G20 Report on Actions against Marine Plastic Litter

Third Information Sharing based on the G20 Implementation Framework

2021

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 May 2021 and October 2021.

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 / NGOs. For details of actions, please refer to the direct links in each description.

2nd edition (As of 19 November 2021)

Acknowledgements

This report is the third compilation report on policies and measures taken / to be taken by the countries, regions and organisations. This report was produced under the responsibility of the Ministry of Ecological Transition, Government of Italy. The Ministry of the Environment, Japan, and the Institute for Global Environmental Strategies (IGES) have provided support for the development of the G20 Report on Actions against Marine Plastic Litter since June 2019. For the second edition of the 2021 Report, the Italian National Institute for Environmental Protection and Research (ISPRA) also contributed to developing the summary infographics over the past three years from 2019 to 2021.

Previous volumes were successfully published over the last two years, with the first report published in October 2019 and the second in November 2020. This report aims to identify the current policy status on marine plastic litter taken by the G20 members, countries and regions sharing the OBOV, as well as international organisations and NGOs. For this year's report, 27 non-G20 countries and 13 organisations contributed to the report by providing their inputs on a voluntary basis. From the G20 members, 15 countries continuously and newly submitted their actions for this year.

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

【Countries】
Australia
Bahrain
Bangladesh
Bhutan
Brunei Darussalam
Canada
Chile
Dominican Republic
Fiji
Finland
France
Germany
Indonesia
Iraq
Italy
Japan
Kiribati
Maldives
Mexico
Myanmar
Netherlands
New Zealand
Norway
Palau
Pakistan
Panama
Papua New Guinea
People's Republic of China (China)
Philippines
Republic of Korea
Samoa
Saudi Arabia
Singapore
Spain
Sri Lanka
Sultanate of Oman (Oman)
Thailand
Turkey
United Kingdom (UK)
United States of America (US)
Uruguay
European Union (EU)

【International organisations / NGOs】
Asian Development Bank (ADB)
Association of Southeast Asian Nations (ASEAN)
Economic Research Institute for ASEAN and East Asia (ERIA)
Ellen MacArthur Foundation
Global Environment Facility (GEF)
International Atomic Energy Agency (IAEA)
International Resource Panel (IRP)
Ocean Conservancy
Organisation for Economic Co-operation and Development (OECD)
United Nations Environment Programme (UNEP)
United Nations Industrial Development Organization (UNIDO)
World Bank (WB)
World Economic Forum Global Plastic Action Partnership (WEF GPAP)

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With Italy and Japan holding the G20 Presidency in 2021 and 2019, we would like to thank the participating 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
GEF	Global Environment Facility
GPAP	Global Plastics Action Partnership
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
IAEA	International Atomic Energy Agency
IMO	International Maritime Organization
IRP	International Resource Panel
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
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

UNCTAD	United Nations Conference on Trade and Development
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
WB	World Bank

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1. Introduction

Plastics are versatile with wide-ranging applications, and they play a significant role in human livelihoods. However, the amount of plastic in the world's oceans has been rapidly growing year by year (Borrelle et al., 2020; Jambeck et al., 2015; Ryberg et al., 2019), posing a threat to the environment and to our way of life. Previous reports have shown that national and local governments, organisations and businesses are increasingly taking action on plastics. G20 Implementation Framework for Actions on Marine Plastic Litter was an initiative initiated in 2019, with 20 countries in 2019 and 25 countries and 10 organisations in 2020 sharing their actions. Actions on MPL are increasing worldwide, but progress is still limited. For example, the pandemic is leading to a surge in production and consumption of masks and protective equipment, which is made up of mainly plastic products. UNCTAD reported that the pandemic has increased marine plastic 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 marine plastic litter problem. We, the G20 members and countries/organisations, must continue and accelerate our MPL actions in parallel with our response to infectious diseases.

Marine litter issues have been intensively discussed at various international fora, such as UNEA (United Nations Environment Assembly), G7 and G20. In light of the "G20 Action Plan on Marine Litter" agreed at the G20 Hamburg summit in July 2017, the "G20 Implementation Framework for Actions on Marine Plastic Litter" was established at the G20 Ministerial Meeting in June 2019 in Karuizawa. Maintaining this momentum, the "Osaka Blue Ocean Vision (OBOV)", aims to reduce additional pollution by MPL to zero by 2050 through a comprehensive life-cycle approach. OBOV 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. 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 87 countries and regions as of July 2021.

Under the G20 Implementation Framework, G20 members will facilitate action implementation 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 voluntarily, and promote policies and measures through peer learning from best practices.

With this as a background, the first G20 report on Actions against Marine Plastic Litter was published in 2019, and the second report was published in 2020, extending the reporting scope to the countries and regions sharing the OBOV as well as institutions beyond the G20 community. Furthermore, for efficient information-sharing, updating and outreach to the wider international community, the reported information and recent relevant news are regularly updated at the G20 Marine Plastic Litter portal site (https://g20mpl.org/archives/1087).

The third G20 report on Actions against Marine Plastic Litter was prepared in 2021, under the leadership of the Government of Italy, which holds the 2021 G20 Presidency, and the Government of Japan. The report will help to promote policies and measures through information and knowledge-sharing based on the G20 Implementation Framework, among and beyond the G20 member states. This report covers actions by the G20 members, and other countries and regions that share the Osaka Blue Ocean Vision, as well as relevant key international organisations.

We hope that this report will contribute to supporting the improvement of ongoing actions and assist in the development of new actions through mutual learning. The report will accelerate the shift from the planning phase to actual implementation by accelerating internationally harmonised and coordinated actions.

2. Policy Framework for MPL

A total of 41 countries have responded to report their activities, and the responses are reflected in the report. The European Union also responded and its actions are included in the report; however, EU entries are excluded in the graphs and tables to maintain consistency among countries and avoid double-counting them. Responses are presented in the following sub-categories: policy framework; measures; and challenges.

Out of 41 countries, 26 countries have national action plans/strategies on marine plastic litter, and 35 countries have legislations on marine plastic litter. Nineteen countries, slightly less than half, have MPL-specific indicators to monitor and evaluate progress towards reducing MPL. Based on the responses, action to abate MPL is entrenched in the policy process, with countries starting to take measures.

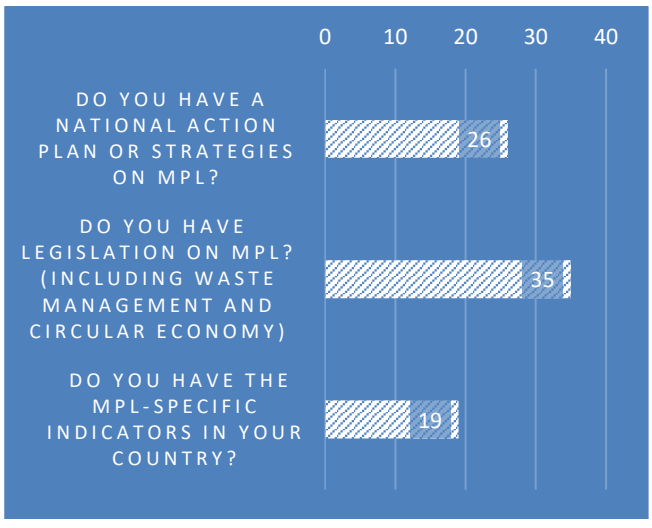


Figure 1: Countries - Policy Framework for MPL*

*Number of countries responded YES among 41 responses

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

Countries

Australia

(a) 2018 National Waste Policy

The 2018 National Waste Policy, agreed by all Australian governments, sets the agenda for waste to 2030. The Policy is underpinned by circular economy principles and recognises that by applying the principles of a circular economy, we can support better and repeated use of our resources.. A copy of the Policy is available at

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

(b) 2019 National Waste Policy Action Plan

The 2019 National Waste Policy Action Plan drives implementation of the National Waste Policy, including by setting seven National Waste Targets to reduce waste, increase recycling and importantly develop markets for recycled materials. A copy of the Action Plan is available at

https://www.environment.gov.au/protection/waste/publications/national-waste-policy-action-plan

(c) 2021 National Plastics Plan

On 2 March 2020 the Australian Government convened Australia's first ever National Plastics Summit, bringing together over 200 leaders from government, industry, and the community to identify solutions to Australia's plastic challenge. The National Plastics Plan takes a whole-of-lifecycle approach to the plastic challenge, including: product design, increasing Australia's recycling capacity, stimulating demand for recycled content, and preventing plastics from leaking into the environment. The plan addresses:

i. Avoiding problematic and unnecessary plastics
ii. The need for Australia to take responsibility for our plastic waste

iii. Supporting consumer action on plastics
iv. Plastic-free oceans and waterways
v. Research and innovation, to inform good decisions and unlock new opportunities.

A copy of the National Plastics Plan is available at

https://www.environment.gov.au/protection/waste/plastics-and-packaging/national-plastics-plan

The National Plastics Plan includes actions for industry to phase out certain problematic plastics informed by the Australian Packaging Covenant Organisation's (APCO) consultation with industry and governments.

These material streams are informed by APCO's consultation with industry and government over the past two years on problematic and unnecessary single-use plastic packaging. Government is working with industry on steps to phase out these products.

To provide greater clarity to industry, on 15 April 2021 Environment Ministers identified eight problematic and unnecessary single-use plastic product types for industry to phase out nationally by 2025 (or sooner in some cases) under the National Waste Policy Action Plan.

Canada

(a) Canada-wide Strategy on Zero Plastic Waste

(b) Canada-wide Action Plan on Zero Plastic Waste

Canada remains committed to implementing its comprehensive agenda toward its vision of zero plastic waste by 2030. Canada is taking a circular economy approach with a range of actions spanning the plastics lifecycle to prevent and reduce plastic waste and pollution from land and aquatic-based sources. This is complemented by actions at all levels of government, industry and civil society.

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 organizations 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.

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, focuses government efforts across a broad range of activities. This includes: achieving consistent extended producer responsibility programs (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; tools for green procurement practices; and, a roadmap to create targets for specific sectors to strengthen value retention processes such as repair, reuse, refurbishment and remanufacture.

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

(a) National Marine Litter and Microplastics Management Strategy

The general objective of this strategy is to articulate the national public policy around the management of marine litter and microplastics, providing national guidelines to focus the management, promote coordination and coherence of the actions of the different sectors with competence. In order to reduce, recover and prevent the entry of waste into aquatic ecosystems and its impacts. In addition, this strategy considers an action plan for the period 2020-2030.

The specific objectives are:
i. Identify the stakeholders that directly and indirectly generate waste from terrestrial and marine sources.
ii. Establish and apply voluntary and mandatory environmental management instruments to prevent the generation of marine debris at its source and reduce its impacts.
iii. Encourage research and innovation for the development and refinement of new methodologies and solutions for monitoring, prevention, reuse and recovery of marine debris.
iv. Build capacity and knowledge among stakeholders involved in the generation and management of marine debris.
v. 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.
vi. 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.

China

(a) Opinions on Further Strengthening Plastic Pollution Control (2020)

China issued the Opinions on Further Strengthening Plastic Pollution Control, which requires positive response to plastic pollution, orderly prohibits or restricts part of the production, sale and use of plastic products, and actively promotes their substitutes. It also requests to increase the supply of green products, develop a robust plastic waste recycling system, and establish and improve the system of management of each link. According to the Opinions, we will take strong, orderly and effective measures to control plastic pollution. The main objectives are to take the lead in banning and restricting the production, sale, and use of some plastic products in specific regions and areas. By 2022, the consumption of single-use plastic products will be on a trajectory of significant reduction, substitute products will be promoted, and the proportion of the plastic wastes that can be used as resources and energy will be significantly increased. For sectors facing grave plastic pollution, such as e-commerce, express and food delivery, a number of models of plastics reduction and green logistics will be developed in mainstreaming and optimization programmes. By 2025, the management system for the production, distribution, consumption, recycling, and disposal of plastic products will be basically established, and a joint governance system engaging multiple stakeholders will be basically built. The development capacity of substitute products will be further improved. The amount of plastic wastes in key cities will be significantly reduced, and plastic pollution will be effectively controlled.

Dominican Republic

(a) No, but we are currently working on the development of the National Action Plan for Marine Litter.

Fiji

(a) The Government has a national strategy to protect its Environment. The environment covers its land, foreshore and marine resource's.

The following are the national instruments that are in place for Fiji.

i. The National Waste Strategy, which covers the management of solid waste. It specifies the existing waste management practices and outlines the inadequacies that may be existing within the system. It also provides a foundation from which future waste management activities and mechanisms may be developed and implemented at the national/local/community level(s).

ii. Clean Environment Policy The objectives of this policy are to promote self-compliance towards an anti-litter behavior in Fiji; to reduce litter through effective implementation of campaigns, readiness programs, and volunteer activities; and effective enforcement of the Litter Act 2008 and where applicable other relevant national legislations.

iii. National Oceans Policy (NOP) 2020 2030

The vision of the NOP is to provide for "a healthy ocean that sustains the livelihoods and the aspirations of the current and future generations of Fiji." The mission of the NOP is "to secure and sustainably manage all of Fiji's ocean and marine resources."

Finland

(a) Reduce and Refuse, Recycle and Replace – A Plastics Roadmap to Finland

The roadmap 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. URL: https://muovitiekartta.fi/in-brief/

(b) The National Waste Plan From Recycling to a Circular Economy National Waste Plan to 2023

The plan 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) The Strategic Programme to Promote a Circular Economy

The Strategic Programme to Promote a Circular Economy (2021) sets out objectives for the use of natural resources and measures through which society based on a carbon-neutral circular economy will provide a sustainable foundation for our economy in 2035. The renewal of waste laws is included into the strategy.

(d) Finnish Marine Strategy

Finnish Marine Strategy includes a Monitoring Programme (2020 – 2026), Programme of Measures (2016–2021). They are based on a regularly updated status assessment of the Finnish marine environment (last update 2018) with targets that guide towards good environmental status, GES (last update for years 2018 – 2024). Marine litter is one of the eleven descriptors of good environmental status that are in the focus of the work.

(e) EU and HELCOM Action Plans to be nationally implemented

i. 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),

ii. Closing the loop- An EU action plan for the Circular Economy, CEAP (14972/15),

iii. A European Strategy for Plastics in a Circular Economy (5477/18)

iv. Regional Sea Convention level work: HELCOM Baltic Sea Action Plan and Marine Litter Action Plan (both are to be updated in 2021).

France

(a) Action Plan for the Marine Environment (Marine Strategy Framework Directive – MSFD)

The MSFD aims at protecting more effectively the marine environment across Europe by achieving the good environmental status of the EU marine waters. The comprehensive document identifies the main pressures such as marine litter. EU member States have drawn up a programme of measures to attain good environmental status. The first cycle of the programme is currently under review and the measures of the second cycle are being drafted.

(b) Biodiversity plan: Target - “0 plastic reaching the sea in 2025”

The biodiversity plan has been published in 2018. It sets up the national strategy to protect biodiversity. It tackles multiple aspects of the national environmental policy such as climate adaptation and plastic reduction.

(c) National Roadmap against Marine Litter “0 plastic reaching the sea 2019-2025”

The objective of this roadmap is ambitious: ending the dumping of plastic waste at sea by 2025 by implementing 35 actions aiming at preventing plastic pollution and raising awareness. This national roadmap translates the biodiversity plan into concrete actions.

(d) National Roadmap for a circular economy

https://circulareconomy.europa.eu/platform/fr/node/783

It aims at achieving a transition towards a circular economy by providing national citizens with the means to adopt a more sustainable consumption and make progress in waste separation.

Indonesia

(a) National Action Plan on Marine Debris Management

The National Action Plan consists of 5 strategies to combat marine debris, namely:

i. National movement to increase awareness of stakeholders;
ii. Waste management sourced from the land;
iii. Prevention of waste in coastal and the sea;
iv. Funding mechanism, institutional strengthening;
v. Research and development.

Italy

(a) Implementation of the Directive 2008/56/EC on Marine litter and update of the Regional Plan on the Marine Litter Management in the Mediterranean

According to the art. 11 of the Marine Strategy Framework Directive, every 6 years, Italy plans and reports to the European Commission the assessment status of the marine environment related to the Descriptor 10 (Marine litter). To do that, a National Monitoring program on beach litter, floating litter, seafloor litter, microlitter, and litter ingested by biota is developed in order to verify the trends. To achieve the good environmental status according to the art. 13 of the MSFD, programme of measures are defined. Moreover, Italy according to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Barcelona Convention) is upgrading the Regional Plan on the Marine Litter Management in the Mediterranean.

Japan

(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 realize a world without additional pollution from plastic in the following eight fields: 1) Sound waste management systems, 2) Prevention of littering, illegal dumping and unintentional leakage of waste into the oceans, 3) Collection of scattered waste on land, 4) Innovation in development of and conversion to alternative materials, 5) Removal of plastic litter from the oceans, 6) Multi-stakeholder involvement and awareness-raising, 7) Sharing scientific information and knowledge: R&D and Monitoring, and 8) International cooperation.

Kiribati

(a) Kiribati Waste Management and Resource Recovery Strategy (KWMRRS 2020-2030)

The KWMRRS was developed through a series of national consultations and meetings with key stakeholders to identify priority waste streams and gaps to be addressed. The development of the Strategy coincides with the formulation of the new Kiribati Development Plan (KDP 2020-23) and the new Kiribati Integrated Environment Policy (KIEP 2020-2036). The Strategy contributes to the thematic area on waste and pollution priorities under these important national documents. The Strategy also complements the Kiribati Vision 2016-2036 (KV20), the national overarching development policy through supporting the tourism and fisheries, two priority sectors identified under the policy. The goals of the KWMRRS are aligned well with the Cleaner Pacific 2025 and Sustainable Development Goals 2030. One of the priority waste streams identified in the KWMRRS is plastic waste and there are strategic actions in the KWMRRS that would be implemented at the national level to address plastic pollution including the ban to import certain plastic products and litter enforcement under the current Environment Act 2007.

Maldives

(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 5 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 4 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.

With regard to the policy 3: Reduce Plastic Pollution by Phasing out single-use plastic, Ministry has formulated the National Single-use plastic phaseout plan. This document outlines the strategic implementation plan for Single Use Plastic (SUP) Phaseout in the Maldives by 2023.

This Phaseout policy is a commitment of the Government of Maldives to phaseout SUP's in the Maldives by 2023, as per the Maldives Parliament Resolution of 2019 (1-ﷺ/2019/EC) and His Excellency President Ibrahim Mohamed Solih's declaration at the 74th session of the United Nation's General Assembly (UNGA) in 2019.

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

Single-use plastic phaseout 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. Furthermore, SUP phaseout plan is in align with the National Strategic Action Plan (NSAP 2019-2023) of the Government and Sustainable Development Goal (SDG) 14 and 15 to affirm the Maldives commitment to phaseout single use plastic by 2023.

The key policy measures of the plan are:

i. Ban 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

The first phase of the SUP plan began with the ratification of the 18th Amendment to Import Export Act law on December 22, 2020 which vests the president with powers to ban the import of SUP's. Therefore, the Presidential Decree to ban the import of single-use plastics identified in the SUP phaseout plan was announced in December 30, 2020. However, due to the pandemic some of the timelines in the decree was delayed and the new effective dates are announced by the president on 31st May 2021. There are total 13 single-use plastic items subjected to ban under the presidential decree. These items will be phaseout in different timelines. Therefore, total 8 single-use plastic items will be banned effective from 01st June 2021. The Presidential Decree to ban the import of single-use plastics identified in the SUP will be available via

https://www.environment.gov.mv/v2/en/download/11888

The legal framework to ban the production and usage of these single-use plastic items has been submitted to People's Majilis. Therefore, as soon as this gets approved the production and usage of the single-use plastic items will also be in effective from the date approved by the Majilis.

Overview of the policy instruments in the single-use plastic phaseout plan.

(a) Policy 1: Ban the Import, Production and Sale of specific single-use plastics

Ban the production, import and sale of single-use plastic plastics in Maldives. The list of single-use plastic items identified in the plan are those that are easily found as litter. In addition, these items will have easily and affordable alternatives in the Market of Maldives

(b) Policy 2: Market Based Instruments (MBI's)

Policy two uses various market based or economic instruments to discourage the consumption of different types of single-use plastics while simultaneously providing incentives to change to environmentally friendly alternatives. Market based strategies under this policy include:

i. Increase in tariff for various SUP's
ii. Duty exemption for alternatives to SUP's
iii. Levies from consumers, on point of sale from certain SUP's
iv. Incentives and Business facilitations programmes targeted for local businesses and SME's that import, manufacture and sell plastic free alternatives

(c) Policy 3: Strengthening National Waste Data Base and Setting Reduction Targets for plastic Packaging

Strengthen national Import Data of Single-use plastics and Determine National Reduction and collection targets by 2023

(d) Policy 4: Extended Producer Responsibility (EPR)

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

(e) Policy 5: Sustainable Provision of Alternatives

Provision of sustainable alternatives will be introduced and implemented under this policy action. In addition to this, certain measures will be taken to strengthen the sustainability performance in different sectors.

(f) Policy 6: Education and Awareness

Education and Awareness is one of key policy action to create awareness about the policy initiatives about the single use plastic phaseout plan and to promote sustainable lifestyle Therefore, a National Awareness Campaign (2021-2023) has been inaugurated in April 2021. The Objective of this campaign is to aware public about the key policies under the single-use plastic phaseout plan and encourage people to adapt to environmentally friendly lifestyle.

Myanmar

(a) 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 linkage with other national environmental policies.

(b) The National Plastic Action Plan will be developed by the cooperation of Environmental Conservation Department, relevant Departments and the Development Partners 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, improve plastic waste management systems and develop laws, rules and regulations, and directives related to plastic that are applicable within Myanmar contexts.

Netherlands

(a) Policy programme on (micro) plastics – European Marine Strategy Framework Directive

In 2018 the Netherlands has 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 utilizing more high-quality secondary raw materials and biomass.

(b) To accelerate the transition to a closed-loop plastics chain and reduce emissions of CO_2, 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 the 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.

As part of the transition agenda for plastics a specific policy programme has been developed for micro plastics. This subprogramme 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.

In 2015, the Netherlands adopted the national Program of Measures, as part of the implementation of the Marine Strategy Framework Directive (MFSD). 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. In these Green Deals 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 has been started to obtain knowledge on distribution, composition and effects from riverine litter and microplastics. Currently this program is being updated. A new program will be adopted in 2022.

Furthermore the Netherlands is implementing OSPAR's Regional Action Plan on Marine litter that is currently also being updated. Adoption is foreseen in 2022.

Finally, the Dutch and European plastic pacts were launched in 2019 respectively 2020. Goal is to bring together frontrunner companies and governments in the NL and EU to accelerate the plastics economy. 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)

New Zealand

(a) National Plastics Action Plan

The National Plastics Action Plan outlines the actions New Zealand will take on plastics from 2021 to 2024. It includes a commitment to support discussions towards a global agreement to tackle marine plastic pollution under UN auspices.

See: National Plastics Action Plan for Aotearoa New Zealand | Ministry for the Environment. https://environment.govt.nz/publications/national-plastics-action-plan/

(b) National Waste Strategy

The National Waste Strategy, which is currently being refreshed, will set the direction and guide investment as we address waste and resource recovery challenges over the coming decades.

See: National waste strategy under development | Ministry for the Environment

Norway

(a) National Plastics Management Plan (in Norwegian: Noregs plaststrategi)

Launched by the Government in August 2021. The Norwegian Plastics Management Plan presents measures for preventing the discharge of plastic waste into the environment. The plan includes measures to promote more sustainable value chains for plastics, as well as measures to ensure that hazardous substances are removed to increase the amount of plastic waste that can be safely recycled.

Measures to reduce plastic pollution across various value-chains and sectors are needed, addressing both land-based and sea-based sources. The plan also includes measures to promote better coordination of clean-up efforts in Norway, as substantial funding, both private and public funding is available to support clean-up actions.

The plan describes action taken or action that is under implementation to reduce plastic litter and plastic pollution, across the entire life-cycle of plastics, regulations on single use plastic items and as well as grant schemes for clean – ups included.

There is a need for measures early in the life-cycle of plastics, as well as strengthened plastic waste management that ensure that plastic does not end up in the environment. Norway is part to the EEA-agreement and an integral part of the European internal market, and many measures will be further developed in close cooperation with the European Union.

(b) National strategy for a Green, Circular Economy launched in 2021 (In Norwegian: Nasjonal strategy for ein grøn, sirkulær økonomi Nasjonal strategi for ein grøn, sirkulær økonomi - regjeringen.no) https://www.regjeringen.no/no/dokumenter/nasjonal-strategi-for-ein-gron-sirkular-okonomi/id2861253/

This strategy includes measures to promote a circular economy for plastics, and thus contribute to the reduction on marine plastic litter and plastics pollution.

Pakistan

(a) United Nations Environment Programme's Scientific Advisory Committee on marine litter and microplastics. Pakistan is the member (EPA) of Scientific Advisory Committee working on the "Assessment on Sources, Pathways and Hazards of Litter including Plastic Litter and Microplastics Pollution". Progress on the Assessment on sources, pathways, and hazards of litter including plastic litter and microplastic pollution.

(b) Pakistan is the signatory of Basel convention, As of 1 January 2021, the new plastic waste entries clarify the scope of control under the Basel Convention for other types of plastic waste and mixtures of plastic waste and the specific conditions under which plastic waste is subject to the PIC procedure.

(c) To address and reduce marine litter and microplastics, a study has been developed "Marine Litter Action Plan – Status Report".

The "Marine Litter Action Plan – Status Report" recommends the following short and long term essential steps to overcome this issue of safe waste disposal along the coastal areas of Pakistan:

i. Promote an integrated approach in dealing with different types of waste with particular focus on wastes affecting marine ecosystem such as plastic debris;
ii. Launch marine pollution control programmes with adequate legal cover and policies, and governmental and private enforcement mechanism as building blocks for a successful implementation;
iii. Need long term and consistent education and awareness programmes/campaigns for the public, government, NGOs and community groups regarding safe disposal of waste and address the issues of illegal dumping;
iv. Develop strong and robust monitoring mechanism to deal with marine plastics debris;
v. Monitoring and Assessment of plastic Waste Management
vi. Recycling programmes should be encouraged to reduce the pressure of plastic debris releases into water bodies;

Panama

(a) National Action Plan for Marine Litter in Panama 2021-2025 (This plan is in the legal process for adoption).

It is a guiding tool to reduce marine litter and seek to eliminate generation sources, which threaten biodiversity and ecosystems on its coasts and seas, involving and joining the efforts of the largest number of national actors.

(b) Plan Estratégico de Gobierno 2019 – 2024

This plan includes among its 15 tasks for the environment, of which we can mention starting the implementation of municipal and industrial waste recycling systems at the national level (cities of Panama, Colon, San Miguelito, Santiago and David), implementing a program restoration and national protection of the ten most threatened terrestrial and marine ecosystems in the country, through alliances with communities, NGOs, the private sector and international organizations

Papua New Guinea

(a) The Policy to Ban Non-Biodegradable Plastic Single Use Shopping Bags

The policy intends to ban the importation, manufacture and use of non-biodegradable single use plastic shopping bags in the country. Plastic bags not only litter the land but often end up in the marine environment when conveyed by rainfall runoff, water flow and wind.

Philippines

(a) National Plan of Action for the Prevention, Reduction and Management of marine Litter (NPOA-ML)

The NPOA-ML was developed to provide a blueprint to enhance the current efforts of the country in resource and waste management and to bring additional lens to marine litter issues and the control of additional leakage of waste into the bodies of water.

Objective - To provide a blueprint to enhance the current efforts of the country in resource and waste management and to bring additional lens to marine litter issues and the control of additional leakage of waste into bodies of water.

Overarching Goal - “Zero waste to Philippine waters by 2040” to support the Vision of “A Philippines free of marine litter through shared participation, responsibility, and accountability”

The Action Plan was divided into two clusters as follows:

- Strategy 1: Establish science- and evidence-based baseline information on marine litter
- Strategy 2: Mainstream circular economy (CE) and sustainable consumption and production (SCP) initiatives
- Strategy 3: Enhance recovery and recycling coverage and markets
- Strategy 4: Prevent leakage from collected or disposed waste
- Strategy 5: Reduce maritime sources of marine litter
- Strategy 6: Manage litter that is already existing in the riverine and marine environment

Enabling/Cross-cutting Cluster of Actions

- Strategy 7: Enhance policy support and enforcement for marine litter prevention and management
- Strategy 8: Develop and implement strategic and targeted social marketing and communications campaigns using various media
- Strategy 9: Enable sufficient and cost-effective financing and other institutional resource requirements for the implementation of the NPOA-ML

(b) Coastal and Marine Ecosystems Management Program (CMEMP)

This Program addresses threats to the coastal and marine biodiversity such as the threat from marine litter pollution. To implement this in Marine Protected Areas, learning event on Marine Litter was conducted and participated by Protected Area Superintendents and other regional officers and staff. Subject of the learning event are: a) Basic issues, sources, threats, mechanisms and pathways of marine litter, b) Global policies and regional policies, frameworks and declarations on prevention and management of marine litter, the existing national and local policies, programs, initiatives related to marine litter reduction.

(c) Philippine SCP Strategic Framework and Action Plan

The formulation of a Philippine SCP Strategic Framework and Action Plan is led by the National Economic and Development Authority (NEDA). The Framework and Action Plan aims to guide and facilitate the implementation of SCP across sectors in the country and to lay down the priority strategies and activities per core SCP thematic areas to support and advance SCP implementation. Proposed interventions in three thematic areas include sustainable business and lifestyles; resource conservation, efficiency, and cleaner production; and recycling and waste and chemicals management.

Republic of Korea

(a) The 1st National Action Plan on marine litter and marine contaminated sediment(2021-2030)

National Action plan which addresses various marine litter (including marine plastic waste and microplastics) related problems based on resource circulation and carbon-neutral approach.

Samoa

(a) National Waste Management Strategy 2019-2023

The National Waste Management Strategy 2019-2023 provides an integrated framework for the sound management of solid waste and chemical and hazardous waste in Samoa.

Saudi Arabia

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia.

The plan is part of a regional effort by the “The Regional Organization for Conservation of the Environment of the Red Sea and the Gulf of Aden”. A final draft of the action plan is currently undergoing final stages of approval before implementation. Key components include: Public awareness campaigns, engagement plans with key stakeholders, evaluation of enforcement mechanisms, adequacy of port reception facilities at the red sea,

developing and monitoring flagship demonstration actions, engage private companies to phase out single use plastic bags, water bottles, straws, etc…plan for coastal land owners to regularly collect litter plastic from their area of operation, re-survey beaches with baseline data, support local marine research institutes to protect coastal marine environment from littering in addition to training and capacity building.

Singapore

(a) Singapore has in place stringent regulations on pollution control and waste management to address the issue of marine litter and microplastics through the (i) management of pollution from land-based sources; and (ii) management of water pollution and quality in inland water bodies and coastal areas. Under the Zero Waste Masterplan, Singapore is also working towards becoming a Zero Waste Nation by reusing and recycling resources, turning trash into treasure, and producing and consuming sustainably, thereby prevention marine litter. Singapore is also in the midst of developing a National Action Strategy for Marine Litter.

Spain

(a) Program of Measures on Marine Litter (2016-2021)

Marine Strategies, complying with the European Marine Strategy Framework Directive, include a Program of Measures on Marine Litter (2016-2021). The 5 Spanish Marine Strategies, one per each marine subdivision, where legally approved by Royal Decree 1365/2018, 2nd November 2018. A new Program of Measures on Marine Litter (2022-2027) is under design.

Sri Lanka

(a) No - National Action Plan on Plastic Waste Management is about to finalized.

Thailand

(a) Roadmap on Plastic Waste Management plan 2018-20 has cover part prevention on sea-based source of marine debris, however, the recommendation on (draft) National Action Plan on Marine Plastic Debris is in the developing process and plan to merge with Phase II of the mention Roadmap's goals.

Turkey

(a) No - there are provincial (not national) marine litter action plans for all 28 coastal provinces of Turkey.

United Kingdom

(a) UK Marine Strategy

The UK Marine Strategy provides the framework for assessing and taking measures to achieve and maintain Good Environmental Status (GES) in UK seas. It covers a wide range of biodiversity and marine environment descriptors including marine litter.

In March 2021 an updated UK Marine Strategy Part Two was published, setting out the monitoring programmes that will be used to assess progress towards updated GES targets, published in the updated UK Marine Strategy Part One in 2019. The UK Marine Strategy Part Three sets out a programme of measures for achieving or maintaining GES. We aim to publish an update to Part Three by the end of 2021.

(b) 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
v. Pre-production plastic pellets

(c) 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's 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.

(d) 25 Year Environment Plan

This plan sets out the UK government's plan to improve the environment within a generation, including the approach to tackling marine pollution of all kinds and in particular material that came originally from land.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

England

(a) The Resources and Waste Strategy for England, published in 2018, contains commitments towards reducing marine plastic pollution through circular economy policy measures and international cooperation.

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

(b) Litter Strategy for England. One way in which waste ends up in the marine environment is through littering that occurs on land. We published the Litter Strategy for England in April 2017, setting out our 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. We publish a dashboard of different indicators each year to monitor the extent of litter and littering in England.

https://www.gov.uk/government/publications/litter-strategy-for-england

(c) Waste Prevention Programme for England. This strategy sets out, in detail, how we will work with communities and businesses to reduce litter. We will also create a new way of monitoring how much litter there is in England, to help us know whether the strategy is working.

https://consult.defra.gov.uk/waste-and-recycling/waste-prevention-programme-for-england-2021/

Scotland

(a) Marine litter strategy for Scotland (www.gov.scot). This is currently under review, with a refreshed Strategy due for consultation in 2021 with an increased focus on marine litter removal. It provides the framework for marine litter policy and legislation development by improving relevant public and business behaviours, reducing sources, improving monitoring and strengthening co-ordination nationally and internationally. As the majority of marine litter comes from land, The Marine Litter Strategy is closely linked with our terrestrial strategy for litter and fly-tipping; Towards a Litter-Free Scotland. This is also under review with a refreshed version due out for consultation in 2021. Fly-tipping, coastal or otherwise, comes under the Rural Crime Strategy, 2019-2022. The improved management of plastic as a material is targeted through our circular economy strategy;

Scotland: Making Things Last – A Circular Economy Strategy

https://www.gov.scot/

https://www.zerowastescotland.org.uk/litter-flytipping/national-strategy#:~:text=Towards%20a%20litter-free%20Scotland%20Scotland%E2%80%99s%20national%20litter%20strategy,of%20interventions%20and%20collaborative%20efforts%20to%20drive%20change

https://www.zerowastescotland.org.uk/sites/default/files/sparc-strategy-2019-2022.pdf

https://www.ellenmacarthurfoundation.org/case-studies/scotland-making-things-last-a-circular-economy-strategy#:~:text=The%20Scottish%20Government%20developed%20a%20strategy%20in%202016,and%20individuals%20to%20jointly%20work%20towards%20that%20goal

Northern Ireland

(a) The Northern Ireland Waste Prevention Programme. Reviewed in 2019 and an interim revised programme with 22 actions was published July 2020 to provide a short extension to the programme pending the introduction of a new Circular Economy Waste Package (CEWP).

https://www.daera-ni.gov.uk/publications/waste-prevention-programme-northern-ireland-stopping-waste-its-tracks

(b) Northern Ireland Marine Litter Strategy, was published in 2013 and an update is expected to take place during 2021.

https://www.daera-ni.gov.uk/publications/northern-ireland-marine-litter-strategy

Wales

(a) Wales Waste Prevention Programme – 2013-2050 The Waste Prevention Programme will ensure that householders and businesses in Wales are able to reduce:

i. The quantity of waste, including through the reuse of products or the extension of the life span of products.
ii. The adverse impacts of the generated waste on the environment and human health.
iii. The content of harmful substances in materials and products.

https://gov.wales/sites/default/files/publications/2019-05/the-waste-prevention-programme-for-wales.pdf

(b) The Wales Clean Seas Partnership developed the Marine Litter Action Plan for Wales collaboratively with Welsh Government in 2020.

https://businesswales.gov.wales/marineandfisheries/sites/marineandfisheries/files/marine-litter-action-plan-wales-2020-2023.pdf

US

(a) No - 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

(a) EU Strategy for Plastics in a Circular Economy (2018)

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.

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 increasing the uptake of alternative materials where evidence clearly shows that they are more sustainable compared to the ones based on fossil resources (an EU-wide policy framework on biobased, biodegradable and compostable plastics is planned for mid-2022). This supports efforts on decarbonisation and creating additional opportunities for growth. As part of the Strategy, the EU adopted the Single-Use Plastic Directive (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 (2019), aiming to reduce the discharges from ship generated waste, including from fishing vessels.

The European Commission is drafting a legislation to restrict microplastics intentionally added to products, e.g. in cosmetics or detergents, and has started preparatory work to reduce emissions of microplastics from other sources, such as tyres, textiles and pre-production plastic pellets taking into account inter alia initiatives like work being carried out in OSPAR Convention on pellet losses. 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.

Related URL:

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

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

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

International Organisations and NGOs

Twelve organisations have reported their responses with regards to our request to the G20 implementation framework survey. The responses are presented in the following sub-categories: action framework, measures & achievements, and challenges.

Ten organisations have prepared action plans (AP) to guide their MPL actions. Furthermore, eight organisations have reported support for the development processes of MPL-specific indicators. Both responses indicate increased participation by organisations on marine plastic litter issues.

