreed to a National Waste Policy Action Plan (the Action Plan) that will drive the implementation of the National Waste Policy. The Action Plan includes ambitious targets to make Australia a world leader in waste management and recycling, including:

- i. An 80% 'recovery' rate of material across all waste streams
- ii. Significant increases to government procurement of recycled materials
- iii. Phase out problematic and unnecessary plastics by 2025

- (b) Australian Recycling Investment Plan

The Australian Government has committed to a AUD167 million Australian Recycling Investment Plan to increase Australia's recycling rates and tackle plastic waste and litter, and accelerate work on new recycling schemes. The focus of this Plan is on creating the right investment environment so that new technologies are commercialised, preventing pollution from entering oceans and creating valuable new products.

The Plan includes AUD100 million to support the manufacture of products using recycled materials (including plastics), AUD20 million to find new and innovative solutions to plastic recycling and waste, AUD16 million toward a Pacific Ocean Litter Project, and more than AUD11 million for community campaigns to reduce litter and clean up beaches and waterways.

- (c) Marine Debris Threat Abatement Plan

Australia is implementing the Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. The plan is available at <https://www.environment.gov.au/biodiversity/threatened/publications/tap/marine-debris-2018>.

■ Achievements

- (a) Australian Recycling Investment Plan

The Australian Government has committed to a AUD167 million Australian Recycling Investment Plan to increase Australia's recycling rates, tackle plastic waste and litter, accelerate work on new recycling schemes and continue action to halve food waste by 2030.

- (b) National Waste Reports

Australia's National Waste Reports describe Australia's national performance on waste and recycling. The Reports presents data and commentary on waste generation, recovery and fate for all waste streams and various material categories. It also analyses this information by jurisdiction and on a per capita basis. More information is available at:

<http://www.environment.gov.au/protection/waste-resource-recovery/national-waste-reports/national-waste-report-2018>

Azerbaijan

■ Measures

- (a) Stimulating and supportive measures have been taken to strengthen the recycling system. Balakhani Industrial Park was put into operation to create favourable conditions for recycling. Entrepreneurs who are residents of this park can benefit from tax, customs, import, rent and utility concessions.
- (b) Enlightening events and competitions on cleaning of coastal areas from plastic waste were organised with the participation of local authorities, students, schoolchildren, civil society institutions.
- (c) Microplastics were collected and evaluated on the shores of the Caspian Sea with the initiative of the "Ruzgar" public association.

■ Achievements

- (a) Waste management (suitable for recycling) was strengthened, the potential of recycling facilities has increased and new enterprises were established.

The situation is improving compared to FY2019.

Canada

■ Measures

- (a) Internationally, Canada participates in key international fora, such as the G7, G20, Basel Convention Partnership on Plastic Waste and the Organisation for Economic Co-operation and Development (OECD), to strengthen resource efficiency and waste management practices globally. Canada's CAD100 million investment is supporting solutions for environmentally sound waste management and plastic pollution mitigation in developing countries.

- (b) Environmentally sound waste management is a shared responsibility in Canada. A range of policies, programmes and regulatory initiatives at all levels of government drive improvements in the production, use, disposal and recovery of materials. The federal government has responsibilities for the transboundary movement of hazardous waste and hazardous recyclable materials, identifying best practices to reduce possible toxic pollution from waste, and developing guidance or other supporting measures. The Government of Canada also invests in waste and wastewater infrastructure. Provincial, territorial and municipal governments have implemented regulatory (e.g. product or landfill bans, incentives, extended producer responsibility programmes, litter by-laws) and non-regulatory measures (e.g. educational campaigns, recycling and deposit programmes) that target some plastic products and other wastes. For instance, all provinces and territories have regulated extended producer responsibility programmes in place, excluding Nunavut. There are over 160 regulated and voluntary stewardship programmes in Canada covering more than

20 product categories including packaging and beverage containers.

- (c) These efforts play an important role in collecting plastics from households and other sources that help to reduce marine debris.
- (d) Through the Canada-wide Action Plan on Zero Plastic Waste, federal, provincial and territorial governments have committed to support prevention, capture and clean-ups efforts, as well as research and development for effective technologies to reduce plastic pollution. This includes supporting activities to prevent and retrieve lost fishing and aquaculture gear.

■ Achievements

- (a) All provinces and territories have regulated extended producer responsibility programmes in place, excluding Nunavut. There are over 160 regulated and voluntary stewardship programmes in Canada covering more than 20 product categories including packaging and beverage containers.
- (b) Through the Zero Plastic Waste Initiative, the Government of Canada invested CAD8.45 million (2018 - 2022) to effect change within and across the plastics lifecycle to increase collection, improve value recovery, and prevent and remove plastic pollution. Twenty-one projects have been funded since 2018, leveraging over CAD6 million in funds (public and private) and engaging at least 77 partner organisations.
- (c) The Zero Plastic Waste Initiative also supports projects that focus on solutions, pilot technologies and innovations, demonstrate best practices and research environmentally friendly litter removal approaches on land, in waterways, and nearshore areas to reduce debris before it enters the oceans. For example, Canada has funded the Great Canadian Shoreline Clean-up – a national programme to mobilise citizens to collect and report on debris across Canada. In 2019, the Great Canadian Shoreline Cleanup had its most successful year in its 25+ year history with almost 3,000 clean-ups, removing over 163,000kg of litter and mobilising nearly 85,000 volunteers. The University of Toronto also organised a local cleanup event in 2019 that resulted in 100 volunteers removing 247kg of litter in one day (5 May 2019).

URL:

<https://www.canada.ca/en/environment-climate-change/services/environmental-funding/programs/zero-plastic-waste-initiative.html>

- (d) As another source of marine litter is lost fishing and aquaculture gear, the Sustainable Fisheries Solutions and Retrieval Support Contribution Program, a CAD8.3 million (2020 - 2022) investment, supports the prevention and retrieval of abandoned, lost or otherwise discarded fishing and aquaculture gear. It will also support fish harvesters to acquire new gear technologies to reduce gear loss. This is the first fund of its kind that dedicates a significant source of funds specifically to combat ghost gear.

URL:

<https://www.dfo-mpo.gc.ca/species-especes/mammals-mammiferes/ghostgear-equipementfantome/program-programme/apply-appliquer-eng.html>

[programme/apply-appliquer-eng.html](https://www.dfo-mpo.gc.ca/species-especes/mammals-mammiferes/ghostgear-equipementfantome/program-programme/apply-appliquer-eng.html)

- (e) In July 2019, the Government of Canada conducted a 3-day ghost gear retrieval expedition called Operation Ghost in the Gulf of St. Lawrence. This operation focused on areas with concentrations of ghost gear, removing 101 crab pots and 9.1km of rope from the water and returning 10,614lbs of crab back to the water.

The amount of collected marine litter has increased since 2018 (not necessarily indicative of more litter but indicates an improvement in citizen participation in clean-ups). The value of investments and number of marine litter projects has increased since 2018.

Chile

■ Measures

- (a) Chile has implemented several programmes that together contribute to the environmentally sound management of plastic waste. These include:
 - i. A Beach Cleaning Programme
 - ii. Construction of facilities to receive separated waste from the community
 - iii. Development of the Extended Producer Responsibility Law and establishment of targets for the recovery of plastic packaging
 - iv. Prohibition of plastic bags by commerce
 - v. Regulation of single-use plastics (currently in discussion in Parliament)

Finland

■ Measures

- (a) Implementation of the EU waste directive (EU 2018/851) which is directly applicable legislation in all EU Member States (incl. Finland). See the previous chapter for National Waste Plan to 2024 and the National Plastics Roadmap which contain activities related to waste management.
- (b) Beach clean-up campaigns as part of national monitoring of beach litter and as voluntary organised activities by NGOs. Activities to improve knowledge on marine litter.
- (c) Project work has been carried out to test trapping of litter in river water draining to the Baltic Sea.

■ Achievements

- (a) Thanks to the effective and cooperative EPR system for beverage packaging, 90% of PET bottles (95% of cans, 87% of glass bottles) are recycled in Finland.
- (b) In 2020, publication of a report on the location, amount and effects of ghost nets was carried out for marine waters in Finland.

France

■ Measures

(a) On-land actions:

- i. Simplify the sorting process for citizens
- ii. Experiment with deposit schemes
- iii. Expand the scope of action of the ERP packaging schemes
- iv. Elaborate recommendations for municipalities in order to fight illegal dumping
- v. Provide municipalities with good practices and a national guide to fight litter and monitor landfills along the coastline

(b) Actions on rivers and waste and rain water:

- i. Integrate objectives concerning marine litter in inland water planning documents

(c) Actions on the seashore and at sea:

- i. Implement the collection and recycling of fishing gear and aquaculture waste in line with the European directive
- ii. Launch a call for projects to tackle plastic pollution in overseas territories
- iii. Encourage and develop passive fishing for litter actions and actions to improve waste reception and management in ports
- iv. Increase the number of ports joining the European "clean port" certification scheme

■ Achievements

(a) Total post-consumer plastic waste generation: 3.3Mt

Total of post-consumer plastics collected for recycling: 0.71 Mt.

The rest is either incinerated or disposed of in landfill.

Source: ADEME, Bilan national du recyclage, 2017.

(b) For plastic packaging, the latest figures are the following:

Total amount of post-consumer plastic packaging waste: 2.2 Mt

Recycling rate: 26%

Recovery rate 65% (including recycling)

(c) The call for projects to tackle plastic pollution in the overseas territories is done, with a total of EUR 266,548 granted.

Islamic Republic of Iran

■ Measures

(a) Environmentally sound waste management:

- i. Promotion of production and consumption of goods with easy recycling and limitation on production and import of those with difficult Disposal and Recycling
- ii. Improvement of production using recycled material

(b) Clean-up activities:

- i. Clean-up of the Caspian Sea, Oman Sea and Persian Gulf beaches in line with No Litter Plan
- ii. Clean Beach activity for all of the coastal cities located in Hormozgan Province with the help of local communities and NGOs on a regular basis, usually last Friday of the year
- iii. Clean-up of coastal areas in the Persian Gulf in collaboration with local communities and NGOs during Environmental Week
- iv. Beach clean-up in Abu Musa Island, Hormoz Island and local communities and authorities
- v. Nationwide clean-up event during the "Clean Earth Week"

Italy

■ Measures

(a) In 2017 - 2018 the Ministry of Environment, Land and Sea signed agreements for the collection and management of waste found on the seabed of selected ports near marine protected areas. These agreements involve port authorities, agencies in charge of the marine protected areas, municipalities, environmental associations, local fisheries and scuba diving associations. The objective of the agreement is to identify an integrated system for the collection and the management of waste removed from the seabed, also through education and training initiatives for fisheries and diving associations, aimed at identifying the best procedures and possibly extending them to other ports. Main activities within the agreement:

- i. Provision of containers for the collection of waste removed from the seabed to fishermen and Marine Protected Area agencies
- ii. Identification of suitable sites for the delivery of waste and positioning of boxes and/or containers clearly identified for the separate collection of waste
- iii. Awareness and education activities oriented to the Marine Protected Areas visitors and to fisheries and scuba diving associations on the proper management of waste generated by these activities
- iv. Training activities on separate collection
- v. Promotion of virtuous behaviour oriented to the prevention and/or reduction of littering
- vi. Awareness initiatives oriented to scuba diving professionals to report on any waste "hot spot" found out during their dives

(b) Agreement "Tuscany – fishing for litter"

In 2018 the Ministry of Environment, Land and Sea, local authorities, environmental NGOs, port authorities, and private companies signed the agreement "Tuscany – fishing for litter". It provides a framework for the development of an innovative pilot project to promote proper waste collection and integrated management of plastic waste collected by fishermen during fishing operations. The project also promotes the awareness of all the stakeholders involved.

Japan

■ Measures

- (a) Enforcement of proper waste management system
 - i. Comprehensive enforcement of waste collection based on public cooperation, e.g. appropriate waste segregation and disposal practice, in accordance with waste management and recycle regulations
 - ii. Installation of recycling facilities to increase domestic recycling capability and to improve recycling of polystyrene foam boxes often used in fisheries with updated technology
 - iii. Enforcement of collection and appropriate treatment of agricultural-generated used plastic in collaboration with related associations
 - iv. Enforcement of onshore collection and appropriate treatment of plastic waste, such as used fishing gear by guidelines developed in 2020
- (b) Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean
 - i. Strengthen patrol activities by national and local government
 - ii. Support beverage industry association to install PET bottle collection boxes next to vending machines to achieve 100% recycling
 - iii. Prevent unintentional leakage of plastics through appropriate use and proper management of fishing gear by fishers
- (c) Collection of scattered waste on land
 - i. Nationwide clean-up event during “UMIGOMI Zero Week” (“umigomi” means marine litter in Japanese). Approximately 430,000 people participated in the event in 2019. In 2020, distribution of guidelines for clean-up events while also ensuring prevention of COVID-19
 - ii. Support of the “Adopt Program” for citizens to carry out cleaning, beautification and management activities with a strong attachment to local public areas
 - iii. Support for clean-up and litter collection activities in cooperation with river administration authorities, local governments and residents
- (d) Removal of plastic litter from the ocean
 - i. Support local governments to conduct collection and treatment of coastal marine litter in accordance with “Act on Promoting the Treatment of Marine Debris Affecting the Conservation of Good Coastal Landscapes and Environments to Protect Natural Beauty and Variety” (hereafter “Marine Litter Act”)
 - ii. Support collection of marine litter by fishers in collaboration with local governments/communities. In order to expand this effort, a demonstration project was started from FY2020. In addition, when fishers volunteer to collect marine litter, the national government has started to provide the litter

processing cost for fishers to collect marine litter voluntarily. Support for fishers in 23 prefectures has been decided. Financial support is provided for fishery cleanup activities carried out by fishers who were forced to suspend their operations due to the effects of COVID-19

- iii. Collection of floating marine litter using marine environment improvement vessels in enclosed sea areas, and by port administration authorities in port areas

■ Achievements

- (a) Amount of waste plastic recycled, heat recovered, incinerated without energy recovery, and land filled (situation regarding waste plastic recycled and heat recovered is deteriorating compared to FY2017):

	FY2015	FY2016	FY2017	FY2018	FY2019
Recycling	2,410kt	2,420kt	2,510kt	2,470kt	Under investigation
Heat recovery	5,220kt	5,160kt	5,240kt	5,030kt	Under investigation
Incineration of waste without energy recovery + landfill	1,520kt	1,400kt	1,280kt	1,410kt	Under investigation
Total	9,150kt	8,990kt	9,030kt	8,910kt	Under investigation

(Reference)

“The status of production, disposal, recycling and treatment of plastic products” (Plastic Waste Management Institute JAPAN)

- (b) Collected amount of marine litter from clean-ups (situation is deteriorating compared to FY2017):

	FY2015	FY2016	FY2017	FY2018	FY2019
Total litter	29,198t	29,931t	45,539t	32,486t	Under investigation
Plastic litter (estimate)	10,700t	10,900t	16,600t	11,900t	Under investigation

(Reference)

Comprehensive Investigation on Measures to Tackle Beach Debris (FY 2016)

http://www.env.go.jp/water/marine_litter/pamph.html

Total litter: The above data describes the amount collected by local governments.

Marine plastic litter: estimated by multiplying the volume of processed litter by the proportion of plastic litter calculated through sample survey.

- (c) Collected amount of land-based litter, illegal dumping, and scattered waste

	FY2017	FY2018	FY2019
Total litter	91,320t	to be investigated	to be investigated
Plastic litter (estimate)	9,940t	to be investigated	to be investigated

(Reference)

“Estimated amount collected by clean-up and collection activities”:

Estimated amount, excluding the amount collected on the coast, based on the amount collected by prefectures and municipalities

“Amount proportion of plastics”:

Estimated amount collected, based on the results of those local governments which have data on the amount of plastic

Maldives

■ Measures

- (a) Enforcement of proper waste management system
 - i. Upgrading island waste management system
 - ii. Intermediary waste treatment system
 - iii. Regional waste management system
 - iv. Waste transfer system
 - v. Behaviour change through information, education, communication and public awareness
 - vi. Modern technology selected through BPEO (Best Practicable Environmental Option) and BATNEEC (Best Available Techniques Not Entailing Excessive Costs)
 - vii. Environmentally sustainable, economically viable and socially acceptable
- (b) Collection of accumulated waste in the islands
 - i. Nationwide clean-up 2020, in cooperation with the island councils

Analysis of waste accumulated in the islands was done in order to identify the quantity of the waste accumulated in each island. Accumulated wastes are to be collected and transferred to the nearest Regional Waste Management Centre
- (c) In 2017, a campaign by Maldivian fishing vessels to intercept and collect ocean plastics from the country's exclusive economic zone was inaugurated
 - i. The plastics intercepted by fishermen and collected at designated collection points were handed over to Parley for the Oceans, with which Maldives has been closely working, to recycle and reuse plastic waste
- (d) Local fishing vessels in collaboration with NGOs are undertaking efforts to intercept plastic before it reaches the ocean and is handed over to Parley for the Oceans.
- (e) In 2019, a campaign was launched to reduce the consumption of plastic bags and bottles
 - i. Reusable water bottles were handed over to students studying in the first grade of all registered schools in the Maldives
 - ii. Reusable bags have been distributed to the island councils who took the initiative to eliminate single-use plastic
- (f) Waste Management Cooperation – WAMCO (state owned company)

WAMCO is a state-owned company responsible for collecting and disposing waste. Segregated plastic wastes that are brought by individuals, clean-ups or organisations are compacted or baled on site for exporting, to be recycled.

(g) Parley

Parley Maldives is active in implementing the Avoid. Intercept. Redesign (AIR) strategy. Parley have set up collection points at all major schools in Male' and entered into agreements with fishing vessels to collect PET bottles every day.

■ Achievements

- (a) Nationwide clean-up 2020

25% completed
- (b) WAMCO- Waste Management Cooperation- state owned company

In 2017, WAMCO generated a revenue of over one million Rufiyaa by exporting plastics, cardboard and metals to regional facilities in Asia.
- (c) Parley Maldives

In 2016, Parley collected 75,000-80,000 five-litre PET bottles every day. Furthermore, only by intercepting the PET bottles that are going to Thilafushi, they exported 3 million five-litre PET bottles in December 2015 to an Adidas manufacturing facility in Taiwan where they are being remade into fashion items, or sportswear. As of December 2019, Parley is in partnership with 88 schools, 46 resorts, 41 councils, 35 government organisations, 18 cafes in Male', seven guesthouses, and two safaris. In total, from December 2016 to August 2019, Parley has sent 60 40ft containers weighing over 1000 tons to the Adidas facility in Taiwan.

Myanmar

■ Measures

- (a) The discharge of plastic waste into the environment has an adverse effect and causes problems globally in the form of marine litter and microplastics. As a party to the Basel Convention, Myanmar has to follow the obligations of the convention on transboundary movement of hazardous and other waste. The new plastic waste amendments to Annexes II, VIII and IX to the Basel Convention will help to get better control of transboundary shipments of plastic waste and balance in the approach to trade in plastic waste and environmental concerns.
 - i. To get better control, manage systematically and to recycle in an environmentally sound manner within our country, importing plastic waste is not allowed but imports of plastic scrap is permitted only under the following criteria:
 - Plastic scrap to be imported must be clean, homogenous and ready to be used as raw materials
 - Recycling factories must have an Approval Letter or Environmental Compliance Certificate of an Environmental Management Plan, Initial Environmental Examination or Environmental Impact Assessment, which is approved by the Ministry of Natural Resources and Environmental Conservation
- (b) The Embassy of the Netherlands is initiating the Ocean

Clean Up Interceptor Deployment in Myanmar Project, which is one of the solutions to prevent plastic from entering the oceans from rivers. Installation and operation of the Interceptor in the mouth of Yangon river could result in the successful collection of plastic waste, contributing to a reduction of plastic waste in oceans.

■ Achievements

- (a) In Yangon, Dowa Eco-System Co., Ltd operates Myanmar's first controlled landfill facility at the Thilawa Special Economic Zone. The implementation of sanitary landfill is starting in Yangon, Mandalay and Bagan.
- (b) In Myanmar, pollution caused by fishing nets is endangering marine mammals as well as people's livelihoods and tourism. The Myanmar Ocean Project, which is supported by the Global Ghost Gear Initiative, Ocean Conservancy, and National Geographic, surveyed and cleaned up marine habitats around Langann Island, Lampi National Marine Park, and some of the popular dive sites around the Myeik Archipelago. 1,821kg of ALDFG have been removed from sites across the Mergui Archipelago in 2019.

Related URL: <http://www.myanmarocean.org/>

Netherlands

■ Measures

- (a) Waste management: the Netherlands has Extended Producer Responsibility (EPR) for packaging. Producers are responsible for the collection and recycling of (plastic) packaging waste. They bear the costs for this system via a private waste management contribution, where this contribution is lower for high-quality recyclable packages.
- (b) Policy programme on microplastics: A few pilots are planned with litter catchment systems in the river. A monitoring system will be developed to investigate the amount of plastic litter and microplastics in and along rivers.
- (c) Marine Strategy Framework Directive (MSFD) Program of Measures, three green deals:
 - i. Green Deal for Clean Beaches provides insight into how different parties go about cleaning up the Dutch North Sea beaches and keeping them clean. The Green Deal also includes the ambitions, plans and concrete actions of these parties. Making activities and plans manifest promotes collaboration and coordination between multiple parties
 - ii. Green Deal for Ships includes concrete agreements to close the maritime waste cycle by means of waste prevention during provisioning, further optimisation of supervision, and optimisation of waste delivery in seaports and recycling of plastic maritime waste ashore
 - iii. Green Deal for Fishing in Support of a Clean Sea is seeking ways to close the waste cycle and thus prevent waste ending up in the sea. One of the basic principles is that all fishing vessels will deliver their operational and domestic waste on land as

from 2020. The green deal tackles the main waste streams of fishery: operational ships' waste (nets, ropes, dolly rope) and domestic waste. Together with Fishing for Litter, the Green Deal resulted in improved collection of waste on board ships and in ports; collection and recycling of used fishing nets; environment courses at fisheries schools; and separation of different kinds of waste to make recycling possible.

■ Achievements

- (a) Amount of waste plastic recycled, heat recovered, incinerated without energy recovery, and land filled (situation for recycled plastic with heat recovery has slightly improved in 2018 compared to 2017)

Recycling	2015	2016	2017	2018	2019
Heat recovery			11% of plastic packaging (61 metric tons)	13% of plastic packaging (68 metric tons)	
Incineration of waste without energy recovery + landfill	n/a	n/a	n/a	n/a	n/a

(Reference)

Stichting afvalfonds verpakkingen (2019) Monitoring verpakkingen – resultaten inzameling en recycling 2018

- (b) Collected amount of marine litter from clean-ups (situation is slightly improving since 2015)

	2015	2016	2017	2018	2019
Total litter (kg)	11,555	19,203	14,929	11,163	10,991
Plastic litter (estimate)	n/a	n/a	n/a	n/a	n/a

Above is the yearly Boskalis beach clean up tour along the whole Dutch coastline (300-350 km)

- (c) Collected amount of land-based litter, illegal dumping, and scattered waste: No data available.

Norway

■ Measures

In general, Norway has a well-functioning waste collection and management system that ensures environmentally sound waste management. Clean-up of legacy waste has increased in years, and efforts will continue to clean the Norwegian shorelines, as awareness has grown.

- (a) Improve waste management recycling system

Norway has targets for recycling, in line with EU Waste Framework Directive and other relevant EU legislation. The country is currently considering measures to reach these targets.

- (b) Norway is considering new regulations on sorting plastic waste from household waste and to a certain extend industrial waste.

(c) **Clean-up activity at rivers and coasts**

- i. There are many clean-up activities in Norway. Government and voluntary efforts work closely together. There is a subsidy scheme by the Norwegian Environment Agency to support various clean-up measures across the country
- ii. The organisation “Keep Norway Beautiful” coordinates voluntary clean-up efforts. In 2018 the government established the Norwegian Centre for Oil Spill Preparedness and Marine Environment, as a national knowledge hub for clean-up efforts. This centre has developed a national mapping tool for clean-up along the Norwegian coast
- iii. In addition, there are other private initiatives such as HMF that contributes in a substantial way to cleaning up activities, and a growing number of professional clean-up actors have emerged in Norway over the past few years
- iv. We are currently assessing how to streamline our clean-up efforts and maximise the outputs of resources available. Each County Governor's Office has been tasked to promote better regional cooperation in clean-up efforts

(d) **Actions on fishing gear**

- i. Norway is considering a new EPR scheme on plastic items used in fisheries and aquaculture
- ii. In order to ensure proper collection and treatment of waste collected at sea, a selected number of ports, ships and fishermen are part of “Fishing for Litter”. Also under consideration is a new “no special fee” system for waste collected by fishermen and others at sea
- iii. Since the 1980s, the Norwegian Agency for Fisheries has organised annual clean-up cruises for lost or abandoned fishing gear

(e) **Capturing trap/filter on drainage/river**

Many local initiatives for capturing litter in rivers and waterways are being tested across the country, but none of these have been scaled up so far.

Philippines

■ Measures

(a) **Regular Clean-Up Activity by DENR and other concerned Agencies** – this is Phase 1 (Cleanup/Water Quality Improvement) of the Manila Bay Rehabilitation (Battle for Manila Bay). Activities include the following:

- i. Clean-up of designated esteros and waterways
- ii. Reduce faecal coliform level and toxic discharges from houses and establishments by causing connection to existing STPs and requiring STPs for gov't, commercial, industrial, and educational establishments
- iii. Inspect and repair leaks in old sewer lines
- iv. Provide temporary sanitation facilities to informal settlers residing along esteros and shorelines pending relocation

- v. Implement solid waste management
 - Closure of dumpsites near Manila Bay
 - Assistance to develop SWM Plans for LGUs in the Manila Bay Region
- vi. IEC Campaigns

(b) **Adopt an Estero/Waterbody Program of DENR** – this is a collaborative undertaking among Estero communities, private entities, the local government units concerned, and the Department, and endeavours to clean up the polluted water bodies/waterways that drain into Manila Bay. The programme aims to effectively comply with the continuing mandamus “Order” of the Supreme Court involving concerned government agencies for the clean-up of the Manila Bay, major rivers and other waterbodies in the country, including the esteros that drain into the bay. It is one of the priority programmes of the DENR and a key strategy to address the continuing mandamus of the Supreme Court to several government agencies to clean-up Manila Bay and its tributaries.

■ Achievements

(a) **Regular Clean-Up Activity by DENR and other concerned Agencies**

The Department of Environment and Natural Resources (DENR) announced that there is a significant decrease in the level of faecal coliform bacteria in Manila Bay. The levels, however, were still way beyond the normal or standard level of 100 most probable number (mpn) of coliform.

- i. Decrease of faecal coliform after a month (January to February 2019)
- ii. Padre Faura outfall, from 330 million mpn to 7.9 million mpn
- iii. Remedios outfall, from 160 million mpn to 35 million mpn
- iv. Manila Yacht Club, 1.3 billion mpn to 52 million mpn

(b) **Adopt an Estero/Waterbody Program of DENR Improvement in Water Quality in All Adopted Waterbodies**

Republic of Korea

■ Measures

(a) **Distribute environment-friendly buoys**

(b) **Reduce blind spots of collection**

- i. Strengthen waste management on islands
- ii. Strengthen sunken waste collection in the distant sea areas
- iii. Expand existing sunken waste collection projects (fishing grounds and ports)

(c) **Create a collection environment that encourage local participation**

- i. Provide incentive and reward to local fishing communities
- ii. Strengthen local government marine litter collection through financial support
- iii. Operation of Marine environment Guard in collaboration with local residents

- (d) Develop efficient collection system
 - i. Develop an efficient marine litter collection system through marine plastic distribution map
 - ii. Develop vacuum microplastics cleaner devices

■ Achievements

- (a) Distribute environment-friendly buoys
 - i. Expand the distribution of eco-friendly buoys in aquaculture farms where Styrofoam buoys are used, continue development of eco-friendly buoys capable of replacing existing Styrofoam buoys
- (b) Reduce blind spots of collection
 - i. Strengthen waste management on islands
 - Establish a waste management system on islands: establish collection platforms on islands in order to collect island waste, which is highly likely to reenter the oceans, and build a management system including the deployment of marine debris cleanup vessels and vehicles based on results from waste management research on island regions
 - ii. Strengthen sunken waste collection in the distant sea areas
 - Collect marine litter deposited in the EEZ: Korea provides support for disposal costs of deposited marine debris pulled up by fishermen during fishing operations, while the government directly carries out a well-devised collection project for deposited marine debris in the future
 - Collect marine litter in areas where marine leisure activities take place etc.: establish a network with private diving associations, the military and coast guards and collect marine debris in vulnerable sea areas such as areas where marine leisure activities take place as well as Military Installation Protection Zones
 - Collect waste in Korea-Japan, Korea-China Intermediate Waters: collect derelict fishing gear from Korea-Japan Intermediate Waters and the Korea-China Interim Measures Zone in order to improve the environment of fishing grounds and manage fisheries resources
 - A clean-up project for marine litter deposited in the Maritime Peace Zone of the Yellow Sea: lay the foundation to preserve the ecosystem and maintain the production of fishing grounds in the Maritime Peace Zone of the Yellow Sea, such as organising an Inter-Korean Joint Project Consultative Group, starting a pilot project and preparing a collection and disposal plan / prepare a mid-to-long term plan and regularly conduct a status survey and collection project for marine debris
 - iii. Expand existing sunken waste collection projects (fishing grounds and ports)
 - Strengthen management of marine debris at

ports managed by local governments: identify the present status and management conditions of marine debris at ports managed by local governments and come up with measures for managing marine debris based on cooperation between the central and local governments / regularly conduct collection and disposal projects for marine debris at fishing ports managed by local governments

- (c) Create a collection environment that encourages local participation
 - i. Provide incentives and rewards to local fishing communities
 - Induce voluntary participation of fishermen by providing incentives to fishing village cooperatives based on collection records when selecting an Autonomous Management Fishing Community and Fishing Experience Village
 - ii. Strengthen local government marine litter collection through financial support
 - Encourage local governments to increase local finances and enhance local capacity of waste collection by increasing the ratio of the national subsidy (currently at 30% or 50%) as well as supporting the securing of clean-up vessels and equipment
 - Discover and support marine waste management projects considering a region's pending issues and management conditions while offering incentives such as rewards (prize money) based on the evaluation of management records of marine debris by local governments
 - iii. Operation of Marine Environment Guard in collaboration with local residents
 - Project for supporting the Guardian of the Ocean Environment: deploy the Guardian of the Ocean Environment, a dedicated management workforce, at hot spots of marine debris on a regular basis
- (d) Develop efficient collection system
 - i. Develop an efficient marine litter collection system through marine plastic distribution map
 - Analyse sea routes, fishing grounds and characteristics of ocean currents to draw a distribution map of marine debris and then utilise it in the collection process
 - Create a distribution map of marine debris by forecasting generation and movement routes of marine debris and then increase the efficiency of collection by utilising the information of hot-spots etc.
 - ii. Develop vacuum microplastics cleaner devices
 - Develop technology to improve on the existing manpower-oriented collection scheme such as devices for removing microplastics from beaches as well as a vacuum suction device

and portable device for cutting fishing gear

Saudi Arabia

■ Measures

(a) As part of NES, MEWA has developed an initiative to establish the NWMC by following measures:

- i. Develop and implement a marine litter prevention strategy: (implementation will commence in 2022)
 - Identify existing initiatives and projects to align and incorporate in the strategy where needed
 - Develop and agree on a comprehensive marine litter prevention framework leveraging best practices
 - Assess land-based litter, seaborne litter and fishing activities related waste and litter
 - Highlight current state and main sources of marine litter and waste
 - Identify target state and the strategic goals to be achieved along the reduction, control and clean-up of marine litter
 - Identify the marine litter prevention strategic initiatives and develop their charters
 - Propose a performance management framework including related KPIs
 - Develop a detailed implementation plan
 - Develop processes to periodically update the strategy
 - Implement the key projects of the strategy in coordination with all stakeholders
 - Track implementation progress and periodically report on completion while highlighting deviations

(b) The Permanent Committee for the protection of the marine environment consists of eight governmental entities (General Authority of Meteorology & Environment Protection, Ministry of Municipal and Rural Affairs, Ministry of Energy, Ministry of Tourism, Ministry of Finance, Ministry of Interior (General Directorate of Border Guard), Saudi Wildlife Authority, Ministry of Environment, Water and Agriculture) and aims to reduce the environmental impacts of the developmental projects on coastal zone and the marine wildlife such as mangroves and corals reefs, by reviewing EIA and permitting all projects that contain backfilling, burial or bulldozing activities. In addition to that, it monitors the implementation of environmental standards and criteria on these projects by site visits and inspections.

(c) The National Transformation Program (NTP) has two initiatives related to the marine protection and managed by GAMEP:

- i. The Marine and Coastal Protection Initiative aims to:
 - Define the baseline environmental conditions, characterize qualitatively and quantitatively existing and future pressures, implement a nationwide integrated monitoring programme and take further actions protect and restore existing environmental assets

- Build capacity in environmental emergency management
- Develop the ability to respond to environmental emergencies by improving the operational model and the interaction model with the Ministry of Interior, developing a system for emergency management and maintenance, and setting a framework for developing partnerships with leading national and international actors in the field of emergency management

ii. The Rehabilitation of Contaminated Spots Initiative aims to:

- Monitor, manage and rehabilitate contaminated spots in coastal and marine areas and deal with the concerned agencies to ensure the commitment and cooperation of all stakeholders in the isolation, control and rehabilitation of contaminated spots, and ensure the use of environmental standards and regulations for the rehabilitation of contaminated spots in accordance with the provisions of the environment general system and international conventions

(d) Environmental inspection through marine surveys to monitor and reinforce of environmental compliance in all sites through regular inspections and corrective actions to meet regulatory environmental standards.

■ Achievements

(a) Environmental inspection through marine surveys under GAMEP monitored discharge points on both the western and eastern coasts which resulted in stopping and closing violators for not complying with the environmental standards and not achieving environmental compliance.

Singapore

■ Measures

To address the issue of marine plastic litter and microplastics, Singapore has put in place stringent legislation and regulations on pollution control and waste management and a comprehensive waste and water management system to minimise waste at source and prevent discharge of litter into the sea. The prevention and reduction of marine pollution is achieved through (i) management of pollution from land-based sources; and (ii) management of water pollution and quality in inland water bodies and coastal areas.

Singapore's approach is detailed below:

(a) Comprehensive waste management system

- i. Control of discharge of trade effluent, oil, chemical, sewage or other polluting matters into drains, as well as hazardous substances into inland waters and conducting regular water quality monitoring of inland water bodies and coastal areas to meet international standards
- ii. Anti-littering as well as waterways clean-up measures, which ensure that land-based litter,

including plastic waste, that might otherwise wash into the ocean is prevented from doing so

- iii. Integrated and comprehensive solid waste management and collection system to minimise waste at source and collect all waste for proper disposal. Recyclables, which are segregated and collected separately at source, including plastics, are sorted, baled and sent for recycling
- (b) Prevention of littering, illegal dumping, release of waste into the ocean
- i. Damming up of tidal rivers to form reservoirs as source of water supply to minimise litter from flowing out into the sea. Vertical gratings, litter traps and float booms installed where appropriate as part of the drainage network to trap debris and litter
 - ii. All used water collected and treated at water reclamation plants (WRPs) to international discharge standards. Most plastic materials, including microplastics, removed through current treatment processes at the WRPs
 - iii. Singapore is party to all six Annexes of the International Maritime Organization's (IMO) International Convention for the Prevention of Pollution from Ships (MARPOL), the main international convention covering prevention of pollution of the marine environment by ships. MARPOL Annex V in particular prohibits the discharge of garbage, including all types of plastics, into the sea
 - iv. Singapore's Maritime and Port Authority (MPA)'s port inspectors patrol Singapore's port waters to ensure that ships in the Port of Singapore do not illegally discharge waste, oil, garbage and sewage
 - v. Singapore conducts inspections on both Singapore-registered and foreign-registered ships in its port to ensure that they comply with the regulations on garbage disposal into the sea and that anti-pollution measures are in place. Ships are also required (by IMO requirements) to maintain a record of their garbage and management plans for verification by Flag State Control and Port State Control inspectors
 - vi. Singapore's MPA deploys five garbage collection crafts daily at scheduled timings to collect garbage from ships at the anchorages

■ Achievements

- (a) Singapore has a comprehensive and integrated solid waste and wastewater management covering proper collection and disposal to prevent and reduce marine pollution. This comprehensive system minimises waste washed into the marine environment and seeks to tackle the issue of marine debris pollution holistically, from upstream. For example, the waste and wastewater management system controls the discharge of all effluents and waste into water bodies. An integrated solid waste management system to minimise waste at the source, reuse and recycle and regulate waste collection and disposal so that waste will not be washed into the ocean. Singapore also has strict anti-littering and illegal

dumping laws, wastewater treatment regulations, and regulations to implement MARPOL obligations.

Achievement assessment: The situation is consistent with previous years.

Spain

■ Measures

Programme of Measures on Marine Litter (2016 - 2021) – Marine Strategies

- (a) Removal of marine litter from the sea
 - i. Implementation of a fishing for litter national plan. The measure will include preparatory actions such as a technical document to ensure consistency of methodologies and data collection, a national database, and demonstration pilot actions as part of LIFE INTEMARES European project. Funds are available in the framework of European Maritime and Fisheries Fund Spanish Operative Programme.
 - ii. Financing of clean-up activities (rivers, beaches, floating litter and shallow seabeds) and encourage participation in organised clean-up campaigns (linked to a harmonised citizen science data collection)
 - iii. Protocol for inventory, classification, assessment and controlled removal of "ghost nets", as part of LIFE INTEMARES European project.
 - iv. Study on hotspots at sea and focused cleaning surveys.

Sri Lanka

■ Measures

- (a) As nearly 80% of the marine pollution is caused by land-based pollution, many activities are initiated to stop land-based pollution. Many clean-ups were conducted and some programmes were supported by the private sector

■ Achievements

- (a) International Beach Clean-up day is celebrated and many beach clean-up programmes are conducted.

Turkey

■ Achievements

- (a) As mentioned previously, the five-year "Marine Litter Provincial Action Plans" are prepared and are being applied in accordance with the national law on Marine Litter Provincial Action Plans' Preparation and Implementation. In 2019, 65,250 tonnes of marine litter was collected from Turkey's marine and coastal areas. However in 2020, 7,517 tonnes of marine litter has been reported to be collected. This decrease can be commented from different points of view. In particular, the Covid-19 pandemic caused a decrease in the rate of clean-up activities as well as touristic and recreational activities.