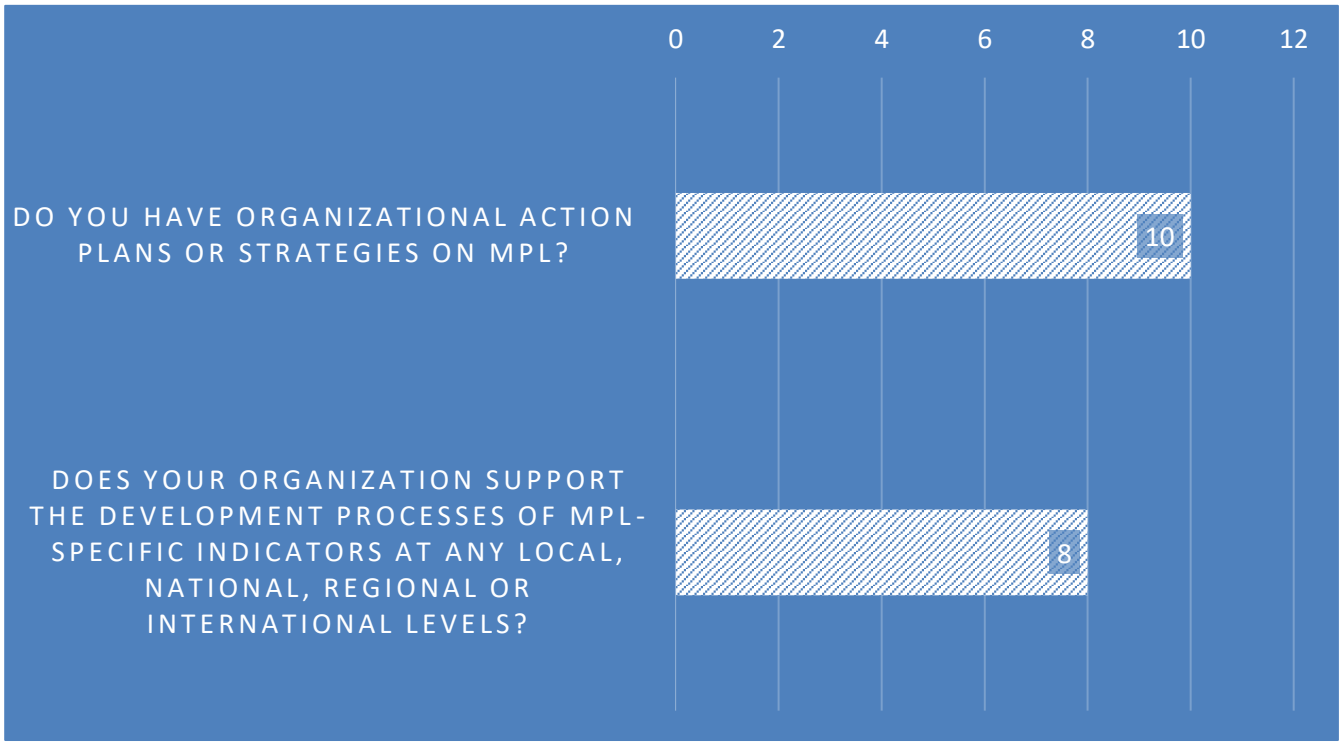


Figure 2: Organisation – Action Framework*

*Number of organisations responded YES among 12 responses

ADB

(a) The Regional Technical Assistance (TA) Program 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 or City Action Plans relevant to marine plastic litter of Indonesia, the Philippines, Thailand, and Viet Nam.

(b) The program includes support for: inclusive and participatory action planning processes (at national and city level); strategy development and policy and regulatory reform to support a circular plastics economy; community demonstration projects and behavior change campaigns; the preparation of investments in solid waste management systems (focusing on 3R) and green business; knowledge sharing, capacity development and regional cooperation activities on several key themes including financing solutions, technology and innovation, market-based instruments, and green and inclusive jobs. These knowledge sharing activities will extend across the Asia Pacific region.

(c) The TA is a flagship program under ADB's Action Plan for Healthy Oceans and Sustainable Blue Economies, which was launched at the 2019 ADB Annual Meeting in Fiji, and commits to scaling-up investments in oceans, including partner co-finance, to $5 billion by 2024.

ASEAN

(a) Bangkok Declaration on Combating Marine Debris in ASEAN Region

The Special ASEAN Ministerial Meeting on Marine Debris in 2019 generated 2 outcome documents: (1) Bangkok Declaration on Combating Marine Debris in ASEAN Region and (2) ASEAN Framework of Action on Marine Debris. They were adopted by the ASEAN Leaders at the ASEAN Summit in 2019.

https://asean.org/bangkok-declaration-combating-marine-debris-asean-region/

(b) ASEAN Framework of Action on Marine Debris

There are four main points on ASEAN Framework of Action, which covers (1) Policy support and planning, (2) Research innovation and capacity building, (3) Public awareness, education, and outreach, and (4) Private sector engagement.

https://asean.org/storage/2019/06/3.-ASEAN-Framework-of-Action-on-Marine-Debris-FINAL.pdf

(c) ASEAN Regional Action Plan on Combatting Marine Debris

The Regional Action Plan proposes an integrated approach to address marine plastic pollution in ASEAN region through 14 actions at three key stages of the value chain: (1) Reduce Inputs into the System, (2) Enhance Collection and Minimize Leakage, and, (3) Create Value for Waste Reuse.

https://asean.org/?static_post=asean-regional-action-plan-combating-marine-debris-asean-member-states-2021-2025-3

ASEAN Working Group on Coastal and Marine Environment (AWGCME) Action Plan

AWGCME aims to ensure ASEAN's coastal and marine environment are sustainably managed; representative ecosystems, pristine areas and species are protected; economic activities are sustainably managed; and public awareness of the coastal and marine environment instilled. There are 7 priority programmes, which include: (1) Key Coastal and Marine Area Conservation; (2) Endangered Coastal and Marine Species Conservation; (3) Tanker Desludging and Oil Spill Reduction; (4) Coastal and Marine Pollution Mitigation (nutrients, marine debris, eutrophication etc.); (5) Coastal and Marine Invasive Alien Species; (6) Climate Change Issues and Impacts in Coastal Areas; and (7) Integrated Coastal Management (ICM) and Marine Spatial Planning (MSP).

Ellen MacArthur Foundation

(a) Launched in 2018 in partnership with the United Nations Environment Programme (UNEP), the New Plastics Economy Global Commitment has brought together key stakeholders to rethink and redesign the future of plastics, starting with packaging. It now unites more than 500 organisations, representing companies producing more than 20% of all plastic packaging globally, who work towards ambitious 2025 targets to realise a circular economy for plastic where:

- All problematic or unnecessary plastic packaging are eliminated through redesign, innovation, and new delivery models as a priority.
- Reuse models are applied where relevant, reducing the need for single-use packaging.
- All plastic packaging is 100% reusable, recyclable, or compostable.
- All plastic packaging is reused, recycled, or composted in practice.
- The use of plastic is fully decoupled from the consumption of finite resources.
- All plastic packaging is free of hazardous chemicals, and the health, safety, and rights of all people involved are respected.

(b) A growing network of national and regional Plastic Pacts spread across 5 continents, is working to put this vision into practice with solutions tailored to their local context. Signatories to the Global Commitment are reporting progress on an annual basis. All information and data from these progress reports can be accessed online here:

https://www.ellenmacarthurfoundation.org/resources/apply/global-commitment-progress-report

(c) The 2020 New Plastics Economy Global Commitment progress report pointed out that additional efforts are necessary:

- By setting virgin plastics reduction targets, underpinned by increased action on elimination of plastics that we do not need and on scaling up of reuse business models

- By embarking on a well-funded research, development and innovation agenda, focused on solutions such as new delivery models and new materials, in particular for flexible plastic and multi-materials (representing 80% of remaining macroplastics leakage into the ocean in 2040)
- By establishing mechanisms to provide dedicated, ongoing, and sufficient funding of collection and recycling in which all industry players introducing packaging to the market provide funding, for example through Extended Producer Responsibility (EPR) schemes
- By creating an international framework for action, through the UN Environment Assembly, building on the vision for a circular economy for plastics

(d) The next progress report will be published in November 2021. You can read more about the New Plastics Economy Global Commitment here:

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

ERIA

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

ERIA's Regional Knowledge Centre of Marine Plastic Debris (RKC-MPD) was established in October 2019 Japan to support ASEAN+3 Member States in its fight against marine plastic pollution.

The goals of the RKC-MPD are:

- Regional network creation and awareness raising
- Promotion of innovative actions in each member country
- Facilitation of national and regional cooperation

(b) Capacity development and information sharing are the two chief pillars that underpin the RKC-MPD's work. More specifically, the RKC-MPD undertakes the following activities:

- Capacity development of governments of ASEAN countries and support for policy formulation
- Capacity development on information administration, research, and investigation that contribute to policy formulation
- Information sharing of ASEAN countries' initiatives at international fora
- Information sharing to raise awareness and to promote efforts taken by private sector and citizens

Related link: https://rkcmpd-eria.org/

GEF

(a) The GEF-7 Programming Directions

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 addressing the full life-cycle of plastics, including alternative sustainable materials, design for circularity, including reuse and refill systems, and waste collection and recycling strategies. The GEF has emphasized public-private partnerships in its regional and national investments to implement the strategy.

IAEA

(a) NUclear TEChnology for Controlling Plastic Pollution (NUTEC Plastics)

Analysis and evidence show that nuclear applications can complement existing technologies and thus accelerate the transition towards a circular economy for plastics. However, the potential contribution of nuclear science and technology for addressing the plastics waste problem has not been fully explored yet, and hence is rarely integrated into proposals for sustainable, scalable solutions. A change is needed to increase the knowledge and awareness of these techniques and technologies, but more importantly to apply them more broadly in practice in order to use the full potential of nuclear techniques' role in reducing the global plastic waste burden.

To facilitate this the IAEA has developed NUTEC Plastics to assist its Member States in integrating nuclear techniques in their efforts to address challenges of plastic pollution. The IAEA supports research and application of nuclear techniques in two main areas: monitoring and assessment of marine plastics and plastic/polymer waste recycling and upcycling.

Radiation technology for industrial purposes, such as gamma and electron beams, offers unique advantages for reducing plastic and polymer waste and therefore fill existing technological gaps in dealing with such waste. Irradiation can address sorting challenges experienced by mainstream mechanical recycling methods by enabling effective sorting of plastic wastes to feed into recycling streams, thus improving the quality and value of the recycled plastics. Radiation technologies can also be used to transform or recycle plastic waste into other products, such as fillers and binders for construction materials. They can also be used to break down or convert waste plastic polymers into fuel or smaller components to generate chemical feedstocks to produce consumer products, with or without the addition of virgin polymers. Reduction of plastic waste is also possible through replacing petroleum-based plastics with biodegradable bio-based products obtained by radiation-driven processes. Furthermore, radiation technology offers cleaner production and recycling processes thus reducing the use of potentially harmful additives and solvents as well as delivering energy savings.

NUTEC Plastics will integrate radiation technologies for plastic waste recycling into national, regional and global initiatives. Ongoing laboratory-scale activities are paving the way for pilot plastic recycling plants to establish the volume, energy and financial balances associated with using radiation technologies to recycling various plastic wastes. Based on the proof of principle and experience gained from the piloting, the technology will be scaled-up to a large-scale plastic waste recycling demonstration plant(s).

Additionally, oceans are the final repository of mismanaged and unrecycled land-based plastics, and there is a lack of sufficient knowledge and understanding of the abundance and impact of microplastics in the ocean. More accurate data are needed to assess the effect that microplastics and associated contaminants have on marine organisms that are part of the global food chain, such as food for human consumption, and therefore on seafood exports, food safety and human health. Isotopic techniques offer unparalleled precision and complement conventional techniques in tracking the abundance and distribution of nano- and micro-plastics in the marine environment. Isotopic tracers, imaging techniques and gamma and beta counters have unique abilities to assess the impacts of micro- and nano-plastics on marine biota. These techniques provide important markers for studying the toxicity of plastics on living organisms, to reveal in detail the impacted organs and systems, and allow to trace the actual toxicological stress and their possible propagation in food chains that can ultimately impact humans through consumption of seafood.

NUTEC Plastics will strengthen and scale-up the development of reliable and cost-effective techniques to assess the spatial and temporal abundance and character of marine plastics to better understand their origin, transport mechanisms, as well as fate and impact. This includes the establishment of harmonized, standardized protocols to identify microplastics in environmental samples, analytical techniques that are in line with best practices and state-of-the-art science, and training for scientists and technicians in their use.

A holistic and sustainable solution to the global plastic burden requires an integrated and comprehensive approach that can only be achieved in partnership with organizations that have complementary roles and expertise. Working within existing national, regional and international initiatives, including private-public partnerships is essential. This includes collaboration with United Nation entities, multilateral development banks, philanthropies, existing large-scale initiatives and multi-stakeholder platforms, private sector, and scientific and research institutions. The private sector will be a critically important partner in making the transition to a circular plastic economy, underpinned by strong governmental action and ownership through enabling policies and supportive legal environment.

NUTEC Plastics' two main components – monitoring and assessment and plastic recycling — are logically intertwined as both contribute to the solution of the global plastic pollution problem. However, their implementation is not contingent on each other and therefore NUTEC Plastics adopts a modular approach. This approach offers the advantage of facilitating the implementation of certain activities according to resource availability, while offering Member States and partners the opportunity to engage in activities linked to their profile, preferences and priorities.

OECD

(a) The Global Plastics Outlook will inform MPL strategies

UNEP

Global and regional resolutions and plans led by UNEP and/or a body whose Secretariat is hosted by UNEP have the following action plans concerning marine plastic litter:

(a) Recent resolutions of the United Nations Environment Assembly (UNEA), including:
   i. Marine litter and microplastics (UNEP/EA.3/Res.7)
   ii. Addressing water pollution to protect and restore water-related ecosystems (UNEP/EA.3/Res.10)
   iii. Innovative pathways to achieve sustainable consumption and production (UNEP/EA.4/Res.1)
   iv. Marine plastic litter and microplastics (UNEP/EA.4/Res.6)
   v. Environmentally sound management of waste (UNEP/EA.4/Res.7)
   vi. Addressing Single-Use Plastic Products Pollution (UNEP/EA.4/Res.9)
   vii. Protection of the Marine Environment from Land-Based Activities (UNEP/EA.4/L.12)
   viii. 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) North East Pacific (NEP) Regional Action Plan on Marine Litter (Currently at a final version stage)

(e) Marine Litter – Pacific Regional Action Plan (SPREP)

(f) Regional Marine Litter Action Plan for the South Asian Seas Region (SACEP)

(g) Regional Action Plan for the Sustainable Management of Marine Litter in the Red Sea and Gulf of Aden (PERSGA-RAP)

(h) Regional Action Plan on Marine Litter in the Arctic (PAME)

(i) Regional Action Plan on Marine Litter (RAP-MALI) for the Wider Caribbean Region

(j) Regional Action Plan for Marine Litter in the Baltic Sea (HELCOM)

(k) Regional Plan on Marine Litter Management in the Mediterranean (RPML)

(l) Regional Action Plan for Prevention and Management of Marine Litter in the North-East Atlantic (OSPAR)

(m) Marine litter in the Southeast Pacific region (CPPS) – Regional Action Plan

(n) Basel Convention Plastic Waste Amendments (decision BC-14/12, http://www.basel.int/tabid/8426/Default.aspx)

(o) Basel Convention Plastic Waste Partnership (decision BC-14/13, http://www.basel.int/tabid/8096/Default.aspx)

(p) Convention on the Conservation of Migratory Species of Wild Animals (CMS) Resolution 12.20 Management of Marine Debris and Decisions 13.122 (https://www.cms.int/sites/default/files/document/cms_cop12_res.12.20_marine_debris_e.pdf) to 13.125 Impacts of Plastic Pollution on Aquatic, Terrestrial and Avian Species (https://www.cms.int/en/page/decisions-13122-13125-impacts-plastic-pollution-aquatic-terrestrial-and-avian-species)

UNIDO

(a) Addressing the challenge of Marine Plastic Litter using Circular Economy methods

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.

Circular economy practices in the plastics value chain 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 to consider on the way to a circular plastics economy and an end to the global marine plastic litter challenge.

Especially, in the product design stage, the following might be considered: a) scrutinizing 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.

Policy measures to incentivize 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 those 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. In developing countries, taking measures to include informal collection, separation and recycling operations and improving working conditions for the informal workforce could be one of the objectives to safeguard livelihoods and ensure a just transition.

For more information, please check:

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

WB

(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. The World Bank Group supports countries in all regions in their efforts to address plastic pollution, at every stage of the plastic life cycle, from stopping leakages to the environment to enabling a circular economy.

(b) COVID-19 has exacerbated the problem of marine plastic pollution, with increased demand for single-use plastic and pressure on solid waste systems, accompanied by a drop in recycled materials because of hygiene concerns and low prices of virgin plastics. World Bank projects that were underway long before the pandemic are now even more relevant. The prevention of plastic pollution provides an opportunity for creating a circular economy model to build a more sustainable and inclusive economy to recover from the COVID-19 pandemic and provide much needed jobs. Responding to this crisis is a priority for the World Bank which has projects worth more than US$2 billion in the pipeline with components focused on plastic pollution prevention. Projects span many sectors, from fisheries to tourism, with most focused on improving solid waste management.

(c) 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, and as a last resort restoring ecosystems.

(d) 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 engagement in countries in various oceanic sectors builds on the Blue Economy approach it has developed. The World Bank, in collaboration with various development partners1, 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:

i. Sustainable management of fisheries and aquaculture;
ii. Marine pollution prevention, including litter and plastics;
iii. The sustainable development of key oceanic sectors;
iv. 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 more than 45 activities in all regions, and committed about USD 28 million to support World Bank's client countries in their efforts to address marine plastic pollution.

(e) The World Bank also develops critical global analytical tools to help governments make informed and strategic policy and investment decisions, such as:

i. 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.
ii. The analytical work Bridging the Institutional Gap in Integrated Solid Waste Management (see link under further information) 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.

WEF GPAP

(a) Global Plastic Action Partnership

The Global Plastic Action Partnership (GPAP), hosted at the World Economic Forum, was created by a coalition of public and private sector leaders to address the worldwide explosion in plastic pollution. It aims to shape a more sustainable and inclusive world by eradicating that pollution. Through its inclusive multistakeholder platforms, GPAP is uniquely equipped to bring public, private and civil society leaders together to develop joint solutions to the plastic pollution crisis that are both pragmatic and ambitious. GPAP operates in three key ways:

i. Convening communities and curating conversations
ii. Generating new insights and action roadmaps
iii. Catalysing coordinated action to scale-up solutions.

Since its inception in 2019, GPAP has launched National Plastic Action Partnerships in Indonesia, Ghana, Viet Nam and Nigeria. It prioritizes six cross-cutting impact areas: Boosting innovation; transforming behavior; harmonizing metrics; informing policy; unlocking financing; and promoting inclusivity.

2.2. Legal Framework

Countries

Australia

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

Injury and fatality to vetebrate marine life caused by ingestion of, or entanglement in, harmful marine debris is listed as a key threatening process under the EPBC Act.

Australia's Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans incorporates actions needed to abate the listed key threatening process. The threat abatement plan 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) Recycling and Waste Reduction Act 2020 (RAWR Act)

The Australian Government has introduced landmark legislation to ensure Australia takes responsibility for its waste. The RAWR Act provides 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 that was agreed by the Commonwealth, state, and territory governments in 2019. The legislation also incorporates the frameworks within the former Product Stewardship Act 2011, with improvements, to encourage companies to take greater responsibility for the waste they generate, including through better product design and the increased recovery and reuse of waste materials.

(c) Recycling and Waste Reduction (Export—Waste Plastic) Rules 2021 (Waste Plastic Rules)

Made within the frameworks established in the RAWR Act, the Waste Plastic Rules implement the ban on exports of unprocessed waste plastic in two phases.

As of 1 July 2021, the export of mixed plastic waste from Australia will be banned. Exporters of waste plastic will be required to hold an export licence and sort their plastic into a single polymer or resin prior to export. The licencing scheme is designed to ensure that positive environmental and human health outcomes are achieved when waste is exported from Australia and that waste plastic is only exported for further processing, recycling, and re-manufacture.

As of 1 July 2022, waste plastic will not be allowed to be exported unless it is both single polymer or resin and it has been further processed, for example into pellets or flakes ready for re-manufacture, prior to export.

The Waste Plastic Rules will help ensure that Australia takes responsibility for its plastic waste and promote the development of our domestic recycling sector as well as the development of a circular economy.

(d) Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Hazardous Waste Act)

Australia is a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basal Convention) and implements its obligations through the Hazardous Waste Act.

The Basel Convention was amended from 1 January 2021 to enhance controls on exports, imports and transboundary movement of waste plastics, so that impacts on human health and the environment are minimised. The amendments introduce a broad category of waste plastics that will be subject to prior informed consent procedures, with certain exceptions.

The Hazardous Waste (Regulation of Exports and Imports) Amendment Bill 2021 is currently before the Australian Parliament. If passed, it will incorporate the Basel Convention plastic amendments into Australian law. The Hazardous Waste Act will operate in tandem with the RaWR Act to ensure the optimal environmental outcome in relation to waste plastics.

(e) National Environment Protection (Used Packaging Materials) Measure 2011

The Australian Government partners with state and territories governments and industry to reduce the environmental impacts of packaging, including plastic packaging, through the Australian Packaging Covenant (Covenant). The Covenant is underpinned by the National Environment Protection (Used Packaging Materials) Measure 2011. The Australian Government, on behalf of the National Environment Protection Council, is currently undertaking an independent review of the National Environment Protection (Used Packaging Materials) Measure 2011 and the Covenant.

Bahrain

(a) Ban of Import Plastic Waste

Bahrain ban import of plastic waste as one of initiatives to prevent marine from plastic littering.

Bangladesh

(a) Recently, government has updated its national environment policy. The National Environment Policy 2018 focuses on the sustainable management of Marine and Coastal ecosystem.

(b) A draft rules of solid waste management has been prepared which include specific section of plastic waste management.

(c) The High Court division of the Supreme Court in Bangladesh ordered the government to impose ban on single use plastic products by 2021.

Bhutan

(a) Bhutan has National Legislation on waste management, namely:

Waste Prevention and Management Act, 2009;

Waste Prevention and Management Regulations, 2012;

National Waste Management Strategy, 2019;

National Waste Management Flagship Program, 2020

Brunei

(a) Environmental Protection Management Order 2016 - Waste Regulation (drafting stage)

The EPMO is designed to provide protection and management of the environment which also includes provision of waste regulation that will regulate the waste sector.

Canada

(a) Canadian Environmental Protection Act

(b) Microbeads in Toiletries Regulations

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 habitat. 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. Canada also ratified the new plastic waste amendments of the Basel Convention and since January 1, 2021 is implementing them through its Regulations.

In October 2020, Canada announced the next steps in its agenda. Canada proposed to ban or restrict select single use plastics (plastic checkout bags, straws, stir sticks, ringed beverage carriers, cutlery, and foodservice ware made from hard-to-recycle plastics), where there is evidence that they are found in the environment, are often not recycled, and have readily available alternatives. Canada also proposed to establish recycled content requirements in products and packaging. This will drive investment in recycling infrastructure, build capacity and spur innovation in technology and product design to extend the life of plastic materials. The announcement included the release of a discussion paper on the proposed approach for public comment.

In May 2021, “plastic manufactured items” was added to Schedule 1 to the Canadian Environmental Protection Act, 1999 (CEPA). This means that the Government of Canada has the authorities to use CEPA to enact regulations and other risk management tools to change behaviour at key stages in the lifecycle of plastic products and create the conditions for achieving a circular plastics economy.

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 Ocean Plastics Charter, 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 Law (EPR). In Mars of this year, the regulation on EPR for packaging was adopted. Additionally, a law which prohibits the delivery of plastic bags by commerce was adopted in 2018, while a law which regulates single used plastics has been adopted this year.

(b) Since 2021 Chile has a Supreme Decree No. 64/2020, which establishes conditions on the treatment and final disposal of waste from aquaculture activities and which, for example, prohibits the use of expanded polystyrene as a flotation element.

(c) 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.

China

(a) Law of the People’s Republic of China on Prevention and Control of Environmental Pollution by Solid Wastes (2020 Amendment)

The Law on Prevention and Control of Environmental Pollution by Solid Waste was amended to identify the responsibilities of competent departments and local governments, improve the system for the prevention and control of solid waste pollution, and strengthen the supervision and implementation of such responsibilities.

(b) Marine Environment Protection Law of the People's Republic of China (2017 Amendment)

The Marine Environment Protection Law of the People’s Republic of China is formulated for the purposes of protecting and improving the marine environment, conserving marine resources, preventing damages caused by pollution, maintaining ecological balance, safeguarding human health and promoting sustainable economic and social development.

(c) Circular Economy Promotion Law of the People's Republic of China (2018 Amendment)

The Circular Economy Promotion Law of the People's Republic of China is formulated for the purpose of facilitating circular economy, raising resources utilization rate, protecting and improving environment and realizing sustained development. The Law aims to achieve sustainable development by raising resource utilization rate and increasing resource recovery in production, circulation, and consumption.

Dominican Republic

(a) General Law 225-20 on Comprehensive Management and Co-processing of Solid Waste of the Dominican Republic, October 2, 2020 (Ley General de Gestión Integral y Coprocesamiento de Residuos Sólidos de la República Dominicana)

The purpose of this Law is to prevent the generation of waste,in addition to establishing the legal regime for its comprehensive management to promote reduction,reuse, recycling, use and recovery, as well as regulating the systems ofcollection, transport and sweeping; final disposal sites, transfer stations,collection centers and recovery plants; in order to guarantee the right of allperson to live in a healthy environment, protect the health of the population, as well asreduce the generation of greenhouse gases, emitted by waste.

The importance of this law, among other things, lies in the role attributed to it to "promote reduction, reuse, recycling, use and recovery" (Article 1), which would allow us to move from a linear economy in which Natural resources are used to create products that are later discarded, to a circular economy where waste returns to the value chain through incentives and obligations contemplated in the law.

Producers of fon (foam), sleeves, and plastic bottles will be obliged to join a specific program of extended producer responsibility to recover, treat and safely dispose of the waste generated.

Fiji

(a) Environment Management Act 2005

The Environment Management Act is Fiji's key national environmental legislation which expands to Fiji's Exclusive Economic Zone (EEZ) under the Marine Spaces Act which addresses Waste Management and Pollution Control related matters. It promotes the sustainable management of natural and physical resources. It is a Legislation for the protection of the natural resources and for the establishment of a National Environment Council and for related matters. The Act enables individuals and communities to ensure their socio--economic, and cultural wellbeing and for their health and safety. The legislation also dictates the avoiding, remedying, and or mitigating any adverse effects of activities (including marine pollution).

(b) Litter Act 2008

The Litter Act — The Litter Act is a law that prohibits and regulates littering in Fiji's environment. Litter prevention Officers are trained to enforce the litter act with fines and penalties as per law.

Finland

(a) Finnish Waste Act

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

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

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) EU Waste directives

The EU Waste directives were renewed in 2020. The delayed national waste laws were enacted in June 23 2021, and they are expected to be ratified in July 15 2021. The laws are expected to enter into force later in July or August 2021.

(e) EU Single-use Plastics Directive

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

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

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

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

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.

(j) 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 2022.

France

(a) The legislation for energy transition for green growth (2015)

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 Reclaiming biodiversity, nature and landscapes law (2016)

The legislation for Reclaiming biodiversity, nature and landscapes law (2016) has set up a ban for microbeads in cosmetics for 2018 and a ban for cotton-buds in 2020.

(c) The legislation for trade relations balance in the agricultural sector and healthy and sustainable diet (EGAlim, 2018)

The legislation for trade relations balance in the agricultural sector and healthy and sustainable diet (EGAlim, 2018) has planned a ban on plastic stirrers and straws in 2020, and a ban of food containers in collective catering for 2025.

(d) The legislation against waste and for a circular economy (2020)

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.

(e) "3R" Decree for reduction, reuse and recycling of single use plastic packaging for 2021-2025 period

This executive decree has been adopted in April 2021 in the context of the legislation against waste and for a circular economy, it defines 3R objectives for single-use plastic packaging for the period 2021-2025.

Germany

(a) e.g.: Ordinance on the Ban of Single Use Plastic products, Ordinance on the Marking of Single Use Plastic products, Packaging Act, Circular Economy Act

National implementation of the EU Single-Use Plastics Directive through different national regulations - e.g. consumption reduction measures, ban on certain plastic products (straws etc.); marking and product and requirements.

Japan

(a) The Waste Management and Public Cleansing Act

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

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

(c) The Act on Promotion of Resource Circulation for Plastics

All entities involved in the process (i.e., from designing products to disposing plastic waste) will take measures to promote efforts (3R+Renewable) for the circulation of plastic resources.

Kiribati

(a) No – however, Kiribati has an Environment Act 2007: An Act to provide for the Protection, Conservation Management and Sustainability of the Environment of the Republic of Kiribati and for Connected Purposes. The Act has provisions under Part 3 that regulate public littering, waste disposal on land and at sea. Plastic waste is one of the targeted waste streams under these provisions of the Act.

Maldives

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

The new amendment for the Import Export bill has been ratified recently and it's effective from 1st August 2020. It states that Single Use Plastics that are being identified by the government of Maldives will be banned from January 2021.

Update: Due to the pandemic there has been changes to the timeline of the import ban. Therefore, the ratification of the 18th Amendment to Import Export Act law has been passed on December 22,2020 which vests the president with powers to ban the import of SUP's. Hence, the Presidential Decree to ban the import of single-use plastics identified in the SUP phaseout plan was announced in December 30, 2020

Updated list will be available via

https://www.environment.gov.mv/v2/en/download/11888

(b) Environment Protection and Preservation Act 1993

Under 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 only in the areas designated for the purpose by the government.

Myanmar

(a) Environmental Conservation Law (2012)

Chapter VIII Management of Urban Environment include management of wastes and pollution control.

(b) Environmental Conservation Rules (2014)

In Chapter (IX) Waste Management, the Ministry shall carry out waste treatment by the categories of business which emit or produce solid wastes, liquid wastes, emissions, radiations which contain poisonous and hazardous materials by establishing their own facility/centre, or collective facility/centre.

Netherlands

(a) There are various legal frameworks that deal with plastics.

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.

Existing regulation focusses 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.

New Zealand

(a) Waste Minimisation Act 2008 (WMA) and Litter Act 1979

The WMA encourages a reduction in the amount of waste we generate and dispose of in New Zealand. The aim is to reduce the environmental harm of waste and provide economic, social and cultural benefits for New Zealand. We are currently reviewing both the WMA and the Litter Act to strengthen and support our wide-ranging government programme for waste. This will include a greater circular economy focus and consider new provisions not already in these Acts. We will also revise how our waste levy funds can be used by central and local government.

See: Waste legislation review | Ministry for the Environment. https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/waste-legislation-review/

Norway

(a) The Pollution Control Act

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 the detailed Waste Regulations (https://www.regjeringen.no/en/dokumenter/waste-regulations/id512073/). Littering, is illegal according to the Pollution Control Act. As part of the European Economic Area Norway is bound by European rules and regulations, including targets relevant to this issue.. Regulation on Delivery and receipt of waste and cargo residues from ships/PRF Directive (2002/59/EC), is implemented/incorporated into the Norwegian pollution regulation, chapter 20. It is currenty under consideration how the revised EU PRF Directive (2019/883) should be implemented into the Norwegian pollution regulation. The purpose of the PRF Directive is to prevent marine litter from ships.

(b) The Product Regulations chapter 2b regulates single-use plastics.

The regulation bans certain single-use plastic items. There is also marking requirements for some products. This implement important parts of the EU Plastics Directive in Norwegian law.

The purpose of the regulation is to reduce the environmental impact of single use plastic products.

(c) The Marine Resources Act

The Marine Resources Act which regulates fisheries, forbids dumping of fishing gear. If fishing gear is lost or has to be cut, it is an obligation to try to recover it and if this is unsuccessful, to report the loss. https://www.regjeringen.no/no/dokumenter/Marine-Resources-Act/id612258/

(d) The Product Control Act

The Product Control Act regulates products from causing environmental disturbance, and damage to health, as well as national provisions for eco-design. Further regulations pertaining to different sources of microplastics emissions will be considered into the existing Norwegian legal framework.
https://www.regjeringen.no/en/dokumenter/product-control-act/id172150/

(e) The Ship Safety and Security Act Ship Safety and Security Act - Norwegian Maritime Authority (sdir.no)

The Ship Safety and Security Act shall safeguard life, health, property and the environment by facilitating a high level of ship safety and safety management, including preventing pollution from ships. https://www.sdir.no/en/shipping/legislation/laws/ship-safety-and-security-act/

(f) The Harbour and Fairways Act

Vessels provide the Norwegian authorities and ports with the information required to enhance safety, the environment and efficient maritime transport. Authority to demand removal of shipwrecks. The Act was updated/revised in 2019, but the translation available reflects the Act prior to revision: regulation-on-vessels-notification-obligations-under-the-harbour-and-fairways-act-1.pdf (kystverket.no) https://www.kystverket.no/globalassets/ohm-regelverk/engelsk/regulation-on-vessels-notification-obligations-under-the-harbour-and-fairways-act-1.pdf

(g) Waste Regulation

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

The Waste Regulation implement among others of the EU Waste framework directive in Norwegian Law. The regulation includes provisions on waste management that are relevant for preventing discharge of plastic litter into the environment.

(h) The Product Control Act

The Product Control Act regulates products from causing environmental disturbance, and damage to health, including prevent environmental disturbance by promoting effective energy use in products.

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

(i) Further regulations pertaining to the emission of microplastics from different sources will be considered into the existing Norwegian legal framework.

Oman

(a) Oman had issued many resolutions as bellow:
   i. Resolution 17/93 for management of solid non-hazardous waste
   ii. Resolution 18/93 for management of hazardous waste
   iii. Decision No.15/2021 to regulate the export of waste

In addition to that Oman followed the Basal Convention for proper waste management.

Pakistan

(a) As a member of Scientific Advisory Committee, key findings of the Assessment on sources, pathways and concern reviewed of marine litter including plastic litter and microplastics pollution (draft) submitted to Marine Litter Team, GPA Unit, Ecosystems Division United Nations Environment Programme.

Sources of marine plastic litter and microplastics, across the lifecycle of plastics and indicating, where possible, the situation in different UN regions. International and transboundary movement of plastic waste.

Overall trends: estimates of land-based and sea-based inputs of marine litter and microplastics to the ocean, where possible presenting the regional breakdown; impacts of natural hazards and climate change.

(b) In Pakistan, following policies and acts are formulated to address coastal and marine pollution but not exclusively for marine debris issue:
   i. National Climate Change Policy 2012
   ii. National Environment Policy 2005
   iii. Pakistan Environment Protection Act, 1997
   iv. The Sindh Local Government Act, 2013
   v. The Sindh Environmental Protection Act, 2014
   vi. Balochistan Environmental Protection Act, 2012
   vii. Hospital Waste Management Rules, 2014
   viii. Maritime Security Agency Act, 1995 (revised 2016)
   ix. The Sindh Industries Registration Act, 2017 (un-approved)
   x. Sindh Solid Waste Management Board Act, 2014
   xi. National Institute of Oceanography Act, 2007
   xii. Karachi Port Trust Act, 1886
   xiii. Ports Act, 1908
   xiv. Import order policy 2020
   xv. Basel convention for plastic waste (transboundary movement)

Environmental Governance in Pakistan is being practiced since the launch of Pakistan National Conservation Strategy (PNCS) in 1992 along with its Action Plan in 1993.

National Environment Quality Standards (NEQS) have been put in place in 1995.

To give legal cover to national pollution prevention efforts at national and provincial level, Pakistan Environmental Protection Act was enacted in 1997.

However, after the 18th Constitutional Amendment, the subject of “Environment and Ecology” was devolved to the provinces. The provincial governments have therefore enacted their own environmental laws and regulations which are being enforced by the respective EPAs.

Panama

(a) The International Convention for the Prevention of Pollution from Ships (MARPOL)

Panama ratified the agreement through Law No. 17 of November 9, 1981, Law No. 1 of October 25, 1983 and Law No. 30 of March 26, 2003, and implements Annexes V, VI and Addenda to said agreement.

(b) Law No. 6 of February 6, 2017 that establishes the integrated management of solid waste in public institutions.

Establishes guidelines, obligations and responsibilities for institutions public services in the national territory in terms of integrated solid waste management, such as paper, cardboard, aluminum strips, tetrapak, disposable plastic bottles and any other waste, with exception of hospital waste.

(c) Law No. 1 of January 19, 2018 that adopts measures to promote the use of reusable bags in commercial establishments.

The use of polyethylene bags is prohibited in supermarkets and other commercial establishments.

(d) Law No. 33 of May 30, 2018 that establishes the Zero Waste Policy and its framework of action for comprehensive waste management, and dictates other provisions.

It is a framework of action for the integral management of waste based on the concept of circular economy

(e) Law No. 187 of December 2, 2020, which regulates the progressive reduction and replacement of single-use plastics.

Establishes the regulatory framework that governs single-use plastics in the national territory, as part of the public environmental policy of the Panamanian State.

Papua New Guinea

(a) Environment Act 2000：provides the tool to regulate the damage caused to the environment and to protect the biodiversity

This law is to regulate the environmental impacts of development activities in order to promote sustainable development of the environment and the economic, social and physical well-being of people by safeguarding the life-supporting capacity of air, water, soil and ecosystems for present and future generations and avoiding, remedying and mitigating any adverse effects of activities on the environment.

(b) The Plastic Bag Regulation 2011 regulates the use of biodegradable plastic shopping bags

This is a regulation to make a provision for the control of manufactured biodegradable plastic shopping bags and for related purposes.

Philippines

(a) Republic Act (RA) 9003, otherwise known as the Philippine Ecological Solid Waste Management Act

RA 9003, was signed into law in 26 January 2001. This law provides for the necessary institutional support mechanisms and instructs all LGUs to establish solid waste management (SWM) programs within their jurisdictions.

(b) Presidential Decree (PD) 979 or the Marine Pollution decree of 1976

PD 979 is a policy support for implementing sea-based waste management strategies. Under PD 979, the National Pollution Control Commission (now the EMB) and the Philippine Coast Guard (PCG) are empowered to promulgate national rules and policies governing marine pollution. However, marine pollution policies that followed thereafter are only included as excerpts or sections of a larger national policies pertaining to either marine or waste management. Similar to RA 9003's Section 48 prohibition on littering, throwing, dumping of waste matters in public places and canals, the Philippine Clean Water Act of 2004 or RA 9275 has a similar stipulation under Section 27 prohibiting unauthorized transport or dumping into sea waters of sewage sludge or solid waste

(c) Relevant ng Bills:

- House Bill No. 5773

  An Act Banning the Manufacture, Importation, Sale, and Use of Single-Use Plastic Products, Providing Funds Therefore and for other Purposes

- House Bill No. 7609

  An Act to Promote Circular Economy and a Whole-of-Nation Transition Toward a Sustainable Future

- House Resolution No. 007694

  Resolution Directing the Committee on Climate Change to Look into the Integration of the Circular Economy Concept into the Country's Low-Emissions Development Strategy and the Minimization of Waste generation through Prevention, Reduction, Recycling and Reuse Towards Ecological Integrity and Clean and Healthy Environment

- House Bill No. 7128

  An Act Establishing the Use of Ecological Waste-to-Energy Management System, Amending for the Purpose Republic Act No.8749, Otherwise Known as the Clean Air Act of 1999, and for other Purposes

- House Bill No. 8691

  An Act Institutionalizing the Practice of Extended Producers Responsibility in Waste Management, Amending for Purpose Republic Act No. 9003 or the Ecological Solid Waste Act of 2000

- House Bill No. 5199

  An Act Amending Republic Act No. 7160, Otherwise Known as the Local Government Code of 1991, For Purpose of Enhancing the Power of Local Government Units in Waste Management and for Other Purposes

- House Bill No. 7609

  An Act Mandating the Local Government Units to Institutionalize Rewards for Compliance with Section 32 of RA 9003, Otherwise Known as Solid Waste Management, and Appropriating Funds Thereof

Republic of Korea

(a) Marine litter and contaminated sediment Management Act

Legislation which has its main goal on managing marine litter (including marine plastic waste and microplastics) using environment-friendly and life-cycle apporoach.

(b) Framework act on resource circulation

'Framework act on resource circulation' aims to make a transition to sustainable circulation economy by enhancing resource circulation policies on both ocean and land and reducing unnecessary waste of natural resources and energy.

Samoa

(a) Waste (Plastic Bag) Management Regulations 2018

The Regulations came into effect in January 2019 banning the importation, selling, distribution, use and manufacturing of (i) plastic shopping bags, (ii) plastic packing bags, and (iii) plastic straws. An amendment to include Styrofoams such as take away food containers, cups and trays in the ban has been approved and currently in force.

Saudi Arabia

(a) New draft "Waste Management Law"

The new draft law provides for key requirements for waste minimization, segregation and recycling. It also provides for the implementation of Extended Producer Responsibility principles and the strict regulation of waste activities across the value chain from point of generation to final treatment with key emphasis on circular economy principles. It also provides for stringent monitoring and penalties for violations including illegal dumping and burning of wastes.

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)
vi. Resource Sustainability Act (RSA)

Spain

(a) Law 41/2010 for the protection of the marine environment,

(b) Law 22/2011 on waste and contaminated soils, National Strategy for a Circular Economy and its Action Plans

The five Spanish Marine Strategies, one per each marine subdivision, where legally approved by Royal Decree 1365/2018, 2nd November 2018.

Furthermore, Spain is preparing a framework legislation on waste that includes specific provision in order to reduce de plastic pollution. In that sense it is proposed:

i. By 2030, 70% reduction of the consumption of some single use plastic product (food containers and cups for beverages), taking into account the quantity placed in the market in 2022.
ii. The reduction of the consumption of other different plastic products as plastics trays for food, rings grouping tins of beverage, among others)
iii. By July 2021, the restriction of cosmetic and hygienic product contained plastic microsphere added intentionally
iv. The development of EPR for agricultural plastic
v. A specific tax for all non-reusable plastic packaging place in the market

That framework legislation transposes the European legislation on single use plastic (Directive (UE) 2019/904).

In the framework of circular economy Spain is also working in a specific action plan on plastic in the long term. By the moment, it is not possible to provide any further information on it.

Sri Lanka

(a) National policy on waste management

This is an umbrella type of policy that covers all the physical types of wastes; solid, liquid and gaseous. The relevant institutions are expected to make sectoral policies based on this policy. Marine waste has been identified under the policy.

Thailand

(a) Enhancement and Conservation of National Environmental Quality Act, B.E. 2535, 2563

To enhance and conservation of environmental quality which covers multistakeholder engagement and supports knowledge, this Act is covering all pollution, including hazardous waste, solid waste, garbage etc.

Turkey

(a) Environmental Law

Determines general rules on prevention of pollution and polluter pays principle.

(b) Municipal Law

Determines duties and responsibilities of Municipalities, including marine litter prevention and clean-up activities.

(c) The Procedures And Principles Regarding The Charging of Plastic Bags

Ministerial Approval dated on 22.12.2020 and numbered 274510

(d) Packaging Waste Control Regulation

Dated on 27.12.2017 and numbered 30283 O.G.

(e) Zero Waste Regulation

Dated on 12.07.2019 and numbered 30829 O.G.

(f) The Law on The Establishment of Environmental Agency of Turkey and the Amendments of Some Laws

Dated on 20/12/2020 and numbered 7261 O.G.

(g) Circular on Marine Litter Provincial Action Plans' Preparation and Implementation (June 10th 2019)

Determines rules on framework of provincial marine litter action plans, how they will be prepared and implemented.

Uruguay

(a) Law N° 17849 (PACKAGING RECYCLING LAW, year 2004). Decree No. 260/007 on 23/07/2007.

The Decree No. 260/007 regulates Law No. 17849 and it seeks to prevent the generation of waste derived from packaging of any type, promoting the reuse, recycling and other forms of recovery of such waste, in order to avoid its inclusion as part of common or household waste. It uses the concept of extended producer responsibility (EPR), through the obligation for the producers to have management plans for packaging waste and used packaging.

April 28th, 2021 two Ministerial Resolutions (Ministry of Environment) were added:

271/2021: seeks to improve the levels of material recovery and also oblige manufacturers and importers of packaging, disposable tableware, trays, etc. to have collection plans. Gradual percentage of recovery targets for packaging materials (50% on December 31st, 2025). On January 1st, 2025, manufacturers, bottlers and importers of non-alcoholic beverages and waters, who sell their products in plastic containers, may only do so in containers that contain at least 40% by weight of recycled material.

Article 6: Manufacturers, importers, owners or representatives of a brand of packaged products that are marketed in the domestic market should:

i. Use containers that due to their design and waste management system that generate, favor, and ensure their adequate recovery for the recycling of high-quality materials, in which the material obtained can be entered as a substitute for raw materials to produce containers again.
ii. Include strategies to reduce the weight of the materials in the packaging in which their products are presented and to favor the use of returnable and reusable containers whenever possible.

272/2021: establishes an environmental seal so that some sectors: gastronomy, hotels, etc., adopt measures to reduce the use of plastics and also prohibits the use of straws as of 31/12/2022. Also establish recommendations for public bodies.

(b) Law N° 19655 (PREVENTION AND REDUCTION OF THE ENVIRONMENTAL IMPACT DERIVED FROM THE USE OF PLASTIC BAGS, year 2018). Decree No. 3/019 on 07/01/2019.

The Decree No. 3/019 regulates Law No. 19655 and its objective is to reduce the environmental impact of the use of plastic bags, discouraging their use and promoting their reuse and recycling. It prohibits the manufacture, import, distribution, sale and delivery of plastic bags that are not compostable or biodegradable.

(c) Law N° 17283 (GENERAL LAW OF ENVIRONMENTAL PROTECTION, year 2000). Decree No. 358/015 on 28/12/2015.

The Decree No. 358/015 has the objective of implementation of actions aimed at minimizing the generation of waste, promoting the reuse, recycling and other forms of recovery of out-of-use tires and achieving the reduction of their negative environmental effects due to their uncontrolled disposal. This regulation assigns responsibility for the management of this waste to the import / producer sector, which will be in charge of implementing a differentiated management circuit for this waste, which allows promoting recovery practices.

(d) Law N° 19829 (INTEGRAL WASTE MANAGEMENT LAW - LEY DE GESTIÓN INTEGRAL DE RESIDUOS, year 2019).

The purpose of the Law is to protect the environment, promoting a sustainable development model, by preventing and reducing the adverse impacts of waste generation and management. This law is in line with a circular economy strategy, where the use of materials is optimized, giving a second life to waste and promoting the development of new forms of business and the creation of green jobs associated with the recovery and valorization chain of materials. In its article 14, the Ministry of the Environment is responsible for the formulation of the National Waste Management Plan, as a strategic planning instrument at the national level for the implementation and development of the national waste management policy. Within this framework, a multidisciplinary and inter-institutional working group has been established in order to identify the strategic axes and lines of action in the different waste streams. Special attention is given to single-use plastics and the management of household waste.

(e) Decree Nº 182/013 (Sound Environmental Management of industrial, agro-industrial and service waste, year 2013).

It establishes the obligation to have waste management plans for the sectors reached, these plans must be designed on the guiding principles in waste management, where the prevention and minimization of waste is promoted, followed by reuse, recycling and recovery, being the final dispose the last of the alternatives.

(f) Actually the Ministry of Environment is developing a new regulation on e-waste to manage the life cycle of these products, applying the concept of extended producer responsibility and the plastic of these devices will be engage.

UK

United Kingdom-wide legislation

(a) The Marine Strategy Regulations 2010 (legislation.gov.uk): The Marine Strategy Regulations (2010) require necessary measures to be taken to achieve or maintain GES in UK seas. To help assess progress against GES it is broken down into 11 qualitative descriptors, including marine litter. These regulations make it law for the Secretary of State to produce indicators and targets and review these periodically.

Ongoing Shipping Regulations with Amendments

i. The Merchant Shipping (Prevention of Pollution by Garbage from Ships) Regulations 2020
ii. The Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) 2003 (as amended)
iii. IMO Action Plan for Marine Litter from Ships 2018

These measures incorporate international standards to prohibit the discharge of garbage (including fishing gear) into the sea from ships and ensuring adequate port waste reception facilities. They provide a framework to prevent the discharges of garbage in UK controlled waters and for ships to deliver their waste ashore to port waste reception facilities.

https://www.legislation.gov.uk/uksi/2010/1627/contents/made

(b) London Convention 1972 (Convention on the Prevention of Maritime Pollution by Dumping of Wastes and Other Matter) and 1996 Protocol; and OSPAR Convention 1999

These promote the effective control of all sources of marine pollution and the need to take all practicable steps to prevent pollution of the sea by dumping of wastes and other matter including bulky items of iron, steel and concrete. OSPAR is developing a new North East Atlantic Environment Strategy (NEAES), which will set OSPAR's strategic direction up until 2030 and will include objectives on marine litter. The Strategy will be agreed and launched in September 2021.

(c) 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.

(d) 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.

Littering

i. Environmental Protection Act 1990 (as amended) (England, Wales and Scotland)
ii. Litter (Northern Ireland) Order 1994 (as amended)
iii. Clean Neighbourhoods and Environment Act 2005 (England and Wales)
iv. Code of Practice on Litter and Refuse (England) 2007)
v. Clean Neighbourhoods and Environment Act (Northern Ireland) 2011)
vi. Code of Practice on Litter and Refuse (Scotland) 2006
vii. Marine Strategy Regulations 2010

These make littering a criminal offence, set out the standards that land managers (primarily local authorities) are expected to meet in keeping their land clear of litter, including beaches above mean high water springs, and provide local authorities with powers to take enforcement action against littering. Councils also have a number of other relevant powers in respect of maintaining public amenity and controlling anti-social behaviour.

(e) Landfill Tax

Landfill Tax was introduced on 1 October 1996 to encourage waste producers and the waste management industry to switch to more sustainable alternatives for disposing of material. There is a lower rate of tax, which applies to less polluting qualifying materials covered by two Treasury Orders, and a standard rate, which applies to all other taxable material disposed of at authorised landfill sites. Previously, the tax applied across the UK but from 1 April 2015 it was devolved to the Scottish Parliament and Welsh Parliament/ Senedd Cymru from 1 April 2018 in Wales.

Voluntary Measures

(a) Responsible Fishing Vessel Standard

This is a scheme, developed by SeaFish (the public body supporting the seafood industry in the UK) and Global Seafood Assurances, which promotes responsible waste management to help prevent marine litter. This replaced the Responsible Fishing Scheme.

http://www.seafish.org/rfs

(b) Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries (CCRF)

This provides a framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment. It includes retrieval of lost or abandoned fishing and aquaculture gear (and fragments of gear) and banning of dumping. Whilst the code is voluntary the UK's SeaFish organisation and the Marine Stewardship Council (which certifies sustainable seafood) are signed up to it.

http://www.fao.org/3/v9878e/v9878e00.htm

Legislation by administration

England

(a) There are a range of legislative measures in place to combat litter and littering in England. The Environmental Protection Act 1990 (s87) makes it a criminal offence to litter and section 88 provides for litter authorities to issue fixed penalty notices, otherwise known as an 'on-the-spot fine', as an alternative to prosecution. Section 89 requires local councils to keep their public land clear of litter and refuse. The standards that councils are expected to achieve in meeting this statutory duty are set out in the statutory Code of Practice on Litter and Refuse.

(b) The Environmental Protection Regulations 2020

The Environmental Protection (Plastic Straws, Cotton Buds and Stirrers) (England) Regulations 2020. We introduced legislation to introduce restrictions on the supply of plastic straws, cotton buds and stirrers, with some exemptions, e.g. for medical reasons.

(c) Litter and refuse: code of practice (updated 2019)

https://www.gov.uk/government/publications/code-of-practice-on-litter-and-refuse

Northern Ireland

(a) The Waste (Circular Economy) (Amendment) Regulations (Northern Ireland) 2020, came into effect in Northern Ireland on 18 December 2020. The legislation includes requirements for measures to ensure better compliance with the waste hierarchy, a widening of the scope of waste streams that must be separately collected and incrementally increasing recycling targets. It also defines specific recycling targets for packaging, requires specific measures for littering and sets minimum requirements for all extended producer responsibility schemes.

https://www.legislation.gov.uk/nisr/2020/285/pdfs/nisr_20200285_en.pdf

(b) Guidance to district councils: litter (updated 2012)

https://www.daera-ni.gov.uk/publications/guidance-district-councils-litter

Scotland

(a) The Single Use Carrier Bags Charge (Scotland) Regulations 2014

https://www.legislation.gov.uk/sdsi/2014/9780111023211

(b) The Environmental Protection (Microbeads) (Scotland) 2018

https://www.legislation.gov.uk/ssi/2018/162/contents/made

(c) The Environmental Protection (Cotton Buds) (Scotland) 2019

https://www.legislation.gov.uk/ssi/2019/271/contents/made

(d) The Deposit and Return Scheme for Scotland Regulations 2020. All drinks containers up to 3l including plastic bottles.

https://www.legislation.gov.uk/sdsi/2020/9780111044681/contents

(e) (Draft) Environmental Protection (Single-Use Plastic Products and Oxo-degradable Plastic Products) (Scotland) 2021

https://www.gov.scot/publications/draft-environmental-protection-single-use-plastic-products-oxo-degradable-plastic-products-scotland-regulations-2021-discussion-paper/pages/1/

(f) Code of Practice on Litter and Refuse (2018)

https://www.gov.scot/publications/code-practice-litter-refuse-scotland-2018/

(g) Environmental Protection Act 1990 - Fixed penalty notices of £80 can be issued for littering, or following prosecution a fine can be charged of up to £2,500.

https://www.legislation.gov.uk/ukpga/1990/43/section/87

(h) Regulatory Reform (Scotland) Act 2014 - A fly-tipping fixed penalty notice of £200 can be issued, or on prosecution an individual can be sentenced to imprisonment and risk a fine of up to £40,000

https://www.legislation.gov.uk/asp/2014/3/part/3/chapter/2/enacted

(i) To enable activities to remove litter without licenses - The Marine Licensing (Exempted Activities) (Scottish Inshore Region) Order 2011

https://www.legislation.gov.uk/ssi/2011/204/article/4/made

Wales

(a) The Welsh Government Code of Practice for Litter and Refuse is under review and is expected to be published 2021.

US

(a) U.S. Marine Debris Act

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 address the adverse impacts of marine debris on the economy of the United States, marine environment, and navigation safety. The Act also set forth direction for the U.S. Coast Guard to address ship-based waste in accordance with MARPOL requirements.

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.

In 2018, the Act (renamed the “Save Our Seas Act”) was further amended to expand work across the U.S. government, most notably with the U.S. 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 U.S. government consider addressing marine debris in all future trade agreements. (The Save Our Seas Act 2.0 was passed in December 2020 and is noted in Section D below)

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.

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.

IMDCC ensures coordination of federal agency research priorities, monitoring techniques, educational programs, and regulatory actions.

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)

The Clean Water Act (CWA) requires each state to establish water quality standards for all bodies of water in the state. Water quality standards consist of the designated beneficial use(s) of a waterbody, plus a numerical or narrative statement identifying maximum concentrations of various pollutants that would not interfere with the designated use. Many states have established narrative criteria for trash or floatables, which inherently include plastic waste.

CWA also allows for states to list waters impaired by pollutants, including trash/plastic waste. Unless planned measures can be taken to address impairments, the Act requires that states or US EPA develop Total Maximum Daily Loads (TMDLs) for those pollutants. Several states have trash-impaired waterbody listings.

The National Pollutant Discharge Elimination System (NPDES) regulates some stormwater discharges from three potential sources: municipal separate storm sewer systems (MS4s), construction activities, and industrial activities. Operators of these sources might be required to obtain an NPDES permit before they can discharge stormwater. A large number of NPDES permits have provisions addressing the stormwater nexus for trash entering waterways.

The Nonpoint Source Management Program requires states to develop nonpoint source management programs, and EPA has subsequently required updates for these programs. Trash is a pollutant that can be addressed through such programs, and nonpoint source grants authorized by Section 319 can be used to address trash pollution.

(c) Resource Conservation and Recovery Act (EPA)

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 wastes are managed in an environmentally sound manner by establishing minimum national criteria for solid waste facilities. RCRA regulations are generally implemented by states and tribes and/or at the local level, with state, tribal 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, tribal and local levels.

(d) Save Our Seas 2.0 Act

The Save Our Seas 2.0 Act is composed of three main pieces:

i. Strengthening the United States' domestic marine debris response capability with a Marine Debris Foundation, a genius prize for innovation, and new research to tackle the issue.
ii. Enhancing global engagement to combat marine debris, including formalizing U.S. policy on international cooperation, enhancing federal agency outreach to other countries, and exploring the potential for a new international agreement on the challenge.
iii. Improving domestic infrastructure to prevent marine debris through new grants for and studies of waste management and mitigation.

(e) Microbead-Free Waters Act

The Microbead-Free Waters Act prohibits the manufacturing, packaging, and distribution of rinse-off cosmetics containing plastic microbeads.

The law also applies to products that are both cosmetics and non-prescription drugs, such as toothpastes.

(f) Toxic Substances Control Act

Under TSCA, EPA has the authority to require testing of new and existing chemical substances such as those that may be in plastic waste entering the environment, and subsequently the authority to regulate these substances.

(g) While TSCA can potentially be used for the purpose of addressing risks specific to chemical substances that may be in plastic waste, to date EPA has not used the authorities in the Act to regulate plastic waste.

(h) Rivers and Harbors Appropriations Act

The Rivers and Harbors Appropriations Act authorizes the Army Corps of Engineers to issue permits for the discharge of materials of any kind into navigable waters under section 13.

EU

(a) Legislation on waste

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) 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 early 2020. In September, EU Member States agreed on a beach litter threshold value of 20 items per 100 m of beach, More threshold values in relation to marine litter and microliter (including microplastics) are being developed.Other EU instruments that help tackle marine litter include legislation on Port Reception Facilities for the delivery of waste from ships (2019), the Single-Use Plastic Directive focusing on most frequently found marine litter (including fishing gear containing plastic) (2019), the EU's International Ocean Governance Agenda (2016) and the Urban Waste Water Treatment Directive.

As a follow-up of the Single-Use Plastic Directive, the Commission also adopted a decision on a standardization request to the European Committee for Standardisation as regards circular design of fishing gear (2021) and a decision laying down the format for reporting data and information on fishing gear placed on the market and waste fishing gear collected in Member States (2021).

The European Commission also adopted its Zero Pollution Action Plan in May 2021 where, among other things, includes a target of reducing by 50% plastic litter at sea and of 30% micro plastics released into the environment by 2030.

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

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

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.211.01.0051.01.ENG&toc=OJ%3AL%3A2021%3A211%3ATOC

https://ec.europa.eu/environment/strategy/zero-pollution-action-plan_it

2.3. Indicators

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:

i. 70% of plastic packaging being recycled or composted
ii. 50% of average recycled content included in packaging
iii. 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.

(c) The Australian Government strongly supports the use of the Australasian Recycling Label (ARL) as the only verified recycling label on the Australian market. The ARL is a world-leading consumer education tool which helps households recycle and assists brand owners to design recyclable packaging.

A national plastics pollution database – Australia's 2021 National Plastics Plan includes a commitment for the Australian Government to partner with organisations to establish a national monitoring protocol and database for plastics pollution. This is currently in the early stages of development.

Canada

(a) 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:

i. Working with industry towards 100% reusable, recyclable, or where viable alternatives do not exist, recoverable plastics by 2030;
ii. Working with industry towards increasing recycled content by at least 50% in plastic products where applicable by 2030;
iii. 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
iv. 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.

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

Through the Canadian Environmental Sustainability Indicators program, Canada has established the plastic particles in the Northern Fulmar indicator. This provides information on the mass of plastic found in the Northern Fulmars' stomach in birds collected in Canada. The Northern Fulmar is a seabird that feeds exclusively on the surface (top 1 metre) in the open ocean. The indicator reports the proportion of birds with 0.1 g or more of plastic in their stomachs and gives an overview of the situation at the national and the regional levels.

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 cent per person by 2030, with a 50 per cent reduction by 2040.

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

(a) The targets on recovery of plastic packaging by EPR regulation consider a progress from 3 to 45% in 12 years on household packaging and from 15 to 55% for non-household packaging.

Prohibition on the use of plastic bags in commerce from February 2019, with exception of micro, small and medium scale companies, for which the prohibition entered into force in August 2020.

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 %

Fiji

(a) No indicators - however, Environment Management Act 2005 creates a waste and pollution permit system with the goal of protecting the environment by regulating solid and liquid waste, emissions from facilities which includes but not limited to Carbon dioxide, carbon monoxide, Nitrogen Dioxide, Ozone, Sulphur Dioxide PM 10, PM 2.5 as well as the management, storage, and disposal of wastes and hazardous substances.

(b) The Litter Act 2008 establishes a system prohibiting littering most of which ends up in the waterways and the marine environment.

Finland

(a) Environmental targets of the Finnish Marine Strategy (2018 – 2024) concerning marine litter, with indicators addressed to each target:

i. Reception of waste is efficient and user-friendly in all ports
ii. The number of cigarette butts on Finnish urban beaches is reduced significantly (by 2024)
iii. Urban waste water treatment facilities remove a very significant portion of microplastics
iv. 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 :

i. 5% of reused packaging by 2023
ii. 10% of reused packaging by 2027
iii. 50% less single use plastic bottles by 2030
iv. 100% recycled plastic by 2025
v. 20% reduction target for single-use plastic packaging (expressed as tonnages of incorporated plastic / reference year 2018) by 31st December 2025, taking into account that at least 50% of this target must be achieved through the reuse of packaging
vi. 77% of plastic bottles collected by 2025
vii. A threshold has been defined at the EU level and it sets a target for good environmental status of a maximum of 20 litter items for 100 meters of beaches.
viii. In the framework of the Marine Framework Directive environmental objectives have been defined with as target a decrease in the amount of litter found in the marine environment.

Germany

(a) As an EU-Member state, GER is obliged to implement the EU-wide agreed threshold value for beach litter.

Indonesia

(a) National target by 70% by 2025.

This target is counted by comparing marine litter leakage from land based in to the ocean in 2018 to the existing year.

Italy

(a) According to the Commission Decision (EU) 2017/848 of 17 May 2017
   i. D10C1 — Primary: The composition, amount and spatial distribution of litter on the coastline, in the surface layer of the water column, and on the seabed, are at levels that do not cause harm to the coastal and marine environment.
   ii. D10C2 — Primary: The composition, amount and spatial distribution of micro-litter on the coastline, in the surface layer of the water column, and in seabed sediment, are at levels that do not cause harm to the coastal and marine environment.
   iii. D10C3 — Secondary: The amount of litter and micro-litter ingested by marine animals is at a level that does not adversely affect the health of the species concerned.
   iv. D10C4 — Secondary: The number of individuals of each species which are adversely affected due to litter, such as by entanglement, other types of injury or mortality, or health effects.

Japan

(a) "National Action Plan for Marine Plastic Litter" includes five indicators for monitoring progress:
   i. Amount of plastic waste generated, recycled, heat recovered, incinerated without energy recovery, and land filled
   ii. Amount of collected land-based litter, illegal dumping, and scattered waste
   iii. Amount of marine litter collected by clean-up activities
   iv. Production capacity and amount of consumption of alternative materials such as marine degradable plastics and paper
   v. Increment of plastic waste generated, recycled, heat recovered, incinerated without energy recovery, and land filled, thanks to international cooperation

Kiribati

(a) No - Data including specific indicators on MPL is non-existent, however the solid waste data generated from past solid waste surveys and plastic waste is one of them. This is one of the challenges facing Kiribati and the ministry responsible for Environment (MELAD) started some work on developing its information and data management system known as KEMIS. This work is ongoing and covers waste management and pollution prevention as one thematic area of the KEMIS.

Maldives

(a) By 2023, phase out of importation, production and use of single use plastics in the country is enforced

(b) By 2021, Develop a national policy framework on pollution prevention

(c) Develop a Single use plastic regulation by 2021

(d) Implement Extended Producer Responsibility (EPR) for identified categories of single use plastic

(e) Phase out single use plastic bottles and introduce water coolers provide access to safe drinking water in public spaces

(f) Formulate a comprehensive policy and implementation framework on the ban of single use plastics with short, medium, and long-term goals

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.

See: Monitoring & Assessing Marine Litter | OSPAR Commission:

https://www.ospar.org/work-areas/eiha/marine-litter/assessment-of-marine-litter#:~:text=OSPAR%20marine%20litter%20experts%20are%20part%20of%20the,plastic%20particles%20in%20fulmar%20stomachs%20as%20common%20indicators

(b) For the plastic pacts and the transition agenda for plastics, we look at the entire supply chain of plastics: 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).

New Zealand

(a) We do not have central-government MPL-specific indicators. However, we have data that suggests less plastic is ending up in our marine environment - for example, more than an estimated 2 billion plastic shopping bags have been removed from circulation through our ban on plastic shopping bags in 2019. Additionally, at least another 2 billion single-use plastic items (straws, cotton buds, cutlery etc) will be removed from circulation through the additional plastic phase-outs that commence in late 2022.

Norway

(a) We do not have specific national indicators that are targeting marine plastic litter. We support international processes on the issue e.g. at present co-financing a study under the Nordic Council of Ministers that will give an overview over relevant indicators for plastic pollution including plastic leaks along the plastic value chain.

(b) 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.

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/

Pakistan

(a) Monitoring of marine litter and debris, especially plastics, and microplastics in Arabian sea

(b) Methodologies and approaches for different sources and sinks, locations and densities

(c) Baselines, Data collection and methodologies;

Data sharing arrangements and platforms

Gaps in monitoring different types of plastic litter and microplastics.

Transboundary movement of plastic waste in ocean

Technologies for improved tracking for plastic recovery

Citizen clean-up programmes and initiatives

Increase plastic products traceability, and retrieval at national level

Legislation strengthening (imposed ban on polyethane)

Analysis of options for material-free solutions to replace the need for plastics.

Effectiveness of mitigation measures across lifecycle stages of plastic

Panama

(a) Number of beach cleaning activities carried out

(b) Tons of garbage collected in beach cleanup activities

(c) Number of participants in beach cleanings by gender

Republic of Korea

(a) Water Quality Index(WQI)

(b) The amount of collected marine litter through national marine litter removal projects

Saudi Arabia

(a) Indicators will be developed as part of the action plan highlighted above.

Spain

(a) Marine litter on beaches

(b) Floating litter

(c) Seabed litter

(d) Microplastics in surface waters

(e) Microplastics in sediments

(f) Microplastics on beaches

(g) Citizen science

(h) Ingestion of ML by turtles

(i) Entanglement (turtles)

Thailand

(a) Plastic waste
   i. Selected types of plastic will be totally banned within 2022 and replaced by eco-friendly material for production
   ii. 50% of target plastic type will recycle with 2022

(b) Marine debris
   i. The number of marine debris have been collected from marine ecosystem each year

It includes prevention and reduction of marine litter from sea-based sources under the Plastic Waste Management Plan which Pollution Control Department is the main operator.

Turkey

(a) It is essential to reduce the annual use of plastic bags by 90 per capita until December 31, 2019, and by no more than 40 until December 31, 2025, throughout the country.

(b) According to "Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast" (IMAP) of Barcelona Convention under the National Marine Monitoring Programme Common indicator 22 (Trends in the amount of litter washed ashore and/or deposited on coastlines - EO10) and Common Indicator 23 (Trends in the amount of litter in the water column including microplastics and on the seafloor- EO10) has been studied partially, however trends will be achieved in the coming years.

(c) The other indicator Candidate Indicator 24 (Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles- EO10) will be studied in 2021 and 2022 through literature work.

UK

(a) The UK Marine Strategy uses marine litter as an indicator of clean seas, showing changes to the amount of litter in the marine environment, including litter on beaches, on the seafloor and floating litter. Beach litter surveys are completed annually or quarterly and cover a representative number of beaches. Data from trawl surveys, typically carried out for fish stock assessments, are used to monitor the amount of litter on the seafloor. After each tow all litter items are emptied from the net and counted and classified. Beached fulmars or individuals accidently killed are collected as part of a monitoring programme in the Greater North Sea to assess the plastics found in their stomachs. Fulmars forage exclusively at sea, generally at the surface of the water. The amount of plastic they ingest can be used as a proxy for the abundance of floating litter in their environment and how this is changing. Indicators for seafloor litter, beach litter and litter found in Fulmar stomachs have been developed and expert groups are working to improve the data. Additional monitoring programmes are being developed to record the amount of microplastics in sediment and in biota.

(b) The UK Marine Strategy Part One assessment indicators of beach litter, seabed litter and plastic particles in fulmar stomachs are also used for reporting to the OSPAR monitoring and assessment programme. These allow the abundance, trends and composition of marine litter in the OSPAR Maritime Area to be determined for different marine compartments (floating, seafloor and coast). OSPAR is currently also working to develop new indicators, including microplastics in sediments. The microplastics indicator will address levels in marine sediments and will cover the whole OSPAR Maritime Area. The Microplastics in Sediment Expert Group at OSPAR is led by Cefas.

US

(a) The US Environmental Protection Agency announced a National Recycling Goal to increase the recycling rate in the US to 50% by 2030.

https://www.epa.gov/americarecycles/us-national-recycling-goal

EU

(a) Indicators for marine litter occurrence and impact in the marine environment are provided through Descriptor 10 of the Marine Strategy Framework Directive. 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 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.

(b) Data on marine litter concentration are available through the EMODnet platform. This includes a complete set of data on litter on beaches of EU Member States and some neighbourhood countries, normalised to common standards.

(c) Work on normalising data on floating, seabed and microlitter concentrations is underway. A target threshold value for beach litter (i.e. 20 litter items/100 m of coastline), has been established (see the JRC Technical Report on A European Threshold Value and Assessment Method for Macro Litter on Coastlines), which is estimated to reduce harm from beach litter to a sufficiently precautionary level.

URL:

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

https://emodnet.ey/

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:

- Pollution control infrastructure assets implemented
- Pollution control and resource efficiency solutions promoted and implemented
- 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":

- By 2022, a partnership facility for healthy oceans and blue economy established.
- 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.
- By 2023, 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.

ASEAN

(a) ASEAN Regional Action Plan on Combatting Marine Debris

(b) ASEAN-Norwegian Cooperation Project on Regional Capacity Building for Reducing Plastic Pollution (ASEANO) (ongoing)

The ASEANO project will strengthen knowledge, capacity, and awareness to tackle plastic pollution from key sources in the ASEAN region, serving as the baseline and monitoring interactions with industries and businesses, governmental bodies and other stakeholders, other projects as well as NGOs. Core objectives includes illuminating driving forces and its implications for economy, development, environment, and human well-being, with focus on local municipality/city level sustainability.

ERIA

(a) One of the chief roles of ERIA's Regional Knowledge Centre for Marine Plastic Debris is to provide policy support for ASEAN+3 Member States. In addition to the on-going capacity development and information sharing work, the RKC-MPD also provided inputs to the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021 – 2025). The RKC-MPD has also developed a project on data collection and reporting system on solid waste management in Myanmar, which is expected to enhance the national capacity to manage land-based waste to the ocean. ERIA has also supported the Philippines in its waste statistics management.

GEF

(a) The GEF-7 Programming Directions

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."

As of June 2021, it is expected to achieve 1.4 million metric tons of marine litter avoided under this sub-indicator (*The number may change as the projects go through the project preparation phase).

https://www.thegef.org/sites/default/files/publications/GEF%20Scorecard_2021_June_CRA_bl2.pdf

IAEA

(a) Working descriptor: "From linear to sustainable circular economy"

The present common use of plastic must move away from "take-make-waste" towards a sustainable circular economy built on the 4R principles: reduce, reuse, recycle and renew. NUTEC Plastics is an initiative inherently contributing to the 2030 Agenda for Sustainable Development and SDG 12.5, which calls on countries to "...substantially reduce waste generation through prevention, reduction, recycling and reuse". NUTEC Plastics' contribution is through application of nuclear techniques for understanding the abundance and impact of marine plastic pollution and for reducing plastic waste volumes by improving plastic recycling methods and developing bio-based alternatives to single use plastics. There are about 25 ongoing or planned technical cooperation projects that relate directly to plastics in IAEA Member States; as well as coordinated research projects that relate to radiation technologies and environmental monitoring. Ultimately NUTEC Plastics benefit Member States through improved marine plastic management through baseline and projected plastic pollution assessments and demonstration of radiation technology in plastic waste sorting, recycling and reuse.

Ocean Conservancy

(a) ASPPIRe: (Advancing Solutions to Plastic Pollution through Inclusive Recycling) in Colombia and Vietnam, an initiative of the Trash Free Seas Alliance®

The goals of the ASPPIRe project are: to pilot new models to incentivize informal sector waste collectors to collect more low value plastic waste; to find end-markets for the plastics collected; to support the economic and social well-being of the informal sector collectors; and to use what we learn to help inform policies in developing countries. Indicators include: the amount of plastic collected, the number of women participants, and the social fingerprint score of each cooperative after six months of training under the SA8000 standard.

More info here: https://iwrc.world/asppire/

(b) SPLASH (Strategic Plastic Litter Abatement in the Song Hong)

With support from the Benioff Ocean Initiative and the Coca-Cola Foundation and local partner the Center for

Marinelife Conservation, Ocean Conservancy is piloting the installation and operation of five plastic capture devices in the Red river (also known as the Song Hong) 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

(c) Accelerating Efforts to Reduce Ocean Plastic in Vietnam

In 2019, Vietnam released a National Action Plan on Marine Plastic Waste Management to 2030 (NAP), which Ocean Conservancy helped shape. Ocean Conservancy is working to support the implementation of Vietnam's NAP by focusing on the policy, financing and science of marine debris reduction with the funding from the US Department of State.

(d) Urban Ocean

Ocean Conservancy, together with Resilient Cities Network (R-Cities) 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 program 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 R-Cities network include Christchurch, New Zealand, Milan, Italy, Pune, India, Rotterdam, The Netherlands, Toyama, Japan, and Vejle, Denmark joined the program to share opportunities that meet the program'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.

Despite the various challenges presented by the COVID-19 pandemic, Urban Ocean programming has continued. Each city has completed the Circularity Assessment Protocol in collaboration with University of Georgia's New Materials Institute and local implementation partners. This field research portion helps the city identify its strengths, weaknesses, and opportunities to improve the circularity of its waste management systems. Urban Ocean also completed its Innovation Dialogues webinar series. The remainder of 2021 Urban Ocean cities will finalize their priorities and complete the project preparation phase in advance of the Accelerator Summit which is scheduled for Q1 of 2022.

URL: http://www.theurbanoceanprogram.org/

UNEP

(a) For people and planet: the United Nations Environment Programme strategy for 2022–2025 to tackle climate change, loss of nature and pollution (UNEP/EA.5/3/Rev.1), adopted at the Fifth session of the United Nations Environment Assembly of the United Nations Environment Programme, Nairobi (online), 22–26 February 2021.

i. UNEP's Medium Term Strategy (2022-2025), under its Chemicals and pollution action, has among its targets: (d) By 2025, the capacity of countries to achieve Sustainable Development Goal targets 6.3, 12.3, 12.4 and 14.1 is strengthened. Progress of the 14.1 is measured by Indicator 14.1.1: (a) index of coastal eutrophication; and (b) plastic debris density.

ii. UNEP launched in February 2021, phase I of the GPML Data Hub and the manual "Understanding the State of the Ocean: A Global Manual on Measuring SDG 14.1.1, SDG 14.2.1 and SDG 14.5.1", a guide to implement the SDG Indicator 14.1.1, 14.2.1 and 14.5.1. Level 2 parameters for reporting by countries, the SDG Global database under 14.1.1b includes currently data on the Beach litter (average count of plastic items per km^2) from Citizen Science data from Ocean Conservancy's International Coastal Clean-up (ICC), NOAA's Marine Debris Monitoring and Assessment Citizen Science Project, and the Marine Litter Watch. The guide also provides the step by step guidelines on how to measure the remaining Level 2 parameters, i.e. Floating plastics (average count of plastic items per km^2), Water column plastics (average count of plastic items per km^3) and Seafloor litter (average count of plastic items per km^2).

URL: https://wedocs.unep.org/handle/20.500.11822/35086;jsessionid=15896984F315C012A9A482D07D481EEC

(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

UNIDO

(a) No specific MPL indicators. The amount of plastic collected for recycling is used as an indicator in some projects.

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)

WEF GPAP

(a) Building consensus on consistent approaches for measuring plastic waste and pollution is essential for monitoring progress. Three of our national partners - Indonesia, Ghana and Viet Nam – have conducted rigorous baseline assessments and projections, giving their governments clear evidence on which to act. In aid of these measurement efforts, we're working with partners and experts to encourage greater integration between established tools and methodologies. We're also upgrading our approach to baseline analysis so that governments, industry and civil society can conduct assessments and projections more independently. The National Plastic Action Partnerships also set up national metrics task forces to advance country-level efforts related to plastic flow data collection, harmonization and analysis.


re-use

3. Measures and Achievements

Popular measures to combat MPL include reducing single-use plastic, conducting clean-up activities along rivers and coasts, creating multi-stakeholders partnerships, promoting innovative solutions, sharing scientific information and knowledge, improving waste recycling system and participating in international cooperation. More than 30 countries are taking such measures.