UK

■ Measures

(a) Resources and Waste Strategy

In the 25 Year Environment Plan, the UK pledged to leave the environment in a better condition for the next generation. The Resources and Waste Strategy for England will help to meet that commitment. The plan is to become a world leader in using resources efficiently and reducing the amount of waste we create as a society. The UK wants to prolong the lives of materials and goods that people use, and move society away from the inefficient 'linear' economic model of 'take, make, use, throw'. A more circular economy will ensure that resources are kept in use as long as possible, so as to extract maximum value from them. There should be recovery and regeneration of products and materials whenever possible, giving them a new lease of life.

i. Sustainable Production Goals

- Invoke the 'polluter pays' principle and extend producer responsibility for packaging, ensuring that producers pay the full costs of disposal for packaging they place on the market
- Stimulate demand for recycled plastic by introducing a tax on plastic packaging with less than 30% recycled plastic
- Harness the potential of extended producer responsibility for other product types
- Set minimum requirements through eco-design to encourage resource efficient product design
- Manage chemicals sustainably and address barriers to reuse and recycling posed by their use, through a Chemicals Strategy
- Develop a model for realising resource efficiency savings, working with businesses through 'resource efficiency clusters'

ii. Helping consumers take more considered actions

- Incentivise consumers to purchase sustainably
- Provide consumers with better information on the sustainability of their purchases
- Ban plastic products where there is a clear case for it and alternatives exist
- Address barriers to reuse
- Support the market for remanufactured goods
- Encourage appropriate disposal of used products
- Lead by example through procurement and the Greening Government Commitments

iii. Resource recovery and waste management

- Improve recycling rates by ensuring a consistent set of dry recyclable materials is collected from all households and businesses
- Reduce greenhouse gas emissions from landfill by ensuring that every householder and appropriate business has a weekly separate food waste collection, subject to consultation

- Improve urban recycling rates, working with businesses and local authorities
- Improve working arrangements and performance between local authorities
- Drive greater efficiency of Energy from Waste (EfW) plants
- Address information barriers to the use of secondary materials
- Encourage waste producers and managers to implement the waste hierarchy in respect to hazardous waste

iv. Tackling waste crime

- Improve the transport, management and description of waste by reforming existing regulations
- Strengthen intelligence sharing and engagement to tackle illegal activity
- Prevent illegal activity being hidden through waste exemptions by reforming the existing regime
- Mandate the digital recording of waste movements, subject to consultation
- Create a Joint Unit for Waste Crime
- Toughen penalties for waste criminals
- Increase awareness of waste regulations and publicise positive work of enforcement bodies as they tackle waste crime

v. Food Waste

- More effectively redistribute food to those who need it most before it can go to waste
- Consult on annual reporting of food surplus and waste by food businesses
- Consult on legal powers to introduce food waste targets and surplus food redistribution obligations
- Publish a new food surplus and waste hierarchy
- Promote awareness of the issue by appointing a new food waste champion
- Support cross sector collaboration through the Courtauld 2025 agreement

vi. Global Britain: international leadership

- Promote the goals of our Resources and Waste Strategy internationally
- Drive international political commitments through the ground-breaking Commonwealth Clean Ocean Alliance
- Support developing nations to tackle pollution and reduce plastic waste, including through UK Aid
- Improve the quality of plastics exported for recycling through the Basel and Stockholm Conventions
- Establish cross-government oversight of the UK's natural resource security

vii. Research and innovation

- Support further investment and innovation in resource efficiency, working with UK Research and Innovation (UKRI) on our Areas of Research Interest

- Launch a call for evidence on the development of standards for bio-based and biodegradable plastics
 - Support further investment in resource efficient technologies, including through the Industrial Strategy Challenge Fund
 - Support the Waste and Resources Action Programme
 - Encourage innovative waste treatment technologies that create transport fuels through the Renewable Transport Fuels Obligation (RTFO)
- viii. Measuring progress: data, monitoring and evaluation
- Work with partners and stakeholders to develop a shared vision and bold new approach to data on resources and waste
 - Move away from weight-based towards impact-based targets and reporting, focusing initially on carbon and natural capital accounting
 - Maintain the coverage and quality of local authority-collected waste and improve data collection to meet future needs
 - Work with tech firms to develop innovative digital solutions for tracking waste, and consult on options to mandate the digital recording and sharing of waste movement data

(b) Waste Exports

- i. All waste exports from the UK are made in accordance with the EU Waste Shipments Regulation and there is a system of inspections in place to verify compliance. Current regulations do not allow the export of waste that is contaminated to the extent that it could not be managed in an environmentally sound manner, or would require further sorting at its destination.
- ii. There is a general requirement that waste materials are destined for operations which will recover them in an environmentally sound manner according to national laws, regulations and practices. In addition, the rules require that all persons involved in the shipment of waste have the appropriate legal authorisations. Waste exporters also have to ensure they comply with any requirements imposed by the authorities of the country of import. The UK regulations provide that a person found guilty of an offence can be fined and/or imprisoned for up to two years.

■ Achievements

- (a) In the 25 Year Environment Plan, the UK pledged to leave the environment in a better condition for the next generation. The Resources and Waste Strategy for England will help to meet that commitment. The plan is to become a world leader in using resources efficiently and reducing the amount of waste we create as a society. The UK wants to prolong the lives of the materials and goods

that are used, and move society away from the inefficient 'linear' economic model of 'take, make, use, throw'. A more circular economy will ensure that resources are kept in use as long as possible, so as to extract maximum value from them.

Related URL:

<https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>

US

■ Measures

(a) **Resource Conservation and Recovery Act (EPA) Voluntary Programs**

- i. **WasteWise** – EPA works with businesses, governments, and nonprofit organisations to promote the use and reuse of materials more productively over their entire life cycles. Partners demonstrate how they reduce waste, practice environmental stewardship and incorporate sustainable materials management into their business model, including their waste-handling processes. Benefits of joining WasteWise include reduced costs for purchasing and waste disposal, as well as opportunities to receive WasteWise Awards for outstanding achievements, public recognition in WasteWise publications, outreach and educational materials, and one-on-one technical assistance via the WasteWise Helpline.

(b) **NOAA Marine Debris Program Removal Grants**

- i. NOAA's Marine Debris Program provides annual funding to partners in the US to support locally driven, community-based marine debris removal projects. These projects benefit coastal habitat, waterways, and wildlife including migratory fish. Since 2006, NOAA has supported over 100 marine debris removal projects and removed more than 17,000 metric tonnes of marine debris from our coasts and ocean.

■ Achievements

(a) **Resource Conservation and Recovery Act (EPA) Voluntary Programs**

- i. **WasteWise-** In 2019, Waste Wise celebrated its 25th anniversary. WasteWise currently has more than 500 partners representing more than 50 sectors. Since the beginning of the programme, WasteWise participants have prevented more than 247 million tonnes of waste from going to the landfill.

(b) **Marine Debris Act**

- i. Removal of over 17,000 metric tonnes of marine debris from US waters (ocean and Great Lakes)
- ii. Development of ten subnational (US state or regional) action plans to coordinate and spur local action to address marine debris
- iii. Development of 10 emergency response guides to aid local US authorities in preparing for severe

marine debris events, from storms, hurricanes, etc., and to assist in faster responses to such events

EU

■ Measures

(a) The Marine Strategy Framework Directive (MSFD, 2008/56/EC)

The MSFD was the first EU legal instrument to explicitly address marine litter; it requires “Good Environmental Status” for marine litter to be achieved by 2020, i.e. that “properties and quantities of marine litter do not cause harm to the coastal and marine environment”.

Related URL:

https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

(b) Directive on Port Reception Facilities (EU) 2019/883

The new Directive covers all waste from ships, with a special focus on addressing marine litter originating from shipping, including from the fishing and recreational sectors. To this end, the Directive provides for a mix of incentives and enforcement measures to maximise waste delivery on shore to adequate port reception facilities, where the waste should be properly managed (e.g. through separate collection). The Directive strengthens the financial incentive for delivery by providing for a 100% indirect fee for garbage (MARPOL Annex V waste) to be paid irrespective of volumes delivered. This fee gives all ships a right to deliver all garbage waste, including waste fishing gear and passively fished waste, without facing any further additional fees.

This should result in a robust framework to tackle (plastic) waste from ships and to ensure that port reception facilities are available for the management of this waste in line with the principles of the Circular Economy.

Related URL:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570190453030&uri=CELEX:32019L0883>

(c) Revision of the Waste Legislation

In relation to waste management, the EU Member States have implemented effective separate (household) collection schemes and have built in economic incentives for better waste treatment (e.g. landfill/ incineration charges) as well as Extended Producer Responsibility (EPR) schemes.

In May 2018, the EU revised its waste legislation to make it fit for the future. The revised legislation includes the following points:

- i. Strengthening the “waste hierarchy”, i.e. it requires Member States to take specific measures to prioritise prevention, re-use and recycling above landfilling and incineration
- ii. Significantly stepping up recycling of municipal waste (target of 55% by 2025 and 65% by 2035) and packaging waste (target of 65% by 2025 and 70% by 2030 – for plastics the 2030 target is 55%)

- iii. Boost to the quality of secondary raw materials and their uptake through new separate collection rules
- iv. Phase-out of landfilling (max. 10% by 2035) and promotion of the use of economic instruments, such as EPR schemes

In the context of the prevention of waste, the revised EU Waste Framework Directive requires Member States to identify products that are the main sources of littering, notably in natural and marine environment, and take appropriate measures to prevent and reduce litter from such products. The Directive also requires Member States to develop and support information campaigns to raise awareness about waste prevention and littering. In the future, Member States management plans will have to contain measures to combat and prevent all forms of littering and to clean up all types of litter. With regard to enforcement they are required to take the necessary measures to prohibit the abandonment, dumping or uncontrolled management of waste, including littering

Under the European Green Deal, with a view to stop exporting the waste outside the EU, the Commission will revisit the rules on waste shipments and illegal exports

Related URL:

https://ec.europa.eu/environment/waste/target_review.htm

(d) Directive on the reduction of certain plastic products on the environment:

The Directive requires the establishment of EPR schemes to ensure that producers are responsible for the costs of cleaning up litter (Article 8)

■ Achievements

- (a) The situation has improved compared to the year 2018. Although most marine litter originates from land, a significant amount – an estimated 300,000 tonnes – of waste is discharged from ships into our seas, which poses an increasing threat to the marine environment. The new Directive (EU) 2019/883 on port reception facilities covers all plastic household and operational waste from ships, as well as fishing gear and other waste. It also applies to ‘passively fished waste’ – waste picked up by fishermen at sea. All ship types must comply, from small recreational vessels to large container and passenger ships, as well as the whole range of ports visited by those ships. The new Directive on port reception facilities has introduced 100% indirect fee for garbage (MARPOL Annex V), meaning that fishing vessels can now dispose of passively fished waste and old/derelict fishing gear without paying extra charges. Work on a risk based targeting mechanism for vessel inspections and the criteria for fee reductions based on ships on-board waste management is ongoing.

International Organisations and NGOs

ADB

■ Measures

- (a) Building on ADB's Livable Cities programme, which is an operational priority under Strategy 2030, ADB continues to support DMCs on Environmentally Sound Waste Management. In the past 3 years (2016 - 2019) alone, ADB has invested USD353.22 million in SWM in the region. About USD346.43 million more are in the pipeline for 2020 - 2021. The relevant indicator under the operational priority is: Number of people benefiting from improved coverage, quality, efficiency, and reliability of services in urban areas, including adequate waste management.

Ocean Conservancy

■ Measures

- (a) International Coastal Cleanup (ICC): Ocean Conservancy is the global leader in marine debris cleanup. For almost 35 years, Ocean Conservancy has mobilised volunteers around the world to pick up trash to protect the world's oceans and waterways. In 2018 alone (the most recent year for which final data is available), more than 1 million volunteers collected more than 23 million pounds of trash in a single day.
- (b) The Global Ghost Gear Initiative (GGGI): GGGI has been hosted by Ocean Conservancy since 2019. GGGI is the only cross-sectoral alliance dedicated to solving the problem of abandoned, lost, or otherwise discarded fishing gear (ALDFG) – widely referred to as “ghost gear” – around the world. The GGGI brings together more than 100 stakeholder groups, including 16 national governments as well as representatives from civil society, the private sector, public agencies, academia, intergovernmental organisations, and others from across the fishing industry to tackle ghost gear at a global scale. In 2017, the GGGI developed the Best Practice Framework for the Management of Fishing Gear, which has been adopted by a range of seafood companies and in national and regional marine litter and fisheries management action plans.

URL: <https://www.ghostgear.org/resources>

- (c) SPLASH (Strategic Litter Abatement in the Hong Sang): With support from the Benioff Ocean Initiative and the Coca-Cola Foundation and local partner the Center for Marinelifelife Conservation, Ocean Conservancy is piloting the installation and operation of five plastic capture devices in the Hong Sang river (also known as the Red River) in the coastal province of Nam Dinh – the heart of the Red River Delta World Biosphere Reserve – while also working with local officials and others in the community to tackle plastic pollution at the source in Vietnam.

■ Achievements

- (a) The International Coastal Cleanup (ICC): Ocean Conservancy has organised the International Coastal Cleanup (ICC) annually for nearly 35 years. Since the effort first started in 1986 nearly 15 million volunteers have removed over 300 million pounds of trash from beaches and shorelines in 153 countries. The ICC provides a global platform for public engagement and gives people of all ages a tangible opportunity to participate in mitigating the significant environmental threat posed by marine plastic pollution. In 2018 alone, more than 1 million volunteers collected more than 23 million pounds of trash in a single day.

Assessment: The situation this year will be challenged by the COVID pandemic that prevents mass gatherings. However, the ICC will proceed, with individuals and others encouraged to engage.

The Global Ghost Gear Initiative (GGGI): In 2019, Ocean Conservancy hosted four regional workshops alongside UN FAO on a Best Practice Framework for the Management of Fishing Gear (BPF) and the Voluntary Guidelines for the Marking of Fishing Gear (VGMFG). The workshops were held in Vanuatu, Indonesia, Senegal, and Panama – following on from previous workshops hosted in Vanuatu, the Solomon Islands, Canada, and Kenya in 2018 - in order to build capacity and raise awareness of how to prevent ghost gear. These workshops drew on both the BPF and the VGMFG. In total, more than 200 participants from 72 countries participated in these workshops. Additionally, gear removals were facilitated around the world—including in Panama, Vanuatu, Myanmar, and the Gulf of Maine. Notably, the removal in Maine yielded the biggest find in a single retrieval effort ever. A gear ball weighing nearly ten metric tonnes was collected and brought to shore to be responsibly disposed of.

Status: Continued progress.

URL: <http://www.fao.org/documents/card/en/c/ca9348en/>

<https://oceanconservancy.org/blog/2019/12/04/developing-local-solutions-ghost-gear-water/>

<https://www.ghostgear.org/projects/2018/11/21/gggi-project-myanmar-ocean-project-ghost-gear-removal-in-the-myeik-archipelago>

<https://oceanconservancy.org/blog/2019/06/28/great-balls-ghost-gear/#:~:text=But%20after%20a%20recent%20trip.lines%2C%20traps%20and%20other%20equipment.>

WB

■ Measures

- (a) Since 2000 about USD5 billion have been committed in World Bank projects to address solid waste management, recycling, and clean production, as well as working on policy reforms. Objectives that guide the World Bank's solid waste management projects and investments include:
- Infrastructure: Providing capital investments to build or upgrade waste sorting and treatment facilities, close dumps, construct or refurbish landfills, and provide bins, dumpsters, trucks, and transfer

- stations
- ii. Legal structures and institutions: Projects advise on sound policy measures and coordinated institutions for the municipal waste management sector
- iii. Financial sustainability: Through the design of tax and fee structures, and long-term planning, projects help governments improve waste cost containment and recovery
- iv. Citizen engagement: Behaviour change and public participation is key to a functional waste system. Support is being provided to design incentives and awareness systems to motivate waste reduction, source-separation and reuse
- v. Social inclusion: Resource recovery in most developing countries relies heavily on informal workers, who collect, sort, and recycle 15%–20% of generated waste. Projects support waste picker livelihoods through strategies such as integration into the formal system, as well as the provision of safe working conditions, social safety nets, child labor restrictions, and education
- vi. Climate change and the environment: Projects promote environmentally sound waste disposal. They support greenhouse gas mitigation through food loss and waste reduction, organic waste diversion, and the adoption of treatment and disposal technologies that capture biogas and landfill gas. Waste projects also support resilience by reducing waste disposal in waterways, addressing debris management, and safeguarding infrastructure against flooding
- vii. Health and safety: Investments in municipal waste management that improve public health and livelihoods by reducing open burning, mitigating pest and disease vector spreading, and preventing crime and violence
- viii. Knowledge creation: Helping governments plan and explore locally appropriate solutions through technical expertise, and data and analytics

3.3. Promotion of innovative solutions

There has been good progress in innovations development, as the number of countries reported on the actions for innovative solution have increased (22 out of 25 countries reported). For countries that contributed to the first report, three countries specifically highlighted progress on innovative solutions.

Various countries such as Azerbaijan, Japan and the Republic of Korea reported that they have supported technology development for increasing recyclability or alternatives development including biodegradable/biobased plastic products. Further investment for technology development and scientific

research has also been reported by some countries, such as Canada, UK, and EU.

Efforts made by international organisations/NGOs in this field varies from research and awareness-raising events to boost innovative solutions (by OECD and in ADB's planned activities), investment in marine debris solutions mobilising private sector funding (by Ocean Conservancy), to innovative business model creation (by the World Bank).

Countries

Australia

■ Measures

- (a) Through Australia's AUD10 billion investment in the Clean Energy Finance Corporation, the Australian Government is trailing a project which will convert garden and food waste across Melbourne into compost for local parks and gardens.
- (b) Australia is also considering where energy-from-waste projects may be helpful in recovering waste that would otherwise go to landfill.
- (c) Australia is developing large energy-from-waste projects in New South Wales and Western Australia worth more than AUD1.5 billion.

Azerbaijan

■ Measures

- (a) Application of the best technologies in the field of recycling.
- (b) Supporting the private sector in the recycling sector.
- (c) Expansion of alternative packaging production.

■ Achievements

- (a) Private sector participation in bioplastic production.
- (b) Establishment of paper packaging enterprises.
- (c) Printing of additional supporting materials for use in general education institutions.

The situation is improving compared to FY2019.

Canada

■ Measures

- (a) The **Canadian Plastics Innovation Challenges** are part of Canada's comprehensive approach to addressing plastic waste and pollution. This program provides funding to small and medium-sized enterprises to incentivise the development of technology to address plastic waste. Through the Canadian Plastic Innovation Challenge, the

government is investing nearly CAD19 million to support Canadian innovators and small and medium-sized businesses to develop solutions for plastics challenges. The Challenges include, among other categories, supporting innovation in reducing plastic waste and microfibers from textiles, finding sustainable alternatives to plastic packaging, developing sustainable fishing and aquaculture gear, and developing innovative solutions to address plastic waste and toxic substances from electronics. For more information on the Challenges please visit:

<https://www.ic.gc.ca/eic/site/101.nsf/eng/00001.html>.

- (b) Canada is also investing in innovation internationally, including CAD20 million to support the G7 Innovation Challenge to Address Marine Plastic Litter.

■ Achievements

- (a) Through the Canadian Plastics Innovation Challenges, Canada has awarded nearly CAD19 million to 29 Canadian innovators and small and medium-sized businesses to address plastics challenges, such as creating a recyclable multi-layer film that can be used for food packaging, transforming polystyrene insulation waste into new insulation, or using PVC waste from construction to produce new insulating materials. These investments are leveraging additional public and private capital.

The value of investments and number of innovation projects has increased since 2018.

Chile

■ Measures

- (a) The Ministry of the Environment is promoting the use of Artificial Intelligence for the control and monitoring of marine debris.

Finland

■ Measures

- (a) One of the ten themes of Plastics Roadmap for Finland is “Invest in a big way in alternative solutions and set up a New Plastics knowledge network” which promotes innovative solutions.

■ Achievements

- (a) The Government funds innovation and piloting of waste collection and recycling solutions worth EUR one million starting in September 2020. Plastic use in the construction sector has been the focus of a series of workshops and a GreenDeal between the ministry and relevant construction sector actors is under negotiation. The MoE has released a tender for applications for development projects that relate to recycling, alternative materials and innovation on the use of plastics in construction sector.

France

■ Measures

- (a) Identifying new fishing gear to prevent impacts on the marine environment.

■ Achievements

- (a) The action to identify new fishing gear to prevent impacts on the marine environment has been completed.

Islamic Republic of Iran

■ Measures

- (a) Support industries that produce recyclable disposable envelopes and containers

Italy

■ Measures

- (a) 2018-Project “Il Po d’AMare” prepared by the Foundation for Sustainable Development, by the Corepla and Castalia Consortia and implemented thanks to the institutional coordination carried out by the Po River District Authority and with the patronage of the Municipality of Ferrara and AIPO (Interregional Agency for the Po River). The project focused on the selection and collection of floating litter through the installation of a collection device (Seasweeper) positioned in the section of the river Po in Pontelagoscuro (Municipality of Ferrara) 40 km from river mouth. The intercepted litter was sent for recycling and with the support of Corepla, the plastic waste was then sent to the sorting center which separated and sent the various polymeric fractions for recycling.

Japan

■ Measures

- (a) Technological development based on “Roadmap for Popularizing Development and Introduction of Marine Biodegradable Bio-based Plastics” such as analysis of biodegradation mechanism, development of new resin, reduction of manufacturing cost and international standardisation.
- (b) “Clean Ocean Material Alliance (CLOMA)” has developed a valuable alliance among relevant business operators, which make up the plastic supply chain, in order to create innovative approaches.
- (c) Support for development of marine biodegradable plastic especially for fishing gear.
- (d) From FY2020, a study was started to develop fishing gear that is easy to recycle, such as gear made of a single plastic material and gear made of multiple materials that can be easily disassembled and separated.
- (e) Support for replacement of plastic products with paper, marine biodegradable plastics, cellulose materials, etc.

through the “Project on building a recycling system for plastics to support decarbonized society”. Support was started for actions on microbeads in 2020.

- (f) Development of an efficient decomposition method for plastic waste using micro-organisms.
- (g) Proposal to the international standard of a method for measuring fibre microplastics generated from textile products.

■ Achievements

- (a) Budget scale of technologies development and R&D

	FY2020
National budget	JPY 277 million

(Reference)

Meeting materials for expert conference on measures against articles that drift ashore

http://www.env.go.jp/water/marine_litter/conf.html

Maldives

■ Measures

- (a) The following actions will be taken in accordance with “Single-use plastic phaseout plan” to reduce the use of SUP and encourage a more sustainable environmentally friendly manner:
 - i. Promotion of sustainable alternatives to plastic
 - ii. Development of a new business model for public water provision
 - iii. Mandatory provision of reusable carrier bags* at all supermarkets
 - iv. Provision of refill stations in all public areas, including private schools, hospitals, clinics, mosques, parks, bus stops, ferry terminals, and all cafés and restaurants
 - v. Installation of water filtration systems in all households in Greater Male’ Area
 - vi. Development of EPR scheme with complementary administrative schemes such as DRS
 - vii. Separate collection and transfer infrastructure for plastics
 - viii. BATNEEC (Best Available Techniques Not Entailing Excessive Costs) in RWMF (Regional Waste Management Facility) and 1 recycling facility in Maldives for fitting local scale

- (b) In 2018- Smart bin initiative by MWSC

Smart Bin is the first ever reverse vending machine made for recycling in the Maldives. This is a joint effort of MWSC and Island Beverages Maldives (IBM). It provides an automated method for collecting, sorting and handling of used plastic bottles for recycling purposes. Smart Bin has the capacity to collect up to 538 bottles per day. The Smart Bin launched by MWSC is a major CSR initiative of MWSC to promote and engage the community in recycling practices.

- (c) Establish three Regional Waste Management Facilities in Maldives (Waste-to Energy)

The main goal of the Ministry of Environment is to establish three main Regional Waste Management Facilities in Maldives. One Regional Waste Management Facility at the South of Maldives (Addu City), the other at Greater Male’ region (K.Thilafushi) and a Regional Waste Management facility in R. Vandhoo which is in the operational phase. These projects are funded by three different parties: RWMF in Greater Male’ area funded by ADB (Asian Development Bank); RWMF in Addu City and R.Vandhoo are funded by both ADFD (Abu Dhabi funded for development) and IRENA (International Renewable Energy Agency).

■ Achievements

- (a) Increased employment and entrepreneurship potential in the waste management sector through support mechanisms for SME (small and medium enterprises) start-ups and existing businesses to encourage innovative solutions for waste reduction, reuse, recovery and management.

Myanmar

■ Measures

- (a) Myanmar is participating in the regional chapter of the “Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE) Project” with funding from the Norwegian Agency for Development Cooperation(Norad). The project aims to demonstrate that non-recyclable plastic waste can be energy-recovered in local energy intensive industries like cement manufacturing in order to increase in-country plastic-waste treatment capacity, to reduce the leakage of plastics to the ocean and to share lessons learned in a regional multi-stakeholder forum enabling awareness raising, capacity building and replication.

■ Achievements

- (a) Since some entrepreneurs are trying to produce environmentally friendly alternative products to plastics, Nature Myanmar Co. is manufacturing biodegradable organic dining-ware from the areca leaf. These products can be used instead of plastic containers and utensils. They can withstand heat and cold and people can even use them in microwave ovens. Therefore, these products are safe and hygienic enough to be used in the food industry, substituting the use of plastic to some extent. These products are environmentally friendly as they are natural and will decompose in three or six months naturally, but they are a little bit higher in price than similar plastic products.

Related URL: <https://nature-myanmar.com/>

Netherlands

■ Measures

- (a) Tax benefits for investments in plastics retrieved from the ocean as an input material (MIA/VAMIL).
- (b) Pilots with litter catchment systems in the river: both the central government and local governments collaborate

with innovative companies like the ocean clean-up, Clear Rivers and The Great Bubble barrier, both in the Netherlands and in Indonesia.

■ Achievements

- (a) Last year the campaign on tyres resulted in 250,000 extra cars with the right tyre pressure, which prevented an estimate of 5-10 tonnes of microplastic emission into water.
- (b) In order to tackle riverine litter, several innovative litter collection systems are currently being tested.

Norway

■ Measures

- (a) Norway has a grant scheme to promote innovative solutions to reduce marine litter.

Republic of Korea

■ Measures

- (a) Build pre-processing facilities and distribute Styrofoam pressers
 - i. Pre-processing facilities
 - ii. Styrofoam pressers
- (b) Distribution of eco-friendly buoys

Expand the distribution of eco-friendly buoys in aquaculture farms where Styrofoam buoys are used, continue development of eco-friendly buoys capable of replacing existing Styrofoam buoys.
- (c) Develop technology for recycling and resource recovery
 - i. Establish a roadmap of technological development for recycling and resource recovery and push ahead technological development
 - ii. Push forward technological development for recycling marine debris such as developing alternative materials of plastics
 - iii. Support transportation costs for eco-friendly disposal of shell fragments and start research for expanding the recycling of shell fragments
 - iv. Establish a mid-to-long term plan for eco-friendly disposal and resource recovery of dead fish
 - v. Increase recycling facilities of dead fish and expand its distribution

■ Achievements

- (a) Build pre-processing facilities and distribute Styrofoam pressers
 - i. Pre-processing facilities
 - Accelerate eco-friendly treatment or resource recovery of fishery waste, which has been difficult to incinerate or recycle due to the attachment of salt or contaminants
 - Install pre-processing facilities for cutting, cracking and cleaning in areas where a large

amount of derelict fishing gear is generated, such as ropes and nets

- ii. Styrofoam pressers
 - Distribute compressors given consumption by region and replace aging facilities with new ones
 - Develop and distribute equipment and technology to automate pre-processing procedures including disposal of eco-friendly buoys made of various materials as well as removal of pollutants
 - Discover and spread best practices of operational management and assessment of compressors

- (b) Distribution of eco-friendly buoys

Expand the distribution of eco-friendly buoys in aquaculture farms where Styrofoam buoys are used, continue development of eco-friendly buoys capable of replacing existing Styrofoam buoys

- (c) Develop technology for recycling and resource recovery
 - i. Establish a roadmap of technological development for recycling and resource recovery and push ahead technological development
 - ii. Push forward technological development for recycling marine debris such as developing alternative materials of plastics
 - iii. Support transportation costs for eco-friendly disposal of shell fragments and start research for expanding the recycling of shell fragments
 - iv. Establish a mid-to-long term plan for eco-friendly disposal and resource recovery of dead fish
 - v. Increase recycling facilities of dead fish and expand its distribution
 - vi. Research on marine litter pre-processing technology utilising ultrasound (2020 - 2021)
 - vii. Development of marine litter recycling technology to create harbour structure reinforcing material (2019 - 2023)
 - viii. Comprehensive national development research which has its main objectives on 1) marine litter collection technology for remote places, 2) development of effective microplastics collection equipment (2019 - 2023)

Saudi Arabia

■ Measures

- (a) One of the strategic objectives of the National Center for Environmental Compliance is to encourage environmentally-friendly innovative solutions with universities and research centres locally and internationally.

Solomon Islands

■ Measures

- (a) Plastic-wise Gizo- Ministry of Environment Climate Change Disaster Management and Meteorology recognises the work undertaken by Plastic Wise Gizo.

A grass roots group which works with women to turn plastic waste into marketable goods. The women of Gizo use their remarkable weaving skills to turn single-use plastic packaging into a variety of products which are sold at the local markets.

This group was established to help decrease plastic waste in Western Province. The initiative is to educate communities on waste management that also turns plastic waste into handicrafts.

- (b) Support the establishment of the Solomon Islands Recycling and Waste Management Association. The association has been formulated to promote recycling activity in the Solomon Islands. The association would like to create a circular economy society through public and private cooperation with a five-year strategy to overcome the challenges facing Solomon's recycling industry.

■ Achievements

- (a) The expansion of Plastic Wise Gizo network which gains national, regional and international recognition has been a great achievement for this group. The group has sold its recycled handicrafts to tourists who travel to Gizo town in the Western Province from cruise ships and gained small amount of income.
- (b) Establishment and launching of the Solomon Islands Recycling and Waste Management Association is an achievement in the area of recycling.

Spain

■ Measures

Programme of measures on Marine Litter (2016 - 2021) – Marine Strategies

- (a) Prevention. Sea-based sources.
- Promotion of projects and initiatives for:
 - Innovation in materials for fishing sector processes and technologies
 - Improving waste management on board in fishing vessels or aquaculture facilities
 - Analysis of the possibility of recycling specific fishing materials as EPS boxes or fishing nets
 - Improving waste facilities in fishing and recreational ports

Funds will be managed by Biodiversity Foundation through a call for projects (PLEAMAR) in the framework of European Maritime and Fisheries Fund Spanish Operative Programme.

Sri Lanka

■ Measures

- (a) Beach caretakers are recruited and some of them are sponsored by private organisations
- (b) Certain stretches of coast line is maintained by private organisations

UK

■ Measures

- (a) The UK has put together a package of over GBP100 million for research and innovation to tackle the issues that arise from plastic waste:
- GBP40 million has been set aside through the Plastics Research and Innovation Fund and the Plastics and Waste Innovation Fund for research and development, including GBP10 million specifically to pioneer innovative approaches to boosting recycling and reducing litter
 - The UK has also announced GBP60 million of funding through the Industrial Strategy Challenge Fund, alongside a GBP150 million investment from industry, towards the development of smart, sustainable plastic packaging, which will aim to make the UK a world-leader in sustainable packaging for consumer products.
- (b) In the 2018 Resources and Waste Strategy for England:
- Committed to reviewing and consulting on measures such as Extended Producer Responsibility and product standards for five new waste streams by the end of 2025, and plan to consult on two streams by 2022. Fishing gear has been identified as one of the five priority waste streams
 - Committed to developing the best mix of policies to reduce the negative environmental impacts of the textiles sector, including harmful microplastic shedding. These requirements could be applied to support durable, repairable, and recyclable textiles. This could include, for example, design requirements to minimise microfiber shedding from textiles, but only if research suggests this is possible and cost effective
- (c) Bio-based plastics review
- The UK published a call for evidence in autumn 2019, to consider the development of standards or certification criteria for bio-based, biodegradable and compostable plastics, and to better understand their effects on the environment and the current waste system. Responses are currently being analysed and the UK response will be published in due course.

■ Achievements

- (a) The UK Government has committed to establish a GBP500 million Blue Planet Fund, funded through UK

Official Development Assistance (ODA) to protect the marine environment from the myriad threats it faces, including plastic pollution, warming sea temperatures and overfishing in order to reduce poverty in developing countries.

- (b) Through the Commonwealth Clean Ocean Alliance, the UK has pledged up to GBP70 million to address plastic pollution. This funding supports a package of programmes with organisations including the World Economic Forum's Global Plastic Action Partnership (GPAP), UN Environment Programme's Tide Turners Plastic Challenge Badge and the Waste and Resources Action Programme (WRAP) Plastic Pacts.
- (c) The UK has committed GBP25 million towards the Research and Innovation Framework which will provide a platform and overarching structure for bringing together governments, industry, researchers and practitioners from across the Commonwealth to work together to tackle the issue of marine plastics.
- (d) The UK has put together a package of over GBP100 million for research and innovation to tackle the issues that arise from plastic waste, alongside a GBP150 million investment from industry, towards the development of smart, sustainable plastic packaging, which will aim to make the UK a world-leader in sustainable packaging for consumer products.
- (e) Through the Small Charities Challenge Fund and UK Aid Match, the UK has committed over GBP3 million to support projects in a number of countries.

US

■ Measures

- (a) **Resource Conservation and Recovery Act (EPA) Voluntary Programmes**
 - i. **Sustainable Materials Management Electronics Challenge** – EPA runs this challenge to encourage electronics manufacturers, brand owners, and retailers to improve and adopt sustainable materials management approaches. Each year, EPA gives awards to companies that 1) increase the volume of materials collected through “take-back” programmes to be recycled at third-party certified electronics refurbishers and recyclers, and 2) showcase innovative ways they manage materials, such as closing the loop on plastics recycling and using renewable packaging materials

■ Achievements

- (a) **Resource Conservation and Recovery Act (EPA) Voluntary Programmes**
 - i. **Sustainable Materials Management Electronics Challenge** - In 2017, EPA gave Dell an Honorable Mention in the Cutting-Edge Champion Award category of this program for their work in collecting ocean-bound plastics in Haiti and using these plastics in computer parts. Dell was previously awarded for working to establish a closed loop

plastics recycling stream (2016) and for replacing much of their product packaging with renewable materials (2015). The programme also awarded LG in 2017 for sustainability achievements in the design of their OLED line of televisions that included making sure all plastic parts were labeled to facilitate recycling

(b) **Clean Water Act**

- i. **Novel method for the extraction and identification of microplastics in ocean trawl and fish gut matrices. Research supported by the Environmental Protection Agency**
Related URL:
<https://www.semanticscholar.org/paper/Novel-method-for-the-extraction-and-identification-Wagner-Wang/0faad963e6c2d3e676ce0b64e203a4bdf133bc4a>

EU

■ Measures

(a) European Circular Economy Stakeholders Platform

The European Circular Economy Stakeholders Platform is a joint initiative of the European Commission and the European Economic and Social Committee. It is an online platform to exchange best practices, knowledge and strategies to accelerate the transition towards the circular economy. As a place for knowledge, the platform features different contributions from stakeholders: good practices, national, regional and local strategies, studies and reports on the Circular Economy and commitments. In the section "good practices", stakeholders are able to submit directly their experiences to the platform. The sections on national, regional and local strategies, on knowledge and on voluntary commitments feature examples of the type of contribution we wish to collect. Many projects and initiatives on plastics, including their alternatives, can be found in the Platform's database, which is being continuously updated.

Related URL:

https://circulareconomy.europa.eu/platform/en/good-practices?key_area=All§or=86&country=All&org_type=All&funding_type=All&identified_challenge=All&scope=All&title=&=Search

(b) Circular Economy Finance Support Platform

Innovation needs innovative financial instruments. Together with the European Investment Bank, the Commission launched the Circular Economy Finance Support Platform (in January 2017), inviting key stakeholders such as national promotional banks, private financial institutions, NGOs and trade associations. This Platform will stimulate the generation and financing of Circular Economy projects and will also raise awareness of circular economy needs, identify opportunities and best practices amongst potential project promoters, and provide advice on structuring and improving the bankability of circular economy projects.

Other EU funding programmes are available to support the

transition to the circular economy:

- i. Horizon 2020 work programme 2018 - 2020 focus area 'Connecting economic and environmental gains – the Circular Economy' has allocated around EUR one billion. Through R&I actions, a strong contribution will be made to sustainable development goals, climate action, resource efficiency, jobs and growth and industrial competitiveness. In particular, actions on plastics, on premature obsolescence, bioeconomy, organic fertilisers, food waste, to mention a few, will be covered by this focus area

Related URL:

<https://ec.europa.eu/programmes/horizon2020/en>

- ii. The European Structural and Investment Funds, including Cohesion Policy

Related URL:

https://ec.europa.eu/info/funding-tenders/funding-opportunities/funding-programmes/overview-funding-programmes/european-structural-and-investment-funds_en

- iii. The European Fund for Strategic Investments (EFSI), which was extended until 2020, focusing more on investments to meet the Paris Agreement targets and help the transition to a circular and zero carbon economy

Related URL:

https://ec.europa.eu/growth/industry/innovation/funding/efsi_en

- iv. The LIFE programme

Related URL: <https://ec.europa.eu/easme/en/life>

(c) Plastics Circularity Multiplier group

Twenty innovation projects teamed up to support the EU efforts to steer the plastics industry into the circular economy. The recently formed Plastics Circularity Multiplier group will share resources and expertise to enhance the impact of the projects receiving funding from the EU's Horizon 2020 research and innovation funding programme. More specifically, the Plastics Circularity Multiplier group will communicate to policymakers, the public and industry on a range of EU-funded innovations on plastics.

■ Achievements

- (a) The situation has improved compared to the year 2018.

International Organisations and NGOs

ADB

■ Measures

- (a) Organising a Healthy Oceans Technology and Innovation Forum (tentatively Q2 2021).
- (b) Organising a series of high level technology and digital innovation challenges/hackathons on 3R/waste management and circular plastics economy (2020 - 2023).

Ocean Conservancy

■ Measures

- (a) Urban Ocean: Ocean Conservancy, together with the Global Resilient Cities Network and the Circulate Initiative, is a lead partner in Urban Ocean, which brings together civil society actors, leading academics, financial institutions and private sector leaders to develop, share and scale solutions to the ocean plastic problem that cut across silos and achieve multiple benefits. The programme welcomed its first cohort of learning cities - Can Tho, Viet Nam, Melaka, Malaysia, Semarang, Indonesia, Pune, India, and Panama City, Panama – in June 2020. "Mentor cities" from the Global Resilient Cities Network will join the programme to share opportunities that meet the programme's objectives. Notably, Pune, India was selected as both a learning and mentor city because of its significant work to date with the informal waste sector, the front line in collecting trash in many parts of the world. The cohort cities will have access to a suite of assessment and capacity building tools to help them prepare for an "Accelerator Summit," during which they will have the opportunity to pitch their proposed projects to potential funders.
- (b) Global Ghost Gear Initiative (GGGI): Currently, the GGGI has 17 solutions projects around the globe which address all intervention points in the fishing gear life cycle to prevent, mitigate and remove ghost gear. Current projects focus on addressing ghost gear in wild capture fisheries, but future projects will also include the aquaculture industry.

Related URL: <https://www.ghostgear.org/projects>

■ Achievements

- (a) Trash Free Seas Alliance (TFSA): Ocean Conservancy and the TFSA were instrumental in the launch of Circulate Capital, the world's first catalytic capital fund to keep trash out of the ocean. Circulate Capital has raised over \$100 million to invest in innovative solutions. In addition, Circulate Capital has secured a USD30 million partial credit guarantee from USAID to further de-risk investment in marine debris solutions.

Status: First investments made, additional investments expected this year.

OECD

■ Measures

- (a) OECD is currently conducting work to quantify circular plastics innovation, using patent data. A working paper is forthcoming. Outcomes of this work will also feed into the Global Plastics Outlook.

WB

■ Measures

- (a) The World Bank acknowledges that tackling plastic pollution requires a comprehensive approach and innovation in many areas, thus supports countries in their effort to develop feasible innovative tech solutions, citizen-driven data and analytics, innovative policy reform processes, new business models for a circular economy, and social innovation processes.
- (b) Such a social innovation process is supported by the World Bank in East Africa, where the World Bank helps to create the enabling environment for promoting innovation around marine litter and plastics and support new and innovative business models that can add value to plastic waste. This is done through encouraging the development of know-how and techniques, supporting innovators and marketplace access, public engagement & awareness, and a plastics social innovation fair. The initiative includes the creation of a digital knowledge platform, and has already conducted a series of open masterclasses, workshops and networking events to share knowledge, connect stakeholders, and build relevant skills. In East-Asia, the World Bank is supporting the detection and classification of plastics on beaches, rivers and waterways through a novel machine learning algorithm that is capable of detecting and quantifying floating and washed ashore plastic litter from aerial, high-altitude pseudo satellites and space missions. The objective is to identify the most abundant, top 10 plastic items leaking into the environment, to establish the basis for developing plastic policies and reduce plastics pollution.

3.4. Multi-stakeholder involvement and awareness-raising

Multi-stakeholder involvement and awareness-raising through campaigns, education and collaboration with related stakeholders have been actively implemented in most of the countries (24 countries) and there have been actions by international organisations.

Collaborations with multi-stakeholders including local governments, communities, industries, non-profit organisations, researchers and civil society are reported by the countries and organisations.

For countries that contributed to the first report, 16 new actions and 10 new achievements are reported by

eight out of 15 countries participating in the 2019 report.

As for the multi-stakeholder efforts conducted by international organisations and NGOs, Ocean Conservancy has been leading multi-partner platforms mobilising people from different countries and institutions, and OECD has been organising multi-stakeholder technical workshops to engage with and hear views from different partners. ADB builds on strong partnerships and convening capability in the region in providing knowledge support and promoting multi-stakeholder involvement at regional, country, city and community level. As for UNEP, their single-use plastic awareness raising project launched in 2019 succeeded in having the participation of over 180,000 youths in India.

Countries

Australia

■ Measures

- (a) Australia is implementing the Threat Abatement Plan under the UN Clean Seas Campaign for the impacts of marine debris on vertebrate wildlife of Australia's coasts and oceans (TAP). The TAP includes a range of management approaches for research and monitoring, public outreach and education, preventing and reducing debris from land-based sources as well as addressing marine-based sources and removing accumulated marine debris from the coastal marine environment.

Azerbaijan

■ Measures

- (a) International experts have been invited to apply the Extended Producer Responsibility Model in Azerbaijan, which is a platform for recycling. An extensive conference was held on 15 November 2019 with the participation of manufacturers, recycling companies, consulting companies, NGOs, entrepreneurs and other stakeholders. International experts were assessed based on the proposals of all stakeholders.
- (b) A large-scale propaganda campaign was held in connection with the violation of the ecological balance of plastic packaging waste. Educational printed and video materials were prepared and disseminated with a focus on the negative impact of waste on the environment, reduction of such impacts, and the importance of using alternative packaging materials.