Extended producer responsibility (EPR), action on fishing gear, and installing traps or fillers in drainage systems or rivers to collect plastic, are also popular. More than 20 countries are taking such actions.

Actions on microplastics are taken by 16 countries. Countries are initiating various upstream and downstream measures against macroplastics.

Among regions targeted by many international cooperation projects, 22 countries have initiatives/projects in Southeast Asia. Ten countries have initiatives in Latin America, and nine countries have initiatives in Africa.

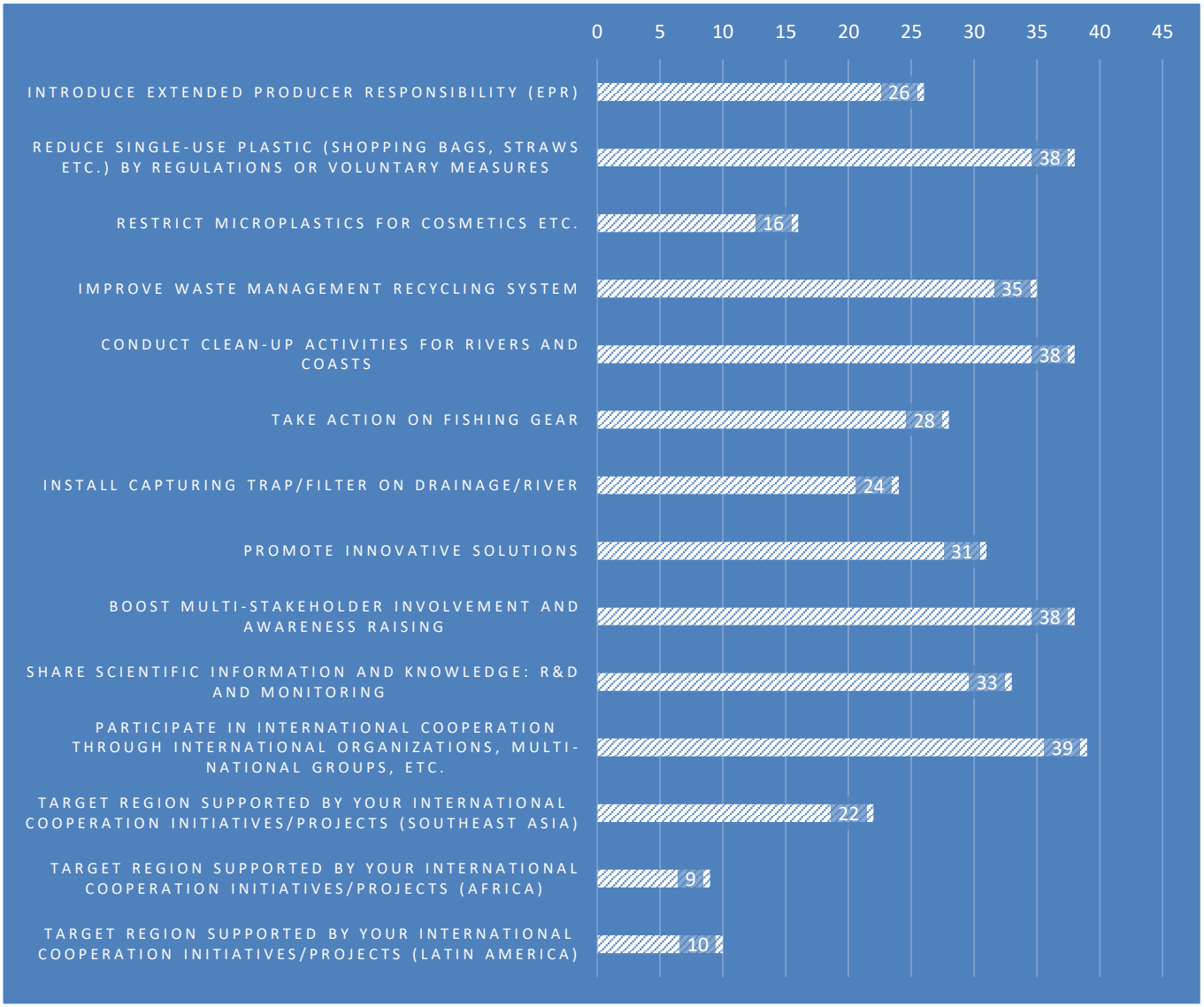


Figure 3: Countries - Measures and Achievements*

*Number of countries responded YES among 41 responses

3.1. Prevention and Reduction of Plastic Waste Generation

Twenty-nine countries have implemented measures to restrict single-use plastics by charging shopping bags and straws. Some 24 countries have initiated actions to encourage sustainable or circular product design to reduce plastic waste generation. However, regulations on microplastics were reported by 15 countries. While these regulations on microplastics are restricted to developed countries, charges for single-use plastics are widespread in developing countries.

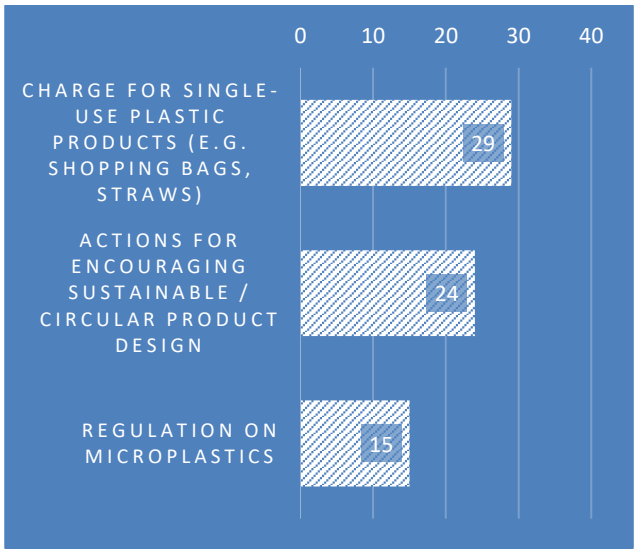


Figure 4: Countries - Prevention and Reduction of Plastic Waste Generation*

*Number of countries responded YES among 41 responses

Countries

Australia

Charge for single-use plastic products

(a) 2021 National Plastics Plan – Phase outs

The National Plastics Plan includes actions for industry to phase out certain problematic plastics informed by the Australian Packaging Covenant Organisation's consultation with industry and governments. These include:

i. Phase out non compostable plastic packaging products containing additive fragmentable technology that do not meet relevant compostable standards (AS4736-2006, AS5810-2010) (July 2022)
ii. Phase out expanded polystyrene (EPS) in loose fill and moulded consumer packaging (July 2022), and consumer food and beverage containers (December 2022)
iii. Phase out PVC packaging labels (December 2022)

To provide greater clarity to industry, on 15 April 2021 Environment Ministers identified eight problematic and unnecessary single-use plastic product types for industry to phase out nationally by 2025 (or sooner in some cases) under the National Waste Policy Action Plan. The list includes:

i. Lightweight shopping bags
ii. "Degradable" plastics (fragmentable/oxo-degradable)
iii. Plastic straws
iv. Plastic utensils and stirrers
v. Plastic bowls and plates
vi. Expanded polystyrene (EPS) consumer food containers (e.g. cups and clamshells)
vii. EPS consumer goods packaging (loose fill and moulded)
viii. Microbeads in personal health care products.

Achievements

Not any particular trend - Plan is new. Not yet measured.

Actions for encouraging sustainable / circular product design

(a) Australian Circular Economy Hub and Marketplace

The Australian Government has invested AU$1.6 million through the Environment Restoration Fund to help establish an Australian Circular Economy Hub and Marketplace by end of 2021, designed to be a one-stop-shop for circular economy inspiration, education and implementation in Australia.

(b) Plastics Design Summit

A Plastics Design Summit will be held for product designers and manufacturers to showcase their sustainable product design.

(c) CSIRO National Circular Economy Roadmap for Plastics, Glass, Paper and Tyres

CSIRO's *National Circular Economy Roadmap for Plastics, Glass, Paper and Tyres* will be used by governments, industry and researchers to inform future decisions on investment, policy development and research priorities.

Achievements

Not any particular trend - New initiatives. Not yet measured.

Regulation on microplastics

(a) Voluntary phase-out of microbeads in rinse-off personal care, cosmetic and cleaning products sold in Australia

A 2020 independent assessment of the voluntary industry-led phase-out of microbeads in rinse-off personal care, cosmetic and cleaning products sold in Australia revealed that 99.3% of the targeted products were microbead free.

Achievements

(a) Positive improvement - The peak industry organisation implementing the phase-out will continue to monitor the market to ensure products remain microbead free through their existing monitoring and assurance program.

(b) Numerical data - The assessment found that:

i. Of the approximately 8100 unique products inspected, 99.3 per cent were microbead-free.
ii. For the 0.7 per cent of products containing microbeads, facial scrubs, facial cleansers, and face masks were the most common product types using microbeads as an ingredient.
iii. There were no microbeads present in cleaning products or in oral hygiene products surveyed, such as mouthwash and toothpaste.

Others

(a) EPR

The Australian Government have introduced a number of measures to encourage industry uptake of product stewardship schemes. This includes through Government accreditation of voluntary product stewardship arrangements, funding to support the development or expansion of voluntary product stewardship schemes and a Minister's Product Stewardship Priority List, which signals to industry that action is expected to improve product stewardship outcomes for a particular product or material.

Bahrain

Charge for single-use plastic products

(a) Ban use single use plastic bags (coming soon)

- Targeted products: plastic bags
- It is plan to enforce end of 2021

Bangladesh

Charge for single-use plastic products

(a) Polythene Shopping Bags less than 20 microns has been banned in Dhaka City on January 2002. Polythene Packaging and bags were banned countrywide on April 2002 along with a relaxation of Polythene for Packaging more than 55 microns. Polythene Packaging has been permitted for minnow & mushrooms more than 35 and tea 40 microns later.

Bhutan

Actions for encouraging sustainable / circular product design

(a) Reduce and reuse of plastic waste

Making baskets out of plastic waste, bags woven by use of plastics

Achievements

Positive improvement

Brunei

Actions for encouraging sustainable / circular product design

(a) No Plastic Bag Day Everyday

Aimed for encouraging the uptake of the 3'Rs-Reduce, Reuse and Recycle to discourage the use of single use-plastics and encourage the use of reusable bag and recyclable packaging in everyday activities.

Achievements

Positive improvement

Canada

Charge for single-use plastic products

(a) Canada's comprehensive zero plastic waste agenda

(b) Proposed ban on harmful single use plastic items

(c) Targeted products:

Plastic checkout bags, straws, stir sticks, ringed beverage carriers, cutlery, and foodservice ware made from hard-to-recycle plastics

In October 2020, Canada announced the next steps in its agenda to achieve zero plastic waste by 2030. One of these steps is a proposed ban on harmful single-use plastic items where there is evidence that they are found in the environment, are often not recycled, and have readily available alternatives. Based on those criteria, the six items the Government proposes to ban or restrict are plastic checkout bags, straws, stir sticks, ringed beverage carriers, cutlery, and foodservice ware made from hard-to-recycle plastics.

A range of tools are in place at the sub-national level to reduce plastic waste including: extended producer responsibility programs for packaging, take back programs, access to curbside and depot recycling programs, landfill bans as well as bans or levies on single use plastics. For instance, the Northwest Territories requires retailers to charge CA 25 cents for single use bags. Companies have also instituted fees to consumers for plastic bags, switched to available alternatives, implemented bans on certain single use plastics or provide rebates for reusable containers.

Achievements

Not any particular trend - It is too early to measure the performance of the proposed ban or restrictions on harmful single use plastics but positive outcomes are anticipated.

Actions for encouraging sustainable / circular product design

(a) Canada's comprehensive zero plastic waste agenda

(b) National product standards

(c) Greening operations and procurement

(d) Canadian Plastics Innovation Challenges

(e) Extended producer responsibility programs

(f) Value-retention processes

Canada's comprehensive agenda to reduce plastic waste and pollution 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:

i. proposed recycled content requirements in products and packaging;
ii. 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;
iii. investing in innovation through the Canadian Plastics Innovation Challenges; and,
iv. working with and supporting industry to improve product design and the recovery of all plastics.

In June 2021, Canada published the Socio-Economic and Environmental Study on Remanufacturing and Other Value-Retention Processes in Canada for public comment. The Government of Canada will develop a national strategy to encourage the remanufacturing of products and other value-retention processes such as refurbishment, repair and reuse.

The federal, provincial and territorial governments are also working together to:

i. Achieve consistent extended producer responsibility programs across Canada;
ii. Develop a roadmap to address single-use and disposable plastics;
iii. Establish national performance requirements for plastic products and packaging (e.g. standards for recycled content and bio-based plastics);
iv. Support recycling infrastructure and innovation in plastics manufacturing;
v. Develop a roadmap that identifies sectors for strengthened value retention processes; and,
vi. Develop guidelines and tools for green procurement practices.

Achievements

(a) Not any particular trend - Since 2018, through the Zero Plastic Waste Initiative, 12 industry and non-profit organizations have received over CA $2.7 million to advance innovative and sector specific solutions that improve the sustainable design and production of plastics, strengthen secondary markets and support Canada's transition to a circular plastics economy. Canadian Plastics Innovation Challenges presented in section 3.4.

(b) Numerical data - It is too early to measure the performance of these initiatives but positive outcomes are anticipated.

Regulation on microplastics

(a) Canada's comprehensive zero plastic waste agenda

(b) Microbeads in Toiletries Regulations

(c) Listing microbeads on Schedule 1 to the Canadian Environmental Protection Act

(d) Listing plastic manufactured items on Schedule 1 to the Canadian Environmental Protection Act

In June 2017, the Government of Canada published the Microbeads in Toiletries Regulations, listing microbeads on Schedule 1 to the Canadian Environmental Protection Act, 1999 (CEPA). 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, starting January 1, 2018 with a complete ban as of July 2019.

In May 2021, "plastic manufactured items" was added to Schedule 1 to CEPA. This means that the Government of Canada has the authorities to use CEPA to enact regulations and other risk management tools to change behaviour at key stages in the lifecycle of plastic products and create the conditions for achieving a circular plastics economy and to reduce plastic pollution, including microplastics.

Achievements

Positive improvement - 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.

Chile

Charge for single-use plastic products

(a) A law which prohibits the delivery of plastic bags by commerce

(b) A law which regulates single used plastics

(c) Regulation on EPR for packaging

Targeted products:

- Plastic bags
- Single used plastics
- Plastic packaging and containers

Chile has implemented several plans, policies and programs to prevent the generation of plastic waste and to increase its recycling, including campaigns to prevent the use of single used plastics

Achievements

Positive improvement - 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.

Actions for encouraging sustainable / circular product design

(a) National Roadmap to the Circular Economy

This year Chile has adopted a National Roadmap to the Circular Economy 2020-2040, which serves as the basis for promoting a transition towards the "Circular Chile" of the future through 4 lines of action: Innovation, regulation, culture and territories.

China

Charge for single-use plastic products

(a) Opinions on Further Strengthening Plastic Pollution Control

Targeted products:

Plastic bags, foam plastic tableware, plastic cotton swabs, and so on.

By the end of 2020, non-degradable single-use plastic straws had been banned in restaurants nationwide; non-degradable single-use plastic tableware had been prohibited for catering services in built-up areas and scenic spots in cities above the prefecture level; by the end of 2022, the use of non-degradable single-use plastic tableware will be prohibited for catering services in built-up areas and scenic spots in county towns; by 2025, the consumption of non-degradable single-use plastic tableware for restaurants and delivery will be reduced by 30% in cities above the prefecture level.

Actions for encouraging sustainable / circular product design

(a) Opinions on Further Strengthening Plastic Pollution Control

Plastic manufacturers shall strictly implement national laws and regulations, enable their plastic products to meet national standards, and shall not illegally add chemical additives that are harmful to the human body and environment. Green designs are encouraged to improve the safety and recycling of plastic products. Moreover, new green and environmentally friendly materials are also encouraged, the use of recycled plastics that meet quality control standards and use control requirements will increase, and the research and development of recyclable, easily recyclable, and degradable alternative materials and products will be strengthened.

The resource utilization of plastic wastes in a standard, centralized, and industrialized manner will be promoted. Related projects shall be implemented mainly in resource recycling bases and other parks to improve the resource utilization of plastic wastes. More efforts shall be made to promote the energy-oriented utilization for the plastic wastes that feature a high sorting cost and are not suitable for resource utilization. The operational management of enterprises such as waste-to-energy power plants shall be strengthened to ensure a stable and up-to-standard discharge of various pollutants and to minimize the amount of plastic wastes that are directly landfilled.

(b) The 14th Five-year Plan for the Development of Circular Economy

On July 7, 2021, the National Development and Reform Commission (NDRC) of People's Republic of China released the 14th Five-year Plan for the Development of Circular Economy. According to the Plan, the circular economy will be developed by saving resources and intensive resource utilization in a resource recycling-based industry system and waste recycling system during the 14th Five-Year Plan period. By 2025, a resource recycling-based industry system will be basically established and a resource recycling system covering the entire society will be basically completed. By then, resource utilization efficiency will be substantially improved, and the replacement ratio of renewable resources to primary resources will be further increased.

According to the Plan, China is expected to roll out up to 11 key projects or actions, including the Special Campaign on Full Lifecycle Management of Plastic Pollution, which aims to prevent and reduce plastic wastes.

Regulation on microplastics

(a) Opinions on Further Strengthening Plastic Pollution Control

By the end of 2020, the production of daily chemical products containing plastic microbeads had been prohibited; by the end of 2022, the sale of daily chemical products containing plastic microbeads will be prohibited.

Researches on the pollution mechanism, monitoring, prevention, and control technologies and policies of plastic wastes and microplastics in rivers, lakes, and seas will be strengthened, and the assessment on ecological environmental impacts and human health risks caused by microplastics will be carried out in the coming years.

Achievements

Positive improvement

Dominican Republic

Charge for single-use plastic products

(a) Numeral 2 of Paragraph II of Article 172 of Law 225-20

Targeted products: Single-use plastic sleeves

Commercial establishments are obliged to reduce delivery and use of single-use plastic sleeves from 12 months after the enactment of the law up to 36 months.

Achievements

Not any particular trend - The application of this action will be carried out within a period of 3 years (36 months) from the enactment of the law in October 2020.

Actions for encouraging sustainable / circular product design

(a) Extended Producer Responsibility (EPR) National Plan and specific plans for waste, Article 57 and following of Law 225-20.

It is the special regime of waste management that has the purpose of guaranteeing that producers, importers and marketers are responsible for the correct handling of waste in the post phases industrial and post-consumer.

A specific national plan will be carried out for each priority waste, taking into account to the amount of generation, dangerousness or difficulty of handling.

Achievements

Positive improvement - With the promulgation of Law 225-20, it is necessary to comply with the Extended Producer Responsibility (EPR).

Regulation on microplastics

(a) General Law 225-20 on Comprehensive Management and Co-processing of Solid Waste of the Dominican Republic, October 2, 2020.

Provisions that regulate the waste of clothing, fishing articles, plastic waste from everyday use and industrial processes.

Achievements

Positive improvement - With the enactment of Law 225-20 we have these provisions to regulate microplastics.

Fiji

Charge for single-use plastic products

(a) The plastic bag levy (initially year 1) followed by a Single use plastic Bag Ban.

Targeted products: Single Use Plastic Bag

All single use plastic bag were banned in Fiji effective January 1, 2020. This ban was legislated through the Environment Management Act 2005 Section 45 (A).

A ban on Styrofoam (technically known as polystyrene) will come into effect on August 1, 2021. This upcoming ban includes the use, manufacture and import of Expanded Polystyrene (EPS) containers for food packaging. This will again reduce the litter issue significantly.

The pathway towards the Container Deposit Regulation is well underway with the stakeholder consultation process (prescribed in the legislation) initiated.

Achievements

(a) Positive improvement - Single use plastic bag ban has highly contributed to reduced number of bags that end up in landfills, by reducing their use at the source.

(b) Numerical data - the fuel retailer segment alone reported a 75% fall in plastic bag consumption (following the levy in year 1)

Actions for encouraging sustainable / circular product design

(a) Ban on single use plastic bags

Members of the public have begun to use environmentally friendly/reusable eco bags instead of Single Use Plastic Bags.

Achievements

Positive improvement

Regulation on microplastics

(a) Research on microplastics is ongoing.

Actions/Legislations listed above will result in the reduction of microplastics in the Marine Environment.

Achievements

Not any particular trend - it will be hard to quantify the impacts as research is at initial stage. More resources (technical and financial will be required to carry out more focused research in this area).

Finland

Charge for single-use plastic products

(a) A Green Deal on actions to restrict the use of plastic carrier bags

i. Targeted products for A Green Deal on actions to restrict the use of plastic carrier bags are:
Plastic carrier bags

ii. Targeted products for EU Single-use Plastics Directive are:
Certain plastic products

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.

(b) EU Single-use Plastics Directive

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).

Achievements

(a) The Green Deal on plastic carried bags has resulted in shops putting a price on plastic carrier bags, enhancing the use of multi-use bags and informing about the need to restrict the use of bags.

(b) 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.

Actions for encouraging sustainable / circular product design

(a) National Plastics Roadmap (2018)

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)

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.

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). Start of the updating of the plan that is to 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.

Regulation on microplastics

(a) 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

Restriction not yet adopted.

France

Charge for single-use plastic products

(a) Progressive ban of some single use plastic products and reinforcement of extended producer responsibility schemes and development new ones

- Targeted products: plastic bags, plastic packaging, plastic bottles, cups, cutlery, plates, containers, expanded polystyrene…

The legislation for energy transition for green growth (2015) sets up the prohibition of non-compostable plastic bags since 2017;

The legislation against waste and for a circular economy progressively forbids the sale and use of certain plastic items, it forbids the single-use plastic items listed in the European directive as well as cotton-bud and microbeads;

The legislation against waste and for a circular economy creates 11 new EPR schemes and extend existing ones.

Achievements

(a) Numerical data
   i. Plastic bags have been forbidden and are less found in the environment.
   ii. We cannot deduce any trends as to the presence of single-use items general in the environment yet. However, in 2020, single-use plastic items represented 19% of the litter collected during litter with a median of de 77 SUP/100meter.

Actions for encouraging sustainable / circular product design

(a) 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

Introduction of a definition of bulk selling in the national legislation and creation of an obligation for shops with a surface area of more than 400 meters to make reusable containers available to consumers;

(b) Definition of standard ranges of reusable packaging for the catering sector, as well as for fresh products and drinks;

(c) Allocation of at least 2% of the annual packaging extended producer responsibility organization contribution to the development of solutions for the reuse of packaging (implementation in 2022);

(d) Modulation of the financial contributions paid by producers to EPR organizations according to environmental performance criteria, including the possibility of reuse;

(e) Improvement of consumer information on the possibilities of re-use (implementation in 2022).

Regulation on microplastics

(a) The law of February 10 2020 relative to the fight against waste and the economy circular foresee that sites of production, manipulation (the sites industrial using granules plastic in their processes of production) and transport (platforms logistics, ports maritime and river) granules of plastics industrial be endowed of equipment and procedures to prevent the loss and leaks granules of plastics industrial that represent a part microplastics susceptible to be found in the environment.

It also foresees setting the implementation of regular Inspections by independent-certified organizations. The terms of implementation are precised in the Decree n°2021-461 of 16 April 2021 relative to the prevention of losses of granules of industrial plastics in the environment

(b) Participation to European REACH regulation

France contributes to European negotiations to prevent microplastics in products (REACH regulation)

Germany

Charge for single-use plastic products

(a) Amendment of the Packaging Act

Targeted products: plastic bags with a thickness between 15- 50 micrometers

From 1.1.2022, the use of plastic bags with a thickness between 15- 50 micrometers is forbidden by law.

Achievements

Positive improvement

Regulation on microplastics

(a) As an EU-Member state GER is pro-actively involved in developing related policy and regulatory measures on EU-level

Achievements

Not any particular trend

Indonesia

Charge for single-use plastic products

(a) Phase out selected SUP, as governed under minister for environment and forestry regulation P.75/2019;

Targeted products:

- plastic bags;
- plastic straws;
- plastic cutlery;
- plastic-based food container;
- plastic foam/Styrofoam;
- small size packaging.
- (fully prohibited by 1 January 2030)

(b) Through the Ministerial regulation, the government obliges producers (manufacturer, retail, and F&B sector) to reduce waste that generates from their product, packaging, container, and shopping carrier in form of plastic, paper, aluminum, and glass.

Achievements

(a) Positive improvement – Enacted in 2019, the government gives two years for the producers to develop their action plan as well as any necessary infrastructure/facility to take back their products/waste and to recycle them. The action plan will be entry into force by 2022.

(b) Numerical data

i. By June 2021 there are 23 producers have submitted to MOEF the planning document of waste reduction roadmap by the producer 2020-2029.

ii. In line with MOEF regulation P.75/2019, by June 2021 there are 58 local governments have stipulated local regulation to ban and limit the use of SUP at retail sector including plastic grocery bag, plastic straw, and plastic foam container.

Actions for encouraging sustainable / circular product design

(a) MOEF regulation P.75/2019 regulates the producer as brand owner to implement the REDUCE principle of 3Rs by redesigning their product and packaging to become sustainable and circular such as returnable, reusable, recyclable, more recycled content, durable, compostable, refillable, and rechargeable.

Achievements

Positive improvement

Italy

Charge for single-use plastic products

(a) Plastic Tax on single use plastic products and packaging

The plastic tax is aimed at discouraging the use of plastic products, by subjecting those who produce, buy or import single-use products used for containment, protection, handling or delivery of goods or food products to a tax of 45 euro cents per kilo.

Achievements

Not any particular trend - The entry into force has been postponed to 2022

Regulation on microplastics

(a) 2017. National legislative measure: ban of microplastics in cosmetics, soaps, creams, toothpastes.

On January 1st, 2020, the ban on microplastics came into force. The law prohibits the “placing on the market of rinse-off cosmetic products with an exfoliating or cleansing action containing microplastics”. The penalties range from fines to the stop of the production.

Achievements

Not any particular trend - The law came into force in 2020, for this reason it is not possible to see any trend of change

Others

(a) Transposition of Directive (EU) 2019/904

The Directive covers single-use plastic products that are found the most on beaches in the Union as well as fishing gear containing plastic and products made from oxo-degradable plastic

The objectives of this Directive are to prevent and reduce the impact of certain plastic products on the environment, in particular the aquatic environment, and on human health.

The Directive promotes circular approaches that give priority to sustainable and non-toxic re-usable products and re-use systems rather than to single-use products, aiming first and foremost to reduce the quantity of waste generated.

Achievements

Not any particular trend - Italy is transposing the Directive, for this reason it is not possible to see any trend of change.

Japan

Charge for single-use plastic products

(a) Charge for plastic shopping bags

Targeted products: plastic shopping bags

From July 2020, a charge for plastic shopping bags was started

Achievements

(a) Positive improvement

(b) Numerical data

Estimated amount of plastic bag for domestic distribution decreased to about 130 thousand ton in FY2020, which was about 200 thousand ton in FY2019.

(reference)

Encyclopedia on market share of packaging materials (2020)

(Japan Comprehensive Economic Research Center Co., Ltd)

Actions for encouraging sustainable / circular product design

(a) Enforcement of sound environmental design

Enforcement of sound environmental design including weight-saving for single use containers and packages

Achievements

(a) Not any particular trend

(b) Numerical data

Amount of waste plastic generated (slightly decreased compared to FY2018)

	FY2017	FY2018	FY2019	FY2020
Plastic Generated (kt)	8,630	8,610	8,500	under investigation

(Reference)

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

Kiribati

Charge for single-use plastic products

(a) Plastic Banning under the Customs Act

Targeted products: Single use shopping plastic bags, ice bags and Non-Biodegradable Nappies

The plastic products that are currently being banned from import under the Customs Act 2019 are:

i. non-biodegradable nappies;
ii. single use shopping plastic bags; and
iii. ice-block bags.

The ban is effective since October 2020 under the Custom Act 2019 and KCAE has taken the lead with the enforcement work under the Act with MELAD's ongoing support.

Achievements

(a) Positive improvement – Despite the ban is now in place, there are still challengings that we face especially with the Nappies and food packaging such as Bread, Buns, Fish and Vegetables.

(b) Numerical data: (You can get from the Kiribati Customs)

Actions for encouraging sustainable / circular product design

(a) Waste Repurposing Initiatives.

This initiative was implemented to encourage women from communities to make something valuable out of the waste such as turning car tyre into chairs, plastic noodles into purses and PET Bottle into jewelry etc. This will also help in reducing the amount of waste ends up in the landfill, ocean, dumped or even burned.

Achievements

Positive improvement – What we experience now is the lack of funding to support the improvement of this initiative. We need funding to purchase our tools and machines from overseas and also to hire the Technical Adviser who is an expert in this field.

Maldives

Charge for single-use plastic products

(a) Increase Tariff

List of items given in the Single-use plastic phaseout plan

https://www.environment.gov.mv/v2/wp-content/files/publications/20210425-pub-single-use-plastic-phase-out-plan.pdf

(b) Introduce levy

List of items given in the single-use plastic phaseout plan

https://www.environment.gov.mv/v2/wp-content/files/publications/20210425-pub-single-use-plastic-phase-out-plan.pdf

To discourage consumers to use single-use plastic items, it is one of the key policy initiatives under the Single-use plastic phaseout plan to charge for single-use plastic products. Will be implemented in 2021.

Achievements

Not any particular trend – Amendment to the Import Export Law will be introduced to increase tariff and Amendment to tax law will be introduced to incorporate the items for levy. The estimated date for policy changes to be effective is at the end of this year.

Actions for encouraging sustainable / circular product design

(a) Duty exemption of environmentally friendly products

To encourage consumers to use environmentally friendly items, it is one of the key policy initiatives under the Single-use plastic phaseout plan to charge for single-use plastic products. Will be implemented in 2021.

Achievements

Amendment to the Import Export Law will be introduced for duty exemption of environmentally friendly products. The estimated date for policy changes to be effective is at the end of this year.

Myanmar

Charge for single-use plastic products

(a) Targeted products: Polyethylene plastic bags

On October 2009, the Yangon City Development Committee (YCDC), Myanmar officially announced to ban businesses from manufacturing, importing, trading or distributing high-density polyethylene (HDPE) plastic bags for environmental reasons. Two years after Mandalay city's achievement to prohibit polyethylene bags, the authorities in Yangon also attempted not to allow the production, storage and sales of non-biodegradable waste such as polyethylene bags and ropes in April 22, 2011.

Achievements

Not any particular trend – due to the government's weak enforcement for sustainable banning, the plastic culture still remains and returns popularity nationwide.

Others

(a) Myanmar National Waste Management Strategy and Master 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) 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.

(c) 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

Charge for single-use plastic products

(a) Implementation of the EU SUP directive

Single-use plastics (europa.eu)

Targeted products: Ban on single use plastic plates, cutlery, cotton buds, balloon sticks.

Achievements

Not any particular trend

Actions for encouraging sustainable / circular product design

(a) Contribution to EU policy on sustainable products

In various consultations NL has pushed for an ambitious EU Sustainable Products Initiative, to be published late 2021, to set strong incentives for sustainable products on the EU market.

See also Annex on SPI enclosed

Regulation on microplastics

(a) REACH Restriction on intentionally added microplastics at EU level and a national policy programme on micro plastics

The EU works on a restriction to ban intentionally added micro plastics from products in the EU zone

Policy programme to tackle the biggest sources of micro plastics in the Netherlands (litter, tyres, paint, pellets/nurdles)

Achievements

Not any particular trend

New Zealand

Charge for single-use plastic products

(a) Phase out of hard-to-recycle and single-use plastics, including banning plastic bags.

Targeted products: drink stirrers, cotton buds, single-use produce bags, cutlery, plates and bowls, straws, fruit labels, plastic bags.

The phase outs will be carried out over three stages, beginning in late 2022.

See: Phasing out hard-to-recycle and single-use plastics | Ministry for the Environment https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/plastic-phase-out/

(b) In addition: Following completion of a co-design process, we will be implementing regulated product stewardship schemes for plastic packaging and farm plastics.

Achievements

(a) Positive improvement

(b) Numerical data - More than an estimated 2 billion plastic shopping bags have been removed from circulation through our ban on plastic shopping bags in 2019. At least another 2 billion single-use plastic items (straws, cotton buds, cutlery etc) will be removed from circulation through the additional plastic phase-outs that commence in late 2022.

Actions for encouraging sustainable / circular product design

(a) Plastics Innovation Fund and Waste Minimisation Fund.

Support product and business model innovations – eg funding Plastics NZ to develop solutions for plastic packaging and products. The PIF supports projects that promote or achieve plastic waste minimization, and the WMF boosts NZ's performance in reducing waste, reuse, recycling, and recovery of waste and diverted material.

See: Waste Minimisation Fund | Ministry for the Environment https://environment.govt.nz/what-you-can-do/funding/waste-minimisation-fund/

See: Plastics Innovation Fund | Ministry for the Environment https://environment.govt.nz/what-you-can-do/funding/plastics-innovation-fund/

Achievements

(a) Not any particular trend

(b) Numerical data - Information about the types of projects being funded: Waste Minimisation Fund funded projects | Ministry for the Environment https://environment.govt.nz/what-you-can-do/funding/waste-minimisation-fund/waste-minimisation-fund-funded-projects/

Regulation on microplastics

(a) Waste Minimisation (Microbeads) Regulations 2017

The aim of the regulations is to prevent plastic microbeads, which are non-biodegradable, entering our marine environment. They can harm both marine life and life higher on the food chain including humans.

Additionally, the Ministry of Business, Innovation and Employment (MBIE) funds 'Aotearoa Impacts and Mitigation of Microplastics' - a program to develop a nationwide overview of contemporary microplastic pollution in New Zealand and assess the risk microplastics present to our environment, economy and well-being. Funded by the MBIE Endeavour Fund.

See: Waste Minimisation (Microbeads) Regulations 2017 (LI 2017/291) Contents – New Zealand Legislation https://www.legislation.govt.nz/regulation/public/2017/0291/latest/DLM7490715.html?src=qs

Achievements

(a) Do not have data to make a conclusion about a particular trend.

(b) A literature review of marine plastics in NZ can be found here: our-marine-environment-2019.pdf https://environment.govt.nz/assets/publications/Files/our-marine-environment-2019.pdf

Some data is available through the Sustainable Coastlines litter intelligence programme: Litter Intelligence – Data https://litterintelligence.org/data?surveySearchText=microplastic&officialSurveys=true&adHocSurveys=true&verifiedSurveys=true&unverifiedSurveys=true

Norway

Charge for single-use plastic products

(a) Measures to reduce the use of plastic carrier bags (obligations through the EU directive to reduce the use of plastic carrier bags), ban on certain single-use (obligations through the EU Directive on the reduction of the impact of certain plastic products on the environment), marking requirements of certain single-use plastic products, and extended producer responsibility schemes.

(b) Targeted products: plastic carrier bags, cotton bud sticks, cutlery, plates, straws and stirrers, food containers, cups for beverages, beverage containers, sanitary products, wet wipes and tobacco products with filters.

The largest actors in the Norwegian grocery, retail and trade sectors have 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:

i. Reduce plastic pollution
ii. Increase plastic recycling
iii. Reduce consumption of plastic bags

Norway has implemented in national law some measures from the EU Directive on the reduction of the impact of certain plastic products on the environment (SUP-directive) such as bans on placing on the market certain plastic products and requirements on the marking of some single-use plastic products that are frequently inappropriately disposed of. New extended producer responsibility schemes are in progress for certain single use plastic products and for plastic gear in fisheries and aquaculture and will include financing of clean-up actions, awareness raising measures and waste management.

Achievements

Positive improvement - The total amount of single use plastic items on the Norwegian market has increased rapidly over the past years, to an estimated 59 629 metric tonnes annually. Some of the measures are recently implemented and yet to show the acquired results.

Actions for encouraging sustainable / circular product design

(a) Actively involved in EU-processes on product design.

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.

(b) Planned Plastic Pact

The Government also plans for a plastic pact with relevant business and industry actors that provide single-use plastic items/plastic packaging, in order to incentivize more circularity/ reduced single use.

Norway is also promoting this issue in the Basel Convention global partnership on plastic waste.

Regulation on microplastics

(a) REACH restriction on intentionally added microplastics

(b) National regulation on granular infill for artificial turfs

In progress: a proposed ban of the use of intentionally added microplastics inseveral products according to ECHAs (European Chemicals Agency) restriction proposal. Regulation expected in 2022.

From July 2021 we have a new national regulation to reduce microplastics emissions from artificial turfs. Norway has also advocated regulations to reduce microplastic emissions from textiles in relation to washing machines under the EUs Eco-design Directive.

We are also considering measures to reduce emissions from the main sources of unintentionally added microplastics (e.g. in paint, leisure boat marinas, tyre abrasion and textiles).

Achievements

Positive improvement

Oman

Charge for single-use plastic products

(a) Ministerial Resolution 23/2020

Oman has ban on using the single use plastic to conserve the Omani environment.

Targeted products: The plastic bags used in the markets, fish markets and in all parks, coffee shops and restaurants and even between the public.

Regulation on microplastics

Achievements

Positive improvement - Environment Society of Oman in collaboration with European Union and the European Environmental Bureau share the EU experience on environmental issue, specifically the issue of plastic pollution with different groups and organizations across Oman including governmental and private sectors.

Pakistan

Charge for single-use plastic products

(a) Ban on single use plastic bags in various parts of Pakistan

Targeret Products: Polythene and polyethylene single-use plastic bags

Production, sale, purchase and use of polythene bags was banned in Islamabad Capital Territory on 14 August 2019. Fines are imposed on those violating the ban.

Achievements

Positive improvement – The number of plastic bags in circulation has reduced. A behavioral change among consumers is on the horizon, whereby consumers prefer to take their own reusable shopping bags to markets/shops.

Panama

Charge for single-use plastic products

(a) Law No. 1 of January 19, 2018 that adoptsmeasures to promote the use of reusable bags in commercial establishments

Targeted products: Shopping bags

The use of polyethylene bags is prohibited in supermarkets and other commercial establishments.

(b) Law No. 187 of December 2, 2020, which regulates the progressive reduction and replacement of single-use plastics.

Targeret Products: 11 products

Ear swabs, clothing covers, plastic egg cartons, disposable stirrers, balloon rods, toothpicks, reeds, cocktail sticks, candy sticks, can rings, disposable plastic plates.

This action recently established the regulatory framework that governs single-use plastics in the national territory, as part of the public environmental policy of the Panamanian State.

Achievements

Positive improvement – People have adopted a new lifestyle of using reusable bags when shopping in establishments such as supermarkets. Reduction of plastic bags

Actions for encouraging sustainable / circular product design

(a) Bottles of Love

Bottles of Love Foundation installs the main plastic processing plant in the region. The work of Bottles of Love is to educate the general population and companies to contribute to the collection of plastic material. The raw material resulting from the transformed plastic is used in the manufacture of RPL (RecycledPlastic Lumber) that is used for the construction of social works aimed at improving the quality of life in vulnerable communities.

(b) Ecobricks

An initiative of Fundación Costa Recicla, consists of putting together an eco-brick that is a plastic bottle that contains non-recyclable materials inside. Society is challenged to give your waste another great function.

(c) Responsible brands.

Nestle's Maggi has contributed to the reduction of waste reaching landfills with packaging of recyclable and reusable products.

Achievements

Positive improvement - They are new initiatives, it has been well received by society.

Papua New Guinea

Charge for single-use plastic products

(a) Fines are imposed on Illegal importation or manufacturing of non-biodegradable plastic shopping bags.

Targeted products: Single use plastic shopping bags.

An Environment Permit is required to either import or manufacture biodegradable plastic shopping bags. If breached, fines are imposed, or to some extent suspension of the environment permit will result.

Achievements

Positive improvement - There is evidence that retail shops are complying with the policy and the regulation. Conservation and Environment Protection Authority (CEPA) is no longer issuing environment permits to import single use plastic shopping bags. Plastic litter has generally decreased as a result of this policy and regulation.

Actions for encouraging sustainable / circular product design

(a) Shoppers encouraged to bring reusable shopping bags

All retail shops have been warned not to issue plastic shopping bags both biodegradable and non-biodegradable at the check-out counters. Again, they have been advised to provide sustainable alternatives, which shoppers pay.

Achievements

Positive improvement - There is evidence that retail shops are complying with the policy and the regulation. Conservation and Environment Protection Authority (CEPA) is no longer issuing environment permits to import single use plastic shopping bags. Plastic litter has generally decr

(a) Positive improvement - All retail shops have been complying with the policy and regulation although they are not environment permit holders. They are no longer issuing plastic shopping bags at the check-out counters and providing alternatives, which customers are paying. This has been very successful thus far. In addition, shoppers are also providing own alternate shopping bags at their own costs.

Others

(a) Environment Permits which allowed importers to import biodegradable plastic bags will cease upon expiry. Only companies with manufacturing environment permits will be renewed with directives to venture into alternate biodegradable and reusable options.

Philippines

Charge for single-use plastic products

(a) BMB Memorandum Circular banning the use of Single-use Plastics and Encouraging the Use of Biodegradable Reusable Materials within BMB and Ninoy Aquino Parks and Wildlife Center, Municipality/City Ordinances;

Targeted products:

Shopping bags, straws, cups, spoons and forks

Achievements

Positive improvement - In terms of use of the targeted products, there is actually an improvement. They are now being refused by consumers and being replaced by reusables.

Actions for encouraging sustainable / circular product design

(a) Information & Education Campaign (IEC)

(b) Communication, Education and Public Awareness Activities

Achievements

Positive improvement

Republic of Korea

Charge for single-use plastic products

(a) Restriction of single -use plastic products

Targeted products: plastic bags, plastic cups and straws

The ministry of Environment of Korea (MOE) introduced a regulation to gradually ban single-use plastic products until 2027.

Actions for encouraging sustainable / circular product design

(a) The 1st National Resource Circulation Plan (2018~2027)

A long term national plan and roadmap which aims to make a transition to the circular economy were established by MOE in accordance with ‘Framework act on resource circulation’.

As an outcome of the plan, Circular economy forum was hosted by the MOE in March of 2021 with participation of multi-stakeholders to discuss environment-friendly design of plastic products as well as ways to promote recycling of home appliances and batteries.

Regulation on microplastics

(a) Regulation on cosmetic products (2017)

Regulation that ban all cosmetic products contain microplastics under 5mm was introduced in 2017 by MOE.

(b) Regulation on use of micro-bead (2021)

MOE has announced the regulation to ban the use of micro-bead on all cleansing agents, detergents and removers manufactured in and outside of ROK.

Achievements

Positive improvement

Samoa

Charge for single-use plastic products

Achievements

Positive improvement - As noted above, the use of single-use plastics are banned completely under the Regulations including shopping bags, packing bags, straws and Styrofoam food containers, cups and trays.

Actions for encouraging sustainable / circular product design

Achievements

Not any particular trend - Samoa's manufacturing sector is very small, only 5.5% of Samoa's economy and includes manufacturing of food and beverages (MCIL Annual Report 2019/20 p.12). Most of the plastic found in Samoa is imported. Samoa's import data for 2019/20 accounts for 21% food; 17.4% for construction material; 8.3% motor vehicles etc.

There are a growing number of bottled water companies in Samoa including other beverages such as locally made health drinks / juices using ginger, lemon and turmeric. A decision by the Samoa Coca Cola Beverage Company to discontinue the use of glass bottles in favor of plastic bottles is cause for great concern.

At present, Samoa is finalizing its Container Deposit Levy or Container Refund Schemes.

Samoa recently launched the Circular Economy for the Recovery of Waste (CERO) Waste Programme supported by the United Nations Development Programme's COVID-19 Rapid Financing Facility, and co-funded by the Foreign, Commonwealth and Development Office, whose support has been facilitated by the British High Commission in Apia. The project is set to "create sustainable and inclusive livelihood opportunities to accelerate the transition towards a circular economy in Samoa".

Regulation on microplastics

Achievements

Positive improvement - Waste (Plastic Bag) Management Regulations 2018

Saudi Arabia

(a) The national center for waste management is promoting the circular economy activation, EPR is a major part of this program.

(b) There has been communication with different stakeholders to prevent and reduce plastic waste generation.

Key initiatives prevention and reduction of plastic waste generation include:

- (PepsiCo, SABIC, and NCWM) closed loop initiative
- EPR (currently considering various option to introduce fees on users of single use plastic bags)

Charge for single-use plastic products

(a) A study has been launched by the NCWM to develop the appropriate EPR business model for managing single use plastic bags and considering a range of options including bans, imposing user fee and/or a combination.

(b) The Key Objective of Project:

- Recover some of the costs related to managing the waste streams
- Change societal behaviors in regards to waste management by charging a specific financial fee in order to reduce production costs, divert from landfills and encourage recycling and resource recovery
- Reduce Waste Generation

(c) The main scope is included the study of current situation of three streams, provide the best international practices that implement the EPR, review the regulation and proposed the responsible policies. the study will include proposing fees and the implementation Plan for EPR System and proposed the regulator & organizational Framework

(d) A key initiative by National Center for Waste Management (NCWM) to achieve the targets of the national waste strategy through waste diversion from landfills and implementing the Extended Producer Responsibility (EPR) principles which recover some of the costs related to managing the waste streams investment, operation, maintenance of facilities and equipment, service improvement, etc.

Singapore

Charge for single-use plastic products

Achievements

The government has embarked on stakeholder consultations on an appropriate charging model for a disposable carrier bag charge at supermarkets, which will take into account Singapore's context and any impact on vulnerable groups. This arises from a recommendation made by the Citizens' Workgroup on Reducing Excessive Consumption of Disposables, which was convened by the government from Sep 2020 to Jan 2021.
Details of the disposable carrier bag charge at supermarkets, including timeline for implementation, will be finalised following the consultations.

Actions for encouraging sustainable / circular product design

(a) Mandatory Packaging Reporting Framework/ Resource Sustainability Act

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. The first reports are to be submitted in 1Q 2022. This is a step towards making companies aware of the environmental impact of packaging that they supply to the market and spur them to reduce packaging and packaging waste. 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 Jul 2021. Plastics from regulated products such as ICT equipment and large home appliances will have to be properly treated or recycled.

(b) Packaging Partnership Programme (PPP)

The Singapore Manufacturing Federation (SMF) has partnered the NEA to introduce an industry-led programme to support companies in their journey towards adopting sustainable packaging waste management practices. The PPP is a joint capability development programme that will support companies in fulfilling their new obligations under the Mandatory Packaging Reporting framework from 1 January 2021 as well as enable the exchange of best practices in sustainable packaging waste management. PPP members are also provided access to the use of the Logo for Products with Reduced Packaging.

(c) Singapore Green Labelling Scheme (SGLS)

The SGLS is an environmental standard and certification mark administered by a non-governmental organisation, the Singapore Environment Council. It looks at the life-cycle environmental impact of products, as well as environmental best practices in their manufacture. The Scheme helps the public to identify environmentally sustainable products. SGLS categories that contribute to sustainable/circular product design include “Products with Recycled/Sustainable Content”.

Achievements

(a) Not any particular trend - Monitoring in progress as PPP is recently implemented

(b) No existing data - companies obligated under the mandatory packaging reporting will only be required to make their first submission in Q1 2022.

Spain

Charge for single-use plastic products

(a) Royal decree 293/2018 on plastic bags.

(b) Future Law on waste and soil contaminated

(c) Future Royal Decree on packaging and packaging waste

Achievements

Positive improvement

Actions for encouraging sustainable / circular product design

(a) Circular Economy Action Plan

(b) Future Royal Decree on packaging and packaging waste

Through eco-modulation of fee in EPR

Regulation on microplastics

(a) Include restrictions in the Future Law on waste and soil contaminated

Sri Lanka

Charge for single-use plastic products

Achievements

Positive improvement - This will be in place within a couple of weeks

Actions for encouraging sustainable / circular product design

Achievements

Positive improvement - We have a separate Ministry to promote small scale local industries. They introduced various types ecofriendly products (Eg. Clay bottles). Some companies started to manufacture plastic alternative products.

Regulation on microplastics

Achievements

Positive improvement - A separate project “Marine litter and microplastics: Promoting the environmentally sound management of plastic wastes and achieving the prevention and minimization of the generation of plastic wastes” is ready to implement. However, it is delayed due to some administrative issues

Thailand

Charge for single-use plastic products

(a) Every day say No to plastic bag campaign

Targeted products: reduce single-use plastic bag

Stop providing single-use plastic bag in shopping mall and department store (Voluntary action) - some store will charge for plastic bag request

Achievements

Positive improvement

Actions for encouraging sustainable / circular product design

(a) Plastic circular economy model development for community and provinces

To apply circular economy model in pilot sites (eastern part of Thailand: Rayong) - Pollution Control Department is the main driver and operater of these activities

Achievements

It conducted several meetings to introduce the project and will sign the MOU with the Provincial Administration Organization soon.

Regulation on microplastics

(a) Ban on using microbead in products

Other government organizations take responsibility in this matter. It is including in the Plastic Management Plan B.E. 2561-2573.

Turkey

Charge for single-use plastic products

(a) Charging of plastic bags

Targeted products: Plastic bags

In order to prevent environmental pollution, raise awareness for environment and efficient management of resources, the Procedures and Principles Regarding the Charging of Plastic Bags have been put into effect as of January 1, 2019. For the application of charging plastic bags in 2020, "Procedures and Principles for Amending the Procedures and Principles Regarding the Pricing of Plastic Bags" has been updated and published with the Ministerial Approval dated 22.12.2020 and numbered 66745475-145.07-274510.

Achievements

(a) Numerical data

It is known that before 2019, the amount of plastic bag production in Turkey was around 35 billion pieces per year, and a person in Turkey used an average of 440 plastic bags per year. As of January 1, 2019, the practice of charging plastic bags (25 kuruş/piece in 2019 and 2020 continues to be applied without changing in 2021) has been started in our country, and plastic bags are started to be procured at sales points for a fee.

In 2019 and 2020, there was a 75% decrease in the use of plastic bags, and when this reduction rate is evaluated only in terms of waste management, it has been determined that the formation of 290,000 tons of plastic waste has been prevented. With the reduction rates in the use of plastic bags in 2019 and 2020, the import of plastic raw materials necessary to produce plastic bags in our country has also been prevented and approximately 2 billion Turkish Liras have been saved, while the emission of approximately 12,000 tons of greenhouse gas has been prevented.

UK

Charge for single-use plastic products

(a) The Single Use Carrier Bags Charges (England) (Amendment) Order 2021

Since 5th October 2015, large retailers in England have been required by law to charge 5p for all single use plastic carrier bags. On 21 May 2021, the charge was increased to 10p and extended to all retailers.

(b) Single Use Carrier Bags Charge legislation

In Northern Ireland, Scotland and Wales this applies to all retailers:

i. Northern Ireland: From 2015, the levy charge was extended to carrier bags of any material with a 5p levy.
ii. Scotland: the carrier bag minimum charge increased from 5p to 10p in April 2021.
iii. Wales: In 2019 the efficacy of the bag charge was reviewed to inform future actions regarding changes in levies or charging scope. https://gov.wales/research-sale-and-use-carrier-bags-wales

The Environmental Protection (Plastic Straws, Cotton Buds and Stirrers) (England) Regulations 2020

We introduced legislation to introduce restrictions on the supply of plastic straws, cotton buds and stirrers, with some exemptions, e.g. for medical reasons.

Achievements

(a) Positive improvement – Due to Covid-19 a small number of retailers notified us that they were unable to provide data. In addition, from 21 March 2020 retailers in England did not need to charge for bags used in online grocery deliveries. Non-essential retailers also closed on the 23rd March 2020. These changes affect the last two weeks of the 2019 to 2020 reporting period.

(b) Numerical data

i. The total number of single use plastic bags sold by all retailers who reported in 2019 to 2020 was 564 million, a 49% decrease on the figures reported by all retailers in 2018 to 2019. Further details can be found here: https://www.gov.uk/government/publications/carrier-bag-charge-summary-of-data-in-england/single-use-plastic-carrier-bags-charge-data-in-england-for-2019-to-2020
ii. We estimate that annual plastic straw usage in England will drop from 4.7 billion down to around 264 million. We plan to review the effectiveness of the policy after a year.
iii. Below the surface: Twenty-five years of seafloor litter monitoring in coastal seas of North West Europe (1992–2017) - ScienceDirect (Maes et al. 2018) showed significant trend in plastic bags (down). https://www.sciencedirect.com/science/article/pii/S0048969718306442

Actions for encouraging sustainable / circular product design

(a) Through the Resources and Waste Strategy for England we have committed to:

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

(b) Sustainable Production Goals

i. Invoke the 'polluter pays' principle and extend producer responsibility for packaging, ensuring that producers pay the full-net costs of disposal for packaging they place on the market. Modulate producers' fees and introduce packaging recycling targets to increase greater recycling rates, reduce the amount of packaging used, and encourage the use of reusable and refillable alternatives. Include the cost of managing littered packaging within full-net costs to incentivise producers to reduce the prevalence of their packaging in the litter stream.
ii. Introduce a deposit return scheme to incentivise increased recycling of in-scope drinks containers.
iii. Stimulate demand for recycled plastic by introducing a tax on plastic packaging with less than 30% recycled plastic. This tax will affect UK producers of plastic packaging, importers of plastic packaging, business customers of producers and importers of plastic packaging, and consumers who buy goods in plastic packaging in the UK. The objective of this tax is to provide a clear economic incentive for businesses to use recycled materials in the production of plastic packaging, which will create greater demand for these materials and in turn stimulate increased levels of recycling and collection of plastic waste, diverting it away from landfill or incineration. The introduction of this tax will encourage a shift to recycled content in plastic packaging. This could have positive environmental benefits thanks to the reduction of raw material extraction during the production process.
iv. Harness the potential of extended producer responsibility for other product types.
v. Set minimum requirements through eco-design to encourage resource efficient product design.
vi. Manage chemicals sustainably and address barriers to reuse and recycling posed by their use, through a Chemicals Strategy.
vii. Develop a model for realising resource efficiency savings, working with businesses through 'resource efficiency clusters'.

The UK is supporting the development of a standard for circular design of fishing gear through CEN (European Committee for Standarisation) Work has commenced, with expected delivery end of 2024.

Regulation on microplastics

(a) Microbeads

In 2018 the UK launched one 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.

(b) Plastic Pellets

In 2019, the British Irish Council Ministers recognised the need to address pellets as a source of microplastics and committed to learn from a trial supply-chain approach in Scotland. The administrations have supported the development of a Publicly Available Specification developed by the British Standards Institution, which sets out how any business handling or managing pellets can reduce pellet loss. This is the first of its kind and will be published in July 2021

Achievement

Microbead impact assessment: https://www.legislation.gov.uk/ukia/2017/178/pdfs/ukia_20170178_en.pdf

Uruguay

Charge for single-use plastic products

(a) Ministerial Resolution: 272/2021

(b) Decree No. 3/019

Targeted products: Straws and plastic bags

Achievements

(a) Positive improvement - In the case of Ministerial Resolution, 272/2021 is too soon to see trends.

(b) Numerical data - plastic bags reduction of 70%

Actions for encouraging sustainable / circular product design

(a) Ministerial Resolution: 271/2021

Regulation on microplastics

(a) Ministerial Resolution: 272/2021

Others

(a) On 2019 a diagnosis of the national situation on marine pollution by microplastics was carried out at the La Plata River and its extension.

Main Conclusions:

A set of direct and indirect probable sources were determined and quantitative estimates were made of the potential amount of MP in tons for these sources. Additionally, the amounts (T) of MP from direct sources that would be reaching the Río de la Plata and its seafront each year were estimated for some cases. It is estimated that around 197,159.4 T of indirect sources of MP are sold annually in Uruguay, represented mainly by the Industry, Construction and Packaging sectors. Regarding direct sources It is estimated that about 2,607.8 T per year of MP are released into the environment, the main sources of contamination being the abrasion of tires and the release of synthetic fibers by clothes washing.

US

(a) EPR - There are no EPR or single use plastic policies at the national level. Solid waste management, including policies and measures on single use plastics or bottle deposit schemes, are determined and implemented at the state and local level.

Regulation on microplastics

(a) Microbead-Free Waters Act

The Microbead-Free Waters Act prohibits the manufacturing, packaging, and distribution of rinse-off cosmetics containing plastic microbeads.

The law also applies to products that are both cosmetics and non-prescription drugs, such as toothpastes.

EU

Charge for single-use plastic products

(a) The Plastic Bags Directive (2015) and the Directive on the reduction of the impact of certain plastic products on the environment (Single-Use Plastic Directive) (2019)

(b) Targeted products:

Food containers, EPS food and beverage containers, cups for beverages, cotton bud sticks, cutlery, plates, stirrers, straws, balloon sticks, balloons, packets, wrappers, beverage containers and bottles, tobacco product filters, sanitary towels, wet wipes, plastic carrier bags and fishing gear.

The Plastic Bags 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.

The Single-Use Plastic Directive includes the following measures:

i. Extended Producer Responsibility (EPR) schemes under the principle 'the polluter pays' to ensure that producers will cover the costs of waste management and clean-up, data gathering and awareness raising for the following single-use plastic products and fishing gear containing plastic: 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. A ban of 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. A general ban on oxo-degradable products;
vi. A 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. Member States with marine waters to set minimum annual collection rates of waste fishing gear containing plastic.

Achievements

The Single-Use product Directive was to be transposed by EU Member States on 3 July 2021. It is too soon to see an effect.

Actions for encouraging sustainable / circular product design

(a) Follow up to the Single-use Plastic Directive

As a follow-up of the Single-Use Plastic Directive, the Commission also adopted a decision on a standardization request to the European Committee for Standardisation as regards circular design of fishing gear (2021) and a decision laying down the format for reporting data and information on fishing gear placed on the market and waste fishing gear collected in Member States (2021). These two decisions are expected to increase the positive effect to be produced by the establishment of extended producer responsibility schemes and the creation of port reception facilities for marine litter provided for by the Single-Use Plastic Directive and the Port Reception Facilities Directive respectively.

URL:

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.211.01.0051.01.ENG&toc=OJ%3AL%3A2021%3A211%3ATOC

Regulation on microplastics

(a) Legislation on microplastics intentionally added to products

The European Commission is drafting a legislation **to restrict microplastics intentionally added to products**, e.g. in cosmetics paints or detergents. It requested 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 assessed the measure and adopted their opinion. The proposed EU-wide restriction would cover intentionally added microplastics in multiple applications including agriculture, horticulture, cosmetic products, paints, coatings, detergents, maintenance products, infill material in artificial turfs, medical and pharmaceutical applications.

As a step further, in the March 2020 new **Circular Economy Action Plan**, the European, 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 was 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.

Achievements

Positive improvement

International Organisations and NGOs

The most popular action that organisations contribute to are circular product design and awareness-raising, with nine organisations supporting this. Further, eight organisations are also focussing on proper waste management and monitoring country policy status.

Six organisations are focussing on scientific research, circular business model creation, prevention of littering, illegal dumping and unintentional waste into the ocean, and monitoring plastic flows and ocean surface plastics. Technology development for plastic alternatives is focussed by four organisations. In this way, organisations are supporting both upstream and downstream approaches.

Collecting scattered waste from beaches and coasts has three responses. The creation of an education system and removal of plastic litter from the ocean are reported by only two organisations and have low priority. Regulation on microplastics has low support with one response.

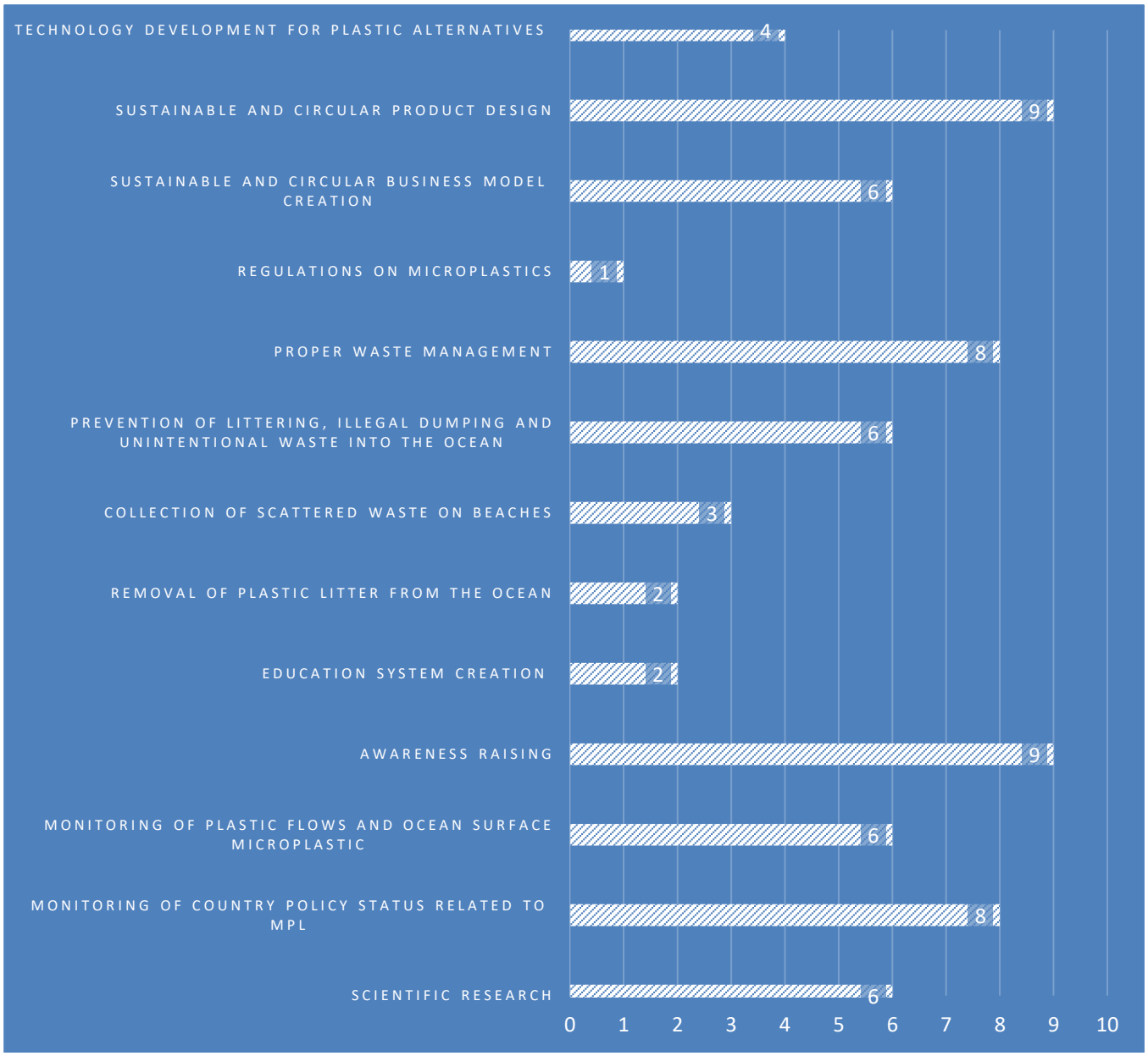


Figure 5: Organisation – Measures*

*Number of organisations responded YES among 12 responses

ADB

Sustainable and circular product design

(a) The project aims to support the Thailand government in developing a policy/regulatory framework for waste management. The project also aims to organize a "Forum for Circular Plastic Packaging" with the Viet Nam government to develop recommendations that will be included in a technical guidance on circular plastic packaging. The recommendations will be targeting i) circular design and production, ii) consumption and iii) waste recycling.

Sustainable and circular business model creation

(a) The project aims to establish a Circular Business Hub in Cirebon, Indonesia. The Circular Business Hub will act as a catalyst and incubator, where innovative technologies and academic and community ideas can flourish, and where innovative stakeholders can test concepts, technologies, and experiments that support a circular plastics economy. At the Circular Business Hub, innovative recycling techniques/technology for problematic plastics in its pilot stage can be tested with the aim of identifying solutions with potential for scaling up in Indonesia.

ASEAN

Sustainable and circular product design

(a) ASEAN-EU Gap Analysis on Circular Economy and Plastics (completed) https://environment.asean.org/wp-content/uploads/2020/02/Circular-Economy-gap-analysis-final.pdf

(b) Promotion of Plastic Circular Society in ASEAN Region (upcoming)

(c) Southeast Asia Regional Program to Combat Marine Debris (SEA-MaP) (upcoming)

Sustainable and circular business model creation

(a) Southeast Asia Regional Program to Combat Marine Debris (SEA-MaP) (upcoming)

ERIA

Sustainable and circular product design

(a) ERIA's RKC-MPD shares good practices information with regards to Design for Recycling and has a publication on Recycling in ASEAN+3 context on its website.

Related links:

https://rkcmpd-eria.org/goodpractices/27/recycling/design-for-recycling

https://rkcmpd-eria.org/publication/15

Sustainable and circular business model creation

(a) "Private Sector Initiatives to Reduce Plastic Waste and Marine Plastic Debris" is one of the key initiatives of ERIA's RKC-MPD to encourage positive business initiatives that contribute to the reduction of marine plastic pollution. The online platform welcomes companies operating in ASEAN+3 region to showcase their products, services, or technologies in order to stimulate intra-regional information exchange.

(b) ERIA's RKC-MPD also shares information on Eco-labeling, Economic Incentives for Recycling Industries, Extended Producer Responsibility, Industrial Standards for Recycled Products, and has a publication on EPR on its website.

https://rkcmpd-eria.org/goodpractices/27/recycling/eco-labelling

https://rkcmpd-eria.org/goodpractices/27/recycling/incentives

https://rkcmpd-eria.org/goodpractices/27/recycling/epr

https://rkcmpd-eria.org/goodpractices/27/recycling/industrial-standard

https://rkcmpd-eria.org/publication/19

Data: As per June 20th, 2021, 41 companies have registered from 5 different ASEAN+3 countries on the platform and 16 stories have been shared in ERIA's RKC-MPD website (https://rkcmpd-eria.org/latestproduct.php).

IAEA

Sustainable and circular product design

(a) Working descriptor: "Radiation-supported recycling"

Radiation technology, specifically gamma and electron beams, offer unique advantages to address the technological gaps that exist in plastic recycling. Innovation of plastic waste recycling using radiation technologies enables better sorting of plastic, breaking down plastic waste into components, converting plastic into fuel and feedstocks, and treating plastic waste to create upscaled products, such as composite materials. Irradiation with an electron beam can also be used for high-fidelity sorting of mixed plastics, as a result of radiation induced charge that is dependent on plastic type, thus enabling electrostatic separation. Radiation technologies can break down plastic polymers into smaller fragments that can be used as feedstocks to produce new consumer products. By combining pyrolysis or cracking of plastics with radiation in chemical recycling of plastic waste to generate fuel or monomer feedstocks, the process is not only easier to control, the required process temperature is lower by one hundred degrees or more and thus more economical. This is a green technology, eliminating the need for solvents and catalyst additives also delivers a higher product purity, and less by-products. Radiation processing also allows the properties of polymer waste to be tailored, creating new composites and enabling innovative repurposing of waste materials.

Sustainable and circular business model creation

(a) The Plastic to Ocean (P2O) model (Sustainable and circular business model creation for assessing the Plastics Value Chain)

The P2O model is the 'first of a kind model' which has been developed to analyse stocks and flows of plastic and plastic waste in and through society at a global level. This model allows projections and global analyses to be carried out on all components of the plastic waste management system. NUTEC Plastics is using this model to assess the economic impact of nuclear technologies on the plastic waste economy. Presently, model input parameters are based on predictions and estimates. Once pilot plants are in operation and providing key performance data, the reliability of P2O projections should increase. Through the P2O model, the potential reduction that radiation technology may provide in terms of reduced leakage of plastics to the ocean was tested. The modelling exercise reveals that radiation technology, if deployed alongside the sorting process or the mechanical or chemical recycling process would reduce marine litter. Radiation alongside formal sorting reduces litter by 1.83kg/MT and alongside mechanical recycling by 2.3kg/MT. The highest reduction in marine litter would be achieved if radiation technology were deployed alongside the chemical conversion to monomers and to hydrocarbons (4.41kg/MT). The analysis concluded that through complementing chemical conversion with radiation, the estimated reduction in ocean littering is more than two times higher than the one obtained by deploying radiation technology in the sorting process or alongside mechanical recycling. These are preliminary results based on assumptions related to the improved recycling technologies. These results are conservative, as recycled plastic accounts only for 9% of the overall plastic waste management equation, however, a dynamic model, taking into consideration expected increases in recycling volumes (to up to 60%) is under development to examine the effect that new technologies introduced by NUTEC Plastics may have as part of an overall transition to a circular economy.

Ocean Conservancy

Sustainable and circular product design

(a) U.S. Recycling

Ocean Conservancy launched an initiative in spring 2021 to support the U.S. Administration with research-based recommendations for a nation-wide recycled content mandate, with input from conservation and industry via the Trash Free Seas Alliance®

Data: Report forthcoming, fall 2021

OECD

Sustainable and circular product design

(a) Global Plastics Outlook (Innovation chapter) [ENV/EPOC/WPRPW/WPIEEP(2021)1]

(b) Follow-up to Global Forum on Design of Sustainable Plastics: Development of general considerations for the design of sustainable plastics

https://www.oecd.org/env/waste/global-forum-on-environment-plastics-in-a-circular-economy.htm

Regulations on microplastics

(a) Report on microplastics: Microplastics in water: pathways and policy responses. A focus on textiles and tyres" [ENV/EPOC/WPRPW(2020)3/REV2].

(b) Global Plastics Outlook (Marine plastic litter prevention, policy scenarios) [ENV/EPOC/WPRPW/WPIEEP(2021)2]

UNIDO

Sustainable and circular product design

(a) UNIDO project "Supporting the promotion of circular economy practices on single-use plastic value chain" in Egypt supports capacity building of product design for SMEs in the plastic value chain.

Sustainable and circular business model creation

(a) UNIDO's global project "SWITCH to circular economy value chains" supports creation of circular business models in the plastic packaging value chain.

UNEP

Sustainable and circular business model creation

(a) The Global Tourism Plastics Initiative is developed within the framework of the Sustainable Tourism Programme of the One Planet network, a multi-stakeholder partnership to implement SDG 12 on Sustainable Consumption and Production, and is led by UNEP and the World Tourism Organization, in collaboration with the Ellen MacArthur Foundation. This Initiative acts as the tourism sector interface of the New Plastics Economy Global Commitment which already unites more than 450 businesses, governments, and is aligned with New Plastics Economy vision, framework and definitions to mobilise the global tourism sector towards concerted action against plastic pollution. The UNEP/WTTC report, Rethinking Single-Use Plastic Products in Travel and Tourism - Impacts Management Practices and Recommendations, was launched on 24 June 2021.

URL:

https://www.oneplanetnetwork.org/sustainable-tourism/global-tourism-plastics-initiative

https://wedocs.unep.org/bitstream/handle/20.500.11822/36324/RSUP.pdf

(b) The project, “Reducing marine litter by addressing the management of the plastic value chain in South-East Asia” (The SEA circular initiative), implemented by UNEP and COBSEA with support from Sida, Sweden, 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 Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam, and China, Republic of Korea, and Singapore are Knowledge partners. 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. The project also implements key provisions of the COBSEA Regional Action Plan on Marine Litter. The project also promotes a human rights-based approach to identify people-centred and equitable solutions that protect disadvantaged groups including informal wasteworkers and coastal communities. Under this project, 153 entities, inclusive of businesses, 3 local government bodies, 5 educational institutions and 3 hospitals, have been trained in plastic footprint measurement and disclosure. Follow-up including auditing of plastic footprint is carried out by Solid Waste Association of Thailand (SWAT).

URL: http://www.sea-circular.org/

(c) UNEP Sustainability Action is an international and intersectoral platform connecting the UN, governments, business, academia and citizens to promote sustainability with a particular focus on global environmental issues and resource efficiency towards achieving the SDGs and “Beyond SDGs”. This platform is coordinated by UNEP International Environmental Technology Centre (IETC) in collaboration with supporters such as Fast Retailing Co.,Ltd. Seven & i Holdings Co.,Ltd., Rakuten Inc., Global Environment Center Foundation and the Ministry of the Environment of Japan.

URL: https://www.unep-sustainability-action.org/

(d) The Life Cycle Initiative is a public-private, multi-stakeholder partnership enabling the global use of credible life cycle knowledge by private and public decision makers. Hosted by UNEP, the Life Cycle Initiative is at the interface between users and experts of Life Cycle approaches. It provides a global forum to ensure a science-based, consensus-building process to support decisions and policies towards the shared vision of sustainability as a public good. It delivers authoritative opinion on sound tools and approaches by engaging its multi-stakeholder partnership (including governments, businesses, scientific and civil society organizations). The Initiative facilitates the application of life cycle knowledge in the global sustainable development agenda in order to achieve global goals faster and more efficiently. In March 2021, the report, Single-use nappies and their alternatives: Recommendations from Life Cycle Assessments, was released by this initiative. This report finds that, by most measures, reusable nappies are better for the environment than single-use nappies. Taking a life cycle perspective is essential for nappies (and other single-use plastic products), as this approach shows that the highest impacts of reusable nappies occur not in manufacturing but in the use phase. For single use nappies, the design of the nappy (i.e., weight and materials) and its management at end-of-life are the key life cycle stages. In June 2021, this initiative also launched the report, Addressing Single-Use Plastic Products Pollution using a Life Cycle Approach.

URL: https://www.lifecycleinitiative.org/

https://www.lifecycleinitiative.org/wp-content/uploads/2021/03/UNEP-D003-Nappies-Report_lowres.pdf

https://www.unep.org/fr/node/29018

WB

(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 worth 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. Together with the International Finance Corporation, its private sector arm, the World Bank engages 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.

The description below provides selected examples of World Bank activities and should not be seen as a comprehensive overview of the organization’s actions on marine plastic litter.

Sustainable and circular product design

(a) Moving towards circular product design requires countries to set the right incentives for the private sector and to lift barriers that currently stand in the way of greater circularity. The World Bank takes a plastic value chain approach to engage key stakeholders, compile baseline data, develop material flow analyses, and identify plastic recycling barriers and opportunities. An example for this approach is a series of studies that addressed the critical need for country specific market assessments of plastics recycling in Thailand, Malaysia, and the Philippines, and provided and developed actionable recommendations for its client countries, for example with to recycled content targets and standards for food-contact applications.

(b) The World Bank’s sister organization IFC works directly with the private sector to make products more circular. For example, IFC finances a leading Nigerian manufacturer of PET resin used in packaging to build a Continuous Polymerisation PET Resin plant, which would source more than 20 percent of its raw materials from local waste plastics.

Sustainable and circular business model creation

(a) The World Bank supports countries and organizations in circular business model creation through analyzing current market conditions and creating an enabling environment. For example, the Pathways out of Plastics' Pollution analytical work includes a life-cycle valuation of the costs and benefits of plastics and their alternatives in five pilot countries in East and West Africa, East Asia, South Asia and the Caribbean, thereby creating the basis for designing and implementing policies that lead to the creation of circular business models.

(b) The World Bank also acknowledges that the introduction of circular business models 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, and social innovation processes.

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.

WEF GPAP

Sustainable and circular business model creation

(a) Stemming the tide of plastic pollution requires the testing and scaling new business models, including reuse and refill systems, that prevent waste from being generated in the first place. Waste prevention is one of the five focus areas of GPAP's Global Plastic Innovation Network (GPIN), an open collaboration platform designed to harness the power of innovation and accelerate high-impact solutions that can help eradicate plastic pollution. It is supported by the GPAP and hosted by UpLink, the World Economic Forum's open innovation crowdsourcing platform. The promotion of circular business models is also a key component of our National Plastic Action Partnerships' action roadmaps and task force work. At the global level, GPAP has partnered with other civil society organizations to develop a reuse portal that will enable stakeholders to connect with each other and learn how to implement reuse models at scale. During 2021, we'll collaborate on the first prototype.

3.2. Environmentally-sound Waste Management

There were responses from 31 countries stating that they could enforce a proper waste management system. Actions to prevent littering, illegal dumping and unintentional leakage of waste into the ocean are reported by 30 counties. Plastic waste management is a downstream measure and requires capacity building, especially in developing countries with limited capacity.