■ Achievements

- (a) Videos and other educational and advisory materials are regularly posted on social media, including the Ministry's Facebook page. A flash mob was held with the call "Let's say no to plastic waste."
- (b) Awareness-raising events were organised and coastal

(beach) areas have been cleaned up with the participation of representatives of Embassies, government agencies and civil society institutions in the country in order to increase public activity on this issue.

- (c) Regional meetings were held with the participation of representatives of the Ministry of Economy and Local Executive Authorities in all regions of country.
- (d) Supporting study materials are being prepared for the teaching of the subject of "Knowledge of Life" taught at the general education level in Azerbaijan.
- (e) Information booklet on waste sorting was published for schoolchildren with the support of the German Organization for International Cooperation (GIZ).

The situation is improving compared to FY2019.

Canada

■ Measures

- (a) The Government of Canada is working with all levels of government, Indigenous communities, industry, non-profit organisations, researchers and civil society to reduce plastic waste and pollution. This includes engagement with key stakeholders on measures throughout the process.
- (b) Federal, provincial and territorial governments have committed to strengthening information exchange and awareness that engage and enable Canadians and businesses to make sustainable choices to better manage plastic resources. This includes promoting tools and best practices and developing guidance on the use of labels and terms such as recyclable and compostable.
- (c) The Government of Canada is also supporting businesses and organisations to engage key stakeholders in advancing solutions and to support awareness raising initiatives in Canada.
- (d) See 3.6 Promotion of International Cooperation for examples of Canada's international multi-stakeholder involvement.

■ Achievements

- (a) The Government of Canada also supports organisations to raise awareness and develop educational materials on the issue. For instance, Canada supported the [10,000 Changes](#) and [Plastic Wise](#) national awareness raising campaigns. Through these campaigns, over 24,000 Canadians pledged to take action to reduce plastic waste and pollution. Canada has also supported educational resource to inform youth about the impacts of plastic pollution and how to sustainably buy, use, dispose or recycle their plastic products, such as: the [Anthropocene Educational Program](#) and [Ocean Plastic Education Kit](#), reaching over 22,000 Canadian teachers. The Government of Canada has even launched an online video game - [Climate Kids Plastics and Oceans](#) – to engage youth about the issue.

Related URL:

<https://10000changes.ca/en/>

<https://pledge.ocean.org/>

<https://anthropocene.canadiangeographic.ca/>

<https://plasticsedkit.ocean.org/>

<https://climatekids.ca/>

- (b) Through the [Zero Plastic Waste Initiative](#), Canada has supported leading businesses and organisations to move towards a circular plastics economy, including assessing options to reduce [agricultural plastic waste](#), creating an [online market place for secondary plastics](#) from the industrial, commercial and institutional sector, and evaluating the [recycling value chain](#) and identifying pilot projects for hard to recycle items.

Related URL: <https://www.canada.ca/en/environment-climate-change/services/environmental-funding/programs/zero-plastic-waste-initiative.html>

<https://cleanfarms.ca/building-a-canada-wide-zero-plastic-waste-strategy-for-agriculture/>

<https://ontario.materialsmarketplace.org/>

<https://www.danone.ca/federal-government-and-six-key-players-partner-to-create-a-circular-economy-for-plastics/>

- (c) In 2018, Canada held an online public consultation seeking input from Canadians on how to move toward zero plastic waste. Over 13,000 comments were received.

The number of Canadian pledges to national campaigns has improved since 2018. Access to educational and awareness materials has increased since 2018.

Chile

■ Measures

- (a) Chile has developed several initiatives to involve stakeholder participation and information exchange regarding marine debris. Some of these activities are:
 - i. Communication campaigns
 - ii. Workshops and webinars on marine debris, with a strong focus on prevention
 - iii. Dissemination of international research on the subject (UNEP, OECD, etc.)
 - iv. Coordination between public agencies including the Ministry of Environment and the Chilean Navy

Finland

■ Measures

- (a) The Plastics Roadmap for Finland - Reduce and Refuse, Recycle and Replace.
- (b) A voluntary Green Deal to reduce the use of plastic carriers bags was made between the Ministry of the Environment and the Finnish Chamber of Commerce in 2016. The aim is to make sure that Finland reaches the reduction targets for the consumption of plastic carrier bags in the EU Directive on packaging and packaging waste. The aim is that by the end of 2025 no more than 40 bags per person per year are used. Over 3500 stores are within the scope of the agreement. A key initiative in the Green Deal has been putting a price on plastic bags and reducing their

availability, for example at the cash register. The Ministry of the Environment evaluates progress towards the goal to ensure that the aims of the Green Deal are met. [http://kassi-info.fi/wp-content/uploads/2016/10/Plastic Carrier Bag Agreement.pdf](http://kassi-info.fi/wp-content/uploads/2016/10/Plastic_Carrier_Bag_Agreement.pdf)

■ Achievements

- (a) Finland's Plastic Roadmap was developed by a working group involving ministries, research institution, sector organisations, businesses, NGOs, active citizen and was supported by a secretariat composed of experts. Ideas for the Roadmap were collected through open websites and seminars. Currently, the implementation of the Roadmap is followed-up by a cooperation network consisting of various types of actors. In addition, a citizens' Plastics Council has been established to support the implementation of the Roadmap, and the MoE has organised Plastics Forum events involving actors dealing with plastics. Please see more: <https://muovitiekartta.fi/in-brief/>
- (b) The number of businesses committing to the voluntary Green Deal between the Ministry of the Environment and the Finnish Chamber of Commerce to reduce the use of plastic bags continues to grow. The number of plastic bags used (sold) has diminished.

France

■ Measures

- (a) Actions on the seashore and at sea
 - i. Implementation of awareness-raising actions for the benefit of fishing and aquaculture activities
 - ii. Raise awareness of amateur boaters through the "I sail, I sort" campaign
- (b) Awareness-raising actions
 - i. Put in place a citizen science platform on marine litter to identify the clean-up actions that take place, monitor the data and share best practices
 - ii. Support the associations that launch awareness raising actions and clean-ups
 - iii. Put in place a "Beaches without plastic litter" chart in link with local authorities
 - iv. Develop awareness-raising actions to inform citizens of the pollution, its impacts and the good practices to have
- (c) Multi-stakeholder involvement
 - i. Regular consultation of stakeholders involved in marine litter issues (NGOs, experts, agencies) through annual meetings
 - ii. Implement voluntary commitments of NGOs, major retailers and brand owners (through the "National Pact on plastic packaging") on prevention measures (elimination of harmful or unnecessary plastic packaging and improved recycled content) accompanied by a monitoring system with pertinent features (transparency, independence, auditable)

■ Achievements

- (a) Actions on the seashore and at sea
 - i. Awareness-raising actions have been conducted targeting fishermen to fight against pollution and initiate the collection of fishing gears and aquaculture waste
- (b) Awareness-raising actions
 - i. The ministry supports the associative network which intervenes in beach clean-ups and awareness-raising actions
 - ii. The citizen science platform on marine litter should be operating before the end of 2020 (a pilot version can be found here: www.remed-zero-plastique.org)
 - iii. Twice a year, a meeting is organised among the NGOs. and public and private actors to share information and raise issues
 - iv. An advertising campaign is launched every year to raise awareness on littering
 - v. Two working groups have been put in place with local authorities to prevent and sanction littering
 - vi. The national chart "Beaches without plastic litter" has been launched
 - vii. The "I sail, I sort" campaign for amateur boaters is implemented
- (c) Multi-stakeholder involvement
 - i. 11 companies and 2 NGOs have signed the "National Pact on plastic packaging" and have established a series of commitments for 2025

Islamic Republic of Iran

■ Measures

- (a) Clean-ups in coastal areas of Nayband Bay (Bushehr Province) in collaboration with Nayband Petrochemical Unit involving a clean-up on Neyband beaches of an area of approximately 8.5 km twice a month. This includes installation of special buckets in five existing parking lots and boards with themes related to enhancing general environmental culture.

Italy

■ Measures

- (a) Within the CReIAMO PA Project (PON Governance 2014-20), aimed to strengthen competence related to the Marine Strategy Framework Directive, many initiatives are underway to share and promote actions regarding the monitoring, management and reduction of marine litter.

The aim of these initiatives is to provide and promote practical examples of suitable measures that can be implemented at national and local level to protect the seas from marine litter. Another expected outcome is to share with the stakeholders some regulatory and management tools, operating models, best practices and projects in the most profitable way.

Japan

■ Measures

- (a) “Plastics Smart” campaign was launched to encourage all stakeholders to prevent generation of marine litter.
- (b) “UMIGOMI Zero Award” is held to award good practices (“umigomi” means marine litter in Japanese). There were 314 applications in 2020.
- (c) Model projects for local governments have been conducted to measure marine litter as a common issue for both coastal region and inland. Five regions were newly selected as models in FY2020.

■ Achievements

- (a) Number of registered cases for “Plastics Smart” campaign

	FY2019
Total	1,189 cases

(Reference)

<http://plastics-smart.env.go.jp/>

Maldives

■ Measures

- (a) “Saafu Raaje campaign” initiated in 2015

The campaign aims to promote public education and awareness on proper waste management practices and in this way, reduce the amount of waste being thrown out onto the streets, parks and other public places and into the sea. The campaign was run in collaboration with other government ministries, civil society and NGOs.

- (b) Awareness campaign on a single-use plastic phase-out plan

With the implementation of a single-use plastic phase-out plan, an awareness campaign will be launched which will aim to reduce the consumption of single-use plastics, and nudge consumers away from single-use plastics and use sustainable alternatives.

- (c) Community mobilisation sessions

This aims to raise awareness in the community about waste management policy, best waste management practices, effects of marine pollution, ways to reduce and refuse plastic consumption, as well as the importance of the 3Rs. These sessions are targeted at selective audiences at Island Level.

- (d) SNES (Student National Environmental Symposium)

Students’ National Environment Symposium (SNES) is a biennial meeting, with the aim of empowering the School Environment Clubs, and build capacity and participation of school students in dealing with environmental issues. The first SNES was held from 20-21 August 2016 at Dharubaaruge, Male’, Maldives. A total of 325 students from 41 schools participated in this symposium. SNES II

programmes and meetings started this year. The symposium aims to enhance the students’ critical thinking capacities through a scientific method with the objective of finding solutions to the environmental problems faced by the students and/or the community at large. Also seek to empower students to implement student led practical solutions in their communities, and to provide the opportunity for other stakeholders to contribute to these students led efforts.

■ Achievements

- (a) SNES (Student National Environment Symposium)

SNES II gave grants to a total of 10 schools out of 53 schools which submitted proposals for projects related to various environmental themes. The selected schools are to implement these projects with the funding they have received within the time period proposed.

- (b) NGO’s (Non-Governmental Organisations)

There are various groups involved in the dissemination of awareness and information regarding plastic pollution, and sustainable alternative lifestyles. Moreover, there are several resorts promoting and using plastic free alternatives and they have integrated those products as part of their key business services.

Myanmar

■ Measures

- (a) Stakeholder awareness should lead to efficient and effective involvement in managing marine plastic debris due to the huge number of stakeholders spread out in all regions. In Myanmar, awareness-raising and capacity building for local governments and communities are conducted by the government, NGOs and other organisations.

■ Achievements

- (a) Staff from state and regional Environmental Conservation Departments conducted 380 awareness-raising activities in states and regions from March 2019 to March 2020 with the cooperation of relevant stakeholders and departments.

- (b) Awareness-raising and capacity building for local governments and communities are conducted by the government, NGO and other organisations in Myanmar. Thank Myanmar, which is an NGO in Myanmar, conducted the “Need that bag?” campaign and “No Straw” campaigns, which encourage businesses to only hand out plastic bags upon request. The campaigns provide CSOs and community members with in-depth understanding of the waste crisis and activated them to become change makers to engage with shop and restaurant owners and the hospitality sector to convince them to change their “plastic bag and plastic straws by default” practice.

Related URL: <https://www.thantmyanmar.com/en/action>

Netherlands

■ Measures

- (a) Within the Netherlands the number of multi-stakeholder cooperations dealing with (marine) litter has increased over the last few years both nationally and regionally. Nationally, it started with the Plastic Cycle Chain Agreement (2013) and the Green Deals with Beach. Shipping and Fisheries sectors (since 2014). Since then collaborations have also started along all major river-branches. The Plastic Cycle Value Chain Agreement has been superseded by the Plastic Pact in 2019 with a more specific focus on single-use plastic products and packaging.
- (b) For microplastics from textiles, a multistakeholder platform has also been set up. Also for tyres, stakeholders collaborate in raising awareness on correct tyre pressure.

Norway

■ Measures

- (a) **Multi-stakeholder involvement and awareness-raising**

There is a high-level of awareness in Norway. The national beach cleaning week is one example of an important tool to raise awareness. As part of the SUP-directive implementation, consideration is made of how to fulfil the directives' obligations to raise awareness in the best possible way.
- (b) Since 2018 the Norwegian Environment Agency has hosted the national forum for government agencies with various responsibilities for clean-up of marine plastic litter. This forum aims to share information and increase coordination of efforts. The Norwegian Environment Agency has also provided financial support to various actors promoting better recycling.

Philippines

■ Achievements

- (a) The development of the NPOA on Marine Litter is expected to produce relevant targets and its indicators which would quantitatively gauge progress toward the reduction of marine litter. Aside from producing relevant targets, the process of developing the NPOA on Marine Litter can also be considered an achievement as it was able to create a loose network of stakeholders involved in the value chain of plastic from manufacture to disposal. It should be noted that following the initial engagement of DENR with all stakeholders for the development of the NPOA, private industries through PARMS have initiated the development of their own parallel roadmap "Zero Waste to Nature: Ambition 2030". To date, the initiative has secured the pledge and buy-in of FMCG companies that are locally operating.

Republic of Korea

■ Measures

- (a) 'Coastal Clean-up Day'
- (b) Public Awareness Projects

■ Achievements

- (a) 'Coastal Clean-up Day'
 - i. The Ministry of Oceans and Fisheries of Korea announced the third Friday of every month as 'Coastal Clean-up day' in July 2018 and has been holding nationwide coastal clean-up activities ever since. The clean-up activities are open to the public and involve participation from multi-stakeholders such as oil companies, local fishermen and local governments.
 - ii. There has also been activity on MOUs (Memorandum of understanding) between the private sector and the government. This year, the Korean government signed an MOU with Lotte which is one of the biggest beverage companies in Korea and invited them to join International Coastal clean-up activity and co-hosted the marine plastic litter up-cycling event.

- (b) Public Awareness Projects

The Ministry of Oceans and Fisheries of Korea established the comprehensive annual plan for marine litter public awareness campaigns at the beginning of the year. Through analysing the result of public awareness campaigns from the previous year, the plan has multiple different strategies to effectively raise public awareness among all groups of people.

- i. Strategy 1: Provide information
 - Publication and distribution of marine litter awareness poster
 - Publication of educational booklet for fishermen and tourists
 - Filming and broadcasting of public advertisements through various platforms such as newspapers, TV, Internet, public transportation
- ii. Strategy 2: Public participation
 - Public awareness campaigns on the street
 - Holding multi-stakeholders fora on marine litter policies
- iii. Strategy 3: Encourage active participation
 - Marine litter UCC and slogan contest
 - Public idea contest on up-cycling and recycling
 - Public idea contest on marine litter policies

Saudi Arabia

■ Measures

- (a) Memorandum of Understanding was signed with external entities and the MEWA, NCWM & NCEC to raise awareness regarding waste generation which covers MPL.

Singapore

■ Measures

(a) Singapore's initiatives to engage domestic stakeholders include:

- i. Partnering with the People, Private and Public (3P) sectors on initiatives that reduce the generation of land-based solid waste, including plastic waste
- ii. Singapore Packaging Agreement, a voluntary agreement undertaken by government, industry and non-governmental organisations to reduce packaging waste. Retailers in Singapore such as Miniso, Bossini and Ikea are encouraging consumers to bring their own reusable bags by either charging for single-use plastic bags or by making them unavailable
- iii. National Recycling Programme, which provides convenient means for consumers to recycle, thereby reducing the amount of plastic waste being sent for disposal
- iv. Nationwide "Say YES to Waste Less" campaign which is aimed at influencing the public to reduce the use of disposables
- v. Working with environment groups such as Zero Waste SG, the Public Hygiene Council (PHC), International Coastal Cleanup Singapore (ICCS) and the Waterways Watch Society (WWS) to foster shared ownership in keeping the environment clean and minimising waste. For example, ICCS organises clean-up initiatives to engender ownership among youths and other members of the public, and Zero Waste SG launched a Bring Your Own (BYO) campaign that provides educational tips and engage retail partners to provide incentives to encourage consumers to use their own reusable containers, bottles and bags leading to reduction in plastic waste
- vi. Singapore's MPA organises maritime environmental outreach programmes to raise awareness on the importance of protecting the marine environment. MPA partners with community groups such as Our Singapore Reefs and Marine Stewards Singapore to organise 'World Oceans Day Celebration' and 'Marine Clean-Up Day'. Both events aim to raise awareness on the importance of protecting Singapore's marine biodiversity among members of the public, through talks on marine conservation, underwater clean-up, and litter-picking activities on the water surface and on shores

Solomon Islands

■ Measures

(a) Friends of the City

The Ministry of Environment recognises the efforts by stakeholder partners to raise awareness on the importance of waste management and conduct public clean-up campaigns. Friends of the City is a volunteer initiative which has brought together hundreds of people to participate in clean-ups across the capital city of Honiara and raise awareness of the importance of maintaining healthy and sustainable local environments. They have worked with the government on the 'Battle against Plastic Pollution campaign', organising and participating in clean-ups across the city on 'World of Environment Day', 'World Ocean Day' and 'Coral Triangle Day'.

(b) World Environment Day, World Oceans Day and Coral Triangle Day Celebrations

The commemoration of these international events is usually a platform used to raise awareness on the importance of waste management. Clean up campaigns are usually organised during these events as well.

■ Achievements

(a) A number of successful clean-up campaigns have been conducted over the years which contribute to increasing knowledge and awareness on the importance of proper waste management practices. This is usually done during international event commemorations.

Spain

■ Measures

Programme of Measures on Marine Litter (2016 - 2021) – Marine Strategies

(a) Raising awareness

- i. Preparation of awareness/communication materials
- ii. Establishment of a technical group on marine litter (national hub) (which organises public events within the National Environmental Congress) and stimulation of national discussion in the form of periodic roundtables with stakeholder participation
- iii. Creation of "Guardians of the Beach" programme, aimed at associations, environmental organisations, fishermen, fishing associations and other groups and a network of "guardians" organisations to ensure environmental preservation of rivers and beaches and awareness of this problem at local, regional and national levels
Additionally, some horizontal measures in Marine Strategies may include marine litter as a subject among other marine aspects
- iv. Awareness-raising programmes for beach tourists, nautical tourism companies, as well as fishermen and civil society in general, including schools
- v. Training programmes for fishermen, observers on board, stranding networks personnel, and training

- for Public Administration managers
- vi. Development and implementation of a curriculum related to the respect and protection of cetaceans, marine turtles and seabirds as well as marine litter in the ship's masters official courses (yacht and fishing)

(b) Circular Economy national policy

- i. Awareness and Participation
 - Collaboration in campaigns promoted by civil society, providing that these campaigns are aligned with the communication strategy
 - Campaigns in National Parks aimed at preventing littering
- ii. Public-private collaboration
 - Promotion of agreements with interested parties such as environmental organisations, the private sector, consumer and user organisations, scientific institutions, etc., in order to develop collaborative projects

Sri Lanka

■ Measures

- (a) Awareness-raising is conducted by many organisations in relation to plastic waste management. Multi-stakeholders are involved.

■ Achievements

- (a) All relevant stakeholders are involved in awareness-raising. Special events are conducted during International Beach Clean-up Days and International Environment Day.

Turkey

■ Measures

- (a) Five-year "Marine Litter Provincial Action Plans" are prepared for 28 coastal provinces and have been approved and conducted through the involvement of related stakeholders. The stakeholders are involved throughout the whole process of marine litter management. Awareness-raising activities are planned and conducted under these action plans. In addition to these planned activities, voluntary activities are also done by NGOs.
- (b) In accordance with the national law on Marine Litter Provincial Action Plans' Preparation and Implementation, five-year "Marine Litter Provincial Action Plans" are implemented under the responsibility of the Governors, in all 28 coastal provinces. Marine litter (including plastics) clean-up activities for are planned, conducted and reported annually under the plan. In addition to these planned activities, voluntary activities are conducted by NGO's.
- (c) Within the scope of Zero Waste Project training seminars, workshops, competitions and conferences were organised across Turkey by the Ministry, provincial directorates and sector representatives, using social

media for different segments of society in order to raise awareness on zero waste approach, prevention, reduction of waste generation, sorting at source, recycling and saving resources. Also two zero waste education projects for schools have been carried out:

- i. Zero Waste Education Project in Schools
The Project was initiated by the Ministry of Environment and Urbanization, the Ministry of National Education and the TEMA Foundation. It is aimed to raise awareness among children on issues related to the protection of natural assets, environmentally-friendly consumption habits and waste management, and reached 471 schools and 88.116 students
- ii. Zero Waste Awareness Project For Schools
Within the scope of IPA-2 Environment and Climate Action Sector Operational Program, and in cooperation with the Ministry of Environment and Urbanization, the Ministry of National Education and TRT, the project aims to raise awareness of zero waste management, recovery and recycling in 100 primary and secondary schools in Ankara

■ Achievements

- (a) In all 28 coastal provinces of Turkey, awareness-raising activities are conducted in schools, public areas, etc. However, a quantitative value regarding how many people were reached could not be measured. Also, 8.7 million people were educated on zero waste management from June 2017 to August 2020.

UK

■ Measures

- (a) The UK co-chairs the **Commonwealth Clean Ocean Alliance (CCOA)** with Vanuatu. The CCOA brings together member states, businesses, NGOs and civil society from across the Commonwealth to commit to action on plastics, share best practice, leverage funding and push for global action. Since its launch in 2018, 34 out of 54 Commonwealth nations have signed up to the Commonwealth Clean Ocean Alliance, all working to tackle ocean plastic pollution.
- (b) The UK has also committed up to GBP70 million to address plastic pollution. This funding supports a package of programmes with organisations including the World Economic Forum's Global Plastic Action Partnership (GPAP), UN Environment Programme's Tide Turners Plastic Challenge Badge and the Waste and Resources Action Programme (WRAP) Plastic Pacts.
- (c) CCOA Technical Assistance Facility
Through the Commonwealth Clean Ocean Alliance Technical Assistance Facility (TAF), up to GBP10 million has been made available to ODA-eligible CCOA members to help some of these governments design and implement new policy to deliver on one or more of the three CCOA ambitions:
 - i. Taking steps to eliminate single use plastic waste
 - ii. Significantly reducing single use plastic carrier bags by 2021

- iii. Banning the sale and manufacture of microbeads in rinse-off personal care products by 2021
- (d) The **Global Plastic Action Partnership (GPAP)** brings together multiple civil-society stakeholders across the plastics supply chain to translate political commitments into investible action plans to reduce plastic pollution. GPAP brings together governments, NGOs and the private sector to devise National Plastic Action Partnerships (NPAPs), which focus on mobilising funding and leveraging expertise in-country to create circular economic solutions. GPAP has launched two such NPAPs in Ghana and Indonesia, with the latter focused on devising a pathway to help the Indonesian Government to meet its target of reducing marine litter by 70% by 2025, and will launch a third NPAP in Viet Nam later in 2020.
- i. The partnership is funded and supported by the governments of Canada and the United Kingdom as well as several companies, Coca-Cola, Dow Chemical and PepsiCo, demonstrating its international focus. As a key supporter of GPAP, UK representatives sit on all NPAP Steering Boards (usually from the respective High Commission or Embassy in-country), which helps foster international collaboration
 - ii. GPAP are also currently creating a toolkit called 'GPAP in a Box', a digital platform that will allow NPAP countries to share research and evidence in order to help other international partners better develop policies on waste management and reducing plastic pollution
- (e) The **Tide Turners Plastic Challenge Badge** is a youth engagement programme delivered by the United Nations Environment Programme (UNEP), in partnership with the World Organisation of the Scout Movement, the World Association of Girl Guides and Girl Scouts and Junior Achievement, as well as specific in-country partners. So far over 230,000 young people have participated in the challenge. The badge not only encourages young people to take action to reduce plastic waste in their own lives, but helps them become leaders in their communities to make sure that as many people as possible join the global fight to tackle the scourge of single-use plastics that is damaging the ocean.
- (f) The **Commonwealth Litter Programme (CLiP)** also works directly with communities in Commonwealth countries, for example through raising awareness of ocean plastic pollution, as well as upskilling local people to conduct beach cleans and local scientists to use microplastic laboratories set up by the programme.
- i. Through CLiP the UK has supported countries across the Commonwealth - Belize, Solomon Islands, South Africa and Vanuatu - to develop National Marine Litter Action Plans and a pilot study in India on water quality. The Marine Litter Action Plans focus on the wide range of sources of marine litter, leakage points and the collection of robust data than can be used to inform policy
- (g) Waste Pilots
- There is a need to find new ways in which developing countries can improve their recycling and disposal of plastic waste. The UK identified three cities to run plastic waste management pilots partnering with private sector and government offices:
- i. Vanuatu (Completed): Assistance has supported Vanuatu to develop and approve an evidence-based, country-wide strategy for practical and effective measures to eliminate avoidable single-use plastic waste. Building on the substantial steps already taken by the Government of Vanuatu (GoV) to address plastic waste on land and in the seas, for example through the introduction of successive bans on various single-use plastic products, the aim of this assignment was to provide scientific and technical assistance to the GoV to support the development of comprehensive strategic action on single-use plastics use and waste flows to the sea which will be funded under technical assistance through the Commonwealth Clean Ocean Alliance
 - ii. Ghana (Completed): Working with businesses to improve waste management and increase recycling in Accra, by levering in private sector investment and gathering evidence on what works. It was led by the Association of Ghana Industries, which is made up of the Coca-Cola Bottling Company of Ghana amongst others. Working together with the Government to also develop a strategy to combat plastic waste management in Accra and support plastic bags levy in supermarkets from May 2020. This pilot gathered data across Accra and shared findings with the GoG to support policy design
 - iii. Uganda (Live): 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
- (h) Through the **Small Charities Challenge Fund and UK Aid Match**, the UK Government is supporting small projects in a number of countries.
- (i) Through **UK Aid Match** two project bids were successful following recent Aid Match appeals:
- i. Tearfund (GBP3 million): Tearfund is working on a proposal to run a plastics project in Haiti (GBP1 million) and Pakistan (GBP2 million), working with communities on waste collection
 - ii. WasteAid (GBP80,000): Preventing plastics from reaching the ocean in Cameroon
 - iii. Through Small Charities Challenge Fund, Waste Aid is being funded to deliver a two-year recycling project in Gambia and a second project in Kenya:
 - iv. In Gambia (GBP50,000), the project will set up a plastics recycling and livelihoods centre in Gunjur to raise awareness about waste management and create employment, specifically to enhance business and entrepreneurial skills of women and youth
 - v. In Kenya (GBP50,000), the project will create and run a Community Waste Recycling Centre as a

social enterprise, in Kwa-Muhia, an informal settlement. The project aims to reduce waste, change behaviour and reduce pollution

■ Achievements

- (a) Through the CCOA, many nations have been involved in UK-led or funded initiatives to address ocean plastic pollution. For example:
- Through the Tide Turners Plastic Challenge Badge, over 230,000 young people across the world have participated in the challenge to raise awareness of ocean plastic pollution
 - Through WRAP, Plastics Pacts have been set up in Malaysia, South Africa, and the Pacific, with more to follow across Commonwealth Countries. The Pacts work across government, and private sector businesses to address plastic pollution
 - The Commonwealth Litter Programme has been completed in four countries (South Africa, Belize, Vanuatu and Solomon Islands), as well as a water quality survey in India. More countries are due to join the CLiP programme this year. CLiP works with government and at local community level to address ocean litter, and works with countries to develop science
 - The Global Plastic Action Partnership (GPAP) has launched two NPAPs in Ghana and Indonesia. GPAP recently published the Indonesia Multistakeholder Action Plan, which advises the Indonesian Government on how to meet its ambitious target of reducing marine litter by 70% by 2025
 - Minister Luhut, Coordinating Minister of Maritime and Investment Affairs, sits on the Steering Board of the Indonesian NPAP, whilst the Ghana NPAP was launched in October 2019 by the President of Ghana, GPAP are also exploring options to launch a third NPAP in Viet Nam later in 2020
 - GPAP have also begun development of 'GPAP in a Box', a digital toolkit that will allow NPAP countries to share key learnings and new research internationally

US

■ Measures

- (a) **Resource Conservation and Recovery Act (EPA) Voluntary Programs**
- America Recycles** – EPA convened the first America Recycles Summit on 15 November 2018. At this event, EPA and 45 organisations from across the recycling system pledged to work together to devise solutions to improve the US recycling system. They formed four workgroups focusing on promoting education and outreach, enhancing materials management infrastructure, strengthening secondary materials markets, and enhancing measurement. Each work group

identified a vision statement as well as challenges and opportunities and near- and long-term actions. Those workgroup actions, and a path forward, were laid out in the *National Framework for Advancing the U.S. Recycling System*. This document was released at the second America Recycles Summit in November 2019, which also hosted an Innovations Fair showcasing the latest technologies in recycling. A third Summit and Innovation Fair is planned for November 2020

- WRAP Program** - In 2016, EPA signed an MOU with the Flexible Film Recycling Group of the American Chemistry Council (ACC/FFRG) and the Sustainable Packaging Coalition (SPC) on ACC's Wrap Recycling Action Program (WRAP). WRAP aims to create opportunities for consumers to recycle polyethylene (PE) film packaging, especially, high-density (HDPE) and low-density (LDPE) film (e.g., municipal collection opportunities; in-store collection bins at supermarkets and big-box stores), to educate consumers about the availability of these opportunities, and to build demand for recycled film and products containing recycled film. The signatories meet regularly to discuss the path forward on this programme
- International Marine Debris Conference (IMDC) series** – Since 1984, NOAA has hosted six International Marine Debris Conferences that engage a wide array of key stakeholders and the public to discuss all aspects of the marine debris issue. The last event, the 6IMDC, was held in March 2018 in California and included over 700 attendees from 54 countries. This conference was action, solution and change-oriented, and included sharing of lessons learned and best practices to reduce and prevent marine debris and its impacts; promoting international co-learning; exchanging innovative ideas such as market incentives and communication strategies; and sharing the latest research initiatives, methods, and results. The next event, the 7IMDC is scheduled to be co-hosted by the Republic of Korea and UN Environment Programme, tentatively scheduled for fall 2022

■ Achievements

- (a) **Clean Water Act**
- Trash Free Waters Voluntary Work in the US** – Since 2013, the Trash Free Waters Program has participated in or provided technical or financial assistance on over 200 domestic, place-based activities in all 10 EPA Regions – across 33 states, DC and 3 territories
 - More than 200 partner programmes engaged nationally
 - 20 trash capture projects
 - 60 source reduction projects
 - 40 data collection projects
 - More than 30 projects funded by various EPA competitive grant programmes – such as

Urban Waters Small Grants and Environmental Justice Small Grants

- 25 of the 28 National Estuary Programs have developed Trash Free Waters Projects
- Two of the EPA Geographic Programs have recently announced funding recipients for their new Trash Free Waters grants

(b) Marine Debris Act

- i. Development of public awareness materials and social media platforms for sharing information to increase awareness and drive behavioral change
- ii. Over USD204 million in funding provided to local partners for removal, prevention and research initiatives

EU

■ Measures

(a) Awareness-raising and communication

The European Commission launched an awareness-raising campaign to highlight the role of citizens in combatting plastic pollution and marine litter (https://ec.europa.eu/info/news/single-use-plastics-are-you-readytochange-2018-jun-05_en). Together with the United Nations Environment Programme and other partners, the Commission coordinates a global network of aquariums to raise public awareness about plastic pollution (https://europa.eu/rapid/press-release_IP-18-6203_en.htm). On the occasion of World Clean-up Day in September 2018, some 50 EU delegations and representations joined NGOs, embassies, schools and volunteer networks to organise beach clean activities across the world (https://ec.europa.eu/maritimeaffairs/content/eubeachcleanup-campaign-goes-global_en). A year later, over 80 countries took part in the #EUBeachCleanup campaign. Social media impact has been unprecedented for any Commission communication initiative. Leading by example, the European Commission has also phased out all single-use plastic cups in water fountains and vending machines in all its buildings and at all meetings.

The EU not only finances dedicated projects focused on awareness-raising but also requires dissemination and communication activities in almost all EU-funded projects against litter

The European Environmental Agency has developed a Marine Litter Watch mobile app to strengthen the knowledge base and provide support to policy making by providing data for EU legislation and helping to change human behaviour in order to prevent and reduce litter in our oceans

(b) Voluntary Commitments from the European plastics value chain

In parallel with the presentation of the Plastics Strategy in 2018, PlasticsEurope and polymer specific platforms presented a set of voluntary commitments that include some quantified targets:

- i. Achieving the goal of 100% re-use, recycling and or recovery of all plastics packaging in the EU-28, Norway and Switzerland by 2040; reach 60% re-use and recycling of plastics packaging by 2030

(PE)

- ii. Commitment to 65% recycling and reuse of PET packaging material collected by 2030. Amongst which, 30% of closed loop (PET)
- iii. 60% recycling and reuse of the collected polyolefin (PO) packaging and to work collaboratively with all relevant stakeholders in Europe to have more than 75% of all PO packaging readily designed-for-recycling by 2030 (PCEP)
- iv. Continuing to contribute yearly around EUR5 million in order to support commitment beyond 2020 and until 2030 (VinylPlus)
- v. to have 100% of its member companies, to which OCS is applicable, to sign the Operation Clean Sweep pledge by the end of 2018

The commitments also foresee establishing an independent committee (also known as the Advisory Committee), made up of representatives from the European Commission and European Parliament, academia, civil society, and Plastics Europe, to monitor and guide the progress made. While providing the general oversight of the Plastics 2030 Voluntary Commitments, this Advisory Committee would serve to complement the respective stakeholder committees of the individual Circular Economy and Value Chain Initiatives

(c) Circular Plastics Alliance

In the framework of the Circular Plastics Alliance, a Declaration was signed in September 2019 by over 100 stakeholders from the entire plastics value chain and by Member States. To date, more than 200 stakeholders have signed the Declaration. Its aim is to establish clear industry commitments on the way forward to make plastics circular in Europe, including how to reach the 10m tonnes objective of recycled content in new products for 2025, foreseen in the Plastics Strategy, and go even further in the following years.

Related URL:

https://ec.europa.eu/growth/industry/policy/circular-plastics-alliance_en

(d) European Plastics Pact

The European Plastics Pact, signed in 2020, brings together governments and frontrunners from across the whole plastics value chain. They work together towards four goals aimed at design, responsible use, recycling capacity and the use of recycled content.

The Netherlands and France started this initiative, that joins over 80 organisations (governments, companies, non-governmental organisations and business associations) from across Europe.

<https://europeanplasticspact.org/>

■ Achievements

- (a) The situation is improving compared to the year 2018.

International Organisations and NGOs

ADB

■ Measures

- (a) Support for multi-stakeholder collaborative forums (from actors along the plastics lifecycle) for catalysing knowledge and solutions on focused subthemes; support for “source to sea” inclusive and participatory action planning processes; community and local business awareness raising and behavior change campaigns as part of demonstration projects on plastic waste management and CE; and a series of awareness-raising activities.

Ocean Conservancy

■ Measures

- (a) The Trash Free Seas Alliance: The Trash Free Seas Alliance® is the oldest forum of its kind that brings together industry, science and conservation leaders focused on innovative and pragmatic solutions to rid the ocean of plastic pollution and other forms of marine debris. Through the Trash Free Seas Alliance®, corporate members have collectively committed millions of dollars for research on ways to improve waste collection and recycling in parts of the world most impacted by ocean plastic pollution. Conservation members provide insights via research, policy recommendations and collaboration across individual initiatives. Many of the members also support Circulate Capital and The Circulate Initiative, the investment management firms [created in partnership](#) with Ocean Conservancy and Closed Loop Partners dedicated to financing companies, projects and infrastructure to prevent ocean plastic pollution.

Related URL:

<https://oceanconservancy.org/news/circulate-capital-launches-new-venture-invest-solutions-ocean-plastic/>

- (b) Science: In order to identify sources and reduction strategies for microplastic contaminants, significant contributors to plastic pollution in coastal and marine areas worldwide, Ocean Conservancy works with cross-sector stakeholders to determine priority research areas and topics of interest that are needed to expedite this facet of the global ocean plastic research agenda using sound science. The extent and impacts of microplastics generated from tires, roads, and clothing have only recently been studied; work will continue with stakeholders to pinpoint actionable measures that diminish pathways of these pollutants into the global ocean.
- (c) Global Ghost Gear Initiative (GGGI): In 2019, GGGI hosted four regional workshops alongside UN FAO on our Best Practice Framework for the Management of Fishing Gear (BPF) and the Voluntary Guidelines for the Marking of Fishing Gear (VGMFG). The workshops were held in Vanuatu, Indonesia, Senegal, and Panama – following on from previous workshops hosted in Vanuatu, the Solomon Islands, Canada, and Kenya in 2018 - in order

to build capacity and raise awareness of how to prevent ghost gear. These workshops drew on both the BPF and the VGMFG. In total, more than 200 participants from 72 countries participated in these workshops.

- (d) Ocean Conservancy is a member of the Advisory Council, as well as two of the working groups of the World Economic Forum's Global Partnership for Action on Plastics (GPAP). GPAP brings together multiple civil-society stakeholders across the plastics supply chain to translate political commitments into investible action plans to reduce plastic pollution.

■ Achievements

- (a) International Coastal Cleanup (ICC): In addition to running the world's largest cleanup, the ICC has also worked to strengthen the capacity of partners around the world. To date the ICC Small Grants Program has funded 66 projects totaling more than USD291 thousand. The first round of the small grants cycle concluded on 31 July 2020, and the 15 projects that were funded took place on 6 different continents (all except Antarctica) and projects focused on a number of different ocean health initiatives including: beach cleanups, education, policy/advocacy, and recycling. Approximately 25,000 individuals in 12 countries were beneficiaries of Small Grants Program activities in their regions. The second round of the small grants cycle began on 1 July 2020, and we are eagerly anticipating working with the recipient organisations on their projects.

Status: Grant funding expected to increase this year.

OECD

■ Measures

- (a) OECD recently held two workshops on the issue of Marine Plastic Litter:
 - i. OECD Workshop on Reducing Marine Plastic Litter (11-12 June 2020)
URL: <https://www.oecd.org/environment/waste/oecdworkshoponreducingmarineplasticlitter.htm>
 - ii. Technical Expert Workshop on Modelling Approaches for Plastics Use Projections (22-23 June 2020)
URL: <http://www.oecd.org/environment/waste/technical-expert-workshop-on-modelling-approaches-for-plastics-use-projections.htm>
- (b) OECD also held two workshop on microplastics (from synthetic textiles and tyres) and a Global Forum on Sustainable Plastic Design:
 - i. OECD Workshop on Microplastics from Tyre Wear: Knowledge, Mitigation Measures, and Policy Options (18-20 May 2020)
URL: <http://www.oecd.org/water/oecdworkshoponmicroplasticsfromtyrewearknowledgeandmitigationmeasuresandpolicyoptions.htm>
 - ii. OECD Workshop on Microplastics from Synthetic Textiles in the Environment: Knowledge, Mitigation

and Policy (11 February 2020)

URL:

<http://www.oecd.org/water/OECDWorkshoponMicroplasticsfromSyntheticTextilesintheEnvironmentKnowledgeMitigationandPolicy.htm>

- iii. OECD Global Forum on "Plastics in a Circular Economy: Design of Sustainable Plastics from a Chemicals Perspective" (28-30 May 2018).

URL:

<https://www.oecd.org/fr/securitechimique/gestion-risques/global-forum-on-environment-plastics-in-a-circular-economy.htm>

UNEP

■ Measures

- (a) Launched by the United Nations Environment Programme in February 2017, the Clean Seas campaign works with governments, businesses and citizens towards the goal of eliminating the needless use of disposable plastics, and to protect oceans and rivers. To date, over 100,000 citizens and 62 countries from around the world have joined the campaign with commitments by signatory countries now covering more than 60% of the world's coastlines. Many countries have pledged to reduce or eradicate single-use plastics from their societies, or to invest more in national recycling facilities.

The Clean Seas campaign engages with the public through regular stories and quarterly activations that shine a light on specific demographics and marine litter problems.

- (b) The Tide Turners Plastic Challenge Badge is a Clean Seas initiative that educates young people around the world about plastic pollution, giving them the tools to change their personal behaviour, inspire their communities, and create a better future for our planet. The pilot phase of the Tide turner Plastic Challenge was initiated in India by UNEP in June 2019 and its second phase was completed on 30 June 2020.