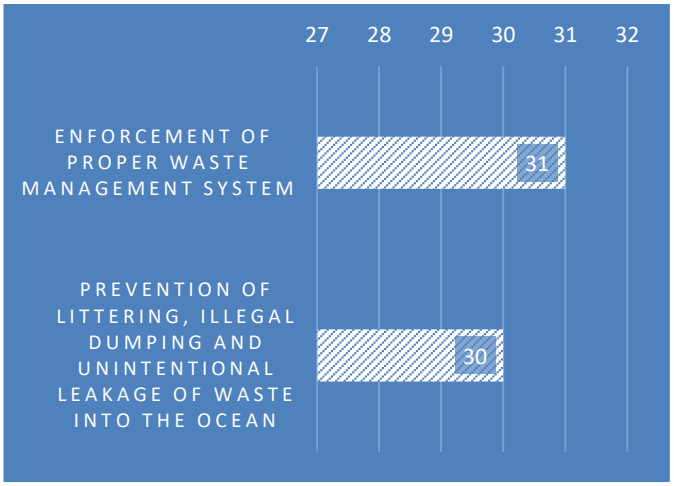


Figure 6: Countries - Environmentally-sound Waste Management*

*Number of countries responded YES among 41 responses

Countries

Australia

Enforcement of proper waste management system

(a) Improve waste management recycling system

The $190 million Recycling Modernisation Fund is supporting innovative investment in new infrastructure to sort, process and remanufacture waste materials covered by the export ban (glass, plastics and tyres).

In addition to the RMF and other Australian Government programs, state governments have been investing in their own programs to support industry to turbocharge its capacity to process materials addressed by the waste export ban.

Programs under the $1.5 billion Modern Manufacturing Strategy are supporting manufacturers in the Recycling and Clean Energy National Manufacturing Priority area to build scale and competitiveness, translate good ideas into commercial outcomes, and connect with new domestic and global markets.

(b) 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 January 2021.

The Recycling and Waste Reduction Act 2020 (the Act) commenced on 16 December 2021.

The Recycling and Waste Reduction Rules (Export–Waste Plastic) Rules 2021 (Rules) were made on 24 May 2021. The Act and Rules regulate export of waste plastic. From 1 July 2021, unsorted mixed waste plastic will no longer be able to be exported from Australia. Exporters of waste plastic that are sorted into single polymer (or processed with other materials into processed engineered fuel) will be required to hold an export licence and declare each consignment of exported plastic. From 1 July 2022, plastics that has been sorted into single polymer will require further processing (for example into flakes or pellets) before it can be exported.

Achievements

Not any particular trend - From 1 July 2021 Australia will no longer export low-grade mixed plastic; all plastic exports must be single polymer; from 1 July 2022 all plastic exports must be processed into flakes or pellets ready for remanufacture.
Numerical data - In 2018/19 Australia exported about 150,000 tonnes of low-grade mixed plastic

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) 2019 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 2018 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 AU$167 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 our oceans and creating valuable new products.

The Plan includes AU$100 million through the Clean Energy Finance Corporation to support the manufacture of products using recycled materials (including plastics), AU$20 million through Cooperative Research Centre grants to find new and innovative solutions to plastic recycling and waste, an AU$20 million Product Stewardship Investment Fund to help to fast track new recycling/product stewardship schemes, and AU$16 million toward a Pacific Ocean Litter Project, and more than AU$11 million for community campaigns to reduce litter and clean up beaches and waterways.

(c) Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans

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

(d) Specific actions in the 2021 National Plastics Plan relating to the prevention of littering, illegal dumping and unintentional leakage into the ocean include:

i. Work with industry to fast-track the phase out of particular problematic and unnecessary plastics, and consider regulatory action should the industry phase out not be achieved
ii. Deliver a Plastic Free Beaches initiative in partnership with Boomerang Alliance to eliminate single-use plastics from Australia's favourite beaches and support local businesses to switch to alternative products
iii. Pursue coordinated global action on marine litter and microplastic pollution through a new global agreement
iv. Work with the textile and whitegoods sectors on an industry-led phase-in of microfibre filters on new residential and commercial washing machines by 1 July 2030.
v. Initiate an industry-led cross-sectoral stewardship taskforce to reduce cigarette butt litter in Australia and consider potential stewardship schemes
vi. Partner with states and territories and the CSIRO on solutions to prevent plastic debris entering the marine environment via stormwater
vii. Partner with organisations to establish a national monitoring protocol and database for plastic pollution.
viii. Continue to implement the Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans.
ix. Establish an Indonesia-Australia Systemic Innovation Lab on Marine Plastic Waste under the leadership of the CSIRO and the Indonesian Ministry of Marine Affairs and Fisheries.
x. Implement measures to reduce ship-sourced waste in accordance with the International Maritime Organization's Action Plan to address marine plastic litter from ships

Achievements

Positive improvement

Bahrain

Enforcement of proper waste management system

(a) Bahrain Waste Management Strategy

It is prepared and approved on 2018, SCE and other relative authorities working on implementation of this strategy, plastic waste is one of the main component.

Bhutan

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Monitoring by Dzongkhag and Thromde administrations

(b) Imposing of penalty;

Achievements

Positive improvement

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Cleaning campaigns, awareness, imposing fines

Brunei

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Enforcement on public complaints- 123 hotline.

(b) Regular inspection on waste collection sites provided by the government.

(c) Inspections to waste collection companies and recycling companies.

(d) Requirements of a Written Notification for any waste related activities.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Sungai Brunei Clean Up projects

Involves collection, transportation and disposal of waste found along the river aimed to holistically managed waste along the Brunei River.

(b) Projects on rubbish collection traps at drainage outlets along Brunei River (to be implemented)

Planned infra project to trap waste at drainage outlet to prevent waste from entering the main rivers and sea.

Achievements

Positive improvement

Canada

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Canada's comprehensive zero plastic waste agenda

(b) Environmentally sound waste management

Internationally, Canada participates in key international fora, such as the G7, G20, Basel Convention Partnership on Plastic Waste, the International Resource Panel, and the Organisation for Economic Co-operation and Development (OECD), to strengthen resource efficiency and waste management practices globally. Canada invested CA $100 million to support solutions for environmentally sound waste management and plastic pollution mitigation and remediation in developing countries.

Environmentally sound waste management is a shared responsibility in Canada. A range of policies, programs 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 programs, litter by-laws) and non-regulatory measures (e.g. educational campaigns, recycling and deposit programs) that target some plastic products and other wastes. These efforts play an important role in collecting plastics from households and other sources that help to reduce marine debris.

Achievements

(a) Not any particular trend

(b) Numerical data

i. All provinces and territories have regulated extended producer responsibility programs in place, excluding Nunavut. There are over 160 regulated and voluntary stewardship programs in Canada covering more than 20 product categories including packaging and beverage containers.

ii. Canada contributed CA $6 million to the Global Plastic Action Partnership, which has supported the launch of four national action plans in Indonesia, Ghana, Vietnam and Nigeria.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Canada's comprehensive zero plastic waste agenda

(b) Zero Plastic Waste Initiative

Internationally, Canada has invested CA $100 million to support developing countries in preventing the leakage of plastic waste into the environment. This includes advancing gender equity elements in plastic pollution through the World Bank ProBlue Fund and supporting the development of national action plans in Indonesia, Ghana, Vietnam and Nigeria via the Global Plastic Action Partnership.

Domestically, Canada is taking action to prevent the leakage of plastics to the environment via its comprehensive agenda on zero plastic waste. Through actions across the lifecycle of plastics, Canada intends to achieve systematic change to keep plastics in the economy and out of the environment. This includes activities to support consumer education, investments in waste infrastructure and systems, and supporting best practices.

Through the Canada-wide Strategy on Zero Plastic Waste and Action Plan, federal, provincial and territorial governments have committed to develop guidance or identify best practices to reduce plastic waste entering the environment from:

i. Natural disasters and spill events
ii. Stormwater, wastewater and industrial discharges, and
iii. Food and organic waste processing and sewage bio solids.

In addition, Canada is assessing infrastructure gaps and opportunities to improve waste collection and recycling for marinas, ports and harbours.

Through the Zero Plastic Waste Initiative, the Government of Canada invested over CA $5 million (2018-2022) to raise awareness and educate consumers and youth; develop and advance citizen science; mitigate plastic pollution leakage points; and develop, test and implement solutions to prevent, assess and remove plastic pollution.

The Government of Canada has also launched social media campaigns to curb littering, including from personal protective equipment as a result of the COVID-19 pandemic.

Achievement

(a) Positive improvement

(b) Numerical data - Twenty-eight projects have been funded since 2018 through the Zero Plastic Waste Initiative, leveraging over $5.6 million in funds (public and private) and engaging over 100 partner organizations.

Chile

Enforcement of proper waste management system

(a) Organic Law of the Environmental Superintendence

This institution has a regulatory role in compliance control and enforcement, and is responsible for executing, organising and co-ordinating compliance among all RCAs and other types of environmental permits.

The Superintendence currently acts in coordination with other sector-specific state entities, by ordering them to execute specific inspections on its behalf, or receive information that is considered environmentally relevant.

Any breaches that are within the Superintendence's jurisdiction can be sanctioned by one or more of the following, depending on whether the breach is categorised as minor, major or severe:

i. A written reprimand.
ii. A fine, ranging from US$972 to US$9.7million).
iii. Temporary or permanent shut down.
iv. Revocation of the RCA.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Construction of facilities to receive separated waste from the community and for the environmentally sound management of plastic waste.

These facilities contribute to improving waste management and preventing littering, illegal dumping and unintentional leakage of waste into the ocean and aquatic ecosystem

Achievement

Positive improvement - Please check:
https://rechile.mma.gob.cl/donde-reciclar/

China

Enforcement of proper waste management system

(a) Opinions on Further Strengthening Plastic Pollution Control

Under the garbage sorting and classification system, more work shall be done to classify, collect, and treat plastic wastes. A ban on random stacking and dumping of plastic wastes shall be implemented to avoid pollution. For office buildings, airports, stations, ports, and other places where large amounts of plastic wastes are generated, more disposal facilities shall be built and more garbage removals shall be completed. Multi-party cooperation among catering and food delivery platforms, environmental sanitation departments, recycling companies shall be promoted, with delivery packages, takeaway lunch boxes, and other recycling facilities setting up in key areas. Establish and improve a system for the recycling of waste agricultural films. The recycling and disposal of waste fishing nets and fishing gears shall be regulated.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Opinions on Further Strengthening Plastic Pollution Control

The inspection and rectification of informal storage and dumping stations of domestic wastes will be carried out. Efforts shall be made to deal with plastic pollution caused by random dumping of domestic wastes in urban and rural areas, environmentally sensitive areas, roads and rivers, and pits and ditches. Operations to clean up plastic garbage in rivers, lakes, and harbors and clean beaches will be carried out. The cleaning and remediation of residual mulch film on farmland, plastic packaging of pesticides, and fertilizers will be promoted to gradually reduce the amount of such films.

Achievement

Positive improvement

Dominican Republic

Enforcement of proper waste management system

(a) Creation of the Program for Comprehensive Waste Management (PROGIRS)

The Program for Comprehensive Waste Management (PROGIRS) was created as an administrative unit of the Ministry of Environment and Natural Resources in charge of complying and enforcing the obligations derived for the application of Law 225-20, especially those that correspond to the ministry, including the enforcement of proper waste management system.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Creation of the Program for Comprehensive Waste Management (PROGIRS)

The Program for Comprehensive Waste Management (PROGIRS) was created as an administrative unit of the Ministry of Environment and Natural Resources in charge of complying and enforcing the obligations derived for the application of Law 225-20, especially those that correspond to the ministry, including the prevention of littering, illegal dumping and unintentional leakage of waste into the ocean.

Achievement

Positive improvement

Fiji

Enforcement of proper waste management system

(a) The Environment Management Act 2005 and Environment Management (Waste Disposal and Recycling) Regulation 2007's waste Permitting system allows Fiji to regulate the disposal of solid waste from industrial and commercial facilities.

Actions are reflected in the Waste Disposal Permit approval conditions, reporting requirements (6 monthly and annually) in the form of waste returns are submitted to the Department of Environment (DOE) and through the compliance and monitoring inspections conducted by the approved inspectors from the DOE.

Achievement

(a) Positive improvement - Following the issue of the Waste Disposal Permits, facilitates get back to the Department for further information to comply with the requirements. Through monitoring and compliance inspections, more than 50 facilities have applied for the Waste Disposal Permits in order to comply with the Environment Management Act 2005

(b) Numerical data - 88 noncompliance notices were issued by the DOE Officers to ensure that facilities comply with the requirements under the legislative framework.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Fiji has over 400 Litter Prevention Officers (LPOs) spread across the country (across the islands)

They have been empowered to enforce the Litter Act 2008.

Community awareness is ongoing and national campaigns have been ongoing.

Working in line with Government agencies and the youth groups of the country.

Achievement

(a) Positive improvement - continuous awareness and public outreach is key to behavior change.

(b) Numerical data - More than 450 litter officers are trained across Fiji who have fined over a thousand offenders till to date.

Finland

Enforcement of proper waste management system

(a) Implementation of the EU waste directive (EU 2018/851)

EU waste directive (EU 2018/851) 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.

Achievement

Positive improvement - The national waste plan will stimulate the recycling of plastics in different ways.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Test trapping of litter

Project work has been carried out to test trapping of litter in river water draining to the Baltic Sea.

Achievement

In 2020, publication of a report of possible location, amount and effects of ghost nets was carried out for marine waters in Finland.

France

Enforcement of proper waste management system

(a) Simplify the sorting process for citizens and extend it to all types of household plastics;

(b) Experiment deposit schemes;

(c) Decision to create a new EPR organization for industrial and commercial packaging before 2025

(d) The legislation against waste and for a circular economy dictates that the terms of reference of the EPR organizations should include targets for reducing the amount of packaging placed on the market, particularly single-use plastic packaging. Failure to reach these targets is sanctioned (implementation in 2023).

Achievement

(a) Numerical data
   i. Total post-consumer plastic waste generation: 3,3Mt
   ii. Total of post-consumer plastics collected for recycling: 0,71Mt.
   iii. The rest is either incinerated or disposed of in landfill.

   Source: ADEME, Bilan national du recyclage, 2017.
   i. For plastic packaging, the latest figures are the following:
      - Total amount of post-consumer plastic packaging waste : 2,2Mt
      - Recycling rate : 26%
      - Recovery rate 65% (including recycling)

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) On-land actions:
   i. Elaborate recommendations for municipalities in order to fight illegal dumping;
   ii. Provide municipalities good practices and a national guide to fight litter and monitor landfills along the coastline;
   iii. Identify solutions for the substitution of expanded polystyrene and support fishermen toward these solutions;
   iv. Prevent the leakage of preproduction plastic pellets into the environment through an involvement of the industries

(b) Actions on rivers and waste and rain water:
   i. Integrate objectives concerning marine litter in inland waters planning documents;
   ii. Launch 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. Implement the collection and recycling of fishing gears and aquaculture waste in link with the European directive;
   ii. Launch a call for projects to tackle plastic pollution in the oversea 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;
   v. Provide fishermen and mussel farmers good practices to prevent waste from net cuttings and from mussel farming.

Germany

Enforcement of proper waste management system

(a) A proper waste management system is in place for decades;

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Circular Economy Act

Measures for consumer awareness raising (transposition of EU Single-Use Plastic Directive)

Achievement

Newly implemented measure - no improvements can be reported so far.

Indonesia

Enforcement of proper waste management system

(a) Adipura Program

This program is made to assess performance of local governments on waste management system they have established and operated.

Adipura Program monitors and evaluates the performance of local government on municipal solid waste management and then rank and classify them into 5 classification from the best to the worse: Class 1, Cass 2, Class 3, Class 4, dan Class 5.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Citarum River Program in West Java Province;

Citarum River Program has been implementing since 2018 with objective to clean and reduce pollution caused by industrial wastewater and garbage. The main activities are including river clean up action, law enforcement to polluted industries, campaign and education to community that live along riverbank, provide composting and plastic recycle facility, and improve disposal facility in several cities and regencies.

(b) Setting up trash boom in 10 priority rivers.

We plan to set up trash boom in 10 main rivers in northern costal of Java Island. The plan is based on research recommendation that conducted by Indonesian Science Institute (LIPI).

Achievement

Positive improvement – Now Citarum River is becoming cleaner

Italy

Enforcement of proper waste management system

(a) National Waste Management Plan

Italy is elaborating a National Waste Management Plan aimed at improving and harmonizing waste management at regional level

Achievement

Not any particular trend

Japan

Enforcement of proper waste management system

(a) 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;

(b) Installation of recycling facilities to increase domestic recycling capability and to improve recycling of polystyrene foam boxes often used in fisheries with updated technology;

(c) Enforcement of collection and appropriate treatment of agricultural-generated used plastic in collaboration with related associations;

(d) Enforcement of onshore collection and appropriate treatment of plastic wastes, such as used fishing gear by guidelines developed in 2020;

(e) Support ODA programs 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.

Achievement

(a) Positive improvement

(b) Numerical data

Amount of waste plastic recycled, heat recovered, incinerated without energy recovery, and land filled (ratio of effective use (thermal recovery and recycling) was 85.4% in FY2019, which increased by 1.8% compared to FY2018)

	FY2016	FY2017	FY2018	FY2019	FY2020
Recycling	2,030kt	2,040kt	2,140kt	2,130kt	Under investigation
Heat recovery	4,920kt	5,060kt	5,060kt	5,130kt	Under investigation
Incineration of waste without energy recovery + landfill	1,660kt	1,530kt	1,410kt	1,250kt	Under investigation
Total	8,600kt	8,630kt	8,610kt	8,500kt	Under investigation

(Reference)

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

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Strengthen patrol activities by national and local government;

(b) Support beverage industry association to install PET bottle collection boxes next to vending machines to achieve 100% recycling;

(c) Prevent unintentional leakage of plastics through appropriate use and proper management of fishing gear by fishers.

Achievement

(a) Not any particular trend

(b) Numerical data

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

	FY2017	FY2018	FY2019
Total litter	91,320 t	86,023t	to be investigated
Plastic litter (estimate)	9,940 t	7,952t	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

Others

(a) The "MARINE Initiative" was launched focusing on (1) Management of wastes, (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, in cooperation with international organizations, has implemented numerous projects to tackle marine plastic pollution.

Kiribati

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Waste Recycling System Or the Kaoki Maange System.

The system operates Monday to Friday, enabling customers to return their recyclable items to receival outlets (collection point).

Achievements

(a) Positive improvement

(b) Numerical data - On a yearly basis, the Kaoki Maange receive approximately;

- 4,000,000 aluminum cans,
- 1,000,000 PET bottles, and
- 2,000 Lead – Acid Batteries (LABs)

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Littering Enforcement by Community Policing and Staff

This activity began this year, and we are engaging securities from each community in Betio. The activity entails issuing an infringement notice to the person who is seen throwing rubbish anywhere. The individual has 28 days to pay his or her fine, if they do not pay within that time, they will be brough to court.

Achievements

(a) We notice a slight change in people's behavior, they've learned to dispose their trash in the bin.

(b) Lack of funding for the waste receptacle.

Maldives

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Establishment of 3 Regional Waste Management Facilities, waste transfer stations and upgrading of IWMCs (Island Waste Management Centers)

The plan is to construct IWMCs on each inhabited island. It is mandatory for each island council to have a waste management plan to manage waste at island level. Waste should be segregated before transferring it to the nearest regional facility or transfer stations Biodegradable waste should be managed at island level. The transfer stations are yet in the planning stage; currently there is a plan to develop 4 transfer stations in 4 zones. And 3 regional waste management centers in the major 3 zones. Currently, there are 3 major waste to energy projects ongoing focused for regional facilities. Waste management equipment's are being provided to island waste management centers by the projects focused for each zone. However, there is still a need of more funding to provide waste management equipment and to establish a proper waste management system.

Weighing scales has been provided to zone 2 islands (46 islands) to weigh waste daily and report the types and amount of waste generated daily. Waste weighing and segregation starts from July 2021 for the mentioned islands and waste data will be collected daily.

Achievements

(a) Not any particular trend - positive improvement cannot be seen yet since the regional facilities and transfer stations has not been established or are fully operational yet. There is a funding and technical resource requirement for the system to be fully effective efficient after the establishment.

(b) Numerical data
   i. New IWMCs planned for this 2021: 43
   ii. Upgrades of IWMC planned for 2021: 31
   iii. Planned to provide waste management equipment for 54 islands this year.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Waste Management regulation effective from 2013

The key elements of the regulations include: ensure safe disposal and transfer of solid waste and encourage recycling and reduction in waste generated, develop guidelines on waste management and disposal and advocate enforcing these guidelines through inter-sectoral collaboration and ensure safe disposal of chemical, industrial and hazardous waste.

(b) Waste bill- currently being finalized

Comprehensive policy framework for better waste Management, addressing roles and responsibilities for stakeholders involved in managing the waste

(c) Environmental Protection and Preservation Act 1993

(d) Under 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 only in the areas designated for the purpose by the government.

(e) Awareness programs for waste management best practices and impacts of littering

Littering on the roads or beaches or in public places is banned under waste management regulation and there are a penalty for the litterers.

Various awareness sessions have been undertaken by ministry and environment protection agency in this regard

(f) Development of Marine Pollution Policy

Development of a National Pollution Prevention Policy is in the draft stage and it is aimed to be implemented by 2021. This policy is to strengthen legislation in the overall works related to pollution, including marine, air and land. Also, to strengthen the monitoring of the management of pollution control and to protect the human health and the environment for a sustainable future.

Achievements

Not any particular trend - Geographical dispersion id one of the biggest challenges for Maldives to ensure safe disposal of waste. Even though some of the policies are implemented, we do not see particular trend as the infrastructure needed for the successful implementation of these policies are still under progress

Myanmar

Others

(a) Myanmar do not allow importing plastic waste but allow the import of plastic scrap only under these criteria:
   i. Plastic scrap to be imported must be clean, homogenous and ready to be used as raw materials.
   ii. 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.

Netherlands

Enforcement of proper waste management system

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) National waste management plan (Landelijk Afvalbeheerplan, LAP3), in compliance with the European Waste Framework directive.

The policy framework in LAP3 sets out the national waste prevention and management policies, the objective of waste policies and definitions. It also provides insight into scenarios, monitoring and enforcement. The sector plans in LAP3 elaborate the general policy from the policy framework for specific flows. The sector plans are the assessment framework for the authorisation of waste processing establishments. On March 2nd 2021 the 2nd modification of LAP3 came into force. LAP3 can be found on: https://lap3.nl/

Achievement

Not any particular trend

New Zealand

Enforcement of proper waste management system

(a) Waste Minimisation Act – Compliance, Monitoring and Enforcement (CME) strategy

CME policies and procedures have been updated to align with best practice and a strategy has developed to deal with compliance with the regulations. The Ministry is producing an annual performance monitoring report on its activities. Annual audit programmes will include a programme for managing the response to plastic bans and product stewardship schemes.

See: Compliance, monitoring and enforcement of the Waste Minimisation Act | Ministry for the Environment https://environment.govt.nz/acts-and-regulations/acts/waste-minimisation-act-2008/compliance-monitoring-and-enforcement-of-the-waste-minimisation-act/

Achievement

(a) In the coming years we will have better data to make a conclusion about a particular trend.

(b) Numerical data - KNZB conducted a National Litter Audit in 2019 (their clean up events can include some beach/waterfront clean ups)

Sustainable Coastlines developed the Litter Intelligence platform where citizen scientists clean up, and collect data on litter in coastal areas. Data collection methodology was developed with NIWA and StatsNZ

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Behaviour change campaign aimed at preventing littering and illegal dumping – led by Keep New Zealand Beautiful (KNZB), funded by MfE

MfE's Strategic Partnerships team are currently working to strengthen strategic alliances with organisations such as Keep New Zealand Beautiful and Sustainable Coastlines who are already delivering on the ground achieving mutual strategic outcomes for litter focused on reduction, data and evidence gathering and behaviour change.

New Zealand supports the Global Ghost Gear Initiative and there are local groups affiliated with this who are taking action and educating.

Certain territorial authorities install stormwater traps to reduce macro plastics entering waterways and further breaking down in the marine environment.

Achievement

Do not have data to make a conclusion about a particular trend.

Norway

Enforcement of proper waste management system

(a) Further developments and refinement of the waste management system

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. Processes related to requirements for the sorting of plastic from businesses.

As of 2021, Norway has a national target that the levels of recycling should increase and that waste generation should be lower than the economic growth.

Achievement

Not any particular trend

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Implemented scrap value for leisure boats (below 49 feet, including canoes, kayaks etc.)

The dumping of leisure boats were identified as a problem and a scrap value system was established, when a boat is handed in to a dedicated waste management facility a reward of Norwegian Kroner 1000 can be claimed.

Littering is illegal in Norway according to the Norwegian Pollution Control Act.

Achievement

Generally it is difficult to measure this.
Numerical data - From 2017 till May 2021 a total of 36 600 discarded boats have been handed in as part of the system. Numbers for 2020: 13,000 boats.

Oman

Enforcement of proper waste management system

(a) Oman comply and accept amendments to annexes II, IIIV and IX to Basel Convention

Oman will allow the imports of plastic covered by waste code B3011 as of 2021, as long as Such plastic waste falls within the scope of the newly created waste code B3011.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Oman has stated the guideline no (159\2005) which determine the chemical parameters and physical parameters along with biological parameters of the discharged water coming from the desalination plants and any discharged sources.

This guideline had maintained the seawater quality in Oman

The guideline also stated conditions for establishing any construction along the coastline to conserve the marine environment

There are conditions diving, dumping and other activities which can maintain the coral reef in Oman.

Achievement

Positive improvement
The water quality in Oman is monitored regularly and it is in a good case.

Pakistan

Enforcement of proper waste management system

(a) Beach-clean-ups is considered to be very important because throwing trash into beaches, and the oceans can be better known as pollution.

(b) Karachi has conducted beach cleaning activity as a Social Project.

Under Coporatize sector responsibility (CSR) companies contribute to societal awareness goals, and support voluntarily or ethically oriented practices (e.g. reduce, and cleanup activities) like cosmetic companies stop adding microbeads in their face wash products/ toothpaste.

Restrict the companies that produce only recyclable product.

Consumer Avoid Products Containing Microbeads.

Support Organizations Addressing Plastic Pollution

Achievement

Positive improvement

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Enforcement of Sindh Environmental Quality Standards by SEPA

(b) Enforcement of Balochistan Environmental Quality Standards by BEPA; and

(c) Implement programmes for conservation and rehabilitation of natural resources in order to reduce risks of natural hazards; e.g. reforestation, mangrove plantation, combating desertification, conservation of special natural resources; e.g. wetlands, lakes, reefs, mangroves, and coastal areas.

Section 11 of the SEPA Act prohibits any emission or discharge that may cause adverse environmental effects. SEPA also enforces the SEQS on industries and municipalities.

BEPA Act 2012

Achievement

Positive improvement

Palau

Enforcement of proper waste management system

(a) Republic of Palau Public Law (RPPL) # 7-24

Establish a recycling program for the Republic of Palau; establish a beverage container deposit fee and creating a Recycling Fund.

Achievement

Positive improvement – Koror State Government Solid Waste Management (KSG-SWM) and Bureau of Public Works Solid Waste Management (BPW-SWM) under the national government through the recycling law.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Palau National Code Annotated (PNCA) 2401-31: Solid Waste Regulation

These regulations are promulgated by the Republic of Palau Environmental Quality Protection Board (EQPB) pursuant to the authority granted by Republic of Palau Public Law No. 1-58. These regulations shall have the force and effect of law.

The purpose of these regulations is to establish minimum standards governing the design, construction, installation, operation, and maintenance of solid waste storage, collection, and disposal systems.

Achievement

(a) Each state has laws to prohibit littering; Environmental Quality Protection Board (EQPB) has a regulation on Solid Waste Management; New landfill managed under Bureau of Public Works Solid Waste Management (BPW-SWM). Currently, there is no specific law for Marine Plastic Litter.

Panama

Enforcement of proper waste management system Reduce and reuse of plastic waste

(a) Recycle for your future

Before part of the Zero Waste Program, it is a public private agreement formed by MiAMBIENTE, the Mayor's Office of Panama, “Autoridad de Aseo Urbano y Domiciliario”, the National Brewery and the Coca-Cola Systemand ANCON.

(b) Mupa Recicla

Inter-institutional alliance, which seeks to strengthen the recycle for your future program and with the objetive of strengthening the integral management of solid waste management in public and private entities.

(c) Drive Thrust and Clean point of Costa Recicla.

The Materials Drive Thru is a monthly activity that provides a community service and the need to provide an alternative to the correct disposal of waste, we collect the following materials: Carton box, tetra-Pak, AluminumCans, Cans of Conversa and GlassBottles.

(d) Regional Project Reduce marine plastics and plastic pollution in the cities of Latin America and the Caribbean through a circular economy approach.

The UN Environment Programme (UNEP) is developing a project aimed at reducing regional marine plastics and plastic pollution by facilitating city-level governments and companies in the Latin America and Caribbean (LAC) region, and accelerating its transition to a circular economy for plastics.

Achievements

(a) Positive improvement

(b) Numerical data - Recycle for your future has achieved the installation of 31 recycling stations (14 in Bethania, 7 in Chilibre and 10 in East Panama), the collection of more than 350 tons of recyclable material, the awareness of more than 100,000 people and the generation of new full and part-time jobs.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Installation of a water wheel to catch floating garbage from the Juan Díaz river by Marea Verde (Project in the beginning phase)

The proposed system will be to reduce the effects on the Bay of Panama and the coastal marine ecosystems in the Ramsar site Humedal Bahía de Panamá by the marine debris generated on land and dumped by the population of the upper, middleand lower basins of the Juan DíazRiver and others. Also facilitate research and the study of marine litter; serve as an exhibition, awareness and environmental education center for the general population of other basins and cities; and as a model of citizen initiatives for the search behavior changes that contribute to mitigating the serious problem of garbage management in our country.

Achievements

In the beginning phase of environmental impact study

Papua New Guinea

Enforcement of proper waste management system

(a) Solid waste management strategy

All waste, regardless of the state (liquid or solid) has to be properly managed and disposed of accordingly. Plastic shopping bags are considered solid waste, therefore solid waste management principles apply.

Achievement

Positive improvement - Plastic shopping bags are disposed of in the landfills, where municipal authorities take charge of treatment and management.

Philippines

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Metro Manila Development Authority (MMDA) Regulation No. 96-009 Anti-Littering Law

MMDA Regulation No. 96-009, entitled, "PROHIBITING LITTERING/ DUMPING/ THROWING OF GARBAGE, RUBBISH OR ANY KIND OF WASTE IN OPEN OR PUBLIC PLACES, AND REQUIRING ALL OWNER'S, LESSEES, OCCUPANTS OF RESIDENTIAL, COMMERCIAL ESTABLISHMENTS, WHETHER PRIVATE OR PUBLIC TO CLEAN AND MAINTAIN THE CLEANLINESS OF THEIR FRONTAGE AND IMMEDIATE SURROUNDINGS AND PROVIDING PENALTIES FOR VIOLATION THEREOF", was enacted into law by the Metro Manila Council on the 22nd Day of August, 1996. The regulation was amended on May 6, 1999 by MMDA Regulation No. 99-006.

(b) RA 9003's Section 48

Prohibition on littering, throwing, dumping of waste matters in public places and canals

(c) Philippine Clean Water Act of 2004 or RA 9275 Section 27

Prohibition on unauthorized transport or dumping into sea waters of sewage sludge or solid waste

(d) RA 7586, otherwise known as the National Integrated Protected Areas System (NIPAS) Act of 1992, as amended by RA 11038, also known as the Expanded NIPAS Act of 2018

NIPAS Act of 1992 and its amendment, the ENIPAS Act of 2018 provides for the management of all designated protected areas (PAs), in order to maintain essential ecological processes and life support systems and maintain their natural conditions to the greatest extent possible. Both RAs prohibit dumping of any waste products and leaving refuse or debris or depositing in ground or in bodies of water. RA 11038 additionally provides for deputation of support for enforcement and its Section 9 stipulates the inclusion of waste, sewerage and septage management in PA management plans

Achievements

Positive improvement

Republic of Korea

Enforcement of proper waste management system

(a) The 1st National Resource Circulation Plan (2018~2027)

In accordance with the 'Framework act on resource circulation', 'The 1st national resource circulation plan was established to set out the path for more sound waste management system in ROK with the specific goal to decrease the amount of GDP-waste generation ratio of ROK by 20% until 2027.

The plan was established based on resource circulation and life-cycle approach and it comprises of 4 main strategies which can work on each stage of product's life cycle from production to recycle. 1) Establishing resource effective system at the product manufacturing stage using resource circulation approach, 2) Promote green comsumption by minimizing the use of single-use products, 3) Enhance waste disposal system through governance, 4) Accelerate material recycling including plastic and batteries through R&D projects and institutional support.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) The 3rd national action plan on rivers and estuaries (2021-2025)

MOE establishes a national action plan every 5 years to effectively manage rivers and estuaries in particular that can be easily polluted by the waste entering from the land. The plan takes multi-faceted approaches using life-cycle and resource circulation approach.

Achievement

Positive improvement

Samoa

Enforcement of proper waste management system

(a) Waste collection services

The Government's waste collection services cover 4 inhabited islands and the collection frequency is twice a week with quarterly bulky waste collection. Two Fukuoka landfills; one on Upolu Island (main) and one on Savaii island.

Achievements

Positive improvement - A waste collection monitoring system is in place using GPS technology which is the first for the Pacific.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Law enforcement and public awareness programs

Law enforcement is critical and goes together with public awareness programs to inform the general public of the impacts of inappropriate activities in regards to waste. Public litter bins have been installed in public places and segregation cages in place for main supermarkets around Apia township.

Achievements

Positive improvement - Littering and illegal dumping are dealt with accordingly while leakage into the ocean from sea is a challenge.

Others

(a) Development of the National Effluent Standards for Samoa

Achievements

Samoa through the Ministry of Natural Resources and Environment (MNRE) is working with key stakeholders to finalize Samoa's NES.

Saudi Arabia

Enforcement of proper waste management system

(a) New draft of waste management law

Provides for the strict monitoring and enforcement of various practices including illegal dumping and burning of wastes. It also includes harsh penalties for violators.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia. Brief description:

The components of the above plan have been briefly presented in item 2 above. We believe that once implemented in conjunction with the new "Waste management Law", those will help to significantly reduce littering and leakage of waste into the marine environment.

Singapore

Enforcement of proper waste management system Reduce and reuse of plastic waste

To address the issue of marine plastic litter and microplastics, Singapore has 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:

Comprehensive waste management system

(a) Control of waste disposal. Through the Environmental Protection and Management Act (EPMA) and the Environmental Public Health Act (EPHA), Singapore's National Environment Agency regulates the disposal of all types of waste in Singapore and administers strict anti-littering regulations. This includes the 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

(b) Anti-littering and waterways clean-up measures,

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

(c) Integrated and comprehensive solid waste management and collection system

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

Achievements

Positive improvement

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Damming up tidal rivers to form reservoirs

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

(b) Collect and treat all used water at water reclamation plants (WRPs)

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

(c) Party to all six Annexes of the International Maritime Organizations's (IMO) International Convention for the Prevention of Pollution from Ships (MARPOL)

Singapore is party to all six Annexes of the International Maritime Organisation'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

(d) 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

(e) Singapore conducts inspections on both Singapore-registered and foreign-registered ships in our 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

(f) Singapore's MPA deploys five garbage collection crafts daily at scheduled timings to collect garbage from ships at the anchorages

Spain

Enforcement of proper waste management system

(a) In a few month, we will have a new law of waste management

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) in a few months we´ll have a new waste law

The future law will include penalties for littering

Sri Lanka

Enforcement of proper waste management system

(a) Compulsory separation of waste

It is now practiced in most of the areas (it is around 60% separation).

Achievements

Plastic waste recycling strengthened.

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

Achievements

Positive improvement - The “Surakimu Ganga” program is being carried out by this Ministry and all 103 rivers are being cleaned. The U.S. Agency for International Development’s (USAID) Clean Cities, Blue Ocean program will fund pilot projects to minimize the flow of plastic pollution to the ocean.

Thailand

Enforcement of proper waste management system

(a) Other organizations in Thailand take responsibility on this matter.

Prevention of littering, illegal dumping, and unintentional leakage of waste into the ocean

(a) Prevention of floating littering leakage to the sea by using garbage boom and litter traps

To set up several litter buoy, garbage-collecting boat and litter trap (SGC-DMCR litter trap) along with main river and mangrove creek

Achievements

Positive improvement

Turkey

Enforcement of proper waste management system

(a) Environmental Law amendment

(b) The National Waste Management and Action Plan (2016-2023)

The National Waste Management and Action Plan (2016-2023) was prepared in 2017 in order to reduce and limit the amount of waste going to landfills throughout the country and to determine the targets and facilities needed for waste recovery, recycling and energy production.

Revision studies have been initiated for the years 2023-2035 in order to harmonize the National Waste Management and Action Plan (2016-2023) with the circular economy approach, to increase and disseminate separate collection at source, and to determine recovery and disposal methods.

In accordance with the Zero Waste Regulation (Official Gazette dated 12 July 2019 and numbered 30829), Provincial Zero Waste Management System Plans were prepared in 2020 by 81 provinces with under the chairmanship of Governors and accepted by the decision of the Local Environment Boards. Provincial Zero Waste Management Plans contain the issues regarding the establishment of a zero waste management system within the province taking into account the local characteristics and current conditions, short and long-term targets together with the strategies and policies at the provincial level, planning and goals for increasing recovery through separate collection at source and training & awareness raising activities.

Municipalities are included in the Provincial Plans at the level of district municipalities responsible for the collection and transportation of waste, and at the level of provincial and metropolitan municipalities responsible for the establishment and operation of waste treatment facilities. In this direction, the current situation and needs in equipment and infrastructure have been revealed, especially civic amenity centers, waste collection methods and waste collection points (including waste drugs from households) are considered within the scope of Provincial Plans. In addition, the current situation of the infrastructure and future planningfor the buildings such as health institutions, educational institutions, public institutions and organizations, industrial enterprises, tourism facilities throughout the province are also included in the Provincial Plans.

By the Environmental Law amendment published in the Official Gazette No. 30621 and dated10.12.2018, Additional Article-11 titled “recycling contribution share” came into force in order to regulate the collection of recycling contribution share from the producers and importers of the products listed in the Annex-1 of the law. All packaging including plastic bags, tires, accumulators, batteries, mineral oil, vegetable oil, medicine, electrical and electronic equipment and beverage packaging are included in the Annex-1.

The Recycling Contribution Share which is an incidence of “polluter pays” and “extended producer responsibility” principles aim to finance the development of the waste management infrastructure and to meet the necessary expenses for collection, transportation and recycling of packaging and other special wastes as well as encouraging the reduction of waste generation.

The Regulation on Recycling Contribution Share prepared by our Ministry was published in the Official Gazette dated 31/12/2019 and numbered 30995 (4. Repeating) and was put into effect as of 01/01/2020.

According to the revision on Turkish Environmental Law (Additional Article-No.12) In order to prevent environmental pollution, the Ministry obliges the deposit application for the packages and products to be determined as of 1/1/2022. Accordingly, sales points that sell the products covered by the deposit are obliged to participate in the deposit collection system.

Achievements

Positive improvement

UK

Enforcement of proper waste management system

(a) The following acts and regulations are in place to enforce proper waste management:

i. Pollution Prevention and Control Act 1999. Regulation making powers for a pollution control system and for other measures to prevent and control pollution.
ii. Environmental Protection Act 1990. Defines the structure and authority for waste management and control of emissions into the environment.
iii. Environmental Permitting Regulations 2016. A framework for environmental regulation, guidance, compliance monitoring and enforcement tools.

(b) Port Waste

Following the UK’s departure from the EU, the UK is seeking to review and engage with stakeholders to gain their views on the effectiveness and adequacy of the current Port Waste Reception Facility regime. Stakeholder engagement will provide the necessary evidence to inform potential policy options to ensure the Regime remains relevant to the UK and that it continues to offer robust environmental protection. The review will also take into consideration best practices from other international Port Waste Reception Facility regimes.

(c) Trapping or screening of drainage / rivers

Many storm overflows which discharge into rivers or the sea from the combined sewerage system in England do have screens. The requirement for screens is set as a condition of the Environmental Permit for discharge.

Trapping or screening drainage / rivers can result in the retention of solids and can create a maintenance issue. The preferred option is to deal with litter / flushed items at source, although not always practicable.”

Prevention of littering, illegal dumping, and unintentional leakage of waste into the ocean

(a) 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.

The UK’s Regulations on the Prevention of Pollution by Garbage from Ships 2020 (S.I. 2020/621) brings in the International Convention for the Prevention of Pollution by Garbage from Ships (MARPOL Annex V) into UK law.

Under the Regulations, discharge of all garbage into the sea is prohibited with very limited exceptions. In all cases the discharge of plastic is prohibited.

The Regulations require fishing vessels to record the discharge or loss of fishing gear in the Garbage Record Book or ship’s logbook, and require fishing vessels to report the accidental loss or discharge of fishing gear which poses a significant threat to the marine environment or navigation.

Under the Regulations it is an offence to fail to report the discharge of fishing gear which poses a significant threat to the marine environment or navigation to (a) the ship’s flag State and (b) any coastal state who has jurisdiction over the waters where the loss or discharge occurs. The UK’s Port Waste Reception Facilities Regulations (S.I. 2003/1809) put legal obligations on ports and vessels to manage ship generated waste. All ports and terminals must provide adequate Port Waste Reception Facilities for waste generated by ships. Ships including fishing vessels are required to deliver their ship generated waste to the port waste reception facilities. The UK will be carrying out a review of the current UK regulations on Port Waste Reception Facilities which will commencing in 2021.

(b) Links to regulations

The Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) Regulations 2003 (S.I. 2003/1809), further information can be found here. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/899732/MGN_563_Amendment_1_R0720.pdf

The Merchant Shipping (Prevention of Pollution by Garbage from Ships) Regulations 2020 (S.I. 2020/621), further information can be found here. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/919758/MGN_632_-_Amendment_1.pdf

Others

(a) The UK has committed to review and consult on measures such as extended producer responsibly schemes for fishing gear containing plastic and schemes for textiles by 2022.

Uruguay

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

(a) Ministerial Resolution: 272/2021

Gradual prohibition of commercialization in the protected areas incorporated into the national system of protected areas of non-returnable beverage containers and other plastic products that are the object of this resolution.

US

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

EPA Marine Litter Related Voluntary Work

(a) Trash Free Waters

Trash Free Waters is a voluntary program that emphasizes stakeholder engagement to assist U.S. and international communities with addressing primarily land-based sources of marine litter. Within the United States, 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 Trash Stormwater Permit Compendium outlining effective stormwater permit trash provisions for use by stormwater permit writers and stormwater planners; and a 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.

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

https://www.epa.gov/sites/production/files/2021-06/documents/ms4_trash_compendium_april_2021_final.pdf

https://www.epa.gov/trash-free-waters/epas-escaped-trash-assessment-protocol-etap

(b) Resource Conservation and Recovery Act (RCRA)

EPA works with businesses, governments, and nonprofit organizations 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.

https://www.epa.gov/environmental-topics/land-waste-and-cleanup-topics

NOAA Marine Debris Program Prevention Grants

(a) 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.

Achievement

(a) Marine Debris Act

Development of ten subnational (US state or regional) action plans to coordinate and spur local action to address marine debris.

Development of ten 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.

Others

International Cooperation

(a) Waste Prevention & Strengthening Recycling (USAID)

i. Municipal Waste Recycling Program (MWRP)

USAID reduces land-based sources of marine plastic pollution by supporting local organizations through grants and technical assistance in Indonesia, Philippines, Sri Lanka and Vietnam 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 range 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 program that works in 22 cities and towns across seven countries (Philippines, Vietnam, Indonesia, Sri Lanka, the Maldives, the Dominican Republic and Peru) to build and advance circular economies and reduce ocean plastic pollution. 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 behavior changes. In support of these objectives, the program partners with local and multinational corporations to effectively leverage private sector expertise, investment and supply chains. Because they are a vital part of the waste value chain and key to the creation of a circular economy, CCBO also economically empowers informal waste collectors, especially women, building capacity, providing access to credit, and facilitating safe working conditions.

(b) Infrastructure Investment (USAID):

i. Development Finance Corporation (DFC) partial loan guarantee for Circulate Capital

USAID signed an agreement with Circulate Capital to provide a $35 million, 50 percent loan-portfolio guarantee through DFC to incentivize private capital investment in the recycling value chain in South and Southeast Asia. The agreement leverages more than $100 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 $1.5 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. The US is a Contracting Party ot the CC and LBS and 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 organization 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 four million dollars 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 supporting 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.

Achievement

International Cooperation

(a) Solid Waste Management and Inclusive Capacity Building- Trash Free Waters

Jamaica - Prioritize 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.

Panama - Prioritize 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.

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 has completed 2 of 3 planned workshops on landfill management in Panama and Costa Rica, with the next one planned for the Dominican Republic in late summer 2021.

(c) Stormwater Runoff and Marine Litter Prevention - Commission for Environmental Cooperation (CEC)

The U.S., Canada and Mexico are implementing projects to reduce marine litter along the transboundary watersheds since 2017. The current CEC project on marine litter includes developing a toolkit and training guide for decision makers on the stakeholder engagement process developed and implemented by the CEC, and developing a Public Awareness Toolkit that will provide ready-to-use, adaptable (plug and play) materials to municipalities, NGOs, educational institutions and other organizations to deliver litter prevention programs and public awareness campaigns. The Toolkit for Decision-Makers is expected to be finalized soon and associated trainings will be conducted. The Public Awareness Toolkit is targeted towards inland communities, including urban inland areas. The messaging will focus on water and trash flow, the full life cycle of a product, and concrete actions that offer individual solutions.

(d) Waste Prevention & Strengthening Recycling (USAID)

i. USAID Municipal Waste Recycling Program - To date, the program has awarded a total of 30 locally-led grant projects in Indonesia, Philippines, Sri Lanka and Vietnam, with a total of 3.5 million people in these countries benefiting from the program activities. In addition, over 12,000 metric tons of plastic waste has been diverted from the natural environment through recycling and improved solid waste management practices.

ii. USAID Clean Cities Blue Ocean - To date, the program has awarded $1.5 million to local grantees who are leading innovative projects. Through these partnerships, and those with local and national governments and the private sector, CCBO has secured over 33,000 metric tons (MT) of plastic from leaking into the environment and aggregated over 217,500 MT of other waste and recyclables.

(e) Infrastructure Investment (USAID):

Development Finance Corporation (DFC) partial loan guarantee for Circulate Capital- Circulate Capital made its first loan utilizing the USAID-DFC loan guarantee in April 2020 to a woman-owned recycling company in Indonesia for facility expansion.

(f) 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.

(g) Global Partnership on Marine Litter

NOAA staff serve on the GPML Steering Committee to help guide its work. US EPA is financially supporting the development of a digital platform to share information on marine litter and plastics on a global level.

(h) 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 tons of solid waste, including 43 tons of plastic waste recycled.

(i) 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 US $800,000 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. There are four projects that have been approved by APEC member economies to address and better understand marine debris in the APEC region.

(j) Global Ghost Gear Initiative Engagement

In 2020 the United States joined the GGGI as a government member and is working with the organization to combat ghost gear globally through promotion of the voluntary gear marking guidelines developed by the FAO with input from the GGGI.

(k) United States Department of State Marine Debris Grants

The 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, Vietnam. 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.

- 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 programs 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.
- 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 incentivizing 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 standardized gear retrieval protocol.
- DOS supports innovative technologies and approaches to combatting marine debris through our 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.
- 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.

(l) 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. The US engages in all four project groups and is preparing for the 2nd PWP meeting June 14-16, 2021.

(m) U.S.-Mexico-Canada Agreement

In 2020, the new U.S.-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 North America. In 2020, the U.S. also passed domestic legislation that provided $8 million in funding to NOAA's Marine Debris Program to address marine debris in North America of which NOAA is allocating $4 million in 2021 on marine debris projects in the region. This legislation also provided EPA with $4 million in funding to address marine debris, and other environmental issues through the trilateral Commission on Environmental Cooperation.

EU

Enforcement of proper waste management system

(a) EU Waste Framework Directive

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. 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.

Achievements

Positive improvement

Prevention of littering, illegal dumping and unintentional leakage of waste into the ocean

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

The 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 irrespectively 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.

International Organisations and NGOs

ADB

Proper waste management

(a) The project aims to implement two pilot demonstration projects (one in Cirebon, Indonesia, and in Tan An, Viet Nam) on solid waste management approaches to reduce marine plastic pollution. The pilot projects will (i) promote the separation of wet and dry waste at the household level (source segregation) and the further separation of high-value plastic in a closed loop collection and recycling system, thereby creating favorable conditions for further processing or use of plastics; (ii) utilize digital technologies for waste reduction and high-quality recycling; and (iii) build partnerships with local reprocessing and recycling companies to implement circular business models.

ASEAN

Proper waste management

(a) Regional Workshop “Managing Packaging Waste – Preventing Marine Litter” (completed)

(b) ASEAN-Japan Projects on ASEAN ESC Model Cities (completed)

(c) ASEAN-Japan Project on SGDs Frontrunner Cities (completed)

(d) ASEAN-Germany Project on ASEAN Municipal Solid Waste Management Enhancement (AMUSE)

(e) 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 (completed) and Phase 2 (ongoing))

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) Regional Workshop “Managing Packaging Waste – Preventing Marine Litter” (completed) https://asean.org/asean-pushes-forward-marine-litter-prevention/

(b) Workshop on the ASEAN Mechanism to Enhance Surveillance against Illegal Desludging (completed)

(c) ASEAN-Germany Project on Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs (3RproMar) (ongoing)

(d) Capacity Development for ASEAN Member States on Identification and Differentiation of Spilled Oil and Tarballs (upcoming)

ERIA

Proper waste management

(a) ERIA’s RKC-MPD shares ASEAN+3 information with regards to Collection from Waste Generators, Preventing Discharge from Specific Sources, Proper Treatment and Disposal, Waste Reception Facility at Port, and has a few publications on waste management on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/27/management/collection

https://rkcmpd-eria.org/goodpractices/27/management/preventing-discharge

https://rkcmpd-eria.org/goodpractices/27/management/proper-disposal

https://rkcmpd-eria.org/goodpractices/27/management/waste-reception-port

https://rkcmpd-eria.org/publications

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) ERIA’s RKC-MPD shares good practices information with regards to Preventing Littering in ASEAN+3 context on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/27/management/preventing-littering

Ocean Conservancy

Proper waste management

(a) U.S. Recycling

Provided input to the Recycling Leadership Council's Blueprint for America's Recycling System, calling for standardization and harmonization of its more than 10,000 different municipality-run recycling systems. https://consumerbrandsassociation.org/sustainability/recycling-leadership-council/blueprint-for-americas-recycling-system/

Data: Calls for three pillars of action: data collection and reporting, system standardization and harmonization, and financing and end market development

(b) The Global Ghost Gear Initiative (GGGI)

GGGI and its members are at the center of efforts advancing end-of-life solutions for fishing gear and building effective recycling programs to allow fishers to responsibly dispose of their gear. In May 2020, the Centre for Sustainable Design at the University for the Creative Arts in the United Kingdom (UK) released a report on circular business opportunities for end-of-life fishing gear, and, in the same month, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) published its report on redesign recommendations for fishing gear in the European Union (EU), which included calling for recyclability in gear design. In an article about entrepreneurs making use of end-of-life fishing gear as a raw material, the World Economic Forum highlighted several GGGI members, including DSM Engineering Materials, Fourth Element, Ghost Diving Foundation, Healthy Seas, and the Olive Ridley Project. Seafish's magazine, Quay Issues, featured an article on the costs and benefits of recycling end-of-life fishing gear, and KIMO International also released a new report and a set of guidelines on best practices for use of net cuttings during at-sea net repairs on fishing vessels in the North Atlantic.

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) SPLASH (Strategic Plastic Litter Abatement in the Song Hong)

After 4 months of operation since the 1st launching end of January 2021, our 1st trash capture device has collected 800kg of debris floating on the Red River, including more than 450kg of plastic.

OECD

Proper waste management

(a) Global Plastics Outlook (Policy scenarios) [ENV/EPOC/WPRPW/WPIEEP(2021)2]

(b) Reports on Extended Producer Responsibility [ENV/EPOC/WPRPW(2020)2/FINAL]; [ENV/EPOC/WPRPW(2021)1]; [ENV/EPOC/WPRPW(2021)2]

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) Global Plastics Outlook (Marine plastic litter prevention, policy scenarios) [ENV/EPOC/WPRPW/WPIEEP(2021)2]

(b) Report on single us plastic waste policies: "Preventing single-use plastic waste: implications of different policy approaches" [ENV/EPOC/WPIEEP(2020)10/REV2]

UNEP

Proper waste management

(a) 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, entered into force on 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 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.

(b) 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. The PWP has more than 100 member entities from Governments, industry, intergovernmental organisations, civil society and regional centres.

(c) Under PoW 14 of the 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. 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.

(d) Under PoW 19 of the 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)

(e) UNEP IETC 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. This project was funded by the Government of Japan.

(f) Furthermore, UNEP IETC works with its collaborating centre, IGES Centre Collaborating with UNEP on Environmental Technologies (CCET), 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. UNEP IETC with CCET developed National Plastic Waste Strategic Actions for Indonesia and Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle - Income Countries.

(g) COVID-19 has had negative environmental impacts in terms of waste and proper handling of it. In addition to the soaring demand for masks and other personal protective equipment, some countries reported that the amount of plastic waste, especially plastic packaging, increased by 15% because of increased food deliveries and e-commerce in general. As part of UNEP's rapid response to the COVID-19 pandemic, UNEP has provided technical guidance to Member States on topics associated with waste management during the pandemic. This included 7 webinars and a series of factsheets, Working with the environment to protect people: Covid-19 Response, covering a range of environmental factors relevant to the COVID-19 response including ones on waste management (https://www.unep.org/resources/factsheet/covid-19-waste-management-factsheets). UNEP in collaboration with University of Melbourne also prepared the Guidance on policy and legislation on integrated waste management in times of pandemic and the report, Waste Management during the COVID-19 Pandemic: From Response to Recovery in collaboration with IGES.

URL:

https://www.unep.org/resources/working-environment-protect-people-covid-19-response

https://wedocs.unep.org/bitstream/handle/20.500.11822/33416/WMC-19.pdf?sequence=1&isAllowed=y

http://wedocs.unep.org/bitstream/handle/20.500.11822/33416/WMC-19.pdf?sequence=1&isAllowed=y

(h) 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.

UNIDO

Proper waste management

(a) UNIDO project "Support for transitioning from conventional plastics to more environmentally sustainable alternatives" in South Africa supports strengthening the plastic recycling capacity of South Africa by encouraging implementation of the national guidelines of waste picker integration, and promoting EPR schemes, in order to increase collection of better-quality recyclables.

WB

Proper waste management

(a) Since 2000 about US$5 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:
   i. 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: Behavior change and public participation are 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.

   One recent example of a World Bank funded waste management project is the US$430 million Plastic Waste Reduction Project in China, which aims to improve plastic waste management at the national and sub-national level, and to reduce plastics pollution from municipal solid waste. Apart from the impact at the national and sub-national level, the project will have a global impact by reducing plastic waste leakages to the world's oceans originating from urban and rural China.

   Another example is the Kerala Solid Waste Management Project (KSWMP) in India, which will establish an integrated solid waste management system that includes a balanced mix of decentralized and centralized waste management interventions. It will support multiple activities at local and regional levels including expansion of waste collection services, development of waste recycling and management facilities, remediation and closure of existing dumpsites, development of scientific landfills, and sanitization of government offices, hospitals, community level waste recycling and processing facilities.

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) The prevention of littering and illegal dumping is as an activity related to proper waste management (see above). While the World Bank assists national and local governments in designing and implementing the right waste management systems, including infrastructure and logistics, behavioral aspects are regarded as key to successful waste management. This view is reflected in engagements in countries and regions.

WEF GPAP

Prevention of littering, illegal dumping and unintentional waste into the ocean

(a) All stakeholders in the plastics ecosystem have a role to play in shifting mindsets and behaviours. GPAP's multistakeholder approach means we can raise awareness among governments, businesses and other decision-makers about proven behaviour change methods. We take a holistic approach to behaviour change, focusing on actions both upstream to prevent waste and downstream to better manage it. The NPAPs in Indonesia and Ghana both convened Behaviour Change Task Forces in 2021.


100%
Recycled

3.3. Clean-up of Marine Plastic Litter

Many countries collect scattered waste from beaches, with 36 countries reporting that they catty out this measure. Twenty-one countries remove plastic litter from the ocean, but this action is restricted to developed countries. Developing countries reportedly require technical and financial support.

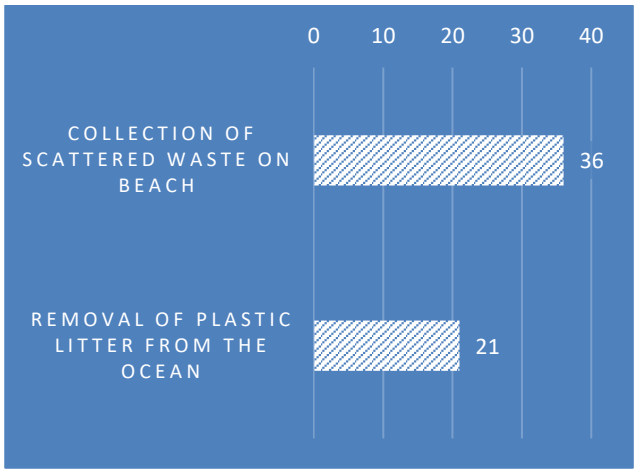


Figure 7: Countries – Clean-up of Marine Plastic Litter*

*Number of countries responded YES among 41 responses

Countries

Australia

Collection of scattered waste on beach

(a) Australian Government Ghost Nets Initiative: Indigenous Rangers Coastal Clean-ups Project

As part of the the $14.8 million Australian Government Ghost Nets Initiative, work will be conducted with Indigenous ranger groups to collect data on the source of ghost nets and coordinate retrievals and marine debris beach clean ups in the Gulf of Carpentaria, one of the nation's hot spots for ghost nets drifting from foreign waters. The Ghost Nets Initiative. The on-ground work will commence from late-2021 to mid-2024.

(b) Environment Restoration Fund

The Australian Government is investing $100 million, over four years from 2019-20 to 2022-23 through the Environment Restoration Fund. Projects delivered under the ERF focus on protecting threatened and migratory species and their habitat across Australia's coasts, oceans and waterways. ERF grants have been provided for beach and coastline clean-up activities, including AU$300,000 to Clean Up Australia Day and AU$5,000,000 to Conservation Volunteers Australia.

(c) Communities Environment Program

The Communities Environment Program is a grant program that supports community-led projects to address local environmental priorities, including litter clean up events.

(d) Install Capturing trap/filter on drainage/river

The 2021 National Plastics Plan includes actions for the Australian Government to:

i. Partner with states and territories and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) on solutions to prevent plastic debris entering the marine environment via stormwater.
ii. Work with the textile and whitegoods sectors on an industry-led phase-in of microfibre filters on new residential and commercial washing machines by 1 July 2030.

Achievements

Positive improvement

Removal of plastic litter from the ocean

(a) Australian Government Ghost Nets Initiative

The $14.8 million Australian Government Ghost Nets Initiative addresses the challenge of ghost nets and plastic litter in the waters and beaches of the Gulf of Carpentaria. The initiative will be delivered over three years and will include actions targeted at removal of plastic litter from the ocean, including:

i. New technology to better detect, collect and dispose of ghost nets, including satellite tags and funding for the in-water retrieval of ghost nets;
ii. Work with Indigenous ranger groups to collect data on the source of ghost nets and coordinate retrievals and marine debris beach clean ups in the Gulf of Carpentaria; and
iii. Investment in proactive steps to address the source of the issue with stakeholders and enable further research and coordination.

Achievements

Positive improvement

Bahrain

Collection of scattered waste on beach

(a) Many activities are led by SCE to clean seas with NGOs

Achievements

(a) Positive improvement

(b) Numerical data - More than 2 tons during each activity

Bhutan

Collection of scattered waste on beach

Removal of plastic litter from the ocean

(a) Cleaning campaigns

Once a month conducts cleaning campaigns and also collaborate with other stakeholders for mass cleanings, observes important days such as world water day or environment day by conducting mass cleaning campaigns

Achievements

Positive improvement

Brunei

Collection of scattered waste on beach

(a) Nationwide Cleaning campaigns: Coastal Areas

Cleaning campaigns for a period of 7 months focusing on coastal areas targeting main beaches in Brunei aimed to reduce the amount of waste discarded into the marine environment particularly plastic waste and to obtain a baseline data on discarded waste along coastal areas.

Canada

Collection of scattered waste on beach

(a) Canada's comprehensive zero plastic waste agenda

(b) Zero Plastic Waste Initiative

(c) Great Canadian Shoreline Clean-up

Through the Canada-wide Strategy on Zero Plastic Waste and Action Plan, 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.

Through the Zero Plastic Waste Initiative, the Government of Canada invested over CA $5 million (2018-2022) to raise awareness and educate consumers and youth; develop and advance citizen science; mitigate plastic pollution leakage points; and develop, test and implement solutions to prevent, assess and remove plastic pollution.

Achievements

(a) Positive improvement - 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.

(b) Numerical data

Zero Plastic Waste Initiative

- ~330 tons of litter removed across Canada (2018-2020)
- For example, since 2020, the Council of the Great Lakes and Georgian Bay Forever have collectively diverted 13,097kg of debris from the Great Lakes (97kg and 13,000kg, respectively). This debris was diverted through the use of litter capture technologies such as Seabins, Littatraps, and Gutter Bins. Since September 2020, the International Fund for Animal Welfare Inc. and the Clean Harbours Initiative diverted an estimated 6,804kg of debris from Newfoundland harbours through the completion of 10 dives.

Great Canadian Shoreline Cleanup

- Since 1994, the Great Canadian Shoreline Cleanup has engaged more than 937,000 volunteers to clean up 44,262km of freshwater and marine shorelines in Canada, removing more than 2 million kg of trash.

Removal of plastic litter from the ocean

(a) Canada's comprehensive zero plastic waste agenda

(b) Sustainable Fisheries Solutions and Retrieval Support Contribution Program (Ghost Gear Fund)

Through the Canada-wide Strategy on Zero Plastic Waste and Action Plan, federal, provincial and territorial governments have also committed to work with fishing and aquaculture harvesters and industry to:

- Develop requirements or best practices for the use of plastics in operations and increase reporting, tracking and retrieval of lost gear;
- Address regulatory barriers to retrieve lost gear;
- Support design, technologies and other innovations to prevent, mitigate and retrieve gear; and,
- Evaluate best policy options to increase collection and end-of-life management of gear.

Canada's Sustainable Fisheries Solutions and Retrieval Support Contribution Program investment of CA $8.3 million (2020-2022) 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.

Achievements

(a) Positive improvement - A baseline has not been established in order to measure trends against. The value of investments and number of plastic pollution removal projects has increased since 2018.

(b) Numerical data

i. An estimated 69 tons of lost or discarded gear removed from Atlantic Canada in 2020

ii. 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.

Chile

Collection of scattered waste on beach

(a) National Beach Cleaning Program.

Through this program, marine debris are removed from the sea, beaches and lakes.

Achievement

Positive improvement

China

Collection of scattered waste on beach

(a) Opinions on Further Strengthening Plastic Pollution Control

The special cleanup of plastic wastes is carried out. The inspection and rectification of informal storage and dumping stations of domestic wastes shall be on fast track, focusing on plastic pollution caused by random dumping of domestic wastes in urban and rural areas, environmentally sensitive areas, roads and rivers, and pits and ditches. Operations to clean up plastic garbage in rivers, lakes and harbors and clean beaches are performed. The cleaning and remediation of residual mulch film on farmland, plastic packaging of pesticides, and fertilizers will be promoted to gradually reduce the amount of such films.

Removal of plastic litter from the ocean

(a) Opinions on Further Strengthening Plastic Pollution Control

The departments of ecological and environmental protection along coastal areas shall take the lead in cleaning marine litter and debris, and to take various actions to prevent marine litters effectively.

Achievements

Positive improvement

Dominican Republic

Collection of scattered waste on beach

(a) Beach Cleaning Day

Annual Beach Clean-ups, organized by the Ministry of the Environment and Natural Resources with the support of key public and private stakeholders, throughout the national territory.

Achievements

Positive improvement

Fiji

Collection of scattered waste on beach

(a) Individuals and community groups collect solid trash such as plastic litter on a volunteer basis.

(b) Ongoing awareness work.

(c) Trashnet

The Department of Environment's Ocean Trash Audit Programme was launched by the Attorney General in June 2020 during the World Ocean's Day at a River in Suva.

Based on the results and in partnerships with the Global CAPP program, Fiji has targeted its awareness, surveillance and compliance program.

Achievements

(a) Positive improvement – Awareness raising and survey were conducted in the area following the deployment of the trash net.

(b) Numerical data - Within a span of 19 days (2 weeks and 5 days), these 5 major household wastes dominated the waste composition during the audit of the 2 waste booms at the river which are ranked in descending order. Total waste count of 2523 were collected.

Removal of plastic litter from the ocean

(a) Ocean Trash net Audit Program

The Department of Environment's Ocean Trash Audit Programme was launched by the Attorney General in June 2020 during the World Ocean's Day at a River in Suva.

Achievements

Positive improvement - Awareness and survey was conducted in the area following the deployment of the trash net. The trash net will be deployed in other parts of the country to carry out similar audits.

Finland

Collection of scattered waste on beach

(a) Beach clean-up campaigns

Beach clean-up campaigns as part of national monitoring of beach litter and as voluntary organized activities by NGOs. Activities to improve knowledge on marine litter. In particular, the campaigns called Siisti biitsi organised by an NGO Pidä Saaristo Siistinä https://www.siistibiitsi.fi/

Achievements

Positive improvement

Removal of plastic litter from the ocean

(a) Fishing for litter

Fishermen are encouraged to collect litter at sea and are allowed to bring it to collection facilities at ports cost free.

France

Collection of scattered waste on beach

(a) Support clean-up campaign organized by NGOs on beaches and along the coastlines;

(b) Launch of the citizen science platform on marine litter to identify the clean-up actions taking place.

Achievements

Numerical data

i. The platform gathers 255 organizations.
ii. NGOs are financially supported each year.

Removal of plastic litter from the ocean

(a) France is leading fishing for litter.

Fishing for litter consist of the retrieval by fishermen of litter collected accidentally during fishing operations.

Achievements

Numerical data

i. Fishing for litter data will be available at the end of the year.
ii. The call for projects to tackle plastic pollution in the oversea territories has granted a total of 266,548 euros granted for projects that contribute to litter retrieval before and in the coastal environment.

Indonesia

Collection of scattered waste on beach

(a) The Ocean Cleanup

Periodical actions to clean up the coastal areas from scattered waste, involving line stakeholders including ministries, local government, local communities, media, etc.

Achievements

Positive improvement

Italy

Collection of scattered waste on beach

(a) Clean up initiatives by NGOs Legambiente, Marevivo and WWF

Initiatives with citizens to remove marine litter from the beaches

Achievements

Positive improvement

Removal of plastic litter from the ocean

(a) Initiative of the Ministry of the Ecological Transition to remove marine litter from the sea

The Castalia ships, specialized in the prevention and recovery of hydrocarbon pollution, are supporting the Ministry of the Ecological Transition to collect and trace the presence, quantity and composition of floating marine litter and in particular plastic waste, both in protected marine areas and in areas in front of river mouths.

For this activity, the Ministry is also supported by Corepla, the National Consortium for the collection, recycling and recovery of plastic packaging, for an experimental project for the recycling of plastic material recovered from the sea fleet.

(b) Transposition of Directive (EU) 2019/883 on port reception facilities for the delivery of waste from ships, amending Directive 2010/65/EU and repealing Directive 2000/59/EC.

According to this Directive, passively fished waste (waste collected in nets during fishing operations can be delivered for free to the port reception facilities.

Achievements

(a) Not any particular trend - The collection of data is still ongoing. Data will be elaborated at the end of the first stage

(b) Not any particular trend - Italy is transposing the Directive this year (2021). For this reason it is not possible to see any trend of change.

Japan

Collection of scattered waste on beach

(a) 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 prevention 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 to clean-up and litter collection activities in cooperation with river administration authorities, local governments, and residents

Achievements

(a) Not any particular trend

(b) Numerical data

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

	FY2016	FY2017	FY2018	FY2019	FY2020
Total litter	29,931t	45,539t	32,486t	27,310t	Under investigation
Plastic litter	10,900t	16,600t	11,900t	10,000t	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 government.

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

Removal of plastic litter from the ocean

(a) 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 30 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 maintenance vessels in enclosed sea areas, and by port administration authorities in port areas.

Achievements

Not any particular trend

Kiribati

Collection of scattered waste on beach

(a) Clean-up activities with Communities, NGOs and Ministries

The purpose is to promote and encourage environmental awareness and discussion of pollution and associated issues by encouraging and coordinating clean-up campaigns and other activities at the community level.

Achievements

Positive improvement

Maldives

Collection of scattered waste on beach

(a) Local Beach clean ups by NGOs

Local Beach Cleanups Environmental Active NGOs organize clean ups and collect the scattered waste on beaches. These clean ups are done frequently. In addition, dustbins are placed by the government and non-governmental organizations in the public areas to avoid littering. “Save the beach Maldives” is one of the active NGO organizing these clean up events. More information via https://savethebeachvillingili.wordpress.com/

(b) Ghost nets and their points of origin of identification by Olive ridley project

The Olive Ridley Project (ORP) is on a mission to protect sea turtles and their habitats through rescue and rehabilitation, education and outreach, and scientific research. More information about the activities via: https://oliveridleyproject.org/report-a-ghost-net

(c) Plastic Intercept

Avoid and Intercept Plastic

(The plastics intercepted by fishermen and collected at designated collection points were handed over to Parley for the Oceans, who Maldives has been closely working with to recycle and reuse plastic wastes).

Removal of plastic litter from the ocean

(a) Reef Clean ups

Non-governmental organizations such as environmental NGOs conduct random reef clean ups.

These NGOs includes, parley Maldives and Save the beach Maldives.

Details of their work can be via:

https://savethebeachvillingili.wordpress.com/

https://www.maldives.parley.tv/

Achievements

These cleanups are conducted by NGOs randomly. And most of the statistics of the collected wastes are recorded by the individual NGOs. Also most of these data are not published regularly.

Mexico

Removal of plastic litter from the ocean

(a) Mexico's adhesion to the Global Ghost Gear Initiative (GGGI)

Mexico formally became the seventeen country member to join the GGGI on past November 2020. Mexico is collecting essential information to integrate a database that allows to develop a model for identifying priority areas in national waters in order to feed the national diagnosis. In a parallel way, initiatives are supported to achieve a quick start hand in hand with organizations from the civil society and other relevant actors, for example, a pilot test project has been successfully carried out for the removal of ghost gear in Banderas Bay, as well as fishing gear recovery and disposal projects in the Upper Gulf of California.

Achievement

Not any particular trend - Mexico's adhesion to this initiative was recent, so it will take more time to identify substantial improvements or trends.

Myanmar

Collection of scattered waste on beach

(a) Beach Clean up activities by local government and NGO

Local government, Hotel Association and NGO make cleanup activities on Myanmar beaches such as Napali, Chaungtha and Ngwe Saung beach to inspire local communities, governments and students (and parents) on how young people can take action to protect the environment and to aware about single-use plastics and how they can reduce, reuse and recycle.

Achievement

Positive improvement

Others

(a) 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.

New Zealand

Collection of scattered waste on beach

(a) There are several nationwide and regional/local coastal clean up initiatives. In addition, community groups have initiatives in place along coastal regions to remove beach plastics.

For example, Sustainable Coastlines, a registered NZ charity, collects scattered beach waste through their 'Love Your Coast' programme. This targets marine litter through beach clean ups and education and have an associated Litter Intelligence database.

The Department of Conservation provides guidance on running local beach clean ups (Beach clean-ups: Restoration advice (doc.govt.nz)).

Local initiatives are also widespread, for example:

i. Palmy's Plastic Pollution Challenge which is aimed at reducing waste in streams and rivers.
ii. Keep New Zealand Beautiful Clean Up Week.
iii. Many mana whenua also have Iwi Environmental Management Plans in place in collaboration with local councils. Some of these plans include strategies to reduce pollution - including plastics.

Achievements

(a) Recent data on beach litter is available (see below) but we do not have enough historical data to make a conclusion about a particular trend.

(b) Numerical data - Our-marine-environment-2019.pdf https://environment.govt.nz/assets/publications/Files/our-marine-environment-2019.pdf

Litter Intelligence – Data https://litterintelligence.org/data?surveySearchText=microplastic&officialSurveys=true&adHocSurveys=true&verifiedSurveys=true&unverifiedSurveys=true

Removal of plastic litter from the ocean

(a) New Zealand supports the Global Ghost Gear Initiative

Achievements

(a) Do not have data to make a conclusion about a particular trend. However, the litter intelligence platform (below) will build towards better identifying trends.

(b) Numerical data - Our-marine-environment-2019.pdf https://environment.govt.nz/assets/publications/Files/our-marine-environment-2019.pdf

Litter Intelligence – Data https://litterintelligence.org/data?surveySearchText=microplastic&officialSurveys=true&adHocSurveys=true&verifiedSurveys=true&unverifiedSurveys=true

Netherlands

Collection of scattered waste on beach

(a) Municipalities in NL regularly clean the beaches, especially after busy beach days.

In addition (as mentioned above), a Clean Beaches program focuses on knowledge exchange, support for collaboration projects and improvement of local collaboration between municipalities and entrepreneurs. A dedicated set of measures must lead to the structural maintenance of clean beaches in the Netherlands. This includes additional monitoring, custom advice to coastal communities, municipalities and beach pavilions, and innovative beach cleaning pilots.

Doe mee met de jaarlijkse Boskalis Beach Cleanup Tour van Stichting De Noordzee - Stichting De Noordzee URL: https://www.noordzee.nl/doe-mee/beach-cleanup-tour/

Achievement

(a) As we do not have all figures at hand we have to be cautious but there is a slight decrease over past 10 years (2010-2020)

(b) Numerical data
   i. There is 27% less litter on Dutch beaches compared to ten years ago (2010).
   ii. In the period 2011-2020 the trend is decreasing towards an average of 282 of pieces of debris per hundred square meter beach in NL.

Others

(a) Preventing riverine litter from entering the ocean. As part of the NL micro plastic programme we do behavioural change pilots focused on polluters along rivers (recreational users, yachts, sport fishermen, construction works). Next to this we also run two pilots with waste catchment systems in the rivers (Great Bubble Barrier and the Interceptor).

Norway

Collection of scattered waste on beach

(a) Beach clean ups

(b) A new national centre will be established on 1 January 2022 in Lofoten, Norway. The centre will be dedicated to clean-up up efforts.

There is a lot of clean-up activities in Norway. The government and the voluntary efforts work closely together. We have a subsidy scheme housed by the Norwegian Environment Agency to support various clean-up measures across the country. A new Norwegian Centre will as of 2022 be a dedicated environmental centre for clean-up efforts of marine litter, notably of sea-based sources and facilitator/coordinator at the national level. The center has developed a national mapping tool with regards to clean-up efforts along the Norwegian coast.

The organization Keep Norway Beautiful coordinates the voluntary clean-up efforts. There a numerous voluntary groups that do beach clean ups at a smaller scale, registered clean-ups can claim a refund for expenses for transport and waste management of marine litter. This is financed by the government but administered by Keep Norway Beautiful.

In addition, there are other private initiatives such as the Norwegian Retailers' Environment Fund (HMF) that contributes in a substantial way to clean up activities, and a growing number of professional clean-up actors have emerged in Norway over the past few years.

We are currently assessing how to streamline our clean-up efforts and maximize the outputs of resources available. The respective County Governor's Office has been tasked to promote better regional cooperation in clean-up efforts.

Mapping projects on beach clean-up projects and statistics (Rydde/Rent hav) digital platforms are in use and being further developed and refined.

Removal of plastic litter from the ocean

(a) Annual retrieval surveys of abandoned, lost, or otherwise discarded fishing gear run by the Fisheries Authorities. Fishing for litter.