- (c) Plastic waste inventory and Environmentally Sound Management (ESM) strategy for plastic waste is being developed in Ghana. Strategies to reduce plastic waste in fishing sector, packaging sector and wastewater sector are being pilot tested.

- (d) A total of 53 project proposals for SGP on Plastic Waste under the Basel Convention were received, of which seven projects were selected and will start implementation in 2021.

■ Achievements

- (a) In March 2020, the Clean Seas campaign launched its #StayHome challenge calling on the public to take part in activities for children such as making musical instruments from trash. In September, the Clean Seas launched an expedition with partner Flipflop — a dhow-boat made entirely from plastic trash that will travel around Lake Victoria, engaging with local communities to exchange knowledge about the plastic pollution problem and solutions to it in the region.

- (b) Since its launch in February 2019, the Tide Turners Plastic Challenge Badge has had representatives from 20+ countries and 165,000 young participants. This year, the recipients of the badge in India and Africa were celebrated at online Zoom calls with guest speakers including Jane Goodall and Sauti Sol.

- (c) Over 180,000 youths have participated in Tide Turners Plastic Challenge since 2019 in India. India is now ready to kick off the 3rd phase and aims to work with 100,000 youths from nine coastal states and four Union Territories (UTs). Among achievements of Phase 2 in 2020 are:
- 127,009 + Youth participated
 - Participation from 28 States and eight Union Territories (UTs)
 - 3,000 + institutions and organisations participated
 - 1,700 + champions emerged successfully after completing the final and the most difficult challenge set for them
 - 1,000+ facilitators reached out to engage and guide youth in their implementation
 - 50+ Interactive webinars were conducted
 - 20 partners supported this initiative

WB

■ Measures

- (a) The World Bank support to countries systematically includes a component on multi-stakeholder mapping and engagement with relevant actors, awareness-raising, and communications campaigns.

3.5. Sharing scientific information and knowledge: R&D and Monitoring

In order to strengthen the scientific data collection and monitoring capacity, multiple actions on R&D and monitoring are reported by most of countries (22 out of 25 countries). The reported actions include development of harmonised monitoring methods (e.g. Japan, Republic of Korea, US), prevention of pollution by marine debris, mapping of MPL and microplastics (e.g. Iran) and technology development for alternative materials to plastics (e.g. France, UK).

For countries that contributed to the first report, progress has been reported by five out of 15 countries, with 18 new actions and one new achievement.

Three international organisations/NGOs reported their efforts in this field. ADB will be conducting research on investment and financial aspects of marine plastic issues while Ocean Conservancy has been publishing multiple reports on sources, distributions and proposed solutions. The World Bank supports target countries to build their capacity to assess the baseline, collect data and plan and implement effective policies.

Countries

Australia

■ Achievements

- (a) Australia is conducting a range of research to better understand marine debris, including marine plastic pollution. Recent CSIRO research indicates that 75% of Australian beach pollution is plastic. This research will assist in setting baselines for marine debris and plastic pollution, allowing this to be tracked over time. For details on CSIRO marine debris research, see <https://www.csiro.au/en/Research/OandA/Areas/Marine-resources-and-industries/Marine-debris>.

Azerbaijan

■ Measures

- (a) Bachelor and master theses on plastic waste management, recycling, challenges and difficulties were performed with cooperation from universities.

■ Achievements

- (a) Workshops and trainings were held for students.
- (b) Cooperation with educational institutions has been established for the joint implementation of projects on the basis of proposals prepared for the organisation of competitions and practical tasks in various formats.
- (c) Methodical recommendation on "Formation of ecological culture in students" have been prepared by teachers at the Institute of Education of the Republic of Azerbaijan.
- (d) Leaflet on "The negative impact of plastic packaging waste on the environment and the importance of using alternative packaging materials" and an electronic poster with the same theme have been posted at the Institute.

Canada

■ Measures

- (a) Canada supports, conducts and shares scientific research that informs evidence-based decision-making, spurs innovation and helps to track progress. In June 2019, Canada's Plastics Science Agenda (CaPSA) was published providing a framework that spans the lifecycle of plastics to inform future science and research investments for:
- Detecting plastics in the environment
 - Understanding and mitigating potential impacts on wildlife, human health and the environment
 - Advancing sustainable plastic production, recycling and recovery
 - Providing the evidence needed to support decision making as we move toward a zero plastic waste future
- (b) Canada, as per the recently adopted Canada-wide Action

Plan on Zero Plastic Waste, will support research, including R&D and innovations, along the plastics value chain to inform decision-making and identify opportunities for improved circularity in the economy. Canada will also develop and maintain national data on plastic use in the economy and their management; develop guidance for Canada-wide monitoring to detect and assess plastic pollution using harmonised approaches; and facilitate collaborative networks to share knowledge.

- (c) The Canadian Government has invested more than CAD10 million in robust science to address priority research gaps. Plastics Science for a Cleaner Future, the Increasing Knowledge on Plastic Pollution Initiative and the Northern Contaminants Program are recent steps on our investments in research to better understand the impacts of plastic pollution and support solutions across the value chain.

■ Achievements

- (a) To support Canada's comprehensive zero plastic waste agenda, in January 2020, Canada published a Draft Science Assessment of Plastic Pollution for public comment. The draft assessment summarises the current state of the science regarding the potential impacts of plastic pollution on human health and the environment. It will guide future research and help inform decision-making on plastic pollution in Canada.
- (b) In 2018, the Government of Canada hosted the Best Brains Exchange on the Ecological and Human Health Fate and Effects of Microplastic Pollution and the Canadian Science Symposium on Plastics with subject matter experts that informed the development of Canada's Plastic Science Agenda (CaPSA) which was published in 2019.
- (c) Canadian researchers are assessing and publishing their findings on the plastics economy as well as the sources, distribution, fate and impacts of marine litter and microplastics in the environment and in biota.

Investments in plastics science in Canada has increased since 2018.

Chile

■ Measures

- (a) Chile has encouraged the development and sharing of scientific information, specifically through activities to characterise marine debris in the South Pacific and to understand the environmental impacts that marine debris causes, especially in the sub-Antarctic zone. Chile has also developed activities to model the transport of marine debris and the inflow of this debris from land to sea.

Finland

■ Measures

- (a) R&D is largely covered by the Plastics Roadmap for Finland (theme “Enhance research knowledge on negative health and environmental impacts of plastics and solutions to these).
- (b) Marine monitoring and its development is part of Finland’s Marine Strategy. Monitoring of marine litter and microplastics is included in a separate subprogramme of the Finnish https://www.ymparisto.fi/en-US/Sea/Finlands_marine_strategy

■ Achievements

- (a) A New Plastics Centre was established as part of the implementation of the Plastics Roadmap by industry actors. The Centre will promote innovation in biobased materials and start a funding programme to promote R&D, new business models and use of new materials.
- (b) Ongoing beach litter monitoring since 2012 in about 15 different locations in Finland several times per year. Publication of the updated marine monitoring programme for years 2020 - 2026 which includes now also a new sub-programme for monitoring of marine litter and microplastics with a detailed description of methods.
- (c) The number of scientists and knowledge related to marine litter has increased significantly in Finland during the recent years and contribute to the management of the problem.
- (d) A broad general survey of sources and pathways of marine litter and microplastics in Finland and a roadmap towards the targets was released in early 2020, and they provide a good overview of the sources and pathways and will allow designation of further measures to be included in programme of measures of 2022–2027.

As an overarching achievement, development of a Plastics Roadmap for Finland with involvement across sectors, including industry and civil society organisations, and with active implementation ongoing.

France

■ Measures

- (a) Actions on rivers and waste and rain water:
 - i. Quantify the litter carried through rivers
 - ii. Quantify litter carried through waste water
 - iii. Identify the areas where litter accumulates in rivers
 - iv. Identify the actions/tools to prevent or recover litter in rivers and waste and rain water and experiment them
 - v. Evaluate the discharge of litter by rain water and elaborate strategies for action
 - vi. Define a common methodology to monitor riverine litter and microplastic pollution
- (b) Actions on the seashore and at sea*
 - i. Monitor litter and microplastics on beach sediments

- and at sea and in biota (fulmars and turtles)
 - ii. Determine the areas where litter accumulates at sea and on the coastline and the possibility of actions
 - iii. Identify and put in place actions to improve litter collection in ports in link with the European directive
- (c) Research:
 - i. Federate and give better voice to the scientific community
 - ii. Launch studies on plastic alternatives that do not impact health and the environment
 - iii. Launch studies on the recycling of plastics that have been at sea

■ Achievements

- (a) Actions on rivers and waste and rain water:
 - i. Quantification of litter carried through rivers
 - ii. Quantification of litter carried through waste water
- (b) Actions on the seashore and at sea:
 - i. A monitoring of litter and microplastics on beach sediments and at sea and in biota (fulmars and turtles) is conducted according to the MSFD requirements and thanks to the NGOs (beach clean-ups, development of large litter bins and applications to monitor the litter on the beach - <https://bacamaree.fr/-, etc.>)
- (c) Research:
 - i. The scientific community meets once a year through the group of research “polymers and oceans”
 - ii. The ministry provides guidelines for research subjects

Islamic Republic of Iran

■ Measures

- (a) Assemblage of encrusting organisms on floating anthropogenic debris along the northern coast of the Persian Gulf (2019), Shabani et al, Environmental Pollution 254 (2019) 112979: the significant difference in coverage of rafting species on plastic items among different sites, there was no clear and consistent trend of species richness and coverage.
- (b) Survey of 18 stations of the coast of Hormozgan province and a number of stations in the Larak, Faroor and Bani Faroor islands, showing that 80% of the waste was plastic and the rest was styrofoam, almost all of which had fishy odors. Glass, paper and cloth made up a small percentage of the waste.
- (c) Investigation of microrubber, microplastics and heavy metals in street dust, with a study in Bushehr city, Iran (2017), by Abbasi et al, Environmental Earth Sciences (2017) 76:798: This study aimed to:
 - i. Investigate micro rubbers (MRs) for the first time and identify micro plastics (MPs) in street dust
 - ii. Determine the physicochemical and mineralogical characteristics and morphology of dust particles
 - iii. Understand the concentration and the possible

source(s) of heavy metals/metalloids

- iv. Identify the chemical speciation and mobility potential of trace metals in urban street dusts
 - v. Determine adverse health effects of street dust on children and adults living in the city of Bushehr in southwestern Iran
- (d) Microplastics in different tissues of fish and prawn from the Musa Estuary, Persian Gulf (2018), by Abbasi et al, Chemosphere 205 (2018) 80e87.
- (e) Distribution and potential health impacts of microplastics and microrubber in air and street dust from Asaluyeh County, Iran (2019), by Abbasi et al, Environmental Pollution 244 (2019) 153e164.
- (f) Microplastics and potentially toxic elements in coastal sediments of Iran's main oil terminal (Khark Island) (2017), by Akhbarizadeh et al, Environmental Pollution 220 (2017) 720e731: This study investigated the potential risk posed by microplastics and toxic elements in coastal sediments of Khark Island, the main oil export hub of Iran. Principal component biplots exhibited a significant positive correlation between microplastic quantities (ranging in shape and colour) and concentration of heavy metals with industrial activity. Source identification of the heavy metals indicated both natural and anthropogenic origin.
- (g) Geochemistry and environmental effects of potentially toxic elements, polycyclic aromatic hydrocarbons and microplastics in coastal sediments of the Persian Gulf (2019), by Abbasi et al, Environmental Earth Sciences (2019) 78:492.
- (h) Investigating a probable relationship between microplastics and potentially toxic elements in fish muscles from northeast of Persian Gulf (2018), by Akhbarizadeh et al, Environmental Pollution 232 (2018) 154e163.
- (i) Microplastic pollution in deposited urban dust, Tehran metropolis, Iran (2017), Dehghan et al, Environ Sci Pollut Res: The plastic load of 88 to 605 microplastics per 30g dry dust with a dominance of black and yellow granule microplastics ranging in size from 250 to 500 µm was determined in 10 street dust samples using a binocular microscope. Fluorescence microscopy was found to be ineffective for detecting and counting plastic debris.
- (j) Neustonic microplastic pollution in the Persian Gulf (2020), Alimehdiani et al, Marine Pollution Bulletin, Volume 150, January 2020: A comprehensive study on microplastics pollution in the surface waters of the Persian Gulf was done for the first time. Some of the results were shown below:
- i. Microplastics were found at all the stations
 - ii. Fibres were the most abundant forms of microplastics
 - iii. The most common polymer types in the samples were polyethylene and polypropylene
 - iv. The western part of the Persian Gulf was more polluted than the eastern part
- (k) Monitoring of Hydrocarbon pollution (PAHs, Hopans, n-alkanes) in the Caspian Sea with emphasize on new methodologies (2019). DOE Project Report.

Italy

■ Measures

- (a) ISPRa which includes, among its priority institutional tasks, the promotion of sharing of knowledge on environmental issues, plans training-pilot courses according to the Law 107/2005 that introduced a new model of learning called "Alternation between school and work". Among the different training courses there is also one related to the marine litter issue.

Related URL:

https://www.isprambiente.gov.it/files2019/pubblicazioni/quaderni/copy_of_Quad_EFA_3_19_PCTO_App_di_viaggio2019.pdf

Japan

■ Measures

- (a) Taking the lead on international harmonisation of monitoring methods. In June 2020, the guidelines for harmonising monitoring methods were revised to make them easier to use for developing countries.
- (b) Investigation and estimation of domestically-generated amount and routes, as well as an investigation into floating plastic.
- (c) Research on toxicity evaluation methods for marine plastic litter, including microplastics, on human health and on the ecosystem.

■ Achievements

- (a) Budget scale of technologies development and R&D

	FY2020
National budget	JPY277 million

(Reference)

Meeting materials for expert conference on measures against articles that drift ashore

http://www.env.go.jp/water/marine_litter/conf.html

Maldives

■ Measures

- (a) Develop and implement a National Recycling Strategy.
- (b) Enforce regulation on Anti Littering through stricter fines, policing and strengthened reporting mechanisms.
- (c) Conduct research to identify technologies for converting waste to wealth that is cost effective and appropriate for the Maldivian context.
- (d) Increase employment and entrepreneurship potential in the waste management sector through support mechanisms for SME start-ups and existing businesses to encourage innovative solutions for waste reduction, reuse, recovery, and management.

- (e) Develop and conduct a nation-wide awareness programme that engages and informs the government institutions, businesses, and the general public on proper waste management practices.
- (f) Conduct comprehensive waste audits across all islands to identify volume of different waste streams and to formulate reduction targets.
- (g) Develop a national database and establish methods for information collection, collation, access and dissemination to ensure its comprehensiveness and public availability.
- (h) Identify ways to expand plastic interception in the Greater Male' Region.
- (i) Equip waste collectors with required equipment and resources to collect and transport different waste streams for treatment.
- (j) Coordinate with the relevant authorities to regulate design and safety features on marine vessels transporting waste.
- (k) Develop a framework to conduct waste audit at island level.
- (l) Develop a framework for extended producer responsibility or other product stewardship programmes.

Myanmar

■ Measures

- (a) A series of pilot scientific field surveys was carried out by the World Bank in cooperation with the Ministry of Natural Resources and Environmental Conservation to enhance the knowledge base on plastic pollution in Myanmar for policymaking.
- (b) During a scientific survey of fish resources, marine biodiversity and oceanography in Myanmar waters by the Norwegian RV Dr Fridtjof Nansen in 2018, opportunistic sampling for pollution (microplastics and food safety) was undertaken.

■ Achievements

A series of pilot scientific field surveys was carried out by the World Bank in cooperation with the Ministry of Natural Resources and Environmental Conservation to enhance the knowledge base on plastic pollution in Myanmar. The surveys find that the top 10 most abundant plastic items leaking into the environment make up 76% of all waste, and the top five plastic items are responsible for 71% of the waste leakage. Plastic bags alone account for over 30% of the plastic pollution. The top 10 most abundant plastic items leaking into the environment in Myanmar are as follows:

(i)	Small plastic bags and pcs	30.80%
(ii)	Crisp and sweet packages	17.70%
(iii)	String & cord (less than 1cm)	10.50%
(iv)	Styrofoam (food and other)	7.60%
(v)	Plastic pieces< 50cm	4.20%
(vi)	Straw cutlery, tray	1.30%
(vii)	Medical waste	1.30%
(viii)	Caps/Lids	1.20%
(ix)	Furnishings	1.20%
(x)	Fertilizer Bags	0.90%

- (c) A study conducted by the Fridtjof Nansen research vessel recently found that microplastic particles were widespread, with the highest numbers recorded in the Rakhine area in the shallowest stations. Microplastics were found in 21 out of the 22 Manta trawls of the Leg 3.4a and most of the items found were less than 5 mm in length.

Related URL:

http://www.dof.gov.mm/images/department/research/2018411_%20surveyreport_Myanmar_FINAL_BIS.pdf

- (d) A survey on plastic pollution in Myanmar conducted by Fauna and Flora International (FFI) in collaboration with Thant Myanmar reveals that 119 tons of plastic waste enter the Ayeyarwady River every day. The upper and lower Ayeyarwady regions contribute 90 tonnes of plastic pollution per day and Yangon, Myanmar's capital, adds 29 tonnes a day. The majority of plastic found in the river is likely to be mismanaged plastic waste.

Related URL:

<https://www.thantmyanmar.com/en/riversurvey>

Netherlands

■ Measures

- (a) Under the first (2015) MSFD programme of measures, a knowledge generating programme was started to obtain knowledge on distribution, composition and effects from riverine litter and microplastics.
- (b) The Netherlands is actively involved in OSPAR's ICG Marine Litter (one of the co-convenors) and in the EU MSFD Technical Group on Marine litter. In both groups knowledge development and exchange is a key element. Contracting Parties have developed and carried out several common R&D projects, funded by, amongst others, the EU.

- (c) One of the pillars of the microplastics programme is research into the relationship between microplastics and health. Much research is also done to gain a better understanding of microplastics and their origin and measures that can be taken to prevent emissions.

■ Achievements

Refer to section “3.3. Promotion of innovative solutions” as well as section “3.6. Promotion of international cooperation” for more information.

Norway

■ Measures

(a) Sharing scientific information and knowledge: R&D and Monitoring

Knowledge-based decision-making is key, and the Norwegian government is also involved in strengthening the knowledge base on marine litter and microplastics, including through stronger research efforts, mapping and monitoring. There is a strong need for increased knowledge inter alia on the effects of marine litter and microplastics. Since 2019, the government has set aside an additional USD one million for specific research on marine litter and microplastics in the annual budget.

Republic of Korea

■ Measures

- (a) Develop harmonised monitoring methods through NOWPAP regional sea programme.

■ Achievements

- (a) Develop harmonised monitoring methods through NOWPAP regional sea programme:
 - i. As a member state of UNEP’s regional sea programme ‘Northwest Pacific Action plan (NOWPAP)’, Korea has been taking part in various discussions taking place between four member states (Korea, Japan, China, Russia) on harmonisation of monitoring methods and sharing data on marine litter

Saudi Arabia

■ Measures

- (a) KSA G20 presidency is committed in supporting the Japanese initiative in international harmonisation of monitoring methods.

Singapore

■ Measures

- (a) Extension of additional membrane bioreactor technology systems at water reclamation plans planned to further reduce the amount of microplastics discharged into the sea
- (b) Marine debris research underway to establish a baseline for marine debris on Singapore’s shores, and set the stage for an integrated, citizen-science programme to collect and share information for use by stakeholders and the public

Solomon Islands

■ Measures

- (a) The Commonwealth Litter Programme (CLiP), is led by the UK through the Centre for Environment Fisheries and Aquaculture Science (Cefas).

CLIP supported Solomon Islands to take action on plastics entering the oceans. Currently 80% of marine litter is estimated to originate on land and Cefas contracted Asia Pacific Waste Consultants to assess the land waste production rates and waste management performances.

■ Achievements

- (a) In collaboration with the Centre for Environment, Fisheries, and Aquaculture Science (Cefas), under the Commonwealth Litter Programme (CLiP), the article "Occurrence and abundance of meso and microplastics in sediment, surface waters, and marine biota from the South Pacific region" is now available containing full bibliographic details in the Marine Pollution Bulletin. See attachment or refer to the article link:

[https://authors.elsevier.com/sd/article/S0025-326X\(20\)30690-1](https://authors.elsevier.com/sd/article/S0025-326X(20)30690-1)

This is for the Microplastic Survey that was carried out in Solomon Islands and Vanuatu.

Spain

■ Measures

- (a) Spanish Marine Strategies contain an extensive monitoring programme on marine litter, including macrolitter and microplastics on beaches, floating litter and sediments and also biota (target species: marine turtles + other options to study such as fish or mussels).

Sri Lanka

■ Measures

- (a) Marine litter-related scientific symposiums are conducted by the Marine Environment Protection Agency, with the participation of all stakeholders.

■ Achievements

- (a) Many symposiums were conducted at Annual Sri Lanka NEXT programmes, and research findings were shared.

Turkey

■ Measures

- (a) Awareness of the marine litter pollution is the very first step of the measures. One way to obtain this is sharing information about the issue. The marine litter monitoring data and information that has been achieved and collected through the National Marine Monitoring Programme is shared in the reports and meetings relevant to the Conventions that Turkey is a party to (Barcelona and

Bucharest Conventions). Data and information is also shared in national and international academical areas (conferences, workshops, seminars) with the permission of the MoEU. Besides this, the MoEU arranges National Marine Monitoring Symposiums to reach various audiences to share information and to create awareness on both marine pollution and marine sources.

UK

■ Measures

(a) Research and Innovation Framework

The UK set out its intention to work with other Commonwealth countries to develop a Marine Plastics Research and Innovation Framework at the Commonwealth Heads of Government Meeting in April 2018. The 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 the issue of marine plastics. Key activities will include:

- i. New jointly-funded interdisciplinary research and innovation programmes developed through the Framework, and activities developed and delivered by individual partnering countries and organisations
- ii. A forum for sharing research plans and emerging findings with all partners, increasing coordination and adding value to individual programmes
- iii. Support for the development of links between researchers and innovators across the Commonwealth, driving new partnerships and strengthening capacity

The UK has announced that it will contribute GBP25 million towards the Framework. This will include both Government-funded activity and support from businesses. Unilever has committed GBP5 million in kind R&D activity, and Waitrose has provided GBP0.5 million for a Fellowship programme which launched in April 2019. The UK is now working in partnership with UK Research and Innovation and Commonwealth partners on operational aspects of the Framework and the development of new bilateral research programmes to support the initiative.

(b) A key premise of **Commonwealth Litter Programme (CLiP)** has been to share the UK's world class science expertise across Commonwealth countries to galvanise action to address marine litter. UK marine litter scientists have worked across CLiP countries to share knowledge, set up microplastic labs, train local staff and work in collaboration with countries to develop research and reports to inform local government policies.

(c) The **Sustainable Manufacturing and Environmental Pollution programme (SMEP)** is a wide-ranging programme with a specific stream of work on finding ways to reduce pollution (including from plastics) from manufacturing in developing countries. The plastics efforts are focused on: i) finding alternative materials and substitution opportunities in current design and production processes and ii) waste management advancements, by finding technological solutions for enhanced biodegrading (e.g. fungi).

(d) **Public-Private Partnerships:** Through public-private

partnerships with Unilever and the mobile industry association (GSMA), the UK Government is supporting the development of innovative business models that encourage plastics recycling, reuse and reintegration into a circular supply chain. This includes an investment in Côte D'Ivoire (Coliba) that provides mobile credit to consumers in return for recycling plastic waste and Mr Green Africa, a Kenyan company primarily involved in the aggregation, sorting, cleaning, processing and reselling of plastics, among other examples. Work was recently completed with Unilever and EY to landscape options for investments and steps needed to create an at-scale integrated supply chain for recycled material across sub-Saharan Africa, the outputs for which will be published in due course.

(e) Current monitoring for the UK Marine Strategy and OSPAR convention:

- i. Seafloor litter bycatch data is recorded during fisheries surveys, providing a spatial coverage of benthic macro-litter
- ii. Surface litter data is monitored for OSPAR in the Greater North Sea region by recording the volume and type of plastics found in the stomachs of the Northern Fulmar (*Fulmaris glacialis*). Floating litter washed ashore is monitored by beach litter surveys for macroplastic, surveyed quarterly from around the UK
- iii. Beach litter is surveyed on a quarterly basis, as part of the OSPAR Beach Litter Monitoring Programme, and is carried out in the UK by the Marine Conservation Society and Keep Northern Ireland Beautiful
- iv. An indicator for assessing the prevalence of microplastics in sediments is under development, with the expectation that sediment grain size can be included

(f) Recent and ongoing research by the UK Government

- i. Evidence reviews on marine plastic pollution (Published here: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20483&FromSearch=Y&Publisher=1&SearchText=ME5232&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>), pathways and the frequency of abandoned, lost and discarded fishing gear (soon to be published here: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20110&FromSearch=Y&Publisher=1&SearchText=ME5435&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>)
- ii. Investigation into tyre-wear particles and their pathways to the marine environment (published here: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20110&FromSearch=Y&Publisher=1&SearchText=ME5435&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>). This work also included the rate at which marine ropes produce microfibers

- iii. 'Lost at Sea - where are all the tyre particles?' Recently funded by the UK's Natural Environment Research Council (NERC), not yet started
- iv. Investigation into pathways for clothing fibres to reach the marine environment, including airborne pathways (published here: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20110&FromSearch=Y&Publisher=1&SearchText=ME5435&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>)
- v. Experiments on weathered microplastic uptake by benthic organisms (Ongoing, NERC MINIMISE project)
- vi. Various microplastic consumption experiments at environmentally-relevant concentrations (Ongoing NERC MINIMISE project, & some published papers)
- vii. Analysis of plastic prevalence on beaches and within marine protected areas (published: <https://www.sciencedirect.com/science/article/pii/S0269749119358361>, using Marine Conservation Society data)
- viii. Filtration efficiency of waste-water treatment plants (published here: <https://pubs.acs.org/doi/abs/10.1021/acs.est.5b05416> and Royal Society review <https://royalsociety.org/topics-policy/projects/microplastics-in-freshwater-and-soils/>)
- ix. Generation rates of microfibrils during domestic washing machine cycles (privately funded; complete, press release: <https://www.plymouth.ac.uk/news/study-shows-devices-can-reduce-fibres-produced-in-laundry-cycle-by-up-to-80>)

(g) Currently funded relevant UK government research includes:

- i. Developing the knowledge base on the economics and process of recycling end-of-life fishing gear to inform an assessment of the impacts of a potential Extended Producer Responsibility scheme for fishing gear
- ii. Investigation of biodegradable plastics as an environmental pollutant
- iii. Strategic funding to develop circular economies for plastic usage, reuse and recycling
- iv. Investigation into alternative textiles and sustainable clothing, to minimise the production of microfibrils and their release into the environment

■ Achievements

- (a) The UK is committed to sharing scientific information and knowledge. For example, the work of the Commonwealth Litter Programme has resulted in publicly available reports, of which evidence has supported policy makers to develop new marine litter policy. Through CLiP, four microplastic labs have been set up in Belize, Vanuatu and South Africa (x2), where scientists have been trained to

carry out science independently through skill sharing from UK experts.

US

■ Measures

(a) Resource Conservation and Recovery Act (EPA) Voluntary Programs

- i. **Facts and Figures Report** - EPA began collecting and reporting data on the generation and disposition of waste in the United States more than 30 years ago. EPA releases an annual report, *Advancing Sustainable Materials Management: Facts and Figures*, to provide information on Municipal Solid Waste (MSW) generation, recycling, composting, combustion with energy recovery and landfilling. The report analyses MSW trends in generation and management, materials and products, and economic indicators affecting MSW. Facts and Figures reports contain data through calendar year 2017
- ii. **Recycling Economic Information (REI) Report** – This report provides national economic information on the impacts of recycling, namely jobs, wages, and taxes in order to increase the understanding of the economic implications of material reuse and recycling. The most recent report was published in 2016

(b) NOAA Marine Debris Monitoring and Assessment Program

- i. NOAA implements its Marine Debris Monitoring and Assessment Program (MDMAP), a citizen science initiative that engages partner organisations and volunteers across the United States in completing shoreline marine debris surveys. Through regular monitoring, NOAA and its many partners systematically collect data to compile a record of the amount and types of debris in the environment, track the progress of existing marine debris prevention initiatives, and identify targets for future mitigation efforts
 - NOAA's Shoreline Monitoring Field Guide and Marine Debris Monitoring and Assessment Technical Memo provide shoreline and surface water monitoring techniques and considerations for monitoring other parts of the marine environment and are used as the basis for marine debris monitoring activities globally. (Link to guide: <https://marinedebris.noaa.gov/sites/default/files/ShorelineFieldGuide2012.pdf>.)
 - NOAA also maintains an MDMAP online database including data collected through shoreline marine debris surveys. All data is openly available for data analysis efforts, and it is intended that the data can be used to develop more effective prevention and mitigation strategies to prevent the impacts of marine debris. (Link to database:

■ Achievements

(a) Clean Water Act

i. Waste Management and Inclusive Capacity Building- Trash Free Waters

- Starting in US Federal fiscal year 2019, the domestic Trash Free Waters programme will be collecting data for the following metrics: 1) Number of waterways that show an improvement in reduction of trash with participation and/or assistance from EPA; 2) Number of trash reduction or litter prevention projects in progress or completed in the fiscal year with participation and/or assistance from EPA; 3) Number of new or reissued MS4 permits that have quantitative or specific prescriptive provisions that address trash

ii. **National Coastal Condition Assessment 2010** is a statistical survey of the condition of U.S. marine and Great Lakes coasts. The most recent report can be found here:

https://www.epa.gov/sites/production/files/2016-01/documents/ncca_2010_report.pdf

iii. Scleractinian coral microplastic ingestion: Potential calcification effects, size limits, and retention. Research supported by the Environmental Protection Agency

<https://www.ncbi.nlm.nih.gov/pubmed/30301077>

(b) Marine Debris Act

- Development of technical papers summarising the state of the science on several marine debris-related topics
- Development of Marine Debris Monitoring Shoreline Protocols and media for protocol training
- Funding a number of research projects to examine the fate, transport and impacts of marine debris in partnership with academic universities

EU

■ Measures

(a) High R&D funding against litter

Through the EU Research and Innovation Programme Horizon 2020 (2014 - 2020) the European Union has funded a number of projects to prevent marine litter and reduce its impact as well as to increase its knowledge base and inform citizens, for example:

CLAIM (<https://www.claim-h2020project.eu/>)

GOJELLY (<https://gojelly.eu/>)

TOPIOS

(<https://cordis.europa.eu/project/rcn/207862/factsheet/en>), SeaChange (<http://www.seachangeproject.eu/>) and ResponSeable (<https://www.responseable.eu/>).

These have been completed by a new call for proposals on understanding the effects of micro- and nano-plastics

on human health (EUR 25 million), on developing a common European framework to harmonise procedures for plastics pollution monitoring and assessments (EUR12 million) and on Technologies for observations as part of the *The Future of Seas and Oceans Flagship Initiative* (9M€). A call for a "Pilot action for the removal of marine plastics and litter" of a total budget of EUR 13.2 million was launched in October 2019, with the aim to develop technologies to clean the seafloor and the surface of nearshore waters, and possibly the water column, from historically accumulated plastics and micro-plastics as well as from other accumulated marine litter. Horizon 2020 also funds related projects to improve the circularity of plastics and implement the circular economy strategy (new materials, recyclability, etc.). In the new Research and Innovation Programme (2021 - 2027), Horizon Europe, specific area for research on seas, oceans and inland waters, and a dedicated Mission, are envisaged for strengthening knowledge and understanding in order to protect, restore and sustainably manage marine, inland and coastal ecosystems and prevent pollution, including marine litter.

Moreover, through the European Maritime and Fisheries Fund (EMFF), the EU is financing projects to prevent and fight marine litter, supporting concrete methodologies and technologies for reducing the volume and harmfulness of sea-based sources of marine litter and for removing and/or recycling it in an environmentally sound and efficient way. These are, for example, MarGnet (<http://www.margnet.eu>), AQUA-LIT (<https://aqua-lit.eu/>) or NetTag (<http://net-tag.eu>).

The DG Joint Research Centre, as the European Commission's science and knowledge service, is actively contributing to interfacing science and policy by advancing the harmonisation of monitoring methodologies, preparing the ground for comparable assessments and by liaising with multiple actors in EU and beyond.

The production of alternative bio-based biodegradable materials and fibres for the substitution of the ones based on fossil resources in tyres and textiles has already started in the industry.

■ Achievements

- (a) Latest release of CORDIS Results Pack on "Oceans plastics" in March 2019 examines eight EU-funded projects on new, sustainable and achievable solutions to help address, and ultimately overcome marine plastic litter.

Related URL:

<https://cordis.europa.eu/article/id/401309-sustainable-and-innovative-solutions-to-tackle-the-plastics-crisis-in-our-oceans-and-seas>.

- (b) BlueMed Pilot action on a Healthy Plastic-free Mediterranean Sea The BlueMed Pilot action, launched in 2018, consists in mapping and assessing the actions on place regarding marine plastic pollution in the EU and non EU countries of the Mediterranean area to promote the circulation of good practices, R&I actions but also demonstration, communication and education.

Related URL:

<http://www.bluedmed-initiative.eu/pilot-action-on-a-healthy-plastic-free-mediterranean-sea/>

- (c) Eurosea project, selected as part of the Future of Seas and

Oceans Flagship Initiative in Horizon 2020, includes the objective to develop capacity and coordination for sustained ocean observations of marine plastic contaminants including a standard sampling protocol for marine debris monitoring in EU and globally.

Related URL: <https://eurosea.eu/>

International Organisations and NGOs

ADB

■ Measures

- (a) Conducting regional studies for investment needs, technology solutions, finance solutions, costs of plastic waste and pollution, market-based / fiscal instruments, successes and lessons in scaling-up circular economy.

Ocean Conservancy

■ Measures

- (a) The Trash Free Seas programme of Ocean Conservancy convenes interdisciplinary scientific groups of established and emerging experts to answer leading questions that expand the ocean plastic knowledge base, scientifically informing and reinforcing Ocean Conservancy policy recommendations. Ocean Conservancy maintains and regularly cultivates new relationships to identify and answer the most pressing questions about ocean plastic pollution and ultimately inform policies that stem the flow of plastic pollution. With its unparalleled relationships to leading academics and researchers in this space, the Ocean Conservancy effectively catalyses the pursuit of these important questions and communicate key findings as they emerge.
- (b) Global Ghost Gear Initiative (GGGI): The GGGI data portal is the central global hub for all things related to ghost gear data including the amalgamated data set itself and a series of tools to interact with that data based on user permissions. Current and future functionality includes: accessing top line data (position and gear type) for research purposes; viewing an interactive global map of all plotted data points; providing a data card on how to collect and submit ideal data sets; implementing broader reporting tools include geo selection and data filtering; user management for projects or organisations submitting data; a resource library of links to/downloads of relevant ghost gear literature, and more.

■ Achievements

- (a) Convening the research group that ultimately published the 2015 Science paper that generated the first-ever estimates on the sources, fate, and distribution of marine debris.
<https://science.sciencemag.org/content/347/6223/768>
- (b) Publishing two seminal reports that examine the causes of marine debris and some of the potential solutions:

- i. Stemming the Tide
<https://act.oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>
- ii. The Next Wave
<https://act.oceanconservancy.org/wp-content/uploads/2017/05/the-next-wave.pdf>

- (c) Publishing the Plastics Policy Playbook, which provides a robust analysis of various solutions to the problem of ocean plastics for policy makers, governments, and businesses options, backed by robust analysis:

<https://oceanconservancy.org/wp-content/uploads/2019/10/Plastics-Policy-Playbook-10.17.19.pdf>

- (d) Publishing Exploring Solutions to Ocean Plastics: Supporting Southeast Asia's Informal Waste Sector:

<https://oceanconservancy.org/wp-content/uploads/2020/06/FINAL-Informal-Sector-Report.pdf>

Status: Additional scientific and analytical work has been/will be released this year.

The situation is improving compared to the year 2018. Improvement reflected in : preparation of scientific reports (such as baselines report, referred to in the EU submission, and the recently published report on thresholds, please see here: https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=434&titre_chap=TG%20Litter), preparation by EU MS of marine litter monitoring programmes (in 2019, to be submitted to the Commission in 2020).

WB

■ Measures

- (a) The World Bank supports countries in understanding the sources, pathways and impacts of marine litter and plastics, either by conducting baseline assessments, collecting key data through national inventories, policy analysis, or providing technical assistance to countries to build their capacity and help them develop roadmaps and action plans, and to meet their commitments on marine plastics. Also, the World Bank supports the development of tools to monitor the effectiveness of interventions and approaches to estimate efficiency of solutions. In addition to data collection, the World Bank advises on the "how to" implement the necessary policy reforms and identify investments needs to implement the solutions.

3.6.Promotion of international cooperation

As acknowledged by the large number of countries sharing the Osaka Blue Ocean Vision, international collaboration and cooperation for MPL are already being implemented beyond the G20 community. According to reporting, Southeast Asia region is a hotspot of existing international cooperative projects

(reported by 16 out of 25 countries). Following this, Africa (reported by ten out of 25 countries) and Latin America regions (reported by eight out of 25 countries) are supported by the reporting countries.

Examples of active inter-governmental partnerships at global level include the Group of Friends to Combat Marine Plastic Pollution, Commonwealth Clean Ocean Alliance, High-Level Panel for a Sustainable Ocean Economy, and United Nations Environment Programme Clean Seas Campaign. In parallel with global partnerships, regional cooperation is actively promoted, such as the ASEAN regional collaboration through adoption of the Bangkok Declaration and the ASEAN framework of Action on Marine Debris (e.g. reported by Singapore).

Public-private partnerships are also widely launched, such as the EU-based Circular Plastics Alliance for improving industry actions for circular plastics, the World Economic Forum's Global Plastics Action Partnership, and the Alliance to End Plastic Waste (AEPW).

For countries that contributed to the first report, progress has been reported by six out of 15 countries, with six new actions and 14 new achievements.

International organisations and NGOs play an important role as catalysts in promoting cross-country cooperation and information-sharing. While organisations such as UNEP, Ellen MacArthur Foundation and GEF play an important part in chairing international platforms advancing global and regional objectives, other organisations such as ADB, ERIA, IRP and OECD are focusing more on their efforts for policy guidance, international/regional research, knowledge-sharing and capacity-building to encourage multi-stakeholders to adhere to the sustainable plastic economy on an international level.

Countries

Azerbaijan

■ Measures

- (a) The experience of leading countries in the field of plastic packaging waste management, including the organisation of collection, transportation and recycling processes was studied, and a comparative analysis was conducted on the basis of these experiences, with acceptable options selected for the country.
- (b) The current situation in this field was analysed and proposals were prepared with the involvement of international experts.

■ Achievements

- (a) Study tours were organised to Austria, Japan, and the UK to obtain the best international experience. Workshops were held by inviting international experts from Austria, Sweden, Romania, Bulgaria and Latvia with the

participation of stakeholders and civil society.

Australia

■ Measures

(a) Regional engagement

Under the Australian Government's AUD167 million Australian Recycling Investment Plan, AUD16 million has been committed over six years to the Pacific Ocean Litter Project to support the Secretariat of the Pacific Regional Environment Program (SPREP) with the implementation of the Pacific Regional Action Plan: Marine Litter 2018 - 2025. This Project will enable SPREP to assist Pacific island countries with phasing out single-use plastics and change the behaviour of plastic users, consumers and producers.

(b) International engagement and commitments

The Australian Government recognises that marine plastic pollution is a global issue requiring a coordinated international response. Australia is a member of the Commonwealth Clean Ocean Alliance, the United Nations Environment Programme Clean Seas Campaign, the G20 Marine Litter Action Plan and G20 Implementation Framework for Actions on Marine Plastic Litter, and the High-Level Panel for a Sustainable Ocean Economy. Under the UN Clean Seas Campaign, Australia has made several public commitments, including packaging targets.

Canada

■ Measures

- (a) Canada has committed to play an active role internationally on this issue, by sharing expertise and information, investing in solutions, advancing policy development and best practices, and strengthening cooperation.
- (b) Canada spearheaded the **Ocean Plastics Charter** in June 2018 at G7 Leaders Summit in Charlevoix. The Charter takes a comprehensive lifecycle approach to prevent marine plastic pollution and lays the groundwork to ensure that plastics are designed for reuse and recycling, in order to protect the environment and keep a valuable resource in the economy.

The Charter includes ambitious action and quantitative and time bound targets in five areas to improve plastics through a lifecycle management approach including:

- i. Sustainable design, production and after-use markets
- ii. Collection, management and other systems and infrastructure
- iii. Sustainable lifestyles and education
- iv. Research, innovation and new technologies
- v. Coastal and shoreline action

To support the objectives of the Charter, Canada announced CAD100 million funding commitments of:

- i. CAD65 million through the World Bank PROBLUE fund to address plastic waste in developing countries
- ii. CAD20 million to spark innovation to beat plastic pollution in developing countries through the G7

Innovation Challenge to Address Marine Plastic Litter

- iii. CAD9 million to an incubator network to prevent plastic waste from entering the world's oceans
 - iv. CAD6 million for innovative private-public partnerships through the World Economic Forum Global Plastics Action Partnership
- (c) Canada contributed to the advancement of policies and scientific knowledge in several international fora, such as the G7, G20, the Arctic Council, and various bodies under the United Nations. For instance, Canada pledged to take action on marine litter via the United Nations Clean Seas Campaign in 2017 and is a member of the United Nations Global Partnership on Marine Litter. In 2018, Canada contributed to the updated guidance on fishing gear through the Food and Agriculture Organization of the United Nations and joined the Global Ghost Gear initiative to tackle lost fishing gear. Canada contributed to the study on marine litter and microplastic in the Arctic under the Arctic Council's Protection of the Arctic Marine Environment (PAME) working group and is participating in the development of the Regional Action Plan on Marine Litter in the Arctic. The Government of Canada is also contributing to work under the London Convention/Protocol to improve analysis of plastic particles in dredged materials and sewage sludge by developing scientific methods to detect plastics in dredged materials from ocean disposal sites. In addition, since 2017, Canada has collaborated with the United States and Mexico via the Commission for Environmental Cooperation engaging local decision-makers and the community to identify marine litter challenges, implement small-scale solutions, and build local capacity and awareness through citizen science, education and outreach.

■ Achievements

- (a) Through the World Economic Forum's Global Plastics Action Partnership, Canada, as a founding member, has contributed to the development and launch of National Action Plan Partnerships (NPAPs) for Indonesia, Ghana and Vietnam. As the GPAP's first national partnership, Indonesia provides key learnings and expertise that will be invaluable in scaling up efforts and influencing other markets across the ASEAN region and globally. With 265 million people and as ASEAN's largest economy, Indonesia is a key player both regionally and globally. Plastic pollution has become a major challenge facing the country's people, environment and economy. The successful launch of the NPAP has quickly led to strong and ongoing collaboration with the Government of Indonesia and diverse stakeholders in their efforts to channel concerted solutions and advance the shift towards a circular plastics economy in the country. NPAPs for Ghana and Viet Nam will be launched in October and November respectively.
- (b) Furthermore, in support of global momentum on plastics, Canada is expanding the implementation of the **Ocean Plastics Charter** by seeking additional endorsements, which allows partners to formalise through an expression of interest to Canadian officials. Partners are then invited to implement the objectives and commitments of the Charter within their respective jurisdictions and area of influence, and are encouraged to report on domestic

progress in implementing the Charter through their own reporting processes and mechanisms. To date, there are 26 governments and 70 businesses and organisations (including PepsiCo, Walmart, Unilever, Ikea, Nestlé, Volvo, Ocean Wise, PyroCore Ltd, and the International Union for Conservation of Nature) that have endorsed the Charter.

- (c) In March 2020, UNEP and Canada signed a five-year agreement whereby Canada provides CAD3.1 million annually to the Environment Fund of UNEP, placing Canada among the top-10 contributors of core, flexible resources to UNEP in 2020. In addition to addressing plastic pollution and marine litter, the Environment Fund supports global efforts in the areas of climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency, and environment under review.
- (d) An increase in Ocean Plastics Charter endorsements indicates strengthened global commitments. There has also been an increase in Canadian-international partnerships and investments to address marine litter since 2018.

Chile

■ Measures

- (a) Chile actively participates in international initiatives whose purpose it is to develop mechanisms to control and prevent marine litter. These include:
- i. Ocean and Fisheries Working Group, APEC
 - ii. Ad Hoc Open-Ended Expert Group on Marine Litter and Microplastic
 - iii. Scientific Advisory Committee on Marine Litter and Microplastic
 - iv. Plastic Waste Partnership of the Basel Convention

■ Achievements

- (a) During 2019 Chile led the development of a road map to control marine debris in the APEC region. This road map was adopted in August 2019 by the 21 APEC economies, which include China, Japan, the United States, Russia, Indonesia, etc.

Finland

■ Measures

- (a) Finland is participating to the work of the UNEP ad hoc open-ended expert group on marine litter and microplastics. Finland is also actively participating to the HELCOM and Nordic cooperation on the matter and a member of the Group of Friends to Combat Marine Plastic Pollution established in June 2020 in New York. Cooperation within the EU on marine plastic litter and microplastics is active both under several for a, including the Marine Strategy

■ Achievements

- (a) As a follow-up to the Nordic Environment Ministers calling for a global plastic agreement, during 2019, Finland actively took part in Nordic cooperation to support UN

AHEG on marine litter and microplastics, and specifically on production of a report on approaches to global governance related to marine litter and microplastics and a possible global plastic agreement. Finland joined the European Plastics Pact.

France

■ Measures

- (a) Participation at regional sea conventions for knowledge and best practices sharing and implementation of action plans.
- (b) Participation in international fora, negotiations and guidelines: JRC, UNEP, GESAMP, European Task Group on Marine Litter, Basel convention, etc.
- (c) Organisation of a workshop to identify the different methodologies to monitor riverine macroplastic pollution in the OSPAR area (regional sea convention).
- (d) Promotion of international cooperation among European willing member states for the exchange of best practice and as an advocacy towards the European Commission to implement facilitating measures ("European Plastics Pact").

■ Achievements

- (a) Organisation of a workshop to identify the different methodologies to monitor riverine macroplastic pollution in the OSPAR area (regional sea convention).
- (b) Participation at meetings and working groups (G20, G7, UN, Regional sea conventions)

Germany

■ Measures

- (a) Germany is striving to initiate an international convention for protecting the world's oceans from plastic waste. Together with like-minded countries, the German government is working on an agenda for further steps to enhance cooperation to avoid plastic waste. An important intermediate target is to achieve a consensus in the 5th UN Environment Assembly for a mandate to develop a legally binding convention.

The Federal Ministry for Economic Cooperation and Development (BMZ) aims to contribute to eliminating the causes of marine pollution as part of its **Ten-point Plan of Action Marine Conservation and Sustainable Fisheries**.

https://www.bmz.de/en/publications/topics/environment/Materialie262_marine_conservation.pdf

To that end, the BMZ is expanding its development cooperation with partner countries, among others in South-East Asia, South-East Europe and the Caribbean. The focus lies on establishing integrated waste management and circular economy approaches to reduce the volume of waste and improve waste recycling.

- (b) Initiated under the patronage of the German Development Minister Gerd Müller, the **PREVENT Waste**

Alliance was launched in May 2019. Member organisations from the private and public sector, academia as well as civil society jointly develop and pilot approaches for plastic waste prevention, collection, and recycling in low- and middle-income countries.

- (c) In addition, BMZ engages in a growing number of **public-private partnerships (PPPs)** to prevent waste from entering the oceans including a strategic alliance on marine litter prevention in Egypt, Morocco, Mexico and the Philippines.
- (d) BMZ further supports the **exchange of knowledge and the dissemination of successful practices** through a **global advisory project** as well as by supporting international organisations and initiatives, such as the **Action Platform for Source-to-Sea Management (S2S Platform)** and the **PROBLUE Multi-Donor-Trust-Fund** by the World Bank.
- (e) **The total funding allocated for marine litter prevention by BMZ between 2017 and 2019** amounts to appr. EUR23 million for technical and EUR14 million for financial cooperation. This includes both total funding for projects solely dedicated to marine litter prevention and proportionate funding for waste management projects partially contributing to marine litter prevention. Additional funding is committed for new projects on marine litter prevention in South-East Asia and the Caribbean starting in 2020.

■ Achievements

- (a) **PREVENT Waste Alliance:** Since its launch in May 2019, more than 120 organisations from the private and public sector, academia as well as civil society have joined the Alliance. The members have developed a study on waste reduction in production and consumption in multi-actor partnerships as well as a Toolbox compiling know-how on Extended Producer Responsibility for the management of packing waste. Within a "Call for Solutions" in 2020, members submitted their joint ideas for concrete actions to be piloted in developing and emerging countries in the coming years.
- (b) **Global advisory project "Concepts for sustainable waste management and circular economy":** On behalf of the BMZ, the implementing organisation GIZ, the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) and the University of Leeds developed a rapid assessment tool for mapping waste flows and quantifying plastic leakage at city-level. The project has established the exchange with other plastic monitoring initiatives at the UNEA IV in 2019 and continues to do so.
- (c) **Project "Integrated Waste Management and Marine Litter Prevention in the Western Balkans":** Five municipalities located along rivers in Albania, Bosnia and Herzegovina as well as Montenegro signed a joint declaration on the prevention of marine litter and a Memorandum of Understanding committing themselves to pursue specific reduction targets for marine litter. On the national level, the project contributed to political processes for the reduction and ban of single-use plastic items, such as a ban on plastic bags in Albania.
- (d) **Cooperation with EU "Rethinking Plastics – Circular Economy Solutions to Marine Litter" in South East**

Asia: The scope and topic of the processes/ advisory services on the management of plastic packaging waste were discussed and first steps were taken to contribute to national policies and strategies in the Philippines, Viet Nam, Indonesia, Thailand, China, Singapore and Japan. Pilot projects addressing the management of plastic waste, sustainable consumption and production as well as the reduction of litter from sea-based sources will be initiated towards the end of 2020.

- (e) **Strategic Alliance „Reduction of Plastic Leakage into the Ocean“:** Guidelines on co-processing waste in cement plants have been developed. Measures to improve collection and sorting of waste were implemented at the local level. As a result, around 250,000 citizens were made aware of the problem and around 100,000 started waste segregation/benefited from segregated waste collection in Mexico and the Philippines.
- (f) **“Climate Literacy and Marine Litter Management Campaign along India’s East-coast”:** A four-month campaign in 2018 has empowered communities in five states on India's east coast to take action to adapt to climate risks and avoid marine litter. The awareness and engagement measures in villages and schools reached 280 villages and informed almost 400,000 residents on marine litter.
- (g) **Support of source-to-sea management for marine litter prevention:** Following the publication of the Source-to-Sea Framework for Marine Litter Prevention in 2019, pilot projects based on this framework have been implemented in Viet Nam and Ethiopia between 2019 and 2020. The projects cooperated with around 200 local stakeholders, conducted sediment erosion and plastic pollution assessments, and generated reports as foundation for designing priority actions.
- (h) **Support of World Bank activities for marine litter prevention:** With specific funding from BMZ, scientific field surveys and remote-sensing technology analysis to identify plastic items most frequently found in waters in Kenya, Cambodia and Myanmar have been conducted to prepare specific plastic action plans to reduce/reuse/recycle the plastic waste in these countries.

Islamic Republic of Iran

■ Measures

- (a) Regional project “Addressing Marine Litter in Caspian Sea Region”
- (b) Draft of Regional Caspian Sea Marine Litter Action Plan as a part of the above regional project.
- (c) Risk Assessment Plan for Plastic Waste Accumulated Areas in the North Coasts of the Persian Gulf and Oman Sea (South Coast of the Country): Part of the Macroplastics Monitoring Master Plan, which is co-operating with Oman, India, the United Arab Emirates, Pakistan and Iran, with Australia as head of the project.

Italy

■ Measures

- (a) ISPRA participate to the GESAMP Working Group on sea-based sources of marine litter (WG 43) established formally in April 2019 and leaded by FAO and IMO and cosponsored by UNEP. The overall objective of WG 43 is to build a broader understanding of sea-based sources of marine litter, in particular from the shipping and fishing sectors, including the relative contribution of different sources, analysis of plastic use and management within both industries and the range and extent of impacts from sea-based sources of marine litter. The Working Group will also work to build a more comprehensive understanding of specific types of sea-based sources of marine litter, and to guide interventions on these sources based on identified priorities.

Japan

■ Measures

- (a) Support ODA programmes in developing countries for waste regulations, capacity and institutional building for waste management, formulation of action plans, and installation of high quality environmental infrastructure such as waste-to-energy plants
- (b) Support ASEAN countries based on “ASEAN+3 marine plastic litter cooperation action initiative”. Based on this initiative Japan has committed to support the development of a national action plan for Myanmar in February 2020. It also cooperates on monitoring technology to Indonesia and Viet Nam
- (c) The “MARINE Initiative” was launched focusing on (1) Management of waste, (2) Recovery of marine litter, (3) Innovation, and (4) Empowerment including provision of training for 10,000 officials engaging in waste management all over the world by 2025. Based on the MARINE Initiative, Japan, through international organisations, has implemented several projects to tackle marine plastic pollution.
- (d) In order to provide support to Indonesia in achieving its national goal to reduce plastic pollution by 70% by 2025 through business activities of CLOMA members, the “Japan - Indonesia Cooperation Working Group” was launched in December 2019. The Ministry of Economy, Trade and Industry (METI) and CLOMA are the co-chairs of this working group on the Japanese side, and they have also become members of the Indonesia National Plastic Action Partnership (NPAP) to support this activity.

■ Achievements

- (a) Number of technical capacity developed persons from other countries

FY2015	FY2016	FY2017	FY2018	FY2019
2,996	2,669	2,160	Under investigation	Under investigation

(Reference)

Provided by JICA

Maldives

■ Measures

(a) Basel Convention

Maldives is a party to the Basel Convention. Hence, Maldives is eligible for funding support to address marine plastic litter and to implement measures for prevention and environmentally sound waste management.

■ Achievements

(a) Commonwealth Clean Ocean Alliance (CCOA)

In 2020, Maldives joined CCOA, a working group aiming to take action on tackling marine plastic pollution.

(b) Grant Projects:

- i. Maldives Clean Environment Project – World Bank (Zones 2, 4 & 5)
90% work done for zone 2
45% work done for zones 4 & 5
- ii. Greater Male' Waste-to-Energy Project- funded by Asian Development Bank (Zone 3)
Project in its initial phase
- iii. IRENA (International Renewable Energy Agency). (Zone 6&7)
Project in its initial phase

Myanmar

■ Measures

(a) Regarding international cooperation and commitments, Myanmar signed the United Nations Convention on the Law of the Sea in 1982. In 1988, Myanmar acceded to the International Convention for the Prevention of Pollution from Ships (1973) and the Protocol of 1978. Myanmar entered into the Basel Convention in 2015. Myanmar adopted the Bangkok Declaration on combating marine debris and ASEAN Framework of Action on Marine Debris in 2019.

(b) As strengthening coordination and cooperation at the regional and international level is one of the key success factors for marine pollution mitigation and marine ecosystem protection in the region, Myanmar is participating in many regional projects such as:

- i. "Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States project" funded by "Enhanced Regional EU-ASEAN Dialogue Instrument" (E-READI)
- ii. "Strengthening Capacity for Marine Debris Reduction in ASEAN region through formulation of National Action Plans for ASEAN Member States and Integrated Land-to-Sea Policy Approach (Phase 1 and 2)" funded by the Ministry of Environment Japan through a JAIF project
- iii. "Supporting Marine Debris Reduction in ASEAN Member States, drafting a Regional Action Plan on Marine Debris and Designing National Action Plans on Marine Debris" project with the help of the World

BankthroughPROBLUEfunding

- iv. "Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE) Project" in cooperation with Norwegian Environment Agency

■ Achievements

(a) Myanmar adopted the Bangkok Declaration on combating marine debris and the ASEAN Framework of Action on Marine Debris and is participating in developing the ASEAN Regional Action Plan on combating marine debris and an ad-hoc, open-ended expert group on marine litter and microplastics.

(b) Myanmar is coordinating and cooperating with many development partners, such as the World Bank, Ministry of the Environment Japan, Asian Development Bank, Norwegian Agency for Development Cooperation and Netherlands Embassy in combating marine debris.

(c) The Ministry of the Environment Japan supports Myanmar in monitoring methods for floating litter and floating microplastics training based on the 3rd Myanmar-Japan Policy Dialogue on Environmental issues.

Netherlands

■ Measures

(a) The Netherlands is actively involved in OSPAR's ICG Marine Litter (one of the co-convenors) and in the EU MSFD Technical Group on Marine litter. Within these groups common approaches are developed on monitoring, assessment and measures. In addition NL is active in the Arctic, supporting the development of the Marine Litter Action Plan under the wing of the Arctic Council/PAME.

(b) The Netherlands has signed an extended MoU with Indonesia on Waste, the Circular Economy and Water Quality in March 2020 with a focus on plastics with three tracks of cooperation: (1) policy advice on single-use plastic products and packaging; (2) circular design of plastic packaging together with the PRAISE coalition of large plastics using companies; (3) demonstration projects along the value chain of collection - sorting - (mechanical/chemical) recycling - reuse of plastic recyclates in Eastern Java/Bali. The Netherlands shares expertise with the Indonesian authorities and the packaging sector there, about effective ways of using Extended Producer Responsibility (EPR) for plastic collection, sorting and recycling. In the future pilot and demonstration projects will also start at 10 sites where plastic is collected separately. The initiatives are well coordinated with the Indonesian government under the umbrella of the National Plastic Action Partnership, which is the first national partnership under the Global Plastic Action Partnership launched by WEF and UN Environment.

Norway

■ Measures

Norway is a strong supporter of more robust global commitments to deal with the issue of marine plastic litter and is actively engaged in relevant processes under EU, OSPAR, Nordic Cooperation and the Arctic Council.

Norway has signed the G7 Plastics Charter, G20 Action Plan and has been a strong promoter of the four relevant resolutions passed by the UNEA, as well as measures taken by IMO and Basel Convention.

Norway believes that there is a need for a new global agreement to more effectively deal with this issue in a comprehensive manner, and has called for such a new global agreement along with many others.

(a) The Norwegian Development Programme to Combat Marine Litter and Microplastics

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 and the UNEA-3 agreed vision to eliminate the discharge of litter and microplastics to the oceans over time.

The Government of Norway will spend NOK1.6 billion (approx. USD200 million) on the development programme to combat marine litter and microplastics in the period 2019 to 2024.

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:

- i. Management of plastic waste in partner countries is improved
- ii. Selected coastal areas and rivers are cleared of waste and the waste is sustainably managed
- iii. Private sector performance regarding sustainable production and use, and responsible waste management, is improved
- iv. Global commitments and national and regional instruments to prevent marine litter are strengthened

Projects are being implemented through multilateral organisations such as the UN and the World Bank, NGOs and research institutes. Geographic focus is on fast-growing economies in South East Asia and Africa, as well as small island developing states to improve waste management systems and clean-up along the shore. Some 40 projects worldwide are funded by the programme.

■ **Achievements**

- (a) Since 2014, Norway has successfully put forward four UNEA-resolutions on marine litter and microplastics, proposed the amendments to the Basel Convention to include plastic waste as well as promoted the action plan under the IMO, bringing the issue of marine plastic litter to the top of the international agenda.

Republic of Korea

■ **Measures**

- (a) Strengthening and Improvement for Marine Litter Response in Indonesia

■ **Achievements**

- (a) Strengthening and Improvement for Marine Litter Response in Indonesia
- i. Ministry of Oceans and Fisheries of Korea and the Coordinating Ministry for Maritime Affairs of Indonesia, the Ministry of Maritime Affairs and Fisheries developed an ODA project 'Strengthening and Improvement for Marine Litter Response in Indonesia' to increase awareness on marine litter through training and education programme and to enhance the capacity on marine litter response through marine litter monitoring education programme targeting public officials, NGOs and local residents
 - ii. The first marine litter monitoring capacity building workshop was held in Labuan Bajo, Indonesia from 28 October to 1 November 2019. The workshop featured an overview of international marine litter problem and marine litter policies as well as marine litter monitoring education and practice. Participants learned how to conduct marine litter monitoring at beaches in Labuan Bajo and carried out pilot marine litter monitoring at five different monitoring spots.
 - iii. The Ministry of Oceans and Fisheries of Korea is planning to invest approximately USD500,000 in this project until 2021.

Singapore

■ **Measures**

- (a) Specifically, under SDG14.1, Singapore conducted a Regional Training Programme on Waste Management and Reduction of Marine Litter as part of the Singapore-Norway Third Country Training Programme (TCTP) in October 2017 and March 2019.
- (b) Provision of capacity building assistance to other countries on the implementation of relevant international instruments for the prevention of pollution from ships, such as the IMO's MARPOL. Through the Singapore-IMO TCTP, Singapore's MPA provided trainers to support IMO's training for the National Workshop on MARPOL Annex V and Port Reception Facilities in the Philippines from 23 - 25 October 2019. Since the launch of the Singapore-IMO TCTP, Singapore has provided in-kind technical assistance to over 2,100 participants from over 90 countries, from Africa, the Americas, Asia, Caribbean, Eastern Europe, Middle-East and the Pacific Islands.
- (c) Singapore was the coordinator of the IMO's Marine Environment Protection Committee (MEPC)'s Correspondence Group on "Development of a Strategy to Address Marine Plastic Litter from Ships", which was established at the 74th Session of MEPC from 13 - 17 May

2019. The Strategy being developed is to build upon the IMO's Action Plan to address marine plastic litter from ships, adopted at the 73rd Session of MEPC from 22 – 26 October 2018, which aims to enhance existing regulations and introduce new supporting measures to reduce marine plastic litter from ships.

- (d) Adoption of the Bangkok Declaration on Combating Marine Debris and the ASEAN Framework of Action on Marine Debris, alongside other ASEAN member states, to protect the marine environment and strengthen regional cooperation on marine debris issues.
- (e) Active participation in regional marine litter initiatives and workshops organised by the Coordinating Body on the Seas of East Asia (COBSEA) and Partnerships in Environmental Management of the Seas of East Asia (PEMSEA).

Solomon Islands

■ Measures

- (a) The Ministry of Environment has been collaborating with a number of development partners such as JICA, EU, UNDP through regional projects on waste management:
 - i. JPRISM II – A JICA-funded regional project implemented by SPREP in nine Pacific countries. The objectives of the project are to strengthen waste management capacity in the region through implementing the Cleaner Pacific 2025 at both national and regional levels
 - ii. PACWASTE PLUS Programme – This initiative is funded by the European Union (EU) and implemented by SPREP to sustainably and cost effectively improve regional management of waste and pollution. The programme is being implemented in 15 countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu. The activities are tailored to address the specific needs of each country based on their identified priorities. Priority waste stream identified by Solomon Islands under this programme includes Solid Waste (recyclables and organic waste) and hazardous waste (e-waste)
- (b) Solomon Islands is a party to a number of international and regional conventions related to waste and pollution management. For instance, the Stockholm Convention, Marine Pollution (London) Convention, UNCLOS, Waigani Convention, SPREP Convention, Pollution Protocol for Dumping.

■ Achievements

- (a) Development of the National Implementation Plan under the Stockholm Convention.
- (b) Data collection, development and design of in-country projects through collaboration with Pacwaste Plus Project.

- (c) Strengthening of institution and technical capacity through the JICA funded J-PRISM Project which results in the newly established Waste Management Division under the Honiara City Council.

Sri Lanka

■ Measures

- (a) Many plastic waste management projects are conducted with international cooperation funds.

■ Achievements

- (a) Many projects were implemented under international cooperation.

Turkey

■ Measures

- (a) Turkey is a peninsular with a broad coastline on the Mediterranean and the Black Sea. Being party to the Barcelona Convention and Bucharest Convention, Turkey is following and steering studies being done under both Conventions. Turkey is also sharing its experience with countries in the region and Secretaries of both Conventions. In addition to these regional studies, Turkey is involved in the UN process and following up the global targets.

■ Achievements

- (a) Following the First Zero Waste Summit which was held on 1 November 2018 in the Presidential Complex's Congress and Culture Center, a second summit was held in Istanbul in November 2019 at the international level.

UK

■ Measures

- (a) The UK is committed to reducing additional pollution by marine plastic litter to zero by 2050 through a comprehensive life-cycle approach, improved waste management and innovative solutions. It is recognised that moving towards a more resource efficient and circular economic model is the most effective way to address marine litter. To achieve this, the UK is committed to promoting education and research and to providing developing countries with a wide range of assistance through bilateral and multilateral cooperation.

- (b) Blue Planet Fund

The UK remains at the forefront of international efforts to protect the marine environment, taking steps to tackle waste and plastic pollution, and continues to recognise the importance of ocean health to sustainable development and climate change. As such, the UK Government has committed to establish a GBP500 million Blue Planet Fund, funded through UK Official Development Assistance (ODA) to protect the marine environment from the myriad threats it faces, including plastic pollution, warming sea temperatures and overfishing in order to reduce poverty in

developing countries. The Blue Planet Fund will deliver tangible and ambitious outcomes for the marine environment and poverty reduction through four interlinked themes of: biodiversity, climate change, marine pollution and sustainable seafood, and is expected to launch 2021.

(c) Commonwealth Clean Ocean Alliance and the Commonwealth Blue Charter:

- i. The Commonwealth Blue Charter is an agreement by all 53 Commonwealth countries to co-operate and collaborate to solve ocean-related problems and meet commitments for sustainable ocean development
- ii. Through 10 Action Groups championed by 13 countries, the Commonwealth will use its global perspective to develop and implement a fair, equitable, inclusive and sustainable approach to global ocean economic development and protection. Action Groups will focus on the following areas: Aquaculture, Blue Economy, Coral Reef Protection and Restoration, Mangrove Restoration, Ocean Acidification, Ocean and Climate Change, Ocean Observations, Marine Plastic Pollution, Marine Protected Areas and Sustainable Coastal Fisheries
- iii. The UK co-chairs the **Commonwealth Clean Ocean Alliance (CCOA)** with Vanuatu. The CCOA brings together member states, businesses, NGOs and civil society from across the Commonwealth to commit to action on plastics, share best practice, leverage funding and push for global action. Since its launch in 2018, 34 out of 54 Commonwealth nations have signed up to the Commonwealth Clean Ocean Alliance, all working to tackle ocean plastic pollution
- iv. The UK has also committed up to GBP70 million to address plastic pollution. This funding supports a package of programmes with organisations including the World Economic Forum's Global Plastic Action Partnership (GPAP), UN Environment Programme's Tide Turners Plastic Challenge Badge and the Waste and Resources Action Programme (WRAP) Plastic Pacts
- v. On World Ocean Day 2020 the UK joined the **Group of Friends to Combat Marine Plastic Pollution (GoF)** as one of the 45 founding countries. This group is based at UNHQ and is co-chaired by Norway, Maldives and Antigua & Barbuda. The GoF aims to strengthen and improve co-ordination on actions to address plastic pollution at the global level, including by supporting work under UNEA

(d) WRAP (Waste & Resources Action Programme) Plastics Pacts

The Plastic Pact is a collaborative initiative delivered by WRAP that will create a circular economy for plastics bringing together businesses from the entire plastics value chain with UK Government and NGOs to tackle plastic waste. WRAP's Plastic Pact helps to provide stronger links between the UK's domestic policy on plastics and our international objectives as set out in the 25 Year Environment Plan. Since 2019, WRAP has

helped support and deliver the Malaysia Plastics Pact, a South African Plastic Pact, and the ANPAC (Australia, New Zealand, Pacific Plastic Pact).

(e) Research and Innovation Framework

The UK set out its intention to work with other Commonwealth countries to develop a Marine Plastics Research and Innovation Framework at the Commonwealth Heads of Government Meeting in April 2018. The 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 the issue of marine plastics. Key activities will include:

- i. New jointly-funded interdisciplinary research and innovation programmes developed through the Framework, and activities developed and delivered by individual partnering countries and organisations
- ii. A forum for sharing research plans and emerging findings with all partners, increasing coordination and adding value to individual programmes
- iii. Support for the development of links between researchers and innovators across the Commonwealth, driving new partnerships and strengthening capacity.

The UK has announced that it will contribute GBP25 million towards the Framework. This will include both Government-funded activity and support from businesses. Unilever has committed GBP5 million in kind R&D activity, and Waitrose has provided GBP0.5 million for a Fellowship programme which launched in April 2019. The UK is now working in partnership with UK Research and Innovation and Commonwealth partners on operational aspects of the Framework and the development of new bilateral research programmes to support the initiative.

International Commitments

(f) United Nations

The UK is committed to SDG Target 14.1: 'By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution'.

- i. The UK is committed to the UNEA Resolutions:
 - Address the problem of marine litter and microplastics prioritising a whole lifecycle approach and resource efficiency, building on appropriate existing initiatives and instruments, and supported by and grounded in science, international cooperation, and multi-stakeholder engagement
 - Compile available scientific and other relevant data and information to prepare an assessment on sources, pathways, and hazards of litter including plastic litter and microplastic pollution and its presence in the rivers and oceans, scientific knowledge about adverse effects on ecosystems, potential adverse effects on human health and environmentally sound technology innovations
 - Act through Regional Seas Programmes (OSPAR).

- Reduce the discharge of microplastics into the marine environment including through phase-out of products that contain microplastics
 - Foster innovation of product design to reduce secondary microplastic release from land- and sea-based sources and improve waste management where needed
 - Prevent losses of primary microplastics, especially pre-production pellets (flakes and powders), to prevent their spills into the environment, across the whole manufacturing and supply chain
 - Elaborate guidelines on plastic use and production in order to inform consumers, including on standards and labels, to incentivise businesses and retailers to commit to sustainable practices and products, and to support governments to promote the use of information tools and incentives to foster sustainable consumption and production
 - Raise awareness of the importance of and to encourage sustainable consumption and production with regard to products likely to generate marine litter, including plastic litter and microplastics
 - Promote environmentally-sound waste management and marine plastic litter recovery
 - Identify technical and financial resources or mechanisms for supporting countries in addressing marine plastic litter and microplastics
- ii. The UK supports **UN Clean Seas**. The campaign contributes to the goals of the Partnership on Marine Litter. The UK is committed to:
- Engage the general public and the private sector in the fight against marine plastic pollution
 - Address the root-cause of marine litter by targeting the production and consumption of non-recoverable and single-use plastic
- iii. The UK supports and is committed to the UN Partnership on Marine Litter and goals to:
- Reduce the impacts of marine litter worldwide on economies, ecosystem, animal welfare and human health.
 - Enhance international cooperation and coordination through the promotion and implementation of the Honolulu Strategy - a global framework for the prevention and management of marine debris, as well as the Honolulu Commitment – a multi-stakeholder pledge
 - Promote knowledge management, information sharing and monitoring of progress on the implementation of the Honolulu Strategy
 - Promote resource efficiency and economic development through waste prevention e.g. 4Rs (reduce, re-use, recycle and re-design) and by recovering valuable material and/or energy from waste
 - Increase awareness on sources of marine litter, their fate and impacts
 - Assess emerging issues related to the fate and potential influence of marine litter, including (micro) plastics uptake in the food web and associated transfer of pollutants and impacts on the conservation and welfare of marine fauna
 - UN Global Plastics Platform, which will explore ways to change the design, production, consumption and disposal of plastics around the world, in line with a transition to a more circular economy
 - Identify opportunities to reduce economic and industrial waste
- (g) Sustainable Development Goal 14.1
- i. Progress towards SDG14 targets will underpin the sustainable development of the ocean. Therefore, it is important to encourage the international community to support programmes and initiatives that deliver SDG14 targets, using currently increased public motivation to protect the seas
- ii. At the United Nations Ocean Conference in June 2017, the United Kingdom made four voluntary commitments under the SDG14 on the following topics:
- **Marine science.** The UK pledged to work actively with international partners in a range of major issues such as strengthening global ocean observations, world ocean assessments and data sharing
 - **Marine Litter.** The UK committed to several actions in order to combat marine litter. These include reducing the volume of single use plastic bags, the introduction of national litter strategies and banning microbeads in personal care products. The UK also signed up to the UN Clean Seas Initiative
- (h) G7
- i. The UK is a signatory to the **G7 5-Year Bologna Roadmap (2017)**, which highlights the need to address plastics leakage into the marine environment. The roadmap requires members to acknowledge the socio-economic benefits of marine litter prevention and reduction measures, including in terms of employment generation, tourism development, sustainable fisheries, waste and wastewater management and other areas
- ii. As a member of the G7, the UK welcomes the proposed **G7 Action Plan on Healthy and Productive Oceans** and the ongoing work of the G7 Future of the Seas and Oceans Working Group in addressing key global issues, acknowledging the need for action to address the impacts that plastic

pollution and marine litter

- iii. The UK has committed to the G7 Oceans Plastics Charter which aims to move towards a more resource-efficient and sustainable approach to the management of plastics. On 9 June 2018, Canada, France, Germany, Italy, the United Kingdom, and the European Union adopted the Ocean Plastics Charter to demonstrate their commitment to take concrete and ambitious action to address the problem

Related URL:

<https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html>

- The Charter recognises the need for urgent action by all sectors of society to:
- Address and prevent the far-reaching devastating impacts of marine litter on the health and sustainability of our ocean, seas and coastal communities
- Prevent mismanagement of plastic waste and ensure that plastics are designed to be recovered so they can be reused or recycled
- Not treat plastic as a single-use product
- Commit to recycling and recycled content targets
- Reduce unnecessary plastic use and associated waste

(i) G20

- i. The UK provided technical expertise to develop the **G20 Action Plan on Marine Litter**. The plan provides a detailed framework for local, national and regional action to prevent and reduce marine litter. Under the G20 the UK has committed to promote the socio-economic benefits of establishing policies to prevent marine litter, to promote sustainable waste management, and raise awareness, promote education and research:
- Under the 2019 'Osaka Blue Ocean Vision' G20 the UK has committed to aim to reduce additional pollution by marine plastic litter to zero by 2050 through a comprehensive life-cycle approach, improved waste management and innovative solutions
 - The UK is committed to continue to provide developing countries with a wide range of assistance through bilateral and multilateral cooperation including Official Development Assistance (ODA).
 - Members developed the G20 Implementation Framework for Actions on Marine Plastic Litter, a new framework where each country, including developing countries implements voluntary actions. This was endorsed by the G20 Osaka Summit.

(j) OSPAR

- i. As a Contracting Party to the OSPAR Convention

for the Protection of the Marine Environment of the North-East Atlantic, the UK develops and implements actions under the OSPAR Regional Action Plan for Marine Litter and participates in monitoring programmes to assess regional trends in marine litter. As part of the Regional Action Plan, the UK has co-led a project on the design and recycling of fishing gear and published a study on best practice in the OSPAR region. This will support OSPAR Contracting Parties in implementing ambitious measures to tackle marine litter from fishing gear

■ Achievements

- (a) Since its launch in 2018, 34 Commonwealth nations have signed up to the Commonwealth Clean Ocean Alliance, all working to tackle ocean plastic pollution.

US

■ Measures

(a) **Waste Prevention & Strengthening Recycling (USAID)**

i. **Municipal Waste Recycling Program (MWRP)** -

USAID reduces land-based sources of marine plastic pollution by supporting locally-led grants and providing technical assistance to local organisations in Indonesia, Philippines, Sri Lanka and Viet Nam to improve solid waste management and waste recycling efforts. Under MWRP, USAID has supported 30 grants focusing on three priority areas: 1) strengthening capacity of local actors and their collaboration; 2) introducing locally appropriate innovations and improving decision-making; and 3) supporting engagement with the private sector for developing and implementing market-driven solutions to marine plastic pollution and strengthening the recycling value chain. The scope of the grants ranges from community-led awareness raising and education campaigns to improving working conditions of informal waste collectors, engaging and empowering women, collaborating with the private sector, and supporting local governments in their efforts to collect and manage waste sustainably

ii. **Clean Cities, Blue Ocean (CCBO)** - Clean Cities

Blue Ocean is USAID's flagship, five-year, global programme that works in rapidly urbanizing countries across Asia and Latin America to target ocean plastics directly at their source. The initial focal countries include: the Philippines, Viet Nam, Indonesia, Sri Lanka, the Maldives, India, the Dominican Republic and Peru. Through a combination of technical assistance and grants, CCBO works to improve solid waste management systems in cities and municipalities that are at the heart of the global plastic pollution crisis, build capacity and commitment for the 3Rs, and promote sustainable social and behaviour changes. In

support of these objectives, the programme partners with local and multinational corporations to effectively leverage private sector expertise, investment and supply chains

(b) Infrastructure Investment (USAID):

- i. **Development Credit Authority (DCA) partial loan guarantee for Circulate Capital** - USAID signed an agreement with Circulate Capital to provide a USD35 million, 50% loan-portfolio guarantee through DCA to incentivise private capital investment in the recycling value chain in South and Southeast Asia. The agreement leverages more than USD100 million from a private-sector investment strategy managed by Circulate Capital, a firm dedicated to incubating and financing companies and infrastructure that prevent ocean plastic and backed by multinational corporations, including PepsiCo, Procter & Gamble, Dow, Danone, Unilever and Coca-Cola

- ii. **USAID Partnership with the Alliance to End Plastic Waste.** In 2020, USAID launched a partnership with the Alliance to End Plastic Waste, a coalition of more than 40 leading companies that have committed to invest USD1.5 billion towards solutions to end plastic waste. The Alliance brings together companies from across the globe involved in all stages of the plastics value-chain – including businesses that make, use, sell, process, collect and recycle plastics, as well as retailers and consumer-goods and waste-management companies. Through the partnership, USAID and the Alliance will deploy innovative, locally appropriate technologies, infrastructure and business models to improve waste-management and recycling in cities and communities at the heart of the crisis in ocean plastics pollution. The partnership will also work to improve the livelihoods, health, and safety of waste workers – both formal and informal

- (c) Cartagena Convention Land-Based Sources Protocol for the Wider Caribbean Region** - The Protocol is an agreement under the Cartagena Convention that obligates Contracting Parties to address pollution from marine litter, nutrients and wastewater. US EPA Chairs the Open-Ended Working Group that advises the Secretariat on efforts aimed at these issues.

- (d) Asia Pacific Economic Cooperation Forum Engagement** – The United States Department of State worked closely with industry and NGO partners to focus attention on combating marine debris using environmentally sound waste management best practices, innovation, and outreach in APEC.

- (e) Global Ghost Gear Initiative Engagement** – The GGGI is seen as the preeminent global organisation comprised of national governments, NGOs, and industry with the objective of combating abandoned, lost or otherwise discarded fishing gear.

- (f) Department of State Marine Debris Grants** – The United States Department of State has administered over USD 4 million in grants aimed at helping address marine debris from both land and sea-based sources.

- (g) NOAA support to Urban Ocean Initiative** – NOAA's Marine Debris Program is providing funding support and engaging with the Urban Ocean Initiative, an effort led by the Ocean Conservancy, an international marine environmental NGO, to better address land-based debris resulting from urban environments. This initiative will provide a platform for select city governments around the world to connect with one another as well as with community leaders, academia, and the private sector to develop, share, and scale solutions to the ocean plastics crisis.

■ Achievements

(a) Solid Waste Management and Inclusive Capacity Building- Trash Free Waters

- i. *Jamaica* - Prioritise marine litter and solid waste management needs and develop projects and activities, including: procuring bins in Whitehouse-Bluefields communities; training schools and local staff in placing them and using the bins; and educating the general public about the impacts of trash
- ii. *Panama* - Prioritise marine litter and solid waste management needs and develop projects and activities, including: identified included public awareness-raising on solid waste management and the impacts of trash with local schools and universities. The project also included installation of a river trash boom on the Juan Diaz River
- iii. *Peru* - Stakeholder workshop held involving over 70 participants. The pilot project identified for Chincha addressed solid waste management through helping two communities segregate and selectively collect at the source in order to recover more valuable recyclable material and prevent that material from entering waterways and the ocean

- (b) Strengthening the Connection Between Marine Litter and Solid Waste Management – Central America and Dominican Republic Trade Agreement and Panama Free Trade Agreement** - Through an interagency agreement with the Department of State, US EPA is working with the national governments of Panama, Costa Rica and the Dominican Republic to engage all stakeholders in identifying solutions to the marine litter problem through improvements in solid waste management. Activities include virtual national dialogues, assisting in their development of national action plans for marine litter, and on-the-ground projects that support the countries' own efforts. US EPA will roll out a workshop on landfill assessments to help determine where investments need to be made.

- (c) Stormwater Runoff and Marine Litter Prevention-Commission for Environmental Cooperation** - The US, Canada and Mexico implemented two projects to reduce marine litter along the transboundary watersheds in 2017 to 2018. The project focused on reducing litter in storm drains by installing trash capture devices in storm drains

in Vancouver, British Columbia and Bellingham, Washington. Scientists then inspected the litter found in the capture devices to better identify sources. The project at the US/Mexico border focused on a far-reaching environmental education campaign within schools, community organisations, businesses, etc. on the impacts of trash in the Tijuana River Estuary and upstream solutions to address it. The project also conducted a feasibility study for a trash boom for the City of Tijuana.