Since the 1980s, the Norwegian Directorate of Fisheries has organized annual clean-up surveys for lost or abandoned fishing gear. The fisherman are obligated to report lost gear, and the authorities can target retrieval accordingly.

In order to ensure proper collection and treatment of waste collected at sea, a selected number of ports and fishing vessels are part of "Fishing for Litter" funded by the Norwegian government. A new "indirect fee" system is planned for implementation during 2022. This fee will apply to all ships calling at a port and will also cover the costs of passively fished waste collected by fishing vessels.

Norway is working on a new extended producer responsibility (EPR) scheme on plastic items used in fisheries and aquaculture.

Scuba diver-groups have contributed to clean ups, including lost fishing gear. At one point the Norwegian Savings Bank Foundation DNB rewarded scuba divers for collecting abandoned traps/pots, thereby both reducing marine plastic litter and avoiding ghost fishing.

Achievements

Numerical data - Lost fishing gear collected since 1980 app. 1000 metric tonnes

Oman

Collection of scattered waste on beach

(a) Survey to sort the AMDs (Anthropogenic Marine Debris) in coastal area of Oman

The survey is targeting collection, sorting and determined which materials are more abundance along the coastal line.

Removal of plastic litter from the ocean

(a) Environment authority has done a lot of campaigns to collect the litters from the ocean like take out the fishing nets which tapped the coral reef, these campaigns done with collaboration of volunteer's divers.

Also, a lot of campaigns done to release the turtles and whales from the fishing gears.

Achievements

Positive improvement

Pakistan

Collection of scattered waste on beach

(a) SEPA observed Environment Day by cleaning up sea litter

On World Environment Day (5 June 2021) Sindh Environmental Protection Agency (SEPA) along with Maritime Security Agency, Pakistan Dockyard and Pakistan Navy cooperated to clean up the litter from seawater.

Achievement

Not any particular tremd

Removal of plastic litter from the ocean

(a) Prime Minister Directive on 'Cleaning Waterways in Pakistan'

The Prime Minister Office issue issued directive in February 2021 delegating the Ministry of Climate Change to collaborate with provincial stakeholders to clean the waterways in Pakistan. Action Plan for the said initiative is under formulation by the Ministry.

Achievements

Positive improvement - The Action Plan for cleaning waterways in Pakistan is still under process of formulation but will likely have positive impacts on clearing the backlog of pollution and preventing future pollution in waterways.

Palau

Collection of scattered waste on beach

Removal of plastic litter from the ocean

Achievement

These events happen often, usually in observance of annual Earth Day and other similar environment focused activities. This is partly due to the lack of dedicated funds.

Panama

Collection of scattered waste on beach

(a) Beach cleaning

This Activity calls for awareness and sensitization for the Panamanian population, about the importance of cleaning the oceans and other bodies of water, for the benefit of biodiversity and health.

Achievement

(a) Positive improvement - This activity is gaining importance as a direct and immediate action, in favor of restoring the health of our seas and oceans.

(b) Numerical data

i. In 2020, with the challenge of the pandemic, the Ministry of the Environment collects approximately more than 30 tons of waste on beaches.

ii. Data from the national cleaning of beaches, coasts and rivers:

- 2018: 5382 participants, 52 tons of garbage collected and 50 activities.
- 2017: 4895 participants, 90 tons of garbage collected, 3 tons of plastic to recycle and 43 activities.
- 2016: 3083 participants, 91 tons of garbage collected, 39 activities.

Removal of plastic litter from the ocean

(a) Underwater cleaning

(b) Ghost net cleaning

As of 2016, the initial actions that the "Autoridad de Recursos Acuáticos de Panamá" (ARAP) has developed in a project for the recovery of marine litter, especially ghost nets, stand out. This activity and others of the same nature have been carried out with the support of the "Minsitry ofEnviroment", the National Aeronaval Service (SENAN) and the important collaboration of NGOs, diving institutions, the Maritime University of Panama (UMIP) and others.

Achievements

Positive improvement - This activity is not focused on just plastic material. It is part of the Global Ghost Gear Initiative.

Papua New Guinea

Collection of scattered waste on beach

(a) Coastal areas clean-up initiative.

One of the activities CEPA is tasked to undertake is encourage coastal clean-up. This activity is commonly supported annually through World Environment Day and World Oceans Day commemorations.

Achievement

Positive improvement - Sectors dealing with environment management, waste management and industrial production support coastal clean through physical participation, and through other means such as been sponsors of certain activities.

Philippines

Collection of scattered waste on beach

(a) International Coastal Clean-ups (ICC)

The Philippines officially joined the ICC in 1994 with the International Maritime Alliance (IMA) as the country coordinator and more than 3,000 volunteers cleaned the shorelines and underwater sites and since 1998, the Philippines has consistently topped the ICC, in terms of volunteer turnout.

Achievements

Positive improvement

Republic of Korea

Collection of scattered waste on beach

(a) International Coastal clean up day

On third friday of september every year MOF holds International Coastal Clean up day ceremony where multi-stakeholders participate in clean-up activity at a beach.

(b) Coastal clean up day

On third Friday of every month MOF and Korea marine Envrionment Management Corporation (KOEM) conduct nation-wide coastal clean-up activity at 12 different regions.

(c) Marine environment keepers

MOF organizes a group of local residents who live nearby the sea and assign them a mission to oversee the coast. With financial support from MOF, Marine envrionment keepers carry out clean-up activity to remove marine plastic at a beach

Removal of plastic litter from the ocean

(a) National marine litter removal project

MOF has been implementing a national scale removal project targeting the seaside, national ports and fishing ports and major fishing areas of Korea and now expand the targeting area even farther to cover blind spots such as remote islands.

A part of a project involves operation of clean-up vessels which remove marine litter at all national ports and fishing ports on a regular basis.

MOF also regularly conducts sunken litter distribution monitoring to selectively choose the area with high pollution level of sunken litter and implement sunken litter removal project accordingly.

Achievements

Positive improvement

Samoa

Collection of scattered waste on beach

(a) Coastal Clean ups

MNRE and other partners together with communities have conducted coastal and mangrove clean ups in the last two years.

Achievements

Positive improvement - The Ministry works closely with its partners and communities in conducting coastal clean ups including community mangrove clean ups. Local NGOs have been very proactive in initiating community based clean ups.

Removal of plastic litter from the ocean

Achievements

Not any particular trend - We have yet to conduct a nation-wide ocean clean up due to lack of funds and other required resources.

However, MNRE through its Water Resources Division piloted the installation of trash booms with the support of SRPEP for 3 years. The project was successful in preventing rubbish including plastic from entering the sea. Data was collected and as a result the Ministry established its River Ecosystem Health Monitoring (REHM) Program targeting problematic urban river systems. This program was effective in monitoring illegal dumping of rubbish into the rivers and along river banks. Since 2014 the Ministry has undertaken fortnightly site visits targeting families residing along the riverbanks. At present, traditional monitoring structures are being utilized to monitor and report to the ministry through village bylaws. Given the practical success of the trash booms, the Ministry has procured biolog-filters with the support of JICA to be installed at Fagalii village.

In addition, the Ministry of Agriculture (MAF) through its Fisheries Division is responsible for monitoring all fishing vessels including monitoring/recording of waste such as plastics used by fishermen and fishing vessels are disposed of appropriately upon arrival. This is one good example of managing plastic waste produced as a result of commercial fishing operations.

Saudi Arabia

Collection of scattered waste on beach

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia

Removal of plastic litter from the ocean

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia

Singapore

Collection of scattered waste on beach

(a) Beach clean-ups.

Recreational beaches under Singapore's National Environment Agency's purview are cleaned throughout the year with frequencies ranging from four times a week to once in two weeks depending on the public usage and accessibility of the beach. The cleaning frequency is increased to twice a day for selected beaches during monsoon periods as more marine litter is washed ashore. Clean-ups are also conducted by groups such as International Coastal Cleanup Singapore (ICCS), Our Singapore Reefs, Little Green Men Singapore, Green Nudge, Nature Society (Singapore), Restore Ubin Mangroves and Seven Clean Seas.

Singapore's Public Hygiene Council also has dedicated "CleanPods", which are community-based resources equipped with metal tongs for litter picking, buckets for litter as well as garden carts for transportation of tools and disposal of trash at selected beach locations. Using the CleanPod resources allow organisations, schools and communities to reinforce the value of ownership for Corporate Social Responsibility (CSR) and educational opportunities.

Removal of plastic litter from the ocean

(a) Dive clean-ups

Dive clean-ups are conducted by groups such as Our Singapore Reefs, a community interest group that promotes awareness and appreciation of Singapore's marine biodiversity and the impacts of marine debris through dive clean-ups and educational outreach activities.

Achievements

Positive improvement - Increased public awareness and 3P collaboration.

Spain

Collection of scattered waste on beach

(a) 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).

Removal of plastic litter from the ocean

(a) 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.

(b) Protocol for inventory, classification, assessment and controlled removal of “ghost nets”, as part of LIFE INTEMARES European project.

Sri Lanka

Collection of scattered waste on beach

(a) Plastic collection campaign on beach

(b) Private Sector, NGOs and voluntary organizations are conducting some beach cleaning programme with Marine Environmental Prevention Authority (MEPA)

MEPA has introduced a regular beach cleaning programme with Samurdhi recipients (Members from low income families who are supported by government through a special programmecalled Samurdhi to upgrade their economy)

Achievements

Plastic waste recycling strengthened.

Removal of plastic litter from the ocean

(a) MEPA is planning to conduct a program for removal of floating plastics.

(b) Underwater clean up is carried out.

(c) Volunteers/ diving groups are conducting collection of floating plastics

Thailand

Collection of scattered waste on beach

(a) Beach clean up

Promoting and raising public awareness to reduce leakage waste particularly plastic waste along the beach - several times/years

Achievements

Positive improvement

Removal of plastic litter from the ocean

(a) Underwater marine debris collecting

Conduct underwater marine debris collecting event at diving spot

Turkey

Collection of scattered waste on beach

(a) Clean-up activities planned and done in 28 coastal provinces of Turkey

Collection of scattered waste for different coastal types (e.g.: beach, sandy, stony, cliff, sea fill area, etc.)

Removal of plastic litter from the ocean

(a) Clean-up activities planned and done in 28 coastal provinces of Turkey

Collection and removal of all litter (including plastics) from coastline and shallow sea by divers

Achievements

Not any particular trend - trend changes from place to place and time to time. It is not possible to make a generalization.

UK

To tackle marine litter, the UK is addressing the issue domestically and internationally, taking a whole-life cycle approach that will prevent and divert material from becoming a source of litter in the first place.

Collection of scattered waste on beach

(a) The Great British Beach Clean (Marine Conservation Society)

The Great British Beach Clean is a week-long citizen science event, where hundreds of beach cleans take place up and down the UK. Litter data collected drives our conservation work and also feeds into the International Coastal Clean-up (ICC).

Removal of plastic litter from the ocean

(a) KIMO 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.

Uruguay

Collection of scattered waste on beach

(a) International Coastal Cleanup Day in Uruguay, 2020

On Saturday, November 14, 2020, the cleaning took place in 46 beaches of Uruguay (Colonia, Canelones, Maldonado, Montevideo, Rocha and San José), having collected about 5000 kg of waste. Heads of the Presidency, the Ministry of the Environment and the Ministry of Tourism participated in this activity. This day was an example of awareness. Additionally, different organizations that carry out the cleaning in the 6 coastal departments carry out educational work on how waste affects the coastal marine ecosystem and how we can act to reverse this situation.

https://www.gub.uy/ministerio-ambiente/politicas-y-gestion/dia-internacional-limpieza-internacional-costas-2020-uruguay

US

Collection of scattered waste on beach

Removal of plastic litter from the ocean

(a) NOAA Marine Debris Program Removal Grants

NOAA's Marine Debris Program provides annual funding to partners in the U.S. 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 22,500 metric tons of marine debris from our coasts and ocean.

Achievements

Not any particular trend

EU

Collection of scattered waste on beach

(a) World Clean-up Day 2018

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. A year later, over 80 countries took part in the #EUBeachCleanup campaign. Such activities took also place in 2020.

Removal of plastic litter from the ocean

(a) Port Reception Facilities Directive

The Port Reception Facilities Directive provides for adequate port facilities. enabling the reception of marine litter passively fished at sea by fishers with port fees independent of the amount brought ashore

The European Maritime and Fisheries Fund provides financial support to fishing for litter

International Organisations and NGOs

ERIA

Collection of scattered waste on beaches

(a) ERIA's RKC-MPD shares good practices information with regards to Waste Collection from Rivers, Beaches, and Oceans in ASEAN+3 context on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/27/waste-collection

Removal of plastic litter from the ocean

(a) ERIA's RKC-MPD shares good practices information with regards to Waste Collection from Rivers, Beaches, and Oceans in ASEAN+3 context on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/27/waste-collection

ASEAN

Collection of scattered waste on beaches

(a) EAS Mangrove Planting Day to Commemorate the 50th Anniversary ASEAN

https://asean.org/east-asia-summit-ambassadors-jakarta-plant-mangroves-celebrate-50th-anniversary-asean/

(b) ASEAN Coastal Cleanup (completed)

https://kemlu.go.id/ptri-asean/en/news/3596/asean-coastal-clean-up-2019

Ocean Conservancy

Collection of scattered waste on beaches

(a) Ocean Conservancy is the global leader in marine debris cleanup. For 35 years, Ocean Conservancy has mobilized volunteers around the world to pick up trash to protect the world's oceans and waterways.

Ocean Conservancy is also coordinating with UNEP to establish guidelines for volunteer-based cleanups (citizen science collected data) to better-align with monitoring of the SDG Goal 14.1 "Reduce marine pollution", specifically 14.1.1b regarding shoreline marine debris pollution. Incorporating citizen science data from cleanups will greatly increase the breadth and frequency at which this goal can be tracked and solution put forth and tested.

(b) International Coastal Cleanup

Ocean Conservancy's International Coastal Cleanup (ICC) is the world's largest volunteer effort to remove trash from beaches and waterways. Since the ICC began in 1986, more than 16 million volunteers have removed and quantified over 340 million pounds of litter across all seven continents. The global network of more than 450 ICC Coordinating Organizations is what makes this work possible. In addition to organizing all aspects of the cleanups within their localities, ICC Coordinators also lead a range of low-cost, high-impact initiatives designed to engage communities and decision makers in efforts to reduce ocean plastic pollution. From education and outreach to improving waste collection and recycling, ICC coordinators are uniquely positioned to advance durable, locally-relevant solutions to the marine debris crisis. The Small Grants program was launched in 2019 in response to feedback from the Coordinator Network, with a mission to provide dedicated support to ICC Coordinators implementing community-based activities.

The 2021 Small Grants – International Coastal Cleanup Cohort includes 29 projects, with a maximum award amount of $20,000 USD. In total, we awarded $260,850 USD in this third round of the Small Grants Program. The 2021 Small Grants – International Coastal Cleanup cycle runs from 1 June 2021 through 31 May 2022, with extensions as necessary due to the COVID-19 pandemic.

Removal of plastic litter from the ocean

(a) Global Ghost Gear Initiative

The GGGI works across the three Rs – reduce, remove, recycle – in 2020 the GGGI helped facilitate gear removals around the world— including in Vanuatu, Hawaii, the Maldives and the Mediterranean. The pandemic situation heavily impacted on the ability to conduct large scale clean-ups, but now vaccination rates are going up, we have planned further events in 2021 and 2022.

Ocean Conservancy also co-authored this paper that showed that the contribution of sea-based activities to ocean litter at 22%, on average across ecosystems, with the caveat that this figure should be regarded as a lower limit. The estimate only includes items clearly related to sea-based activities (mainly fishing gear).

URL: https://www.nature.com/articles/s41893-021-00720-8

3.4. Promotion of Innovative Solutions

Encouraging plastic alternatives, such as biodegradable plastics, and promoting circular product design, including the use of recycled materials or closed-loop recycling, are solutions that are carried out by 24 countries. There are also 24 countries supporting public-private partnerships to implement such innovative solutions.

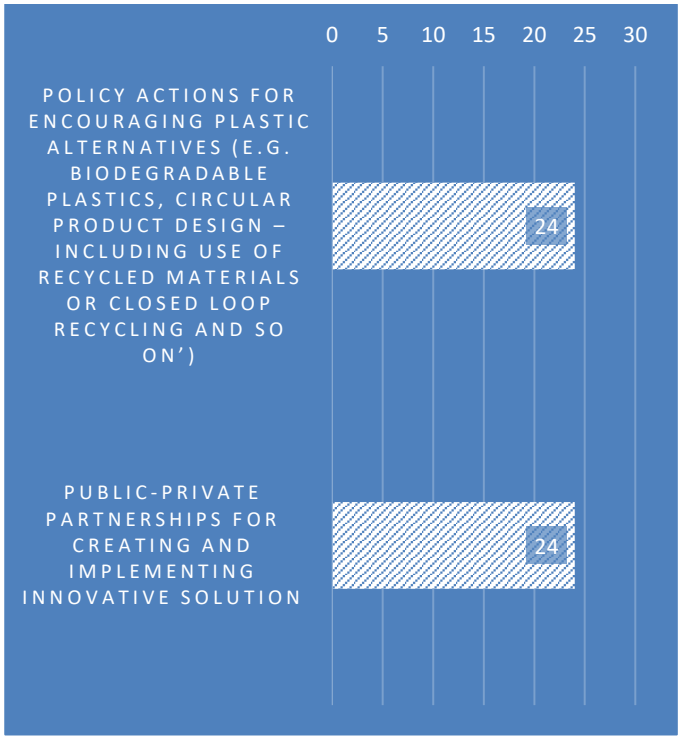


Figure 8: Countries – Promotion of Innovative Solutions*

*Number of countries responded YES among 41 responses

Countries

Australia

Policy actions for encouraging plastic alternatives

(a) A Plastics Design Summit

A Plastics Design Summit will be held for product designers and manufacturers to showcase their sustainable product design.

(b) Australian Circular Economy Hub

The Australian Government has invested AU$1.6 million through the Environment Restoration Fund to help establish an Australian Circular Economy Hub and Marketplace by end of 2021, designed to be a one-stop-shop for circular economy inspiration, education and implementation in Australia.

We are taking a systemic approach that designs out plastic waste, builds our processing capacity, scales up our manufacturing capability and generates demand for these products.

The $190 million Recycling Modernisation Fund is supporting innovative investment in new infrastructure to sort, process and remanufacture waste materials covered by the export ban (glass, plastics and tyres).

In addition to the RMF and other Australian Government programs, state governments have been investing in their own programs to support industry to turbocharge its capacity to process materials addressed by the waste export ban.

Programs under the $1.5 billion Modern Manufacturing Strategy are supporting manufacturers in the Recycling and Clean Energy National Manufacturing Priority area to build scale and competitiveness, translate good ideas into commercial outcomes, and connect with new domestic and global markets.

Industry is also taking action to reduce and reuse plastics in their packaging. Companies such as Coco-Cola Amatil now use 100 percent recycled plastic in all plastic bottles under 1 litre, and frozen cups and lids. Additionally, PepsiCo is transitioning to 100 percent recyclable packaging across its snack range by the end of 2021, further reducing waste sent to landfill.

Achievements

Not any particular trend - New initiatives. Not yet measured.

Bahrain

Policy actions for encouraging plastic alternatives

(a) Biodegradable plastic bags for example will be one of the alternatives to the consumers if ban of plastic bags enforce.

Bhutan

Policy actions for encouraging plastic alternatives

(a) Limit the use of single use plastics especially plastic carry bags and home-made ice cream pouches

NECS provided clothes bags to reduce the use of single use plastic bags, use of water filter in offices or meeting is encouraged instead of using bottles water, no plastic cutlery is used in the meetings.

Public-private partnerships for creating and implementing innovative solution

(a) PPP model is practiced in Bhutan

Involvement of private sectors in waste management; encouraging entrepreneurs in waste business

Achievements

Positive improvement

Canada

Policy actions for encouraging plastic alternatives

(a) Canada's comprehensive zero plastic waste agenda

(b) Canadian Plastics Innovation Challenges

(c) G7 Innovation Challenge to Address Marine Plastic Litter

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 incentivize the development of technology to address plastic waste. Through the Canadian Plastic Innovation Challenge, the government is investing nearly $19 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. Successful applicants receive up to $150,000 to develop a proof of concept and subsequently up to $1 million to develop a prototype if selected.

Canada is also investing in innovation internationally, including $20 million to support the G7 Innovation Challenge to Address Marine Plastic Litter.

Achievement

(a) Positive improvement

(b) Numerical data

Canadian Plastics Innovation Challenges

- 17 challenges supported by 8 departments across 15 sectors, such as automotive, textiles, packaging, fishing gear, fiberglass boats
- $19M overall awarded to Canadian innovators and small and medium-sized businesses to address plastics challenge
- Two new challenges for recycling technologies to process personal protective equipment (PPE) waste were launched under the COVID Response challenge stream

The Government of Canada hosted the international 2020 Gear Innovation Summit in Halifax in February 2020. Attended by over 250 stakeholders, the Summit provided an opportunity to hear from leaders in ghost gear programming and learn how we can best prevent, reduce and retrieve ghost gear using recognized best practices and new innovative technologies.

Public-private partnerships for creating and implementing innovative solution

(a) Canada's comprehensive zero plastic waste agenda

(b) Canada Plastics Pact

The Government of Canada is working with all levels of government, Indigenous communities, industry, non-profit organizations, researchers and civil society to reduce plastic waste and pollution. This includes engagement with key stakeholders on measures throughout the process.

The Government of Canada is also supporting businesses and organizations to engage key stakeholders in advancing solutions to transition Canada to a circular plastics economy. For instance, through the Zero Plastic Waste Initiative, Canada has supported leading businesses and organizations 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 such as medical PVC.

In January 2021, the industry-led Canada Plastic Pact was launched with over 40 founding partners, including Environment and Climate Change Canada. The Pact is part of the Ellen MacArthur Foundation's Plastics Pact Network and brings together organizations from the national plastic value chain to collaborate and rethink the way plastic packaging is designed, used and reused to realize a circular economy for plastic in Canada.

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://councilgreatlakesregion.org/cglr-to-clean-up-great-lakes-plastic-pollution-and-pilot-innovative-materials-marketplace-platform-in-ontario-with-support-from-the-government-of-canada/

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

https://www.vinylinstituteofcanada.com/medical-pvc-recycling-pilot-program-pvc-123/

Achievements

(a) Positive improvement

(b) Numerical data - 12 industry and non-profit organizations have received over CA $2.7 million to advance innovative and sector specific solutions that improve the sustainable design and production of plastics, strengthen secondary markets and support Canada's transition to a circular plastics economy.

Others

(a) Canada also recognizes that the COVID-19 pandemic has resulted in the increased use, waste and litter of personal protective equipment (PPE). The government is investing in PPE-specific recycling technologies, improving our understanding of littered PPE through citizen science, and supporting the health care sector to develop hospital protocols that target the sustainable procurement, sterilization and re-use, and recycling of its PPE waste.

Chile

Policy actions for encouraging plastic alternatives

(a) Harnessing Artificial Intelligence for the control of marine debris

The Ministry of the Environment is promoting the use of Artificial Intelligence for the detection, control and monitoring of marine debris.

Achievement

Positive improvement

China

Policy actions for encouraging plastic alternatives

(a) Opinions on Further Strengthening Plastic Pollution Control

Recyclable and foldable packaging products and logistics and distribution equipment will be promoted actively. Relevant enterprises are encouraged to build a multiple-platform operation system for recyclable packaging by equity cooperation, joint capitals, and other means. Enterprises are encouraged to use integrated packaging of goods and logistics, under a recycling system for recyclable logistics distribution equipment.

Achievement

Positive improvement

Public-private partnerships for creating and implementing innovative solution

(a) Opinions on Further Strengthening Plastic Pollution Control

Plastic products manufacturers should promote green design to improve the safety and recycling of plastic products. Moreover, new green and environmentally friendly materials are also encouraged, the use of recycled plastics that meet quality control standards and use control requirements will increase, and the research and development of recyclable, easily recyclable, and degradable alternative materials and products will be strengthened. Develop a replacement plan for the reduction of single-use plastic products. Strengthen the management of registered merchants in e-commerce, food delivery, and other platform enterprises, with green supply chains being promoted.

Dominican Republic

Policy actions for encouraging plastic alternatives

(a) 6th Edition of the National Award for Cleaner Production

The National Prize for Cleaner Production is a mechanism used by the Ministry of Environment and Natural Resources to promote and encourage the implementation of the cleaner production strategy to achieve progress towards an efficient and sustainable use of resources in the Dominican Republic.

Public-private partnerships for creating and implementing innovative solution

(a) Promulgation of Law 47-20 on Public-Private Partnerships on February 21, 2020

The purpose of this law is to establish a normative framework that regulates the initiation, selection, award, contracting, execution, monitoring and extinction of public-private partnerships including the public-private partnerships for creating and implementing innovative solution.

Achievements

Positive improvement

Fiji

Policy actions for encouraging plastic alternatives

(a) Eco friendly bags are being sold. Fijians are using recyclable products and reusing products.

Public-private partnerships for creating and implementing innovative solution

(a) Zero Waste initiatives

The Ministry of Environment has proactively developed a Waste Reduction Ambition Program leading to Zero Waste Business Recognition Program launching the program in partnership with the private sector. The concept will work with the private sector and closely establish the appropriate milestones fitting around each business environment. Work has been stymied by the current pandemic.

(b) Tax free zone for recycling.

The government has also declared the Naboro Landfill Zone as a tax free or tax holiday zones for the setup of recycling ventures. The Ministry has partnered with the other relevant ministries in promoting this zone and attracting investment groups into these future recycling hubs for the country.

Achievements

(a) Positive improvement

(b) Numerical data - While there were a few organisations that volunteered just prior to the second outbreak of COVID two months ago, one organization signed up for the zero waste initiative just before the second outbreak in Fiji. The Ministry has also provided support to two other interested parties to set up shop within the recycling facility at the Naboro Landfill Tax free Zone.

Finland

Policy actions for encouraging plastic alternatives

(a) Plastics Roadmap for Finland

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.

Achievement

The Government funds innovation and piloting of waste collection and recycling solutions worth 1 million euro started in September 2020. Plastics use of construction sector has been the focus of a series of workshops and a GreenDeal between the ministry and relevant construction sector actors was completed in 2021. 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.

Public-private partnerships for creating and implementing innovative solution

(a) Plastics Roadmap for Finland

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

Positive improvement - The Government funds innovation and piloting of waste collection and recycling solutions worth 1 million euro started in September 2020. Plastics use of construction sector has been the focus of a series of workshops and a GreenDeal between the ministry and relevant construction sector actors in 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

Policy actions for encouraging plastic alternatives

(a) Introduction of a definition of bulk selling in the national legislation and creation of an obligation for shops with a surface area of more than 400 meters to make reusable containers available to consumers;

(b) Definition of standard ranges of reusable packaging for the catering sector, as well as for fresh produce and drinks

(c) Simplify the sorting process for citizens and expand it to all plastics;

(d) Experiment deposit schemes;

(e) Expand the scope of action of the ERP packaging schemes to industrial and commercial packaging

Public-private partnerships for creating and implementing innovative solution

(a) Identifying new fishing gears that intend to prevent impacts in the marine environment.

(b) In 2020, the Ministry of ecological transition launched the basis for an Accelerating Strategy "Recyclability, recycling and reincorporation of materials" in order to support innovation in the private sector. The strategy targets plastic as a priority material.

(c) The ADEME has planned to launch a study in 2021 to characterise the sources of recoverable waste in France and to identify and analyse the most promising chemical recycling methods for treating these sources.

Germany

Public-private partnerships for creating and implementing innovative solution

(a) PREVENT Waste Alliance

Multi-Stakeholder Partnership (see section 5 for more details)

Achievements

(a) Positive improvement

(b) Numerical data

- More than 200 member organisations within two years
- Piloting of 8 innovative solutions since early 2021

Indonesia

Policy actions for encouraging plastic alternatives

(a) MOEF regulation P.75/2019 regulates the producer as brand owner to implement the REDUCE principle of 3Rs by redesigning their product and packaging to become sustainable and circular such as returnable, reusable, recyclable, more recycled content, durable, compostable, refillable, and rechargeable.

Moreover, MOEF regulation P.75/2019 governs producer to implement take-back scheme of post-consumer product and packaging for recycling and reusing purpose. Both closed loop recycling and opened loop recycling is applied in this scheme.

Achievement

(a) Poisitve improvement – A multi-national company has been implementing the closed loop recycling of PET bottle through bottle-to-bottle program

(b) Numerical data - one brand owner producer has implemented take-back scheme and succeed to collect and recycle 12,000 tons of used PET bottles.

Public-private partnerships for creating and implementing innovative solution

(a) Waste to Energy

Processing waste into new energy sources. This program is jointly implemented between the government (as regulator) and private sectors as the off taker (power generation sector and cement sector), by switching coal to RDF/SRF product.

Achievements

(a) Positive improvement

(b) Numerical data

- One waste to electricity facility using thermal gasification technology has been installed and operated in Surabaya City with capacity 1,000 ton per day that produced 9 MW electric power.
- One refuse derived fuel (RDF) facility has been installed and operated in Cilacap Regency Central Java with capacity 120 ton per day that produced 40-50 tons RDF to be co-fired in cement.kiln.

Italy

Public-private partnerships for creating and implementing innovative solution

(a) 2018-Project "Il Po d'AMare"

The project was 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 the 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.

Achievements

Positive improvement - The initiative started in 2018 in the Po River now is exported also in other two rivers.

Japan

Policy actions for encouraging plastic alternatives

(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 standardization;

(b) Support for development of marine biodegradable plastic especially for fishing gear;

(c) 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”. The support was started for actions on microbeads in FY2020, and continued for measures on other plastic materials as well in FY2021;

Achievement

(a) Positive improvement

(b) Numerical data

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

Public-private partnerships for creating and implementing innovative solution

(a) “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;

(b) 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;

(c) Development of an efficient decomposition method for plastic waste using micro-organisms.

Achievements

(a) Positive improvement

(b) Numerical data

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

Others

(a) Proposal to the international standard of a method for measurement of fiber fragment mass released from textile and products.

Kiribati

Policy actions for encouraging plastic alternatives

Achievements

There is a plan, but the policy is still in the process.

Public-private partnerships for creating and implementing innovative solution

(a) Waste Recyclable System

The Kaoki Maange system is privatized and operated by a local agency widely known as 'One Stop' company. The current contract was signed on the 1st of November 2019 between the One Stop and the MELAD. One Stop has been operating the Kaoki Maange system when it started in 2004.

Achievements

Positive improvement

Maldives

Policy actions for encouraging plastic alternatives

(a) Pass regulation on the new bio degradable bag standard

The new regulation on the standardization of biodegradable plastic bags has been put into effect from 15 June 2021. With regard to this new regulation bio degradable bags can be allowed at 0 percent duty if only the standard of the bag complies with the new regulation for biodegradable bags. More information via: https://www.gazette.gov.mv/gazette/download/6145

(b) Duty exemption on plastic free alternatives

This policy action is one of the key policy initiatives under the single-use plastic phaseout plan. Therefore, an amendment to the Import Export Law of Maldives will be introduced to incorporate environmentally friendly products for duty exemption. Will be implemented in 2021

Achievement

Not any particular trend - New policy actions are being taken started from this year, so no significant change recorded yet

Myanmar

Others

(a) Since some entrepreneurs are trying to produce environmentally friendly alternative products for plastics, Nature Myanmar Co. is manufacturing biodegradable organic dining ware from 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 that of plastics.

Netherlands

Policy actions for encouraging plastic alternatives

(a) Promote the development of waste catchment systems

In NL, we run two pilots with waste catchment systems in the rivers, to see what impact it can have on the cleanliness of the river.

Public-private partnerships for creating and implementing innovative solution

(a) Based on top 10 beach litter items and taking into account existing waste management measures in 2015 three so-called Green Deals were adopted in NL 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. For beach-recreation and fishing these Green Deals have been followed up by more regular programs in 2021.

See also information in 2.1 on the national and EU plastic pacts

Achievements

Positive improvement - New report on Dutch Green Deals shows that marine litter is decreasing – KIMO (kimointernational.org)
URL: https://www.kimointernational.org/news/new-report-green-deals-marine-litter-is-decreasing/

New Zealand

Policy actions for encouraging plastic alternatives

(a) National Plastics Action Plan

Includes a focus on recycling and reuse which encompasses actions such as phasing out single-use and hard-to-recycle plastics, regulated product stewardship of plastic packaging, improving kerbside recycling standardization, and commits to undertaking research on compostable packaging and its impacts on soil quality. These are not all aimed at encouraging plastics alternatives but they are aimed at circular product design, including use of recycled materials or closed loop recycling.

We are also committed to undertaking research to ascertain the impacts of compostable packaging on soils and release a Ministry position statement on the use of compostable packaging.

Achievement

(a) Positive improvement

(b) Numerical data - An estimated 2 billion plastic shopping bags have been removed from circulation through our ban on plastic shopping bags in 2019. At least another 2 billion single-use plastic items (straws, cotton buds, cutlery etc) will be removed from circulation through the additional plastic phase-outs that commence in late 2022.

Norway

Policy actions for encouraging plastic alternatives

(a) Through the EU (Norway as part of the EEA agreement) a new target is set on incorporating 25% of recycled plastic in PET beverage bottles from 2025, and 30% in all plastic beverage bottles from 2030.

(b) Initiatives for better product design supported by Innovation Norway.

Regarding biodegradable plastics. There are ongoing assessments on the suitability of biodegradable plastics. There are issues related to recycling, as it is difficult at household level to sort correctly. In addition, in a cold climate the biodegradable plastics do not degrade at the same level/the process is slow. Other materials (wood, paper etc.) as alternatives to plastics are more commonly introduced.

Achievement

Positive improvement

Public-private partnerships for creating and implementing innovative solution

(a) Planning a Plastic Pact with the industry in order to reduce consumption of certain plastic products, especially single-use.

(b) Support to research and innovation coupling industry with research institutions.

(c) The Norwegian Retailers' Environment Fund and the Research Council of Norway (RCN) have a joint project on supporting research on circular solutions for plastics including reuse and recycling.

The Research Council of Norway (RCN) and Innovation Norway supports projects aimed at coupling industry with research and innovation for a more circular economy. This includes several projects on plastics.

Oman

Policy actions for encouraging plastic alternatives

(a) "Sustainable use of Plastic" campaign

(b) Guideline for importing and dealing with plastic bags

Recycled bags is one of the alternatives to the consumers because the country already pan the single used plastics

Achievement

Positive improvement

Pakistan

Policy actions for encouraging plastic alternatives

(a) Integrated Resource Recovery Centers (IRRCs)

IRRCs have been established in various parts of the country. The Ministry of Climate Change is planning to initiate more centers in 10 regions to address the solid waste issue. IRRCs extract recyclables from the waste and process organi c waste into compost, which is then used as fertilizer.

Achievement

Not any particular trend - It is still too early to notice a clear trend. Moreover, the projects need to be upscaled to meet the challenge.

Public-private partnerships for creating and implementing innovative solution

(a) CoRe Group Alliance

CoRe Group Alliance consists of stakeholders from industry, non non-governmental and public sector organizations that envisions to create a circular economy by reducing packaging footprint. The Alliance's commitment is to make 100 percent o of their packaging recyclable and/or reusable by 2025.

Achievement

Not any particular trend - It is still too early to see any noticeable trend.

Palau

Policy actions for encouraging plastic alternatives

Achievements

(a) Positive improvement – There is no policy however many stores incentivize the use of reusable shopping bags including rebate.

(b) Koror State Government Solid Waste Management (KSG-SWM) Waste to Energy program: pet bottle caps and used food and engine oil are collected and processed into fuel used in power generators in several facilities.

(c) No data collection at this time

Public-private partnerships for creating and implementing innovative solution

Achievements

(a) Positive improvement - Koror State Government Solid Waste Management (KSG-SWM) partnership with one major private corporation for composting; KSG-SWM also partners with various hotels to recycle used cooking oil.

(b) Numerical data - EQPB does not have, maybe KSG-SWM.

Papua New Guinea

Policy actions for encouraging plastic alternatives

(a) Ban on non-biodegradable shopping bags

This policy bans importation and production of non-biodegradable shopping bags. Environment Permit holders were initially advised to provide biodegradable shopping and reusable bags as alternate options.

Achievement

Positive improvement – Use of biodegradable shopping bags increased, but rate of degradation was not fully understood, not measurable and without sufficient evidence, therefore total ban on plastic shopping bags was imposed.

Public-private partnerships for creating and implementing innovative solution

(a) Stakeholder Participation.

Environment Permit holders (producers and suppliers) and retail shops were informed to provide biodegradable options, and re-useable and recyclable bags as also alternate options. These new activities are to be included in the environment conditions upon renewal.

Achievements

Positive improvement - Environment Permit holders (producer and suppliers) and retailers have complied with the instructions, and some manufacturers have retrofitted their plants. More reusable shopping bags are common sites in the retail shops. Other home-grown/local products such as carry bags and coconut leaves are replacing plastic shopping bags.

Philippines

Public-private partnerships for creating and implementing innovative solution

(a) The Healthy Oceans Clean Cities Initiative (HOCCI).

A one-year project focused around 6 cities in the Philippines towards reducing their Marine Plastic Litter (MPL). The goal is to reduce marine plastic pollution and the strategy is strengthening institutional capacity to support the operationalization and localization of the National Plan of Action (NPOA) on Marine Litter. The implementing Entity is the UN-Habitat and UNEP-ROAP.

Achievements

Positive improvement

Republic of Korea

Policy actions for encouraging plastic alternatives

(a) Biodegradable fishing gears dissemination

National enterprise where MOF develops and disseminates eco-friendly fishery equipment such as nets and buoys to fishermen.

(b) National R&D project to invent microplastic removal equipment and develop plastic-to-energy technology (2021-2024)

MOF is currently pushing forward a R&D project to develop an equipment that can effectively remove microplastic on beaches. Another objective of the project is to invent the technology and facility which will allow people to utilize marine plastic litter to generate energy.

Public-private partnerships for creating and implementing innovative solution

(a) Adopt-a-beach project

MOF is working on establishing a system where MOF matches a group of people (NGOs, Corporations etc.) with