- (d) **USAID Municipal Waste Recycling Program** - To date, the programme has awarded a total of 30 locally-led grant projects in Indonesia, Philippines, Sri Lanka and Viet Nam, with a total of 3.3 million people in these countries benefiting from the program activities. In addition, over 3,100 metric tonnes of plastic waste has been diverted from the natural environment through recycling and improved solid waste management practices.
- (e) **USAID Clean Cities Blue Ocean** - By the end of this year, CCBO will have awarded grants in the Philippines, Vietnam, Sri Lanka, the Maldives, and the Dominican Republic and will have completed initial solid waste management assessments for 13 cities in the Philippines, Vietnam, Sri Lanka, the Maldives, the Dominican Republic and Peru.
- (f) **Development Credit Authority (DCA) partial loan guarantee for Circulate Capital**- Circulate Capital made its first loan utilising the USAID DCA loan guarantee in April 2020 to a woman-owned recycling company in Indonesia for facility expansion.
- (g) **Cartagena Convention** - This year, the LBS Protocol will publish a report, entitled "State of the Convention Area Report" (SOCAR) that will be the first ever baseline data of information regarding coastal water quality that reflects national data rather than extrapolated from global assessments.
- (h) **Global Partnership on Marine Litter** - The GPML is coordinated by the UN Environment Programme and recently updated its Framework document and is implementing its action plan for 2020 work. NOAA's Marine Debris Program staff serve on the GPML Steering Committee to help guide its work.
- (i) **Striving for Increased Public Participation in Environmental Protection in Central America through a Small Grants Program with Civil Society Organizations** - To date, this Department of State program provided training to over 5,000 people, with 160 people actively involved in community-based initiatives. This initiative strengthened solid waste management capacity in 10 communities through training 61 municipal employees and authorities, resulting in the improved management of over 3,500 tonnes of solid waste, including 43 tonnes of plastic waste recycled.
- (j) **Asia Pacific Economic Cooperation Forum** - Successes included receiving endorsement from APEC members for a revision to a 2009 report on the direct economic costs to APEC economies due to marine debris. The report revises estimates of the direct costs of marine debris to member economies to support arguments to strengthen regulatory and non-regulatory actions. DOS also developed a marine debris management and innovation sub-fund and contributed USD800,000 to the

fund. The fund will serve as a dedicated resource for APEC projects aiming to tackle the marine debris problem. DOS continues to engage major source countries in Southeast Asia to encourage policy changes needed to prevent and reduce marine debris.

- (k) **Global Ghost Gear Initiative Engagement** - This year the US joined the GGGI and is working with the organisation to combat ghost gear globally through promotion of the voluntary gear marking guidelines developed by the FAO with input from the GGGI.
- (l) **United States Department of State Marine Debris Grants** - The US Department of State has provided several grants that help address different aspects of the marine debris issue. One example is a grant provided to the Center for Community Health Research and Development which implemented a project titled, "Social Mobilization For Marine Waste Management", which aimed to reduce marine debris via social change in Ly Son Island, Viet Nam. The project has established a local steering committee on environmental protection; delivered 50 new public waste receptacles; gathered more than 300 people to clean 15km of coast; collected 500kg plastic waste; trained 50 people in waste collection and processing; trained 45 community leaders in communications skills; trained 600 households in proper waste sorting, resulting in a ten-fold increase in the percentage of households practicing proper waste sorting; and provided 3,000 households with reusable shopping baskets to replace single-use plastic bags.
 - i. Additionally, grantee WWF Peru implemented the project titled, "Making a business out of a problem: Creating a circular economy for abandoned, lost, and discarded fishing gear in Peru," with the intent to prevent and reduce the amount of Abandoned, Lost, or otherwise Discarded Fishing Gear (ALDFG) entering Peru's coastal waters by collecting and recycling end-of-life fishing gear. The project launched net collection programmes in three communities, obtained signed letters of commitment from the three largest anchoveta fisheries in Peru (Tasa, Copeinca, Austral), and secured a supply of more than 200,000 kg annually of end of life fishing nets for recycling
 - ii. DOS worked with grantee Ocean Conservancy on the development of the project titled "Implementing Best Practices for Fishing Gear Management to Reduce and Prevent ALDFG in the Caribbean Region," to reduce and prevent the incidence of abandoned, lost or otherwise discarded fishing gear (ALDFG) in Jamaica and Dominica. The grantee incorporated the Global Ghost Gear Initiative Best Practices Framework into the COAST checklist for incentivising good fisheries management practices through an insurance product, and made progress toward implementing the framework; developed innovative fishing gear and gear marking technologies to prevent ALDFG and facilitate gear recovery; and gathered information on the most prevalent types of ALDFG in Caribbean nations to develop a standardised gear retrieval protocol
 - iii. DOS supports innovative technologies and approaches to combatting marine debris through its

grants. This includes grantee WWF-Hong Kong, who developed a project titled “All Hands on Deck - A Community-Based Marine Litter Reduction Programme”, which conducted three coastal cleanup activities, three community fora, selected three types of alternative fish boxes to be tested by the fishing industry to reduce polystyrene marine debris, and engaged the major players (including fishery and seafood industries, and manufacturers of boxes) to obtain support to change from polystyrene to alternative boxes

- iv. Another grantee, the Global Knowledge Initiative (GKI), developed a project called “Building Ecosystems to Reduce Waste in Our Oceans - Ocean Plastic Prevention Incubators”. GKI, and subgrantees SecondMuse and Circulate Capital, aim to reduce marine debris by building effective waste management and plastic recycling economies in Indonesia and the Philippines. The grantees have drafted three case studies and one policy guideline; hosted a workshop that led to the establishment of a stakeholder meeting forum; planned a public Plastics Festival in Surabaya to raise awareness; and built a database of more than 200 waste and recycling operators and potential partners

- (m) **Basel Plastic Waste Partnership** - The Plastic Waste Partnership was established at the 14th COP to the Basel Convention and held the first meeting in March 2020. The goal of the PWP is to significantly reduce and in the long-term eliminate the discharge of plastic waste and microplastics into the environment, in particular the marine environment. Four project groups were established to begin work focusing on: plastic waste prevention and minimization; plastic waste collection, recycling and other recovery including financing and related markets; transboundary movements of plastic waste; and outreach, education and awareness-raising.

- (n) **US-Mexico-Canada Agreement** - In 2020, the new US-Mexico-Canada Agreement (USCMA) free trade agreement went into effect between the three nations. This agreement continues the already strong collaboration between these governments to address marine debris. In 2020, the US also passed domestic legislation that provided USD8 million in funding to NOAA’s Marine Debris Program to address marine debris in North America; and provided EPA with USD4 million in funding to address marine debris, and other environmental issues through the trilateral Commission on Environmental Cooperation.

EU

■ Measures

- (a) Regional and international collaboration

Around the EU, the four Regional Sea Conventions (in Mediterranean, Northeast Atlantic, Baltic and the Black Sea) developed and implemented, with EU technical and financial support, plans against marine litter; G7 (in 2015) and G20 (in 2017) also adopted Action Plans against

marine litter. Regional plans and initiatives against marine litter exist (Southeast and Northwest Pacific, East Asian Seas) or are under development (Persian Gulf, NE Pacific, Arctic) also outside the EU.

The EU finances projects in its neighbourhood (Mediterranean and Black Sea) and the Commission services are working on large projects that will contribute to marine litter reduction internationally, for example in Southeast Asia, the Pacific and South America (in the order of EUR800 million, for the period 2014-17).

In May 2019, the EU played a central role to achieve international decision-making on trans-boundary movements of most plastic waste subject to the controls of the Basel Convention. The new rules (which will enter into force in 2021) will improve controls on exports and imports of plastic waste. Countries on the receiving end will be able to refuse foreign shipments of mixed and unsorted plastic waste. It is important to stress that the EU has stricter rules than the Basel Convention: this means that, from 2021, it will be prohibited for the EU to export plastic waste covered by the Basel Convention to countries outside the OECD. The amendments to the Basel Convention is an important step towards a better control of global trade in plastic waste and will help developing countries to control imports into their territories. This will support the prevention of marine litter and encourage sorting and recycling of plastic waste, in line with EU circular economy policies.

The EU also plays an active role in the implementation of the IMO Action Plan against plastic litter.

- (b) International Ocean Governance Agenda

Fighting marine litter and the “sea of plastic” is one of the 50 actions included in the International Ocean Governance Agenda adopted by the EU in November 2016 (please see more information below). The EU published an in-depth analysis of the EU’s International Ocean Governance Agenda – Two years of progress in 2019 taking stock of the activities and achievements undertaken EU on the actions set out in the 2016 International ocean governance Communication.

Related URL:

https://ec.europa.eu/maritimeaffairs/policy/ocean-governance_en

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2019:104:FIN>

■ Achievements

- (a) International Ocean Governance Agenda

Over the last two years, under its International Ocean Governance Agenda, the EU has taken action to address marine litter at source and has engaged in shaping the international response to this increasingly pressing problem. It has done so by building on the EU Strategy for Plastics in a Circular Economy (see above). The EU has actively supported the follow-up of the Resolution on marine litter and micro-plastics adopted at the third UN Environment Assembly in December 2017, and the implementation of the Resolution adopted at the fourth UN Environment Assembly in March 2019.

It has also actively supported the efforts made by the G7 and G20 members.

It is providing targeted support to improving waste management in the Pacific and in the Southeast Asia, which faces massive challenges in tackling plastic pollution. The EU has secured specific funding to develop marine litter baselines as part of the implementation of the Marine Framework Directive. Maps of litter distribution are now available through the European Maritime Observation and Data Network (EMODnet), including new maps on beach litter, seafloor litter and microplastic. Additional financing was earmarked in 2017 to support the reduction, monitoring and quantification, removal and recycling of marine litter. Investment of EUR22 million has been done to support fishing for litter operations. Furthermore, the EU has proposed the adoption of measures to prevent marine pollution associated with fishing activities in all Regional Fisheries Management Organisations to which it is party.

The EU actively engaged with the FAO as well in view of the adoption of voluntary guidelines on the marking of fishing gear, and with the IMO as regards the established action plan on marine litter from ships.

Lastly, Europol, with the support of European Fisheries Control Agency, European Maritime Security Agency and the European Border and Coast Guard Agency collaborated with INTERPOL in an unprecedented operation to fight maritime pollution in 2018. The operation, code-named 30 Days at Sea, brought together some 276 law enforcement and environmental agencies across 58 countries to take targeted action to tackle crime against marine pollution law. The results were outstanding, with more than 3800 actions worldwide detecting 356 pollution incidents. These led to 120 arrests and 436 administrative cases of prosecution for illegal discharges of oil and garbage from vessels, shipbreaking, breaches of shipping emissions regulations, river pollution and land-based run-off into the sea.

The situation is improving compared to the year 2018. Support of implementation of regional action plans around EU (NE Atlantic, MED, Black sea, Baltic) through capacity building and funding (projects such as Oceanwise, Cleanocean, MED ML, EMBLAS).

International Organisations and NGOs

ADB

■ Measures

- (a) Enhancement of partnerships with the international community in advancing implementation at the national and city level of global and regional frameworks (such as the ASEAN Framework of Action on Marine Debris, and the Bangkok Declaration on Combating Marine Debris in ASEAN Region), and global blue economy principles (ADB is signatory to the Sustainable Blue Economy Finance Principles).

Related URL:

<https://www.wwf.org.uk/updates/sustainable-blue-economy-finance-principles>

- (b) Implementation of regional knowledge-sharing workshops and cooperation activities, including cross-country study tours and city twinning.
- (c) Collaboration with partners on regional studies, knowledge products, training and knowledge-sharing events on: (a) Infrastructure and technology options and investment needs, (b) Finance solutions including innovative financing mechanisms and market-based/fiscal instruments, (c) circular economy and green jobs / livelihood development potential, and (d) successes and lessons in scaling-up circular plastics economy.
- (d) Healthy Oceans Technology and Innovation Forum in 2021, high level technology and digital innovation challenges.

Ellen MacArthur Foundation

■ Achievements

To date, through the **New Plastics Economy Global Commitment and Plastics Pact network**, more than 1000 organisations globally are united behind a common vision, with common 2025 targets, for a circular economy for plastics.

Related URL:

<https://www.newplasticseconomy.org/assets/doc/npec-vision.pdf>

- (a) New Plastics Economy Global Commitment - Progress report

In October 2019, the then business signatories to the Global Commitment reported the following aggregate results, following the first year of working towards the shared 2025 vision and framework of targets:

- i. Elimination of unnecessary and problematic packaging: Approximately 60% of brands, retailers and packaging producers that use, or have used, PS, ePS or PVDC, have eliminated or have concrete plans to phase out these materials from their portfolio. For single-use straws, carrier bags and undetectable carbon black plastics, this is approaching 70%, while for PVC the proportion is as high as 79%
- ii. Shifting from single-use to reuse (where relevant): 43 packaged goods companies, packaging producers and retailer signatories — 36% of the signatories — have engaged in testing and piloting reuse business models across different markets and product types
- iii. All packaging to be 100% reusable, recyclable or compostable: Approximately 60% of signatories' plastic packaging is reusable, recyclable or compostable in practice and at scale
- iv. Increasing the amount of recycled content: Packaged goods companies and retailers committed to an average of 22% recycled content in their packaging by 2025. This was a five times increase on their 2018 average of 4% (which was already double the estimated global average of 2%)
- v. Making more recycled content available: Recycling company signatories committed to quadruple the

amount they process by 2025

- vi. Transparency: The October 2019 report provided unprecedented transparency across the industry's value chain on progress towards these targets and on plastic usage. For the first time, 176 of the then 189 business signatories, representing about 20% of the global plastic packaging volumes, and 14 of the 16 government signatories reported on progress towards realising their public targets, all using common language and definitions

The second annual progress report will be released in October 2020.

(b) New Plastics Economy Plastics Pact Network

To date, nine Plastics Pacts have launched across Africa, Europe, Latin America and North America. Pacts, for the first time, have brought together companies from across the plastics value chain, many of them competitors, as well as local governments, NGOs and others in the local market, to work together towards a common vision and a set of concrete, ambitious local targets.

Pacts are at different stages of implementation, however initial progress has been demonstrated. For example, a recent progress report of the first Plastics Pact, the UK Plastics Pact led by WRAP in the UK, shows:

- i. 1.1 billion problematic or unnecessary plastic items have been identified to be eliminated by the end of 2020
- ii. More than GBP90 million being invested in recycling capacity in the UK
- iii. The use of recycled materials in plastic packaging of products in UK supermarkets has been increased. Members of the UK Plastics Pact continue to work collaboratively to overcome key challenges in the transition to a circular economy for plastics. Business members account for two-third of consumer plastic packaging in the UK. Lessons learnt from this and the other Pacts are shared with the Plastics Pacts network globally.

Overall progress observation: positive uptake and developments in the first year

ERIA

■ Measures

- (a) Strengthening the role as a network hub among ASEAN+3 (ASEAN Member States, China, Japan, and Republic of Korea) countries:
 - i. Launch of a website as an information-sharing platform in the region (<https://rkcmpd-eria.org/>). The main content of the website is the Good Practices section, which shares the National Framework to Tackle Marine Plastic Debris (Ministries and Coordination Mechanism, National Laws and Regulations, Local Regulations, Action Plans and Roadmaps, and International Agreement), Government Initiatives, Scientific Knowledge, and Voluntary Initiatives
 - ii. Networking between ASEAN and target countries.

Participating in ASEAN Working Groups (ASEAN Working Group on Chemicals and Waste, ASEAN Working Group on Coastal and Marine Environment) as well as conducting dialogue with each country by identifying focal ministries and setting the focal points of dialogue

- iii. Strengthening the cooperation with related organisations. Conducting network meetings with research institutions and major international organisations in the region
- iv. Strengthening the internal structure and strengthening cooperation with Institute for Global Environmental Strategies (IGES) to improve the website.

(b) Information-sharing for international frameworks or initiatives:

- i. Introduction of Regional Knowledge Centre for Marine Plastic Debris at various meetings and conferences organised by ASEAN, G20, JICA, OECD, UNEP, and COBSEA
- ii. Creation of videos for awareness-raising and introduction of Regional Knowledge Centre for Marine Plastic Debris (<https://rkcmpd-eria.org/aboutus.php>)

■ Achievements

- (a) ERIA is preparing to conduct a capacity development programme for ASEAN member states on various topics related to marine plastic issue.

GEF

■ Measures

- (a) In the GEF-7, GEF is building on previous investments, analyses and partnerships to address the lifecycle of marine plastics with targeted interventions that emphasise circular solutions, public-private partnerships and on the ground investments. The projects most directly addressing marine plastic pollution are:
 - i. Ghana plastics/UNIDO - USD7 million – approved by the GEF Council in December, 2019
URL:
https://www.thegef.org/sites/default/files/project_documents/8da8f12a-cfde-e911-a83d-000d3a37557b_PIF_0.pdf
 - ii. Indonesia plastics/ADB - USD7 million – approved by the GEF Council in June, 2020
URL:
https://www.thegef.org/sites/default/files/web-documents/10546_MFA_PIF_v1.pdf
 - iii. Latin America plastics/UNEP (Colombia, Jamaica, Panama) - USD7 million - approved by the GEF Council in June, 2020
URL:
https://www.thegef.org/sites/default/files/web-documents/10547_MFA_PIF.pdf
 - iv. Southeast Asia plastics/ADB (Myanmar, Thailand, Viet Nam, Philippines, Indonesia) – USD2 million -

approved by GEF CEO in September, 2020

- (b) There are also a few projects that indirectly address plastic pollution, including:
 - i. ISLAND Program/ UNEP - USD56 million, which is addressing chemicals and waste in SIDS with a small aspect on knowledge sharing related to addressing single use plastics.
URL:
https://www.thegef.org/sites/default/files/web-documents/10185_PFD_SIDS_PFD.pdf
 - ii. Circular Economy Regional Programme Initiative (Near Zero Waste) / EBRD - USD 18 million
URL:
<https://www.thegef.org/project/circular-economy-regional-programme-initiative-near-zero-waste>

■ Achievements

- (a) GEF has been actively engaged as co-chair of the Platform for Accelerating the Circular Economy (PACE), which was launched by the World Economic Forum and is hosted by the World Resources Institute. PACE works with businesses and governments to pursue circular solutions to a range of themes, including plastics.
- (b) An offshoot of PACE, the Global Plastic Action Partnership (GPAP) is working in countries around the world to development and execute national action plans to address plastics. The GEF is on the Governing Council of GPAP and has aligned its investments with GPAP projects in Ghana and Indonesia.
URL:
<https://www.weforum.org/projects/circular-economy>
- (c) There are many other global plastic pollution reducing initiatives in which GEF has engaged, such as the New Plastic Economy, Trash Free Seas Alliance, Circulate Capital and the Alliance to End Plastic Waste.

IRP

■ Measures

- (a) The Government of Japan on behalf of the G20 commissioned the UN Environment International Resource Panel to undertake a 'think piece' to **qualitatively consider possible policy options to eliminate additional marine plastic litter entering the ocean by 2050.**

In this study, the International Resource Panel is working in partnership with SYSTEMIQ and the Pew Charitable Trusts which have a modelled scenario - the System Change Scenario - which highlights how, using a combination of existing approaches and technology, a reduction of over 80% in plastic entering the ocean can be achieved by 2040 relative to business-as-usual, but only if both "upstream" (pre-consumer) and "downstream" (post-consumer) interventions are combined (Lau et al. 2020). In addition to an 80% reduction in plastic pollution, this scenario has multiple co-benefits relative to BAU by 2040, including: a USD70 billion cost reduction to governments between 2021-2040, a 25% reduction of greenhouse gas emissions relative, a 55% reduction in

virgin plastic production and a net creation of 700,000 jobs, mainly in the Global South (The full results, methodology and assumptions of this scenario analysis, including quantitative metrics of the economic, environmental and social implications of each of the modelled scenarios can be found at www.systemiq.earth/breakingtheplasticwave.)

Guided by this System Change Scenario, a high-level workshop was held in March 2020 attended by representatives from the plastics industry, independent researchers, civil society and intergovernmental bodies, and developed a range of policy options and support actions to deliver the Osaka Blue Vision. The Think Piece will outline the key government policies that can create the enabling conditions to achieve the system interventions described above to reduce plastic leakage to the ocean to 5 million tonnes by 2040, and move further towards net zero by 2050. Preliminary results of the think piece will be delivered to a G20 meeting in September and the final report will be launched at UNEA5.

The International Resource Panel (<https://www.resourcepanel.org/about-us>) has a Steering Committee comprised of 28 governments, the European Commission and UNEP.

OECD

■ Measures

- (a) The OECD provides member and partner countries with policy guidance and recommendations to move towards a more sustainable plastics economy. This includes guidance on upstream plastics design, waste prevention, waste management and material recovery.
- (b) In addition to the lines of work outlined in the policy framework section, the OECD has worked on specific policy tools. In particular, the OECD has prepared guidance (published in 2001 and updated in 2016) for governments looking to implement Extended Producer Responsibility (EPR) schemes (this is not limited to but also relevant for plastics). The updated EPR guidance published in 2016 includes an assessment of how EPR schemes have been implemented in OECD countries, and their effectiveness in reaching a number of environmental and economic targets. One finding of the paper is that the presence of EPR schemes corresponds with increased material recovery and reduces waste disposal to landfills. The OECD is currently continuing its work on EPR, specifically looking at how eco-modulation of EPR fees can further incentivise design for environment (report is forthcoming).
- (c) The OECD Control System for waste recovery, embodied in the OECD Decision of the Council on the Control of Transboundary Movements of Wastes Destined for Recovery Operations (OECD-Legal-0266), is an international agreement, that aims at facilitating the trade of waste destined for recovery that can be recovered in an environmentally sound and economically efficient manner, by using a simplified procedure as well as a risk-based approach to assess the necessary level of control for materials. The OECD Decision is closely interlinked with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. Amendments to incorporate plastic waste have been agreed for both international agreements and will be effective as of 1 January 2021, regulating the trade of

certain plastic waste among OECD countries and between OECD and non-OECD countries. It was also agreed that the OECD Secretariat, through the Working Party on Resource Productivity and Waste, would implement a framework, to monitor the transboundary movement of plastics waste among OECD countries. A review of the OECD system of controls on plastic wastes is planned to take place for 2024.

URL:

<https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0266>

■ Achievements

- (a) OECD's work aims to provide the evidential basis for policy formulation and sharing of best practices amongst its members and observers in the form of **reports**, **workshops** and **international agreements**. A number of relevant publications and events are listed in the Further Information section.
- (b) Several **workshops** were hosted recently to facilitate discussion between member states, subject matter experts, industry, NGOs and other stakeholders on issues related to plastic waste and marine plastic litter. Notable events included:
 - i. A workshop on the impacts of trade on the circular economy
 - ii. Two technical workshops on mitigation and policy options to target microplastics emitted during product use from textiles and tyres
 - iii. A technical meeting on modelling plastics use and macroeconomics
 - iv. A Global Forum on sustainable plastics design
 - v. A policy workshop on reducing marine plastic litter
- (c) In addition, the OECD Secretariat has **facilitated negotiations** on incorporating the recent Basel waste list amendments into the OECD Decision on transboundary movements of waste (OECD-Legal-0266). As discussed in Section 3.6, amendments to both international agreements will become effective as of 1 January 2020 and will have a significant impact on plastic waste trade globally.

UNEP

■ Measures

- (a) UNEP, in cooperation with the Open Universiteit of the Netherlands, offers the free Massive Open Online Course (MOOC) on Marine Litter as a key activity of the Global Partnership on Marine Litter (GPML) as well as the Clean Seas Campaign. This MOOC has been created in order to stimulate leadership and offers opportunities for actionable and change-oriented learning, related to marine litter and microplastics, within the framework of the GPML. The 4th MOOC on Marine Litter start on 26 October 2020 with the Leadership Track now available for enrollment in 10 languages: Arabic, Chinese, English, French, Indonesian, Portuguese, Russian, Spanish, Thai and Vietnamese. Participants who wish to remain in the course will continue to the Expert Track, which is available in English, Russian and Spanish.

- (b) UNEP implemented "Promotion of countermeasures against marine plastic litter in Southeast Asia and India (CounterMEASURE) from May 2019 to May 2020 (USD 1.1 million) to generate knowledge related to plastic pollution leakage in Asia Pacific in order to improve policy implementation in the region. The project activities were carried out in a total of nine main sites in the Lower Mekong Basin Region and India. <https://countermeasure.asia/>. This project was funded by the Government of Japan.

- (c) Scaling up and expanding of partnerships with the Government of Japan, the project "Promotion of action against marine plastic litter in Asia and the Pacific (CounterMEASURE II)" was launched in May 2020 by Japan and UNEP in support of the G20 Implementation Framework for Actions on Marine Plastic Litter and the "Osaka Blue Ocean Vision". This project will generate scientific knowledge on plastic pollution in the Ganges, Mekong and selected rivers in Sri Lanka and Myanmar is generated, shared and disseminated to inform policy and decision-making processes at local, national, regional and global level. With the Convention on Migratory Species (CMS) Secretariat, the project has started effort to understand impact of plastic pollution on freshwater migratory species such as Ganges river dolphin and Mekong Giant Catfish.

- (d) The project, "Reducing marine litter by addressing the management of the plastic value chain in South-East Asia" (SEA circular) aims to reduce land-based plastic leakage into the marine environment and associated adverse impacts on people and ecosystems by ensuring that less plastic is wasted at source and the plastic value chain is managed sustainably in South-East Asia. The project promotes market-based solutions and appropriate regulatory and fiscal incentives; strengthen the science-basis for decision-making; create outreach and public awareness for behaviour change; and regional networking for coherent action and knowledge exchange. This implements key provisions of the COBSEA Regional Action Plan on Marine Litter, and directly delivers on Sustainable Development Goal 14 target 1 and Goal 12 target 5. The project promotes a human rights-based approach to identify people-centred and equitable solutions that protect disadvantaged groups including informal wasteworkers and coastal communities. Target countries are Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam, and China, Republic of Korea, and Singapore are Knowledge partners. This project was funded by the Government of Sweden.

- (e) The Coordinating Body on the Seas of East Asia (COBSEA) is a regional intergovernmental mechanism hosted by UNEP, and is one of 18 Regional Seas programmes. It is the decision-making body for the East Asian Seas Action Plan, bringing together nine countries – Cambodia, China, Indonesia, Republic of Korea, Malaysia, the Philippines, Thailand, Singapore and Viet Nam – in protection and sustainable development of the marine and coastal environment, including addressing marine pollution. In 2019, the 24th Intergovernmental Meeting of COBSEA adopted the revised Regional Action Plan on Marine Litter (RAP MALI) comprising four main action items and proposed sub-actions for further development by the WGML:

- i. Action 1. Preventing and reducing marine litter from land-based sources - Legal and economic instruments, Integrated waste management,

- Removal of existing litter and its disposal
 - ii. Action 2. Preventing and reducing marine litter from sea-based sources - Legal and economic instruments, Removal of existing litter and disposal
 - iii. Action 3. Monitoring and assessment of marine litter - Expert monitoring group (under WGML), Regional coherent national marine litter monitoring programmes (in line with regional guidance and global GESAMP guidelines)
 - iv. Action 4. Activities supporting the implementation of COBSEA RAP MALI - Regional and international cooperation and reporting (including synergies across regional frameworks such as ASEAN), National planning and policy frameworks, Research activities, Information, education, outreach and involvement of stakeholders, Training and capacity building
- (f) UNEP support India to engage globally on this issue of marine pollution under the 'Indo-Norway Marine Pollution Initiative'. This is one of the initiatives that are implemented in response to the Memorandum of Understanding (MoU) between the Government of India and the Government of Norway, signed on 8 January 2019 to cooperate on oceans and developing the blue economy, By the Letter of Intent signed on 11 February 2019 between Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India, and Ministry of Foreign Affairs, Norway, the initiative aims to strengthen approaches to tackle and prevent pollution from both land-based and offshore activities, in line with SDG 14 and its target 14.1, which by 2025 seeks to "prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution". UNEP supports the policy and technical capacity of the Marine Litter Cell in the Ministry through research, analysis, and stakeholder discussions over a period of three years under the project.
- (g) The International Environmental Technology Centre (IETC) of UNEP has been implementing the project on Environmentally Sound Management, Treatment and Technology on Plastic Waste in Asia (USD 909,090) in 2020 - 2021, based on the Osaka Blue Ocean Vision in the G20 Osaka Leaders' Declaration. The project focuses on environmentally-sound technologies for plastic waste management. The project has been analysing the needs and demands for plastic waste management mainly in Asia and plans to develop a digital platform where information of environmentally-sound technologies for plastic waste is disseminated, and the needs and demands of such technologies are matched. UNEP IETC applies integrated solid waste management for plastic waste and supports countries and cities to integrate plastic waste into a holistic waste management. The project results and achievements will be available in the second half of 2021. This project was funded by the Government of Japan.

In June 2020, UNEP IETC launched the UNEP Sustainability Action which is an international and intersectoral platform connecting UN organisations, governments, business, academia and citizens to promote sustainability with a particular focus on global environmental issues and resource efficiency towards achieving the Sustainable Development Goal 2030 (SDGs) and "Beyond SDGs". The UNEP Sustainability

Action team will conduct a series of awareness raising campaigns to change people's behaviour on sustainability, including combating the challenges on plastic issues.

Furthermore, UNEP IETC works with its collaborating centre, IGES Centre Collaborating with UNEP on Environmental Technologies, mainly for national and city waste management by supporting national and municipalities in policy development, institutional capacity building, knowledge production, dissemination and networking towards sustainable waste and resource management, UNEP IETC and CCET assists with the development of national, city, and regional-level waste management strategies consistent with a holistic waste management approach, aimed at addressing solid, liquid and gaseous waste in an integrated and complementary manner.

- (h) The Basel Convention Plastic Waste Amendment, the first and only global legally-binding instrument to control the transboundary movements of plastic waste and ensure environmentally sound management such waste was adopted at the COP-14 in 2019. The Basel Convention Secretariat is providing technical assistance to support the preparedness of countries to implement the Amendment which will become effective as of 1 January 2021. The Plastic Waste Amendment made plastic waste, including mixtures of such wastes subject to the prior informed consent (PIC) procedure; meaning that the exporting countries will need to formally obtain the decisions of importing countries as to whether they wish to receive future shipments of such plastic waste and ensure that the importing countries have the capacity to manage plastic waste in an environmentally-sound manner. The Amendment also clarified the scope of plastic wastes presumed to be hazardous and therefore subject to the PIC procedure. Furthermore, the plastic waste presumed not to be hazardous, destined for recycling and almost free from contamination and other types of waste would not be subject to the PIC procedure and could be freely traded. A group of cured resins, non-halogenated and fluorinated polymers, as well as mixtures of plastic wastes consisting of polyethylene (PE), polypropylene (PP) or polyethylene terephthalate (PET) were included in such list.
- (i) The Basel COP adopted decision BC-14/13 on further actions to address plastic waste under the Basel Convention. In section VI of the decision, the Conference of the Parties established a working group of the Plastic Waste Partnership (PWP). The goal of the PWP is to improve and promote the environmentally sound management of plastic wastes at the global, regional and national levels and prevent and minimise their generation so as to, among other things, reduce significantly and in the long-term eliminate the discharge of plastic waste and microplastics into the environment, in particular the marine environment. The PWP aims to mobilise business, government, academic and civil society resources, interests and expertise to improve and promote the environmentally sound management (ESM) of plastic waste at the global, regional and national levels and to prevent and minimize its generation. At its first face-to-face meeting, the PWP working group established project groups on (1) Plastic waste prevention and minimization, (2) Plastic waste collection, recycling and other recovery including financing and related markets, (3) Transboundary movements of plastic waste, and (4) Outreach, education and awareness-raising. To support the implementation of its workplan, the PWP will finance a

series of pilot projects to improve and promote the environmentally-sound management (ESM) of plastic waste and to prevent and minimise its generation. The PWP has more than 100 member entities from Governments, industry, intergovernmental organisations, civil society and regional centres.

■ Achievements

- (a) CounterMEASURE has generated insights into pathways of plastic leakage in Lower Mekong and India:
- i. Developed plastic leakage pathways and found that plastic pollution characteristics are site-specific. It also revealed that smaller cities with access to waterways and tributaries and without good waste collection coverage are equally as important as megacities in reducing plastic leakage into rivers. Ports and piers may also be key locations to reduce plastic leakage. These sites not only contribute to plastic leakage through improper waste practices, but also accumulate plastics that have leaked from upper segments of rivers. They could serve as strategic intervention points for plastic pollution reduction
 - ii. Microplastic testing along the Mekong confirmed that the river collects plastic debris as it flows. Lower parts of the Mekong, such as Can Tho in Viet Nam, contain significantly more microplastics than the upper river sections
 - iii. Local knowledge from all project sites was summarized in the report, “The Plastic Leakage Assessment and Monitoring in River Basins in Asia”, and identified four types of plastic leakage hotspots (namely plastic value chain hotspots; plastic leakage source hotspots; plastic accumulation hotspots, and plastic application hotspots), as well as the framework to identify plastic leakage pathways for evidence-based countermeasures
 - iv. Developed data visualisation platform to provide data and maps to public. <https://platform.countermeasure.asia/>
 - v. Organised several training sessions and workshops to develop regional capacity to tackle plastic leakage issues. A total of 5,085 people (government officials, experts and students) have been trained. The project established a network of experts, NGOs and agencies in Asia with expertise in plastic leakage assessment and monitoring. The project demonstrated how local stakeholders could come together and act on new knowledge, as shown by communities in India who organised a series of sensitisation exercises in the form of pledges, walks, workshops, clean-up events, and social media campaigns to collect vital information on plastic hotspots and leakage pathways as well as to galvanise action to curb plastic pollution
 - vi. Mobilised local experts and volunteer to promote Citizen Science. Using mobile application developed under the project, 886 illegal dumping sites, disposal sites are verified by local stakeholders
 - vii. Collections of 3,411.4 kg of waste in 21 clean-ups in the Mekong, Ganga basin (Yamuna Sub basin) and Mumbai resulting in identification of high risk plastic items such as disposable cutlery, multilayer food packaging, sachets (e.g. for tobacco), fishing gear, and items associated with worship and festivals (e.g. textiles, flowerpots) and mapping of 886 hotspots as origin of plastic pollution.
 - viii. 3,799 people along the Mekong and the Ganges were involved in identification, classification and prioritisation of plastic pollution hotspots along waterways and rivers contributing to the development of the framework for the Plastic Leakage Assessment and Monitoring in River Basins in Asia and the establishment of a network of technical and academic entities to address plastic pollution in rivers in Asia
 - ix. Microplastics surveys at 39 points in seven cities along the Mekong, Ganga and Yamuna river basins that confirmed that plastic pollution increases as rivers flow from the upper to the lower basins
 - x. Video clips of plastic pollution in rivers in Asia generated 107,166 views. TV programmes generated in collaboration with NDTV and Thai PBS reached a 1,631,200 viewership, contributing to higher awareness about role of stakeholders along waterways and rivers to reduce plastic pollution
 - xi. Identification of future intervention needs as:
 - Geolocation of plastic leakage hotspots and pathways using secondary and primary data
 - Promotion of standardised methodologies and tools, and capacity building for assessment and monitoring
 - Catalysing countermeasures with Open Data Policy and regional and national data platforms
 - Promotion of affordable microplastic testing and generation of source products database
 - Catalysing countermeasures with citizen engagement and media engagement
 - Elimination of unnecessary plastics while incentivizing of alternatives and recycling
 - Focus on sector/product specific management policies
 - Investment in waste management infrastructure in medium and smaller cities and expansion of waste collection coverage especially river and drain-side areas
 - COVID-19 - Strengthen mechanisms to deal with spike in plastic waste and plastic biomedical waste management infrastructure (SUPs from e-commerce, PPEs, sanitation material)
- (b) The revised COBSEA RAP MALI (2019) and the UNEP Northwest Pacific Action Plan (NOWPAP) Regional Action Plan on Marine Litter (RAP-MALI) have provided countries with an overarching regional framework for addressing marine litter as a transboundary issue. It promotes regionally coherent efforts to preventing and reducing marine litter from land-based and sea-based sources, monitoring and assessment, and creating enabling

conditions.

- (c) The SEA circular initiative (www.sea-circular.org) was launched on 10 September 2018 in the presence of the Minister of Environment and Natural Resources of Thailand.
- i. 153 entities, including businesses, three local government bodies, five educational institutions and three hospitals, have been trained in plastic footprint measurement and disclosure
 - ii. The project is supporting regionally coherent marine litter plans, including the development of a Malaysia Marine Litter Roadmap 2020 - 2030; an implementation roadmap for the Viet Nam National Action Plan for Management of Marine Plastic Litter; and technical assistance to inform marine litter planning in Cambodia
 - iii. Private sector roundtables identified business strategies to reducing plastic waste in times of COVID-19, i.e. with the hotel and tourism industry, food packaging and delivery businesses. Dialogue with 60 different companies from six industries have identified market transformative solutions and informed a business engagement strategy
 - iv. Six case studies have been collected and shared on policy and technology best-in-class practices from the private-sector, public-sector and civil society
 - v. The initiative has supported regional policy development, including the revised COBSEA Regional Action Plan on Marine Litter adopted at the COBSEA Intergovernmental Meeting in June 2019, and the establishment of a COBSEA Working Group on Marine Litter to guide regionally coherent action
 - vi. Working with the National University of Singapore (NUS), and with support from the Global Marine Litter Partnership (GPML), the project conducted a review of nearly 400 scientific publications on marine plastic pollution in 13 countries in South-East and East Asia in 2020. The review includes a comprehensive report of published plastic pollution research, policies and initiatives in ASEAN+3 and a searchable database of research and a series of graphics and is the foundation for the development of a regional research network on marine litter. The marine litter research database will be expanded and integrated in the East Asian Seas Regional Node of the GPML
 - vii. UNEP and COBSEA organised the first annual SEA of Solutions partnership event on marine litter to share knowledge and form partnerships to reduce plastic pollution in 2019 with over 600 stakeholders. A virtual SEA of Solutions will be held in November in 2020.
 - viii. A survey conducted with 400 consumers and 400 businesses across Viet Nam, the Philippines, Malaysia, Thailand and Indonesia showed increased awareness and concern about plastic waste but a disconnect to change in practices and any increase of responsibility. The Perceptions on

Plastic Waste report was launched virtually in August 2020

WB

■ Measures

- (a) The World Bank works with partners all over the world, both at government and multi-stakeholder levels, including through its engagement with the Global Partnership for Action on Plastics (GPAP). The World Bank has also initiated partnerships with UN agencies and other institutional alliances and partnerships (e.g. Plastic Waste Partnership created by the BRS secretariat, PREVENT alliance created by Germany) and relevant private initiatives and key stakeholders in-country. The World Bank also works with and supports regional blocs, such as the ASEAN in Asia, Organization of Eastern Caribbean States (OECS) in the Caribbean, and the West Africa Coastal Areas Management Program (WACA) platform in West Africa, and as such collaborate with other MDBs and active partners of these.



4. Challenges

As described in the previous chapters, the actions and measures on MPL have been increasingly promoted and implemented at the national, regional and global levels. However, challenges still remain that need to be tackled through country-based and international collaborative actions.

Challenges raised by countries such as the Netherlands, France, UK, US include: development of monitoring methodologies for microplastics; financial support to local authorities for relevant activities such as clean-ups; aligning multiple stakeholders in a joint manner; domestic markets for recycled materials; and postponing relevant meetings due to the outbreak of COVID-19.

Some challenges reported by other countries include: improvement of waste management; lack of EPR implementation and weak enhancement of legislation; lack of monitoring capacity and limited data collection; lack of economic incentives (e.g. reported by Azerbaijan, Maldives, Iran, Philippines, Solomon Islands, Sri Lanka).

Countries

Australia

- (a) Australia would like to improve environmentally responsible trade in recycled plastics in the Indo-Pacific region, and work with its neighbours to find practical solutions that keep plastic out of the ocean and remove what is already there.

Azerbaijan

- (a) Improvement of plastic and solid waste management has not been completed.
- (b) Pilot projects on sorting process are implemented in separate regions, however full sorting process is not yet applied across the country.
- (c) Effective management, collection and recycling of plastic waste is not fully functional due to non-implementation of Extended Producer Responsibility mechanism. The

system of packaging and recycling of packaging waste (the project is in the negotiation stage) has not been established.

Finland

- (a) The impacts of COVID-19 on the objectives on reducing marine litter and microplastics is as yet unknown, but it is likely that the use of single-use plastics has increased in certain domains, e.g. face masks, carry-on food, and possibly in the medical sector. This needs attention in the recovery phase.

France

- (a) Raise awareness about single-use plastics and the impacts of throwing litter on public roads.
- (b) Raise awareness on the impossibility to clean-up the sea and the necessity to develop actions on land.
- (c) Funding to clean-up accumulated waste (dumpsites, litter on riverbanks...).
- (d) Cost for local authorities to clean up litter (importance of ERP schemes).

Germany

- (a) **International cooperation:** Lack of marine litter data / monitoring capacities; Finance & capacity gap for sustainable waste management in partner countries.
- (b) Due to the COVID-19 pandemic, a number of physical meetings that had been planned to promote and elaborate on the aspect of marine litter, have been cancelled. Thus this year's report suffers from a lack of conclusions and impulses from platforms for mutual exchange, such as international conferences, workshops etc.

Islamic Republic of Iran

- (a) Legislative gaps in combating land-based and sea-based litter and microplastic:
 - i. A limited mandate on disposing garbage from land-based and sea-based into coastal area
 - ii. Lack of strategy framework for marine litter such as National Action Plan

- iii. Potential legislative gaps on production and use of materials causing marine litter
 - iv. Lack of mandate for reporting of lost gear and facilitating the sharing of this information to reduce gear conflict
- (b) Weak enforcement of existing legislation:
- i. Weak implementation of laws and regulations in disposing of litter and wastewater from different industries into the coastal area.
- (c) Lack of proper information and reporting from land-based sources :disposed to coastal environment.
- (d) Technology: Satellite monitoring systems like Clean Sea Net focus primarily on detecting oil discharges, and there is a lack of proper technologies to replace plastics and microplastics with environmentally-friendly materials.
- (e) Financial: Lack of adequate financial resources to combat different items of litter and microplastics originated from land or sea.

Japan

- (a) Spread efforts toward the achievement of the Osaka Blue Ocean Vision at the local government level.
- (b) Cooperate across sectors.
- (c) Identify and estimate the sources, pathways and fate of plastic waste leakage toward the development of source inventories.

Maldives

- (a) Enhancement of marine litter monitoring capacity.
- (b) Limited technical capacity for relevant scientific research.
- (c) Limitations in data collection and management.
- (d) Collection of marine litter distribution.
- (e) Lack of awareness on the linkages between health and marine pollution.
- (f) Lack of technology based sustainable mitigation and adaptation options/solutions to eradicate the adverse effects to climate conditions for Maldives from both land and marine transport sector.
- (g) Lack of financing mechanisms (incentives).
- (h) Managing Transboundary plastic waste.

Myanmar

- (a) Due to the lack of available/reliable data on waste generation and management (including marine litter data and recycling sectors/activities), it is difficult for policymakers to develop evidence-based policies to tackle marine litter/plastics issues.
- (b) There are gaps and challenges in implementing plastic

waste management in order to combat marine debris. Development and implementation of a long-term and robust strategy are necessary to prevent marine pollution and debris and promote circular economy approaches.

- (c) Stakeholder awareness should lead to an efficient and effective involvement in managing marine plastic debris.
- (d) Promoting collaborative actions with the private sector and industrial associations is necessary to implement measures to address marine debris issues.
- (e) In tackling marine litter and microplastics, new and innovative financial mechanisms and technical assistance are still necessary to address marine plastic pollution sustainably based on the national context and circumstances.

Netherlands

- (a) Developing of methodologies/technologies to monitor riverine litter and especially microplastics, even though there is still no scientific consensus on microplastics and the best way to measure them. Without a complete understanding of microplastics, their behaviour and risks associated with them, it is still necessary to take measures to reduce microplastic emissions from prioritised sources (car-tyres; textile; paints;).
- (b) Another challenge is aligning stakeholders to tackle litter on land in a joint fashion. Responsibilities are divided among many stakeholders and every actor does his/her own share, which does not makes it the most effective way to deal with this issue.

Norway

- (a) The lack of knowledge of the scope of plastic pollution in Norwegian waterways and seas, the most prevalent sources and the pathways of plastic litter remains a challenge in Norway.
- (b) Microplastics from land-based sources is estimated to be a proportionally larger challenge than macro-plastics, as a large part of the waste generated is being treated. In particular, microplastics discharge from abrasion from car tyres and emissions from artificial football turf constitute specific challenges in the region.
- (c) There is also a lack of knowledge about the total amount of pressure of plastic and microplastic pollution on marine ecosystems and thus on food safety.
- (d) Plastic consumption in Norway is expected to grow, and work is being done to put a circular economy in place for plastics to improve resource efficiency and to increase the use of secondary plastics as well as better design of products as part of cooperation with the European Union.
- (e) Lack of standardised methods for measuring the presence of marine plastic litter in the environment, and no global baseline against which to measure these achievements, as well as very little quantitative information is available on a global level. There is also a lack of indicators for quantitative reporting on national efforts more upstream. There is reason to believe that global awareness has increased as a result of the global attention and efforts

taken in various multilateral organisations. Norway believes that a new global agreement will provide an important framework for reporting on its achievements, both on a national level and as a collective global whole towards these various goals and targets.

Philippines

- (a) Harmonising initiatives across different stakeholders – There are many viewpoints on the issue of marine litter and many key players along the plastic value chain. Key intervention points have already been identified but activities done by stakeholders overlap and become redundant or even run contradictory to other initiatives in the absence of a coordinating body.
- (b) Lack of long-term resources – Although there are many project proposals and interested development partners, sustainability of marine litter interventions remain a problem due to the lack of resources (particularly in terms of funding and manpower) that can continue the project beyond the timeframe provided by proponents.
- (c) Need for baseline data on marine litter and microplastics.
- (d) Absence of standardised method/s for collection, monitoring, and assessment of marine litter and microplastics. These methods should also be harmonised in order to compare results among researchers, member countries, thus ensuring comparability and measuring progress.
- (e) Need for standard methodologies for laboratory analysis of marine litter and microplastics, whenever required.
- (f) Need for capacity building for the following:
 - i. Collection, monitoring, and assessment of marine litter and microplastics
 - ii. Conduct of laboratory analysis of marine litter and microplastics

Saudi Arabia

- (a) Developing a new infrastructure of waste management.
- (b) Enhancement of marine litter monitoring capacity.
- (c) Collection of marine litter distribution information.
- (d) Raising awareness among local governments, businesses and citizens.

Solomon Islands

- (a) Lack of waste management supporting infrastructure has been a major challenge over the years. For instance, there is only one managed landfill site in the capital city of Honiara. Over the years, space at this landfill site has shrunk and there is a need for a new landfill site to provide space for the increasing amount of waste generated. In the provinces there are no proper landfill sites, only unmanaged dumpsites. This is due to land issues as well as technical and financial capacity to develop landfills. There is a need to improve waste disposal site operations in the provincial towns.

(b) Very low budget allocation for the waste management sector. There is always limited financial support to keep the waste management system functional in an efficient manner. Storage, collection, transportation to final disposal site requires huge budget allocation. This is experience in the capital city, Honiara, as well as the provincial towns.

- (c) Lack of recycling facilities in country. Aluminum cans and scrap metal are the main recyclables that are exported out of the country. Other recyclable materials are either dumped in landfill or into the environment or stockpiled in various locations.
- (d) Limited Human Resources – The issue of limited human resources and capacity is also ongoing. While there is a certain level of capacity being developed at the national level, the number of staff being recruited is insufficient to deal with all the waste and pollution issues. The Honiara landfill for example has one dedicated staff as Landfill Manager, and for each province, the environmental health officers under Ministry of Health also manage waste and pollution issues. There are no dedicated waste management officers in the provinces. The underlying challenge is with the number of staff members being recruited and the ability of relevant institutions such as MECMD, Ministry of Health and Provincial governments to finance new positions.

Sri Lanka

- (a) Plastic waste collection network is very poor.
- (b) Though EPR system is proposed, legislations are not in place yet.
- (c) Recycling facilities are concentrated within cities and the long distance for transportation of waste for recycling is not economical.

Turkey

- (a) Marine litter is the outcome of technical, economic and social problems. The consuming behaviour of the public needs to be controlled, and proper waste management has to be implemented, in order to avoid pollution at source. Rapid actions to prevent littering that are taken in Turkey, hit a wall created by the COVID-19 epidemic. As a result of the increase in use of single use plastics and misbehaviour by people throwing used masks away, the waste management systems are not enough to tackle the pollution problem. To overcome this problem, new projects are proposed to develop capacity in this field.
- (b) In addition, Turkey faces a challenge with its marine litter monitoring programme due to having very long coastlines which need large budgets and require many experts in the field. Therefore it is hard to implement a detailed monitoring programme for every coastline and marine region with frequent sampling periods. However this challenge is partially overcome by focusing on the coastlines under pressure. Other challenges include sampling, analyzing and evaluation methodology, but the expertise in this area is increasing and this challenge will be overcome in the next few years.

UK

- (a) The outbreak of COVID-19 resulted in the postponement of the Commonwealth Clean Ocean Conference. The Conference was scheduled to be held in London from 17 – 19 March 2020, with Ministers, senior policymakers, scientists and representatives from civil society confirmed to attend the event. The conference was planned to be a global knowledge-sharing platform showcasing the successes of the projects active under the CCOA, including the Commonwealth Litter Programme (CLiP) and the CCOA Technical Assistance Facility (TAF), and others around the world. Until such a time as it is safe to meet in person, the UK is working to convene virtual meetings and webinars to ensure these important conversations continue.

US

(a) Recycling System Challenges

- i. Education and Outreach - It can be difficult for consumers to understand what materials can be recycled, how materials can be recycled, and where to recycle different materials. This confusion can lead to placing recyclables in the trash or throwing trash in the recycling bin or cart. Therefore, it is important to enhance education and outreach to consumers on the value of recycling and how to recycle properly.
- ii. Infrastructure - Some recycling infrastructure has not kept pace with today's waste stream. Communication between the manufacturers of new materials and products and the recycling industry needs to be enhanced to prepare for and optimally manage the recycling of new materials.
- iii. Markets for Secondary Materials - Domestic markets for recycled materials need to be strengthened in the US. There is also a need to better integrate recycled materials and end-of-life management into product and packaging designs. Improving communication among the different sectors of the recycling system is needed to strengthen the development of existing materials markets and to develop new innovative markets.
- iv. Measurement - Stakeholders across the recycling system agree that more consistent measurement methodologies are needed for measuring recycling system performance. These more standardised metrics can then be used to create effective goals and track progress.

International Organisations and NGOs

ADB

- (a) The limited movement brought about by the COVID-19 pandemic has postponed or delayed activities.



5. Best Practices

5.1. National level

Countries

Australia

- (a) Australia has also had success working with National, State and Territory and Local Governments to achieve positive outcomes for the Environment including:
 - i. In December 2018, Australia's national and jurisdictional Environment Ministers and the President of the Australian Local Government Association set a unified direction for waste and recycling in Australia by agreeing to a new National Waste Policy.
 - ii. At the COAG meeting on 13 March 2020, the Australian Government, along with all states and territories and local governments, agreed to introduce a ban on the export of waste plastic, paper, glass and tyres. The ban will have environmental benefits through an expanded local recycling industry, by building Australia's capacity to make valuable products from recycled materials, and making sure Australia take responsibility for its waste.

Azerbaijan

- (a) Application of the Extended Producer Responsibility and the draft Law on "Packaging and Circulation of Packaging Waste" is under negotiation.
- (b) Draft law on Disposable plastics bans has been submitted to the Government for approval.

Canada

■ Examples:

- (a) Canada-wide Action Plan for Extended Producer Responsibility.
URL: https://www.ccme.ca/en/current_priorities/waste/epr.html
- (b) Canadian Code of Conduct for Responsible Fishing Operations.
URL: <http://www.dfo-mpo.gc.ca/fisheries-peches/policies-politiques/cccrfo-cccpr-eng.html>
- (c) Solid waste management for northern and remote communities.
URL: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/environment/northern-remote-communities.html>
- (d) How Do We Use and Recover More Compostable Packaging? - Canadian Perspectives.
URL: http://www.nzwc.ca/focus/design/Documents/NZWC_HoWDoWeUseRecoverMoreCompostablePackaging.pdf
- (e) Online Design Portfolio Celebrating Canadian design for waste prevention and systems-thinking.
URL: <http://www.nzwc.ca/focus/design/portfolio>
- (f) 10,000 Changes public awareness campaign and education.
URL: <https://10000changes.ca/en/>
- (g) Plastic Wise public awareness campaign.
URL: <https://ocean.org/plastic-wise/>

Finland

- (a) Plastics Roadmap for Finland is a good example of a cross-sectorial programme for restricting loss of plastics to the environment, involving the industry as well as the civil society. The Finnish Marine Strategy with the Programme of Measures targeting also marine litter and microplastics is a good example of a programme with specific targets and focused measures for the marine environment and complementing the Plastics Roadmap, as well as coordination with other countries activities under the Regional Sea organisation.
- (b) Broad activities on data and knowledge gathering to form a firm basis for decisions. In the case of Finland, that encompasses scientific research, monitoring method development and monitoring of both macro litter and microplastics, as well as producing an assessment of most important sources and pathways of plastic litter to the sea.
- (c) Good collaboration across administrative boundaries and broad involvement of stakeholders in updating the programme of measures for marine litter and microplastics.
- (d) Adaptation of activities according to new information, i.e. "learning by doing".

France

- (a) The prohibition of single-use plastic items (which are most found in the marine environment) is a good way to develop alternatives and to provide citizens with a safer choice of products and develop new habits of consumption. It is also very coherent with a better use of resources and the implementation of a circular economy.
- (b) A citizen science platform is very useful to give a clear idea of all the clean-ups that occur and of the quantity (and qualification) of litter collected. Such a platform is a way to share the good guidelines to conduct clean-ups (to preserve biodiversity and the nesting of birds, etc.) and to communicate on this issue and on other actions, thereby linking the population who wants to get involved to the NGOs already in place.
- (c) The Ministry is developing the national charter "Beaches without plastic waste". Coastal municipalities are invited to sign this charter in order to implement 15 concrete actions of awareness-raising, clean-up and prevention of marine litter on their beaches. It is useful to shed a light on good practices, improve communication between municipalities and realise an annual evaluation of the actions.
- (d) The extended producer responsibility schemes serve to finance the collection and recycling of certain waste. They can be particularly relevant when certain waste is found which can be difficult to collect (for instance: cigarette butts).

Islamic Republic of Iran

- (a) Neustonic microplastic pollution in the Persian Gulf (2020), Alimehdiani et al, Marine Pollution Bulletin, Volume 150, January 2020: A comprehensive study on microplastics pollution in the surface waters of the Persian Gulf was done for the first time. Some of the results are shown below:
 - i. Microplastics were found at all the stations
 - ii. Fibres were the most abundant form of microplastics
 - iii. The most common polymer types in the samples were polyethylene and polypropylene
 - iv. The western part of the Persian Gulf is polluted more than the eastern part
- (b) Actions taken to reduce the usage of plastic material and replacement by environmentally-friendly material: Replacement of plastic bags with other environmentally-friendly products in product centres. Also, support for industries that produce recyclable disposable envelopes and containers, and using the potential of women for making textile bags.

Japan

- (a) Strengthening of domestic plastic waste management system

Japan is aiming to build a domestic resource circulation system by promptly installing plastic products recycling facilities, utilising the "Project for promoting installation of advanced equipment such as CO2 saving type recycling" (FY2020 budget: USD33.3 million). In addition, there is a plan to support recycling technology development of plastic products, as well as promoting efficient use of resources that have not been collected or recycled, under the "Project on building a recycling system for plastics to support decarbonised society" (FY2020 budget: USD35 million).

- (b) Formulation of Resource Circulation Strategy for Plastics

This strategy was formulated in May 2019 to comprehensively promote plastic resource circulation. The purpose of this strategy is to realise a sustainable society and pass on a rich environment to the next generation, while addressing a wide range of issues such as resource/waste constraints, marine litter countermeasures, global warming countermeasures and building a domestic resource circulating system that responds to bans on waste import by Asian countries. The strategy also aims to reduce the dependence on non-renewable resources, replace them with renewable resources, and collect and reuse the resources, taking into account economic and technological possibilities. The main focus points include thorough reduction; effective, efficient and sustainable recycling; promotion on usage of recycled materials and bioplastics use; marine plastic countermeasures; international deployment; and infrastructure development.

Maldives

- (a) BATNEEC (Best Available Techniques Not Entailing Excessive Costs) in RWMF (Regional Waste Management Facility) and 1 recycling facility in Maldives for fitting local scale:
 - i. Conduct feasibility study for establishing a recycling facility in Maldives
 - ii. Provision of sorting technologies and material recovery technologies in at least 1 RMWF (Regional Waste Management Facility)
- (b) Pass **legislation on Producer Responsibility on Packaging** whereby the roles and responsibilities of importers, producers, and distributors take full or partial economic and physical responsibility for the **environmental product design, separate collection, and end-of life management of single-use plastic products**.
- (c) Implement a mechanism to extract nonbiodegradable waste generated in inhabited islands and ensure safe transportation to Thilafushi annually until the Regional Waste Management and Treatment Facilities are operational.

Netherlands

- (a) The national Plastic Pact that was signed in February 2019. More than 75 parties (supermarkets, plastic packaging industry, recyclers, etc.) committed themselves to four concrete targets by 2025:
- (b) a. all single-use plastic products and packaging that the Plastics-Using Companies place on the Dutch market are reusable where possible and appropriate, and are in any case 100% recyclable b. each of the Plastics-Using Companies avoids unnecessary use of plastic materials through reduced use, more reuse and/or use of alternative, more sustainable materials, resulting in a 20% reduction in the amount of plastics (in kg) relative to the total amount of single-use products and packaging placed on the market, compared to the reference year (2017). c. the Plastics-Producing Companies will have created sufficient sorting and recycling capacity in the Netherlands so that at least 70% of all single-use plastic products and packaging (measured by weight) that reach the disposal stage in the Netherlands are recycled to a high standard; d. all single-use plastic products and packaging marketed by Plastic-Using Companies will contain the highest possible percentage of recycled plastics (in kg12), with each company achieving an average of at least 35%. Moreover, the plastics used will as much as possible be sustainably produced biobased plastics, in order to reduce the use of virgin fossil-based plastics.
- (c) Setting up a comprehensive microplastics programme to focus policy attention to the different sources of microplastics is a unique feature in the plastics policy. The Dutch Policy programme on microplastics focusses on:
 - i. Prevention and cleaning up of litter, specifically in rivers
 - ii. Behavioural change pilots (waste collection infrastructure, communication nudges etc.) are

done in collaboration with regional and local governments to prevent litter. Extended Producer Responsibility on 'throw-away plastics' (SUP-directive, see below)

- iii. Car tyres: communication campaign on tyre pressure and tyre type. Lobby towards the EU for including wear in the EU tyre label
- iv. Clothing: the Research Institute for health and the Environment (RIVM) recently published a study on the possible measures to prevent micro plastics from clothing. Currently, discussions are being taken on the next steps with the sector
- v. Microplastics from paints will be researched in 2020. The Netherlands is very positive about the EU ambition to also develop policy on microplastics, as outlined in their Circular Economy package.

Norway

- (a) The Pollution Control Act and its associated measures is a well-functioning management tool to prevent littering and marine plastic pollution in Norway.
- (b) Norway has a system that ensures a high return rate of plastic bottles, through an environmental tax on bottles and drinking cans. Bottles and cans get a lower tax depending on the return percentage. This gives the industry a good reason to establish return systems for bottles. The plastic bottles are subject to a deposit fee, which consumers get back when they return the bottles. 88% of plastic bottles are returned in Norway today. the deposit fee was raised in 2018 to give consumers an even stronger incentive.

Philippines

- (a) **Regular Clean-Up Activity by DENR and other concerned Agencies** - Based on the results of the Manila Bay Rehabilitation, a programmatic approach serves as a banner of best practice in addressing the complex land-to-sea problems of marine litter. Some activities housed within the programme include:
 - i. Closure of dumpsites near Manila Bay – DENR has invested in assisting with the closure of open dumpsites in 128 LGUs within the Manila Bay Region to reduce waste leakage in the environment
 - ii. Assistance to develop SWM Plans for LGUs in the Manila Bay Region – Around 97% of all LGUs in the Manila Bay Region have completed their SWM Plans which outlines local action on waste management. It is expected that SWM Plans will aid in reducing the amount of mis-managed waste that would leak into the marine environment
 - iii. Regular clean-ups of Manila Bay riverways – clean-ups of river systems by the Local Government Unit are done at least once a week. Around 452 clean-up activities have already been carried out with a total of 2,857,771.73 kgs of waste collected.
 - iv. Information Education Campaigns – EMB-DENR has been conducting local IEC campaigns to educate coastal communities of the impact of their waste on the marine environment

- v. Installation of Trash Traps along creeks and other tributaries to capture waste travelling downstream towards Manila Bay

(b) **Adopt an Estero/Waterbody Programme of DENR** - The programme aims to mobilise local communities into cleaning up waste and floating debris, including silt that has accumulated in the water bodies; institutionalise good sanitation and ecological solid waste management practices through Information, Education and Communication Campaign (IEC) to the communities to increase their awareness on the possible impact of poor sanitation to their health, such as possible incidence of water-borne diseases among residents within the vicinity of the waterways; strengthen the institutionalisation of solid waste management practices among LGUs and communities to reduce pollution load in the esteros and waterbodies; and institutionalise public-private-community partnership in environmental management. As a pro-active action of the Department, the AEWPB was implemented nationwide in order to prevent degradation and help improve the physical conditions of the water bodies in the country with DENR-EMB spearheading the implementation of the programme.

(c) **Refill Revolution (National and Local Level Collaboration)** - More than 500 residents of the City of San Fernando in Pampanga together with government employees celebrated and joined the annual Manila Bay day in a "Refill Revolution" event to promote economical ways of reusing and recycling plastic materials and to save the historic Manila Bay from plastic pollution. Local residents, who participated in the event organised by EMB and DENR-3 Manila Bay Coordinating Office, were able to refill their clean and reusable bottles, containers and eco bags with condiments, toiletries, and other household essentials for half of their actual retail price in supermarkets.

Republic of Korea

(a) Campaign for Zero Ocean Plastic

The Korean Government announced this year as the 'First year of a new era for Zero Marine Plastic' and it has pushed multiple public awareness campaigns as well as cross-sectoral clean-up activities such as '2019 International Coastal Clean-up ceremony' with the participation of more than 1,000 people from corporations, NGOs and schools.

(b) Comprehensive Plan on Marine Litter Reduction (2019)

Korea established the 'Comprehensive Plan on Marine Litter Reduction' in May 2020. The main purpose of the plan is to reduce marine plastic litter by half and it aims to achieve its goal by 2030 through the introduction of the life-cycle management system of marine plastic litter, enhanced marine plastic litter management infrastructure and promoting wide public participation and so on.

The plan will be implemented through close cooperation between the Ministry of Ocean and Fisheries of Korea (MOF), the Ministry of Environment of Korea (MOE), and the Ministry of Food and Drug Safety of Korea. The plan is in line with 'G20 Action Plan on Marine Litter' which was adopted at G20 Hamburg Summit in 2017 and it will further improve Korea's commitment on reducing marine plastic.

(c) Legislation of the Act on the Management Marine Debris and Polluted Marine Sediments

Establishment of the foundation for enforcement of the Coast Guard's duty to prevent waste from entering the ocean, introduction of a collection order to prevent occurrence.

(d) Establishment of Collection System for Broken Styrofoam Buoys

Abandoned Styrofoam buoys in the oceans are thought to be a major sea-based source of marine plastic litter, as they easily break into small pieces over time. The Ministry of Oceans and Fisheries established a Styrofoam Buoys Collection System which provides buoy collection sites to local communities where fishermen can dispose of Styrofoam buoys they no longer use

Saudi Arabia

(a) PIF investments in Saudi Investment Recycling Company (SIRC), Development Company, WASCO-MEPCO, LAVAGET, Dallah Al-Baraka.

Singapore

Comprehensive waste management system:

(a) Having a comprehensive and integrated solid waste management and collection system helps to minimise waste at source, reuse and recycle waste, and regulate waste collection and disposal so that waste will not be washed into the marine environment.

(b) The Sustainable Singapore Blueprint and the Zero Waste Masterplan will guide Singapore's efforts towards becoming a Zero Waste Nation.

(c) Related URL:

<https://towardszerowaste.sg/zero-waste-masterplan/>

(d) Prevention of littering, illegal dumping, release of waste into the ocean:

(e) Singapore has put in place a routine cleaning regime for all inland waterways to trap and remove land-based litter and flotsam. Damming up of tidal rivers to form reservoirs as source of water supply has also minimised litter from flowing out into the sea. Singapore also has a strict anti-littering enforcement regime aimed at deterring littering.

Solomon Islands

(a) Support provided to community initiatives through purchase of clean-up tools such as knives, wheelbarrows, grass cutters and rakes for their community clean-up programmes. This support is provided under the Ministry of Environment Waste Management Programme Development Budget.

(b) Clean up campaigns and awareness programmes during international events such as World Environment Day, World Oceans Day, Coral Triangle Day.

(c) Promotion of waste minimisation through the 4R (Refuse, Reduce, Reuse, Recycle) initiative. This includes waste

segregation at source and introduction of home composting of organic waste. Eco-school programmes and eco-bag pilot projects were implemented as part of this promotion.

Spain

- (a) Monitoring (macrolitter and microplastics) on beaches, floating litter, seabed litter, and also biota (target species differ in each marine region: in Spanish waters: marine turtles + other options for study such as fish or mussels). Also citizen science protocol may be of interest.
- (b) Implementation of a non-special fee cost recovery system for waste collection from vessels in national ports (implemented since 2011).
- (c) Fishing for litter initiatives. These are expected to be harmonised into a national umbrella, but currently there are relevant individual initiatives (some of them private) with good coverage in terms of number of ports and experience, that could be shared.

Sri Lanka

- (a) National Policy addressing marine plastic litter

Turkey

Zero waste project that is aimed to become widespread nationwide by 2023, and charging for plastic bags are the best practices to reduce plastic waste in Turkey.

- (a) **ZERO WASTE – BLUE AND THE NEW CIRCULAR ON MARINE LITTER MANAGEMENT**
 - i. The implementation of charging for plastic bags and the results of the “Zero Waste Project” (that aims collecting wastes separately at source and efficiently managing them) contribute greatly to the prevention of marine litter.
 - ii. The Zero Waste - Blue opening event was held in Istanbul on 10 June 2019 under the auspices of the esteemed wife of the President of the Republic of Turkey Mrs. Emine ERDOĞAN. This event aims to carry out systematic practices for the reduction of marine litter, to raise awareness and to raise environmental consciousness in society.
 - iii. The Zero Waste – Blue opening event initiated a campaign during the tourism season all over Turkey, to protect the marine environment and support cleaning activities. All citizens, non-governmental organisations, relevant institutions and media were invited to be sensitive about the protection of the marine environment and to support awareness-raising activities.
- (b) New legislation called “Circular on the Preparation and Implementation of Marine Litter Provincial Action Plans” was issued by the Ministry on 10 June 2019. According to the Environmental Law, measures were already taken to prevent littering from all land and sea-based activities. With this new legislation, the following actions are taken (in coordination with relevant institutions / organisations at regional and national level), in order to tackle marine

litter effectively:

- i. Preventing formation of marine litter, by taking special and locally taken precautions at the source
- ii. Integrated and planned works for the disposal of existing marine litter
- iii. Dissemination of training and awareness-raising activities at national level

UK

- (a) Through its 25 Year Environment Plan, the UK is committed to leading efforts to protect the marine environment. To tackle marine pollution, the UK will pursue a sustainable, international and transboundary approach that prioritises reducing global reliance on plastics, increases economically viable recycling processes, and promotes maritime practices that prevent harmful matter entering the seas. The Resources and Waste Strategy for England is framed by natural capital thinking and guided by two overarching objectives:
 - i. To maximise the value of resource use
 - ii. To minimise waste and its impact on the environment
- (b) This Strategy complements and helps deliver other government strategies which relate to the environment and include our ambitions to double resource productivity and eliminate avoidable waste by 2050. As well as the 25 Year Plan, they include: the Clean Growth Strategy, the Industrial Strategy, and the Litter Strategy. It also responds to the recommendations of the 2017 Government Office for Science Report, From Waste to Resource Productivity. This explores how waste can be treated as a valuable resource and this Strategy takes forward a number of its recommendations. The UK will deliver this through policies, actions and commitments which adhere to at least one of five strategic principles:
 - i. To provide the incentives, through regulatory or economic instruments if necessary and appropriate, and ensure the infrastructure, information and skills are in place, for people to do the right thing
 - ii. To prevent waste from occurring in the first place, and manage it better when it does
 - iii. To ensure that those who place on the market products which become waste to take greater responsibility for the costs of disposal – the ‘polluter pays’ principle
 - iv. To lead by example, both domestically and internationally
 - v. To not allow ambition to be undermined by criminality
- (c) The Strategy will contribute to the delivery of five strategic ambitions:
 - i. To work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025
 - ii. To work towards eliminating food waste to landfill by 2030
 - iii. To eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan
 - iv. To double resource productivity by 2050
 - v. To eliminate avoidable waste of all kinds by 2050

- (d) The UK also supports non-governmental organisations and projects including 'Fishing for Litter' and 'Marine Conservation Society'.

i. Fishing for Litter

The UK supports Fishing for Litter, and the development of similar local schemes. This is a voluntary, unpaid litter bycatch removal scheme by commercial fishermen, run by KIMO, which provides fishing boats with bags to dispose of marine-sourced litter collected during normal fishing operations

ii. Marine Conservation Society

The UK funds the Marine Conservation Society to record litter from sections of the coast which helps in monitoring the levels and trends of plastic pollution across several years. This data is used in combination with other monitoring data to inform our decisions about how to tackle marine litter. The UK welcomes these efforts which provide valuable citizen science data and, encourage more people to become stewards of the marine environment. According to the Marine Conservation Society's Great British Beach Clean, the number of plastic bags dropped by almost 40% between 2015, when England introduced a 5p single-use carrier bag charge, and 2016.

US

- (a) US EPA Trash Free Waters Best Practices Compendium: <https://www.epa.gov/trash-free-waters/aquatic-trash-prevention-national-great-practices-compendium>

- (b) NOAA Reports and Technical Memos on Marine Debris: <https://marinedebris.noaa.gov/reports-and-technical-memos#pub-term-39>

- (c) Microplastics Expert Workshop report: https://www.epa.gov/sites/production/files/2018-03/documents/microplastics_expert_workshop_report_final_12-4-17.pdf

EU

- (a) Comprehensive approach to plastic production, use and disposal in the EU's Plastic Strategy as part of the EU's Circular Economy Action Plan.
- (b) Binding legislation for monitoring and assessing marine litter, for defining acceptable thresholds, setting targets and for taking measures to reduce quantities of litter and harm from litter.
- (c) Integrated approach covering all sources of plastic litter and microplastics.
- (d) Legislation on the reduction of the impact of certain plastic products on the environment, targeting the top 10 single-use plastic products most often found on Europe's beaches and seas as well as fishing gear containing plastics.
- (e) Legislation on port reception facilities to reduce the discharges from ship generated waste, including from

fishing vessels.

- (f) Establishment of baselines for marine litter quantities in the coastal and marine environment.

- (g) Work towards the establishment of regulatory thresholds to prevent harm from litter in the marine coastal environment, including socio-economic aspects.

- (h) International and regional approach, coordination with neighbouring countries and third countries.

5.2. Local level

Countries

Azerbaijan

- (a) Increasing the recycling potential, application of bioplastic production and expansion of alternative packaging production.

Canada

■ Examples:

- (a) Best Practices Guide for the Collection and Handling of Polyethylene Plastic Bags and Film in Municipal Curbside Recycling Programs.

URL:

https://www.plastics.ca/?f=Recycling/file_file_files_Best_Practices_Guide.pdf&n=file_file_files_Best_Practices_Guide.pdf

- (b) Information for municipalities considering a ban on single-use shopping bags.

URL:

<https://www.recyc-quebec.gouv.qc.ca/municipalites/mieux-gener/informations-banissement-sacs-plastique>

France

- (a) An efficient waste management and fight against littering (fines).
- (b) Awareness-raising: since 2017, some municipalities have been implementing awareness-raising campaigns through the installation of "Here begins the sea" signs near sewer drains, in order to encourage citizens to dispose of their waste in the appropriate facilities and thus prevent litter.
- (c) Municipalities have put in place nets to prevent litter from reaching the sea and rivers.

Islamic Republic of Iran

- (a) Clean Beach activity for all of the coastal cities located in Hormozgan Province with the help of local communities and NGOs on a regular basis, usually the last Friday of the year.

Japan

- (a) Support for collection and treatment of coastal marine litter by local governments.

Japan promotes the collection and treatment of marine litter by local governments, through the "Project for promoting local measures against coastal marine debris" based on the "Marine Litter Act" (FY2020 budget: JPY3,695 million). In addition, fishery multi-functional measures (FY2020 budget: JPY2,999 million) are being used to encourage fishers to take action on the collection and treatment of marine litter including marine plastics, for the maintenance and recovery of the marine ecosystem. Furthermore, we encourage local governments to cooperate with fishers so that they bring back to port any litter that they collect while they are fishing, making use of subsidies under the "Project for promoting local measures against coastal marine debris" based on the "Marine Litter Act". In order to expand this effort, Japan started a demonstration project in FY2020. In addition, when fishers volunteer to collect marine litter, the national government has begun to provide full support for the litter processing cost, and has decided to support 23 prefectures. It also provides financial support for fishery cleanup activities carried out by fishers who were forced to suspend their operations due to the effects of COVID-19.

Maldives

- (a) Develop and implement an SOP for waste segregation at the household level in all administrative islands.
- (b) Revise the current waste management model employed in the inhabited islands, as per the recommendations of existing technical studies to ensure sustainability.
- (c) Develop a framework to conduct waste audit at island level.
- (d) Conduct comprehensive waste audits across all islands to identify volume of different waste streams and to formulate reduction targets.
- Incentivise plastic free packaging on locally made food and other products

Norway

- (a) The municipalities have a duty to collect and ensure proper treatment of municipal waste. The municipalities charge each household a fee that fully covers all costs of waste management, including collection, transport, reception, storage, treatment and control. More than 80% of the waste is either recycled or used as energy. Where landfills still have to be used, they have to be designed and monitored to prevent run-off, discharges to air and spreading of litter.

Philippines

- (a) **Local Regulation of Plastic and Plastic Products**

	No. of LGUs with Ordinance Regulating or Banning the Use of Plastic Bags
CAR	16
NCR	14
REGION 1	55
REGION 2	44
REGION 3	41
REGION 4A	66
REGION 7	32
REGION 10	21
REGION 11	6
Caraga	21
Total	316

Solomon Islands

- (a) Western Provincial Government has developed a policy to ban plastic bags use in their provincial town.
- (b) Two out of nine provincial governments recruit their own Environment Officers under their provincial plan and budget without relying on national government to send officers to their province.

US

- (a) NOAA's Marine Debris Program provides summaries of past projects undertaken at a local or community-level that use outreach and education to prevent marine debris: <https://marinedebris.noaa.gov/current-efforts/prevention>

5.3. Private sector

Countries

Azerbaijan

- (a) Investments are being made in the production of alternative packaging; the recycling market is being expanded. Implementation of pilot projects is supported.
- (b) Plastic packages collected in special containers located in parks, residential areas, universities are recycled within the pilot project of "My clean country", jointly implemented by the Coca-Cola Company, Ministry of Ecology and Natural Resources of Azerbaijan and Azerbaijan Diplomatic Academy.

Canada

■ Examples:

- (a) Circular Economy Business Toolkit.

URL:

<http://www.nzwc.ca/focus/circular-economy/toolkit/Pages/default.aspx>

- (b) Canadian Produce Marketing Association Preferred Plastics Guide.

URL:

https://www.cpm.ca/docs/default-source/industry/2020/CPMA_PREFERRED_PLASTICS_GUIDE_English.pdf

- (c) Operation Clean Sweep.

URL: <https://www.plastics.ca/PlasticTopics/OCS>

- (d) Black Plastic Recycling Technologies

URL:

<https://www.plastics.ca/?f=Recycling/CPIA%20Black%20Plastics%20Recycling%20Technology.pdf&n=CPIA+Black+Plastics+Recycling+Technology.pdf>

- (e) Plastics Optical Sorting Technologies.

URL:

https://www.plastics.ca/?f=file_one_pager_on_automated_sorting.pdf&n=file_one_pager_on_automated_sorting.pdf

France

- (a) Development of links with the industrial sector: the “National Pact on plastic packaging” allows a commitment from companies and the implementation of targets for recycling, reusing and reducing plastic packaging.

- (b) The Clean Sweep Operation is an international programme for actors in the plastic industry, and is designed to prevent the loss of plastic pellets into the aquatic environment. It provides companies with a guide on good practices to follow.

Islamic Republic of Iran

- (a) Clean-up of coastal areas of Nayband Bay (Bushehr Province) in collaboration with Nayband Petrochemical Unit: Clean-up activities carried out on Nayband beaches (approximately 8.5km) twice a month. Including installation of special buckets in five existing parking lots and boards with themes related to enhancing general environmental culture.

Japan

- (a) Clean Ocean Material Alliance

As marine plastic litter is a currently emerging global issue, worldwide efforts not only by governments but also by the private sector are urgently needed, such as prevention of littering, further enhancement of 3R (Reduce, Reuse and Recycle) initiatives, and further development and adoption of plastics with excellent biodegradability and alternative materials to plastics, such as paper.

In light of this situation, the “Clean Ocean Material Alliance” was established, consisting of a wide range of business operators that make up the supply chain, with a view to accelerating innovation through public-private partnerships by promoting new efforts on the 3Rs and alternative materials to ensure that the use of plastic products is more sustainable.

Maldives

- (a) Parley Maldives

Parley Maldives is active in implementing the Avoid. Intercept. Redesign (AIR) strategy. Parley have set up collection points at all major schools in Male’ and entered into agreements with fishing vessels to collect PET bottles every day. In 2016, Parley collected 75,000-80,000 five-litre PET bottles every day. Furthermore, only by intercepting the PET bottles that are going to Thilafushi, they exported 3 million five-litre PET bottles in December 2015 to an Adidas manufacturing facility in Taiwan, where they are being remade into fashion apparel, or sports wear. As of December 2019, Parley is in partnership with 88 schools, 46 resorts, 41 councils, 35 government organisations, 18 cafes in Male’, seven guesthouses, and two safaris. In total, from December 2016 to August 2019, Parley has sent 60 40ft containers weighing over 1000 tonnes to the Adidas facility in Taiwan.

- (b) Waste Management Corporation Limited (WAMCO)– (state owned company)

WAMCO is a state-owned company responsible for waste collection and disposal at regional facilities. Segregated plastics brought to WAMCO by individuals, clean-ups, or organisations are compacted or baled on site for exporting, to be recycled. In 2017, WAMCO generated a revenue of over one million Rufiyaa by exporting plastics, cardboard, and metals to regional facilities in Asia.

- (c) Secure Bag

Secure Bag is a private business engaged in the export of reusable, and recyclable materials since 2004. Their main business segment is exporting scrap metals, such as copper, aluminium, brass and batteries. Plastics are only a small portion of the business, which is done out of Corporate Social Responsibility (CSR). The company can be said to be the largest private buyer and collector of PET bottles in the Maldives. They mainly buy PET bottles from the second hand “Neelan” shop in the Maldives, from Maldives Water and Sewerage Company (MWSC), tourist resorts and other islands. They export 20-30 tonnes of PET every three to six months. In 2017, Secure Bag exported 80 tonnes of plastic waste, parings and scrap. This is an increase from the latest export value provided by Secure Bag in 2014, which was 55 tonnes.

Norway

- (a) According to the provisions in the Pollution Control Act, industry has the responsibility to ensure environmentally-sound treatment of its own plastic waste. The return system for bottles and drinking cans described above is an example of this.

Philippines

There have been several initiatives by the private sector to reduce the amount of plastic waste generation through:

- (a) Adoption/Use of Refill Stations (e.g. Human Heart Nature Refill Stations, NutriAsia Bring-Your-Own-Bottle (BYOB) Kiosks, and Wala Usik Sari-sari Store Program for MSMEs).
- (b) Community-based Plastic Waste Recovery Initiatives (e.g. Unilever's Kolek Kilo Kita para sa Walastik na Maynila and Nestle's May Balik! Sa Plastik! Program w/ Valenzuela City).
- (c) Product Redesign such as Coca-Cola's shift to clear sprite plastic bottles to increase local recycling recovery rates for their bottle packaging.

Saudi Arabia

- (a) Sabic innovative solutions in reducing plastic waste generation.

Singapore

Cooperation with stakeholders:

- (a) Singapore works with consumers, food and beverage establishments, supermarkets and hotels to reduce the use of disposables and encourages residents to recycle through the National Recycling Programme.

Solomon Islands

- (a) Solomon Breweries Ltd. operates a bottle reuse scheme whereby glass bottles are redeemed by retail distributors at SBD0.50 a bottle. Some tourist accommodation facilities similarly recycle bottles and aluminum cans, ultimately for export.
- (b) Establishment of the Solomon Islands Recycling and Waste Management Association to manage and recover recyclable materials in country.

Sri Lanka

- (a) The private sector is involved in establishing waste collection centres, beach clean-up programmes, and funding beach care-takers.

5.4. International cooperation

Countries

Australia

Australia is working with the international community to develop international best practice in the following ways:

- (a) The High Level Panel for a Sustainable Ocean Initiative

The High Level Panel for a Sustainable Ocean Economy is a two-year initiative consisting of heads of government from 14 nations, including Australia. Its role is to amplify and accelerate action for ocean health and wealth, and create a roadmap for a rapid transition to a sustainable ocean economy. Marine pollution and the circular economy is a key issue for the Panel.

- (b) IMO Project to reduce marine plastic litter from ships in the Pacific Islands region.

Australia is actively participating in the work of the International Maritime Organisation (IMO) including:

- i. IMO Action Plan and Strategy on marine litter from ships – Australia has contributed AUD60,000 to a study to determine the contribution of shipping to this issue. A key focus of the work is to address marine plastic pollution from fishing vessels, which is a key interest to the region
- ii. IMO Ship-Generated Garbage in the Pacific (Fiji and Papua New Guinea, AUD500,000). This project, being conducted by the IMO, will address the negative impacts caused by ship generated garbage, notably plastics, in the Pacific region. It will identify the extent of the current problem, the size of the active fleet, current practices on board, general awareness of the impacts of pollution to the marine environment caused by ship-generated waste, and other factors that impact on the amount of plastics in the ocean that originate from ships

Azerbaijan

- (a) Regional Project on "Addressing marine litter in the Caspian Sea region" was implemented within the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention). The main objective of the Project is to establish a sound network for addressing the marine litter and promoting cooperation of the relevant stakeholders as well as to develop a Caspian Marine Litter Action Plan to prevent and reduce marine litter in the Caspian Sea.
- (b) An online course on marine litter was organised under the project and by the United Nations Environment Programme (UNEP) as well.
- (c) As a result of this Project, the Regional Action Plan on Marine Litter of the Caspian Sea was prepared and submitted to the Tehran Convention Secretariat. The draft plan is expected to be approved at the Conference of the Parties to the Tehran Convention.

- (d) EU4 Environment project of the EU aims to support the development of Extended Producer Responsibility schemes.

Canada

■ Examples:

- (a) Ocean Plastics Charter.

URL: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html>

France

- (a) Participation at meetings and working groups (UN, G7, G20, RSC, EU, etc).
- (b) In 2017 and 2019, France organised workshops to share results and methodologies of existing projects analysing riverine plastic pollution. Harmonised methodologies are needed for long-term plastic pollution monitoring in rivers and this should help assess measures efficiently. The outputs of this workshop was an exchange of knowledge, improved relations between researchers and NGOs running riverine litter monitoring projects, and a first draft of a report summarising the advantages and disadvantages of every method discussed during the workshop.

Germany

- (a) Study: Prevention of Plastic Waste in Production and Consumption by Multi-Actor Partnerships (PREVENT Waste Alliance, Wuppertal Institute, 2020);

https://prevent-waste.net/wp-content/uploads/2020/07/Prevention_of_plastic_waste_in_production_and_consumption_final.pdf

The study presents experiences of the members of the PREVENT Waste Alliance and their partners in the prevention of plastic waste by multi-actor partnerships in the form of 17 best-practice examples. The study gives recommendations for the reduction of plastic waste including success factors for waste prevention, necessary next steps and conclusions regarding the necessary political framework conditions.

- (b) EPR Toolbox: Know-how to enable Extended Producer Responsibility (PREVENT Waste Alliance, cyclos GmbH); to be published soon;

<https://prevent-waste.net/en/newsarea/>

The EPR Toolbox is a collection of relevant knowledge on the topic of producer responsibility and packaging management. It is developed for the application in low- and middle-income countries compiling expert knowledge, information and training materials. The Toolbox is due to be publicly available on the PREVENT website in the third quarter of 2020.

- (c) Waste Flow Diagram (WFD): A rapid assessment tool for mapping waste flows and quantifying plastic leakage. Version 1.0. (GIZ, University of Leeds, Eawag and Wasteaware, 2020);

<https://plasticpollution.leeds.ac.uk/toolkits/wfd/>

The aim of the WFD is to map the flows of macro waste in a municipal solid waste management system, including quantifying the sources and fate of any plastic pollution. It allows for identification of high-priority sources of plastic pollution and to run scenarios facilitating informed interventions as well as the monitoring of implemented measures at the municipal level.

- (d) Source-to-Sea Framework for Marine Litter Prevention: Preventing Plastic Leakage from River Basins (SIWI, 2019); Report & Policy Brief;

https://www.siwi.org/wp-content/uploads/2019/08/Marine-Litter-Prevention_2019_WEBB.pdf;
https://www.siwi.org/wp-content/uploads/2019/08/Marine_Litter_Prevention_Policy_Brief_WEBB.pdf

Plastic flows in rivers can connect several regions and countries. Source-to-sea approaches can be helpful in dealing with fragmented governance systems along them. The Source-to-Sea Framework for Marine Litter Prevention is a holistic management approach that can be integrated with existing approaches such as Integrated Water Resources Management (IWRM), Coastal Zone Management (CZM) and Marine Spatial Planning (MSP) and can link these management approaches together.

- (e) Guidelines on Pre- and Co-processing of Waste in Cement Production – Use of waste as alternative fuel and raw material (GIZ 2020);

https://www.giz.de/en/downloads/giz-2020_en_guidelines-pre-coprocessing.pdf

The Guidelines offer updated and objective information about pre- and co-processing of waste in the cement industry. They contain knowledge and practical experiences gained in implementing pre- and co-processing since the first edition that served as a reference document in international agreements (e.g. Basel Convention for Hazardous Waste Treatment) and adaptation of various national guidelines.

- (f) Report: Marine Litter Prevention - Reducing plastic waste leakage into waterways and oceans through circular economy and sustainable waste management (GIZ 2018);

https://www.giz.de/en/downloads/giz2018_marine-litter-prevention_web.pdf

The study outlines potential approaches to prevent marine plastic litter. It is based on an extensive literature review as well as field visits, observations and interviews in the two case studies in Indonesia and Algeria. A methodological approach is elaborated to assess plastic waste leakage in qualitative and quantitative terms.

- (g) Circular Economy Briefing Series (GIZ 2018): Managing Packaging Waste in the ASEAN Region, Refund Systems for Packaging & Extended Producer Responsibility for Managing Packaging Waste (GIZ 2018);

https://www.giz.de/en/downloads/giz2018_ASEAN-Packaging-Waste_web.pdf;
https://www.giz.de/en/downloads/giz2018_Deposit-Refund-Packaging_web.pdf;
https://www.giz.de/en/downloads/giz2018_EPR-Packaging_web.pdf

Islamic Republic of Iran

- (a) Project: Addressing marine litter in the Caspian Sea region. Establishment of the regional network on marine litter.
- (b) The project focuses on the following issues:
 - i. The initial establishment of a regional network on marine litter consisting of five national networks
 - ii. Creating an opportunity for the members of the network to participate in the training courses provided by the relevant international organizations in the field of marine litter
 - iii. Leading a massive coastal clean-up campaign on Caspian Sea Day2019 using the regional network
 - iv. Providing assistance and support to the preparation of a Caspian Sea Action Plan on marine litter
- (c) Project outputs and activities:
 - i. Establishment of a regional network on marine litter
 - ii. Ensuring the participation of network members in training sessions
- (d) Involvement of the members of the network to participate in a massive coastal clean-up campaign on 2019 Caspian Sea Day 2019.

Japan

- (a) International cooperation targeting developing countries

Japan launched the “MARINE Initiative” to advance effective actions to combat marine plastic litter on a global scale focusing on (1) Management of waste, (2) Recovery of marine litter, (3) Innovation, and (4) Empowerment. Under this initiative, Japan will support empowerment in developing countries to promote waste management, recovery of marine litter and innovation, including provision of training for 10,000 officials engaging in waste management all over the world by 2025.

Japan will continue to provide support to ASEAN countries, based on the ASEAN+3 initiative, for various initiatives such as: awareness-raising of local governments, citizens and business units; development of national action plans on marine litter; capacity building for proper waste management including waste-to-energy infrastructure; as well as promoting knowledge-sharing through “Regional Knowledge Center for Marine Plastic Debris”.

Based on the MARINE Initiative, Japan, in cooperation with international organisations, has implemented several projects to tackle marine plastic pollution. For example, Japan has earmarked over USD1.1 million to support the United Nations Environment Programme (UNEP) for implementation of countermeasures against marine plastic litter in Southeast Asia by using novel technologies and methodologies to track plastic pollution to its sources along the Mekong and Ganges rivers. The project has also supported establishment of local partnerships for reducing plastic pollution.

Maldives

- (a) In 2020, Maldives joined the Commonwealth Clean Ocean Alliance, a working group aiming to take action on tackling marine plastic pollution.

Netherlands

- (a) European plastic pact

The Netherlands, together with France, initiated the European Plastics Pact to accelerate the shift towards the reuse and recycling of single-use plastic products and packaging. The Pact brings together over eighty governments, companies, non-governmental organisations and business associations from across Europe and frontrunners from across the whole value chain. They work together towards four goals aimed at design, responsible use, recycling capacity and the use of recycled content. The Pact supports this work by offering a unique platform to exchange ideas, display good practices and discuss challenges, needed to build a new circular default for all to follow.

Norway

- (a) Norway believes that there is a need for a new global agreement to more effectively and comprehensively address this issue across the whole lifecycle of plastics. While a large number of global and regional initiatives have been taken over the past years, many of these lack a permanent structure for follow-up, reporting and cooperation. Such an agreement should be developed and subsequently housed under the auspices of the UN system to ensure best possible legitimacy, participation and buy-in.

Saudi Arabia

- (a) According to MEWA analysis these are the countries relevant to KSA with best practices in Protected Marine Areas and Waste Management:
 - i. Spain – European Environmental Agency
 - ii. Sweden – Swedish Environmental Protection Agency
 - iii. Australia – Department of Environment and Energy
 - iv. Germany – German Federal Environmental Agency
 - v. US – United States Environmental Protection Agency
 - vi. UAE – Environment Agency Abu Dhabi
 - vii. UK – Environment Agency

Singapore

- (a) Singapore actively participates in regional and global marine litter platforms under ASEAN and the UN.

UK

- (a) Global Ghost Gear Initiative
 - i. In 2017 the UK signed up to the Global Ghost Gear Initiative (GGGI), the world-renowned experts and pioneering alliance of the fishing industry, private companies, NGOs and governments working to solve the global abandoned, lost and discarded fishing gear (ALDFG) problem. The UK funds and collaborates with GGGI on regional interventions via technical workshops, bespoke training and other outreach initiatives
 - ii. The UK supports the Global Ghost Gear Initiative (GGGI) and the Food and Agriculture Organisation of the United Nations (FAO) international best practices outlined in the GGGI Best Practice Framework for the Management of Fishing Gear and the FAO Voluntary Guidelines for the Marking of Fishing Gear
- (b) OSPAR
 - i. The UK is also committed to action through the OSPAR Convention (for the Protection of the Marine Environment of the North-East Atlantic) Regional Action Plan for Marine Litter, including a report on design and recycling of fishing gear which discusses best practice in North-East Atlantic

US

- (a) Case Study Report on Behavior Change in Local Systems to Mitigate Ocean Plastic Pollution:
<https://urban-links.org/resource/behavior-change-in-local-system-to-mitigate-ocean-plastic-pollution/>
- (b) Women's Economic Empowerment and Equality in Waste Management and Recycling: Latin America and the Caribbean Landscape:
<https://urban-links.org/resource/womens-economic-empowerment-and-equality-in-waste-management-and-recycling-latin-america-and-the-caribbean-landscape/>
- (c) Women's Economic Empowerment and Equality in Waste Management and Recycling: Global Landscape:
<https://urban-links.org/resource/womens-economic-empowerment-and-equality-in-waste-management-and-recycling/>
- (d) Understanding the Ocean Pollution Problem in Latin America & the Caribbean:
<https://urban-links.org/insight/understanding-the-ocean-pollution-problem-in-latin-america-the-caribbean/>

International Organisations and NGOs

Ellen MacArthur Foundation

- (a) The Ellen MacArthur Foundation's work with the Global Commitment - in collaboration with the UN Environment Programme - and Plastics Pact network, as well as its global analysis, have shown that no single organisation can tackle plastic waste or pollution in isolation. Unprecedented levels of international, multi-stakeholder, and cross-value chain collaboration are needed to move from a 'take-make-waste' economy to a circular economy in which plastic never becomes waste or pollution.
- (b) The Ellen MacArthur Foundation also works with other leading organisations such as the World Wide Fund for Nature (WWF), the World Economic Forum and its Global Plastic Action Partnership, the Minderoo Foundation, the PEW foundation and several others to help shape the required ecosystem, solutions, innovation and funding to create a circular economy for plastics.

ERIA

- (a) Participation in the 15th ASEAN Ministerial Meeting on the Environment (15th AMME).
- (b) Participation in the Informal Roundtable Discussion on the Topic of: "Governance of and Research on Marine Plastic Pollution in Southeast Asia".
- (c) Participation in the Technical Consultation of the COBSEA Working Group on Marine Litter.
- (d) ERIA-AIPA Online Joint Dialogue on Waste Management in the Context of COVID-19 Pandemic.
- (e) Participation in 5th meeting of the ASEAN Working Group on Chemicals and Waste.

Ocean Conservancy

- (a) In 2017, the GGGI developed the Best Practice Framework for the management of Fishing Gear (BPF), which has been adopted by a range of seafood companies and incorporated in national and regional marine litter and fisheries management action plans. This comprehensive guide covers a wide range of fishing gears and users, focusing on the most commonly-used gear types, both in industrial and artisanal fisheries. This document provides comprehensive guidance for minimising lost gear and its impacts across the entire seafood supply chain and includes recommendations for 10 stakeholder groups from fishers, to gear manufacturers, to Fisheries Control Agencies. GGGI is working to increase the uptake and adoption of the Best Practice Framework across stakeholder groups worldwide.

Related URL: <https://www.ghostgear.org/resources>

- (b) Ocean Conservancy, with funding from the US Department of State, is supporting Viet Nam in the implementation of its marine debris National Action plan (October 2019 - September 2021). Three indicators (i, ii,

iii) to measure its progress are:

- i. Support implementation of Viet Nam's NAP and influence similar progress on a regional and global level:
 - Number of fora where Viet Nam is featured as an emerging leader in marine debris reduction
 - Number of stakeholders convened
 - Marine debris featured as a central theme in high-level fora
 - NAP implementation roadmap developed
- ii. Increase access to financing for improved and more sustainable waste management:
 - Analysis produced of informal sector's degree of financial inclusion, along with set of recommendations for improving access to capital and related financial products
 - Number of potential partners identified and engaged
 - Number of pilot locations identified
 - Number of experts from financial technology sector convened
 - Set of recommendations complete and shared with stakeholders
- iii. Increase availability of Viet Nam-specific science to influence data-driven policymaking and identify opportunities for interventions to reduce leakage of waste into the ocean:
 - Number of protocols and other tools translated into Vietnamese
 - Number of baselines established
 - Number of waste flow assessments completed
 - Amount of data contributed to global databases (ie. NOAA or CleanSwell)
 - Number of Vietnamese partners trained in assessment protocols
 - Number of "train the trainer" sessions conducted

OECD

- (a) Exchanging experiences through policy dialogues is essential towards achieving long-term goals, such as the Osaka Blue Ocean Vision. During the OECD Workshop on Reducing Marine Plastic Litter, held in June 2020, participants discussed a number of policy approaches that can be used to tackle the issue of marine plastic litter. A Workshop Summary Record and presentation slides are available here: <http://oe.cd/mpl-workshop>
- (b) The forthcoming Global Plastics Outlook will develop state-of-the-art modelling insights into the plastics issue, in cooperation with a number of stakeholders. This will further provide insights into economic drivers and projections of plastic waste, its associated environmental and economic impacts, as well as the policy mixes that will be effective in curbing plastic related pollution and waste generation.

UNEP

- (a) The ad hoc open-ended expert group on marine litter and microplastics was established at the third session of the UN Environment Assembly (UNEA) in response to UNEP/EA.3/Res.7 Marine Litter and Microplastics. At the fourth session of UNEA, the mandate of the expert group was extended, pursuant to operative paragraph 7 of resolution UNEP/EA.4/Res.6 Marine plastic litter and microplastics.
- (b) CounterMEASURE project developed the framework "Plastic Leakage Assessment and Monitoring in River Basins in Asia" summarising the conceptual framework of plastic leakage assessment and monitoring and the methodology of data collection, analysis and visualisation that highlight the best practice and lesson learned from the field implementation. The Mekong River Commission and its member states, i.e. Cambodia, Laos PDR, Thailand, and Viet Nam, will develop a plastic waste management and monitoring plan for the Mekong River basin by 2022.
- (c) UNEP and COBSEA are strengthening the evidence base for informed decision-making and supporting marine litter planning, including:
 - i. Developing regional guidance on harmonised marine litter monitoring, identifying core objectives, common indicators and standards (to be completed in 2021) and an inventory on marine litter monitoring efforts in the region (to be completed in 2020)
 - ii. Working with the GPML and regional partners to deliver training on marine litter monitoring, building on a Training of Trainers held in September 2019
 - iii. Supporting countries to develop national marine litter plans in line with the RAP MALI, including the NAP in Viet Nam (2019), a Roadmap on Marine Litter in Malaysia (2021), support to develop NAPs in Cambodia and Thailand
 - iv. COBSEA countries have agreed to establish the East Asian Seas Regional Node of the GPML to provide knowledge management and networking services related to policy development, scientific evidence and research, and capacity building. The Node is under development and is planned to be established in 2021
- (d) The implementation of the Tide Turners Plastic Challenge in India received overwhelming response and appreciation from around the world and in India with young champions sharing their success stories across different social media channels and catching the attention of various industry leaders, political leaders and professionals across geographical boundaries. With a large youth engagement, this challenge has taken off and likely to yield great benefits.
- (e) Under BRS-Norad-1 project, best practices for tackling sources of plastic waste have been compiled. Based on this, strategies to prevent and minimise the generation of plastic waste from packaging, fishing and wastewater sectors have been developed for Ghana and Bangladesh and are to be developed in Sri Lanka. Best practices for the environmentally-sound management of plastic waste have also been compiled in the target countries.

WB

- (a) As ocean and marine litter does not respect national borders, and as explained in section 3.6, the World Bank is supporting regional cooperation on preventing and reducing marine litter and pollution through projects and platforms such as WACA, OECS, and ASEAN.
- (b) In terms of best practices at the national level, the World Bank supports countries in developing national inventories and developing roadmaps to help them meet their targets. The World Bank also works at the local level with provinces, states and other sub-national governments to address the different issues related to marine pollution. Since in many countries, solid waste management (SWM) falls under the responsibility of municipalities, support at the local level becomes an essential part of the solution to end leakages.



6. Further Information

Countries

Azerbaijan

- Action Plan on reducing negative environmental impacts of plastic packaging waste in the Republic of Azerbaijan: 2019 - 2020
<http://www.e-qanun.az/framework/41394>
- National Strategy for the Improvement of Solid Waste Management in the Republic of Azerbaijan: 2018 - 2022
<https://president.az/articles/30566> (click "PDF yükləyin" for download)
- The "European Union for Environment" (EU4Environment) Action targets six countries (Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Ukraine)
<http://www.oecd.org/site/eu4environment/>
- Caspian Environmental Information Center
<https://ceic-portal.net/>

Canada

- Canada's Zero Plastic Waste website:
www.canada.ca/zero-plastic-waste
- Ocean Plastics Charter:
<https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html>
- Canada-wide Strategy on Zero Plastic Waste:
https://www.ccme.ca/en/current_priorities/waste/waste/strategy-on-zero-plastic-waste.html
- Canada-wide Action Plan on Zero Plastic Waste (Phase 1 & Phase 2):
<https://www.ccme.ca/en/resources/waste/waste/plastic-waste.html>
- Prime Minister's announcement on federal actions to reduce plastic waste and pollution:
<https://pm.gc.ca/en/news/news-releases/2019/06/10/canada-ban-harmful-single-use-plastics-and-hold-companies-responsible>
- Reducing plastic waste in federal operations:
[https://www.canada.ca/en/treasury-board-](https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/government-canada-actions-plastic-waste-federal-operations.html)

[secretariat/services/innovation/greening-government/government-canada-actions-plastic-waste-federal-operations.html](https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/government-canada-actions-plastic-waste-federal-operations.html)

- Microbeads in Toiletries Regulations:
<https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/microbeads.html>
- Canada's Plastics Science Agenda:
<https://www.canada.ca/en/environment-climate-change/services/science-technology/canada-science-plastic-agenda.html>
- Draft Science Assessment of Plastic Pollution
<https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/draft-science-assessment-plastic-pollution.html>
- Economic study of the Canadian plastic industry, markets and waste: summary report
<http://publications.gc.ca/site/eng/9.871296/publication.html>

Chile

- <https://rechile.mma.gob.cl/>
- <http://www.chaobombillas.cl/>
- <https://fch.cl/en/initiative/new-plastics-economy/>

Finland

- The National Waste Plan – Towards a Recycling society:
https://www.ym.fi/en-US/The_environment/Waste/The_National_Waste_Plan
- Finland's Plastics Roadmap <https://muovitiekartta.fi/in-brief/>
- Green Deal on Plastic carrier bags:
https://www.ym.fi/en-US/The_environment/Waste/Plastic_Carrier_Bag_Agreement
- Finland's Marine Strategy and related documents:
https://www.ymparisto.fi/en-US/Sea/Protection_and_management_of_the_marine_environment/Development_of_Finlands_marine_strat

egy

- HELCOM Marine Litter Action Plan:
<http://www.helcom.fi/action-areas/marine-litter-and-noise/marine-litter/marine-litter-action-plan>
- International cooperation and EU affairs on waste management and recycling: https://www.ym.fi/en-US/The_environment/Waste/International_cooperation_and_EU_affairs

France

- Legislation for energy transition for green growth:
<https://www.ecologique-solidaire.gouv.fr/sites/default/files/Energy%20Transition%20for%20Green%20Growth%20Act%20in%20action%20-%20Regions%2C%20citizens%2C%20business%20%28%2032%20pages%20-%20juillet%202016%20-%20Versions%20anglaise%29.pdf>
- Legislation for Reclaiming biodiversity, nature and landscapes law
<https://www.gouvernement.fr/en/reclaiming-biodiversity-nature-and-landscapes>
- Legislation for trade relations balance in the agricultural sector and healthy and sustainable diet (EGAlim)
<https://www.gouvernement.fr/en/achieving-a-balance-in-trade-relations-in-the-agricultural-sector-and-healthy-and-sustainable>
- Anti waste law for a circular economy
<https://circulareconomy.europa.eu/platform/sites/default/files/anti-waste-law-in-the-daily-lives-of-french-people.pdf>

Germany

- BMZ Ten-point Plan of Action “Marine Conservation and Sustainable Fisheries”;
https://www.bmz.de/en/publications/topics/environment/Materialie262_marine_conservation.pdf
- PREVENT Waste Alliance;
<https://www.prevent-waste.net/en/>
- Global advisory project “Concepts for sustainable waste management and circular economy”;
<https://www.giz.de/en/worldwide/15109.html>
- Project “Integrated Waste Management and Marine Litter Prevention in the Western Balkans”;
<https://www.giz.de/en/worldwide/80948.html>
- Project “Rethinking Plastics – Circular Economy Solutions to Marine Litter” in South East Asia;
<https://beatplasticpollution.eu/rethinking-plastics/>
- Action Platform for Source-to-Sea Management (S2S Platform);
<https://www.siwi.org/what-we-do/source-to-sea/>
- S2S Pilot Projects;
<https://www.siwi.org/latest/ethiopia-and-viet-nam-pilot-source-to-sea-management/>
- PROBLUE Multi-Donor-Trust-Fund by the World Bank;
<https://www.worldbank.org/en/programs/problue/overview>

Japan

- National Action Plan for Marine Plastic Litter
https://www.cas.go.jp/jp/seisaku/kaiyo_plastic/dai1/pla_n.pdf
- Resource Circulation Strategy for Plastics
<https://www.env.go.jp/press/files/jp/111747.pdf>
- Subsidy for the local government (4. Removal of plastic litter from the ocean)
http://www.env.go.jp/guide/budget/2019/19juten-sesakushu/032_3012.pdf (Japanese only)
- Clean Ocean Material Alliance (5. Innovation through development and conversion of alternative materials)
<https://cloma.net/english/>
- Plastics Smart campaign (6. Collaboration with stakeholders)
<http://plastics-smart.env.go.jp/en/>

Maldives

- Strategic Action Plan 2019 - 2023
<https://presidency.gov.mv/SAP/>
- Environment Protection and Preservation Act 1993
<http://extwprlegs1.fao.org/docs/pdf/mdv18342.pdf>
- Waste Management Policy
<http://www.mvlaw.gov.mv/pdf/gavaid/minHousing/28.pdf>
- Maldives Clean Environment Project
<https://www.worldbank.org/en/news/loans-credits/2017/06/23/maldives-clean-environment-project>
- Greater Male' Waste to Energy Project- funded by Asian Development Bank (Zone 3)
<http://www.environment.gov.mv/v2/wp-content/files/publications/20180108-pub-market-sounding-info-brochure-for-potential-bidders.pdf>
- Parley Maldives
<https://www.parley.tv/updates/2019/9/25/future-island-nation>
- Master Plan for sustainable fisheries
<https://openjicareport.jica.go.jp/pdf/12301677.pdf>

Netherlands

- <https://www.circulairondernemen.nl/uploads/0e657a0084a4f18d2ff61335794ea3c7.pdf> (Plastic Pact - english)
- European Plastics Pact:
<https://europeanplasticspact.org/>

Philippines

- <https://emb.gov.ph/>
- **Battle for Manila Bay**
<https://www.denr.gov.ph/index.php?id=794&page=80&sort=&filter=&searchword=Adopt+an+Estero+Program>
http://water.emb.gov.ph/?page_id=45
- **Refill Revolution**
<https://www.pna.gov.ph/articles/1033511>
<https://r3.denr.gov.ph/index.php/86-region-news-items/418-denr-holds-%20qrefill-revolutionq-to-save-historic-manila-bay>

- <http://r3.emb.gov.ph/refill-revolution/>
- **National Solid Waste Management Status Report 2008 - 2018**
<https://emb.gov.ph/wp-content/uploads/2019/08/National-Solid-Waste-Management-Status-Report-2008-2018.pdf>
- **Private Industry Initiatives**
Human Heart Nature
<https://humanheartnature.com/buy/index.php/content/refilling-%20station-faq>
NutriAsia
<https://nutriasias.com/bring-your-own-bottle-and-refill-your-favorite-condiments-in-nutriasias-byob/>
Nestle
<https://www.nestle.com.ph/media/news/august-plastic-neutrality>
Unilever
<https://www.unilever.com.ph/news/news-and-features/2019/the-city-of-manila-launched.html>

Republic of Korea

- Marine Environment Information System: Offer comprehensive data on marine litter information of Korea to the public (<https://www.meis.go.kr>)

Saudi Arabia

- National Environmental Strategy
<https://www.mewa.gov.sa/en/Ministry/initiatives/SectorStrategy/Documents/6.%20BAH-MEWA-KSA%20NES-CEDA%20Executive%20Summary%20v3%2020180221%20ENG.pdf>

Singapore

- Singapore's Zero Waste Masterplan:
<https://towardszerowaste.sg/zero-waste-masterplan/>

Solomon Islands

- <https://solomonislands-data.sprep.org/>
- [https://authors.elsevier.com/sd/article/S0025-326X\(20\)30690-1](https://authors.elsevier.com/sd/article/S0025-326X(20)30690-1)
- <https://www.worldbank.org/en/news/feature/2019/06/05/meet-the-innovators-battling-plastic-waste-in-solomon-islands-rendy-solomon>

Spain

- <https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/basuras-marinas/default.aspx>

Turkey

- Zero Waste Website
<https://sifiratik.gov.tr/>
- Social Media Accounts
<https://www.facebook.com/sifiratikgovtr>
<https://twitter.com/sifiratikgovtr>
<https://www.instagram.com/sifiratikgovtr/>

UK

- 25 Year Environment Plan
<https://www.gov.uk/government/publications/25-year-environment-plan>
- Resources and Waste Strategy for England
<https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>
- UK Marine Strategy
<https://www.gov.uk/government/publications/marine-strategy-part-one-uk-updated-assessment-and-good-environmental-status>
- Commonwealth Blue Charter: Commonwealth Clean Ocean Alliance
<https://bluecharter.thecommonwealth.org/action-groups/marine-plastic-pollution/>
- Commonwealth Litter Programme
<https://www.cefas.co.uk/clip/resources/>

US

- 2016 - 2017 Interagency Marine Debris Coordinating Committee Biennial Report:
https://marinedebris.noaa.gov/sites/default/files/imdccc_report_2016_2017.pdf
- National Parks Service Ocean Plastics:
<https://www.nps.gov/subjects/oceans/ocean-plastics.htm>
- U.S. Agency for International Development Ocean Plastics: <https://urban-links.org/issue/ocean-plastic-pollution/>
- U.S. Agency for International Development program Clean Cities Blue Ocean:
<https://urban-links.org/project/ccbo/>
- U.S. Agency for International Development Municipal Waste Recycling Program: <https://urban-links.org/project/municipal-waste-recycling-program-mwrp/>
- U.S. EPA SMM Facts and Figures Report:
<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management-0>
- U.S. EPA The Framework for Advancing the U.S. Recycling System:
https://www.epa.gov/sites/production/files/2019-11/documents/national_framework.pdf
- NOAA's Marine Debris Program:
<https://marinedebris.noaa.gov/>

EU

- A European Strategy for Plastics in a Circular Economy:
<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516265440535&uri=COM:2018:28:FIN>
- Directive on the reduction of the impact of certain plastic products on the environment (SUP Directive):
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0904&from=EN>

- International Ocean Governance: an agenda for the future of our oceans
https://ec.europa.eu/maritimeaffairs/policy/ocean-governance_en
- Directive on port reception facilities:
<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1570190453030&uri=CELEX:32019L0883>
- Marine Strategy Framework Directive:
https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm
- Good Environmental Status – Marine Litter:
https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/index_en.htm
- Revision of the Waste Legislation:
https://ec.europa.eu/environment/waste/target_review.htm

International Organisations and NGOs

ADB

- ADB Strategy2030
<https://www.adb.org/documents/strategy-2030-prosperous-inclusive-resilient-sustainable-asia-pacific>
- [Strategy 2030 Operational Plan for Priority 3](#); Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 2019 - 2024
<https://www.adb.org/documents/strategy-2030-op3-climate-change-resilience-sustainability#:~:text=Publications-,Operational%20Priority%203%3A%20Tackling%20Climate%20Change%2C%20Building%20Climate%20and%20Disaster,Resilience%2C%20and%20Enhancing%20Environmental%20Sustainability&text=The%20third%20operational%20priority%20of,resilience%2C%20and%20enhance%20environmental%20sustainability>
- [Strategy 2030 Operational Plan for Priority 4: Making Cities More Livable, 2019-2024](#)
<https://www.adb.org/sites/default/files/institutional-document/495966/strategy-2030-op4-livable-cities.pdf>
- Action Plan on Healthy Oceans and Sustainable Blue Economies [Regional Technical Assistance: Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific](#)
<https://www.adb.org/projects/53068-001/main>

Ellen MacArthur Foundation

- Further information on the New Plastics Economy initiative, including the Global Commitment and Plastics Pact Network, can be found at:
<https://www.ellenmacarthurfoundation.org/our-work/activities/new-plastics-economy>

ERIA

- Regional Knowledge Centre for Marine Plastic Debris (RKC-MPD)
<https://rkcmpd-eria.org/>
- Plastic Recycling: Policies and Good Practices in Asia
<https://rkcmpd-eria.org/publicationsdetails.php?pid=15>
- Tackling marine plastic pollution together
<https://www.thejakartapost.com/news/2019/08/01/tackling-marine-plastic-pollution-together.html>
- Sea change: Japanese leads on marine plastic litter
<https://www.eastasiaforum.org/2019/10/26/sea-change-japanese-leads-on-marine-plastic-litter/>
- Strengthening Waste Management Policies to Mitigate the COVID-19 Pandemic
<https://www.eria.org/publications/strengthening-waste-management-policies-to-mitigate-the-covid-19-pandemic/>
- Environment in Mekong: Climate Change, Deforestation, Marine Plastics, and Urbanisation Challenges of Sustainability (published soon)
- Local Multi-Stakeholder Partnership on Marine Plastics: Good Practices in Asia (published soon)
- Challenges of EPR Implementation in Developing Countries (published soon)

OECD

- OECD (2018) Improving Markets for Recycled Plastics: Trends, Prospects and Policy Responses
<https://www.oecd.org/environment/improving-markets-for-recycled-plastics-9789264301016-en.htm>
- OECD (2019) Policy approaches to incentivise sustainable plastic design
https://www.oecd-ilibrary.org/environment/policy-approaches-to-incentivise-sustainable-plastic-design_233ac351-en
- OECD (2016) Extended Producer Responsibility: Updated Guidance for Efficient Waste Management
<https://www.oecd.org/environment/extended-producer-responsibility-9789264256385-en.htm>
- OECD (2018) Extended Producer Responsibility and the Impact of Online Sales
https://www.oecd-ilibrary.org/environment/extended-producer-responsibility-epr-and-the-impact-of-online-sales_cde28569-en
- OECD (2019) Waste Management and the Circular Economy in Selected OECD Countries
https://www.oecd-ilibrary.org/environment/waste-management-and-the-circular-economy-in-selected-oecd-countries_9789264309395-en
- Official website of OECD Environment Directorate:
<https://www.oecd.org/environment>
- OECD Workshop on Reducing Marine Plastic Litter (11 - 12 June 2020)
<https://www.oecd.org/environment/waste/oecdworkshopreducingmarineplasticlitter.htm>
- Technical Expert Workshop on Modelling Approaches for Plastics Use Projections (22 - 23 June 2020)

<http://www.oecd.org/environment/waste/technical-expert-workshop-on-modelling-approaches-for-plastics-use-projections.htm>

- OECD Workshop on Microplastics from Tyre Wear: Knowledge, Mitigation Measures, and Policy Options (18-20 May 2020)
<http://www.oecd.org/water/oecd-workshop-on-microplastics-from-tyre-wear-knowledge-mitigation-measures-and-policy-options.htm>
- OECD Workshop on Microplastics from Synthetic Textiles in the Environment: Knowledge, Mitigation and Policy (11 February 2020)
<http://www.oecd.org/water/OECD-Workshop-on-Microplastics-from-Synthetic-Textiles-in-the-Environment-Knowledge-Mitigation-and-Policy.htm>
- OECD Global Forum on “Plastics in a Circular Economy: Design of Sustainable Plastics from a Chemicals Perspective” (28-30 May 2018).
<https://www.oecd.org/fr/securitechimique/gestion-risques/global-forum-on-environment-plastics-in-a-circular-economy.htm>

UNEP

- The ad hoc open-ended expert group on marine litter and microplastics
<https://environmentassembly.unenvironment.org/expert-group-on-marine-litter>
Promotion of countermeasures against marine plastic litter in Southeast Asia and India (CounterMEASURE)
<https://www.conference2020.countermeasure.asia/>
<https://countermeasure.asia/>
- Reducing marine litter by addressing the management of the plastic value chain in South-East Asia
<https://www.sea-circular.org/>
- The Coordinating Body on the Seas of East Asia (COBSEA)
<https://www.unenvironment.org/cobsea/>
- UNEP Northwest Pacific Action Plan (NOWPAP) Regional Action Plan on Marine Litter (RAP-MALI)
<https://www.unenvironment.org/nowpap/>
- Global Partnership on Marine Litter
<https://www.gpmarinelitter.org/>
- UNEP International Environmental Technology Centre:
<https://www.unenvironment.org/ietc/>
- UNEP Sustainability Action:
<https://www.unenvironment.org/ietc/what-we-do/unep-sustainability-action>
- Basel Convention Plastic Waste Partnership
<http://www.basel.int/tabid/8096/Default.aspx?Basel>
- Convention Plastic Waste Amendment
<http://www.basel.int/tabid/8426/Default.aspx>
- Basel Convention technical assistance
<http://www.basel.int/tabid/8341/Default.aspx>

Reports:

- **Global Waste Management Outlook:**
<https://www.unenvironment.org/ietc/resources/publications/global-waste-management-outlook>
- **Asia Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/asia-waste-management-outlook>

- **Central Asia Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/central-asia-waste-management-outlook>
- **SIDS Waste Management Outlook**
<https://www.unenvironment.org/ietc/node/44>
- **Waste Management Outlook for Latin America and the Caribbean**
<https://www.unenvironment.org/ietc/resources/publications/waste-management-outlook-latin-america-and-caribbean>
- **Africa Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/africa-waste-management-outlook>
- **Waste Management Outlook for Mountain Regions: Sources and Solutions**
<https://www.unenvironment.org/ietc/resources/publications/waste-management-outlook-mountain-regions-sources-and-solutions>
- **Single-Use Plastics: A Roadmap for Sustainability**
<https://www.unenvironment.org/ietc/resources/publications/single-use-plastics-roadmap-sustainability>
- **Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle - Income Countries**
<https://www.unenvironment.org/ietc/resources/policy-and-strategy/strategies-reduce-marine-plastic-pollution-land-based-sources-low-and-middle-income-countries>

The ad hoc open-ended expert group on marine litter and microplastics

<https://environmentassembly.unenvironment.org/expert-group-on-marine-litter>

Promotion of countermeasures against marine plastic litter in Southeast Asia and India (CounterMEASURE)
<https://www.conference2020.countermeasure.asia/>
<https://countermeasure.asia/>

- Reducing marine litter by addressing the management of the plastic value chain in South-East Asia <https://www.sea-circular.org/>
- The Coordinating Body on the Seas of East Asia (COBSEA)
<https://www.unenvironment.org/cobsea/>
- UNEP Northwest Pacific Action Plan (NOWPAP) Regional Action Plan on Marine Litter (RAP-MALI)
<https://www.unenvironment.org/nowpap/>
- **Global Partnership on Marine Litter**
<https://www.gpmarinelitter.org/>
- **UNEP International Environmental Technology Centre:**
<https://www.unenvironment.org/ietc/>
- **UNEP Sustainability Action:**
<https://www.unenvironment.org/ietc/what-we-do/unep-sustainability-action>
- **Basel Convention Plastic Waste Partnership**
<http://www.basel.int/tabid/8096/Default.aspx?Basel>

- **Convention Plastic Waste Amendment**
<http://www.basel.int/tabid/8426/Default.aspx>
- **Basel Convention technical assistance**
<http://www.basel.int/tabid/8341/Default.aspx>

Reports

- **Global Waste Management Outlook:**
<https://www.unenvironment.org/ietc/resources/publications/global-waste-management-outlook>
- **Asia Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/asia-waste-management-outlook>
- **Central Asia Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/central-asia-waste-management-outlook>
- **SIDS Waste Management Outlook**
<https://www.unenvironment.org/ietc/node/44>
- **Waste Management Outlook for Latin America and the Caribbean**
<https://www.unenvironment.org/ietc/resources/publications/waste-management-outlook-latin-america-and-caribbean>
- **Africa Waste Management Outlook**
<https://www.unenvironment.org/ietc/resources/publications/africa-waste-management-outlook>
- **Waste Management Outlook for Mountain Regions: Sources and Solutions**
<https://www.unenvironment.org/ietc/resources/publications/waste-management-outlook-mountain-regions-sources-and-solutions>
- **Single-Use Plastics: A Roadmap for Sustainability**
<https://www.unenvironment.org/ietc/resources/publications/single-use-plastics-roadmap-sustainability>
- **Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle - Income Countries**
<https://www.unenvironment.org/ietc/resources/policy-and-strategy/strategies-reduce-marine-plastic-pollution-land-based-sources-low-and>

<https://openknowledge.worldbank.org/bitstream/handle/10986/32245/9781464814594.pdf?sequence=3&isAllowed=y>

- **Marine Pollution in the Caribbean: Not a Minute to Waste**
<http://documents.worldbank.org/curated/en/482391554225185720/pdf/Marine-Pollution-in-the-Caribbean-Not-a-Minute-to-Waste.pdf>
- **Indonesia Marine Debris Hotspot Assessment (report published in FY18)**
<http://documents.worldbank.org/curated/en/983771527663689822/pdf/126686-29-5-2018-14-18-6-SynthesisReportFullReportAPRILFINAL.pdf>
- **The Blue Economy Development Framework (brochure)**
<http://pubdocs.worldbank.org/en/915191553141931804/BH023-BlueEconomy-digital.pdf>
- **The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries**
<https://openknowledge.worldbank.org/handle/10986/26843>

WB

Programmes

- PROBLUE website:
<https://www.worldbank.org/en/programs/problue>
- PROBLUE Annual Report 2019
<https://documents.worldbank.org/curated/en/559541570047740595/pdf/PROBLUE-2019-Annual-Report.pdf>
- Indonesia Sustainable Oceans Program
<https://www.worldbank.org/en/programs/indonesia-sustainable-oceans-program>

Reports

- **What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050**
<https://openknowledge.worldbank.org/bitstream/handle/10986/30317/9781464813290.pdf?sequence=12&isAllowed=y>
- **Quality Unknown: The Invisible Water Crisis**

“G20 Report on Actions against Marine Plastic Litter” 2019 and 2020 are downloadable on the G20 MPL portal site (<https://g20mpl.org/>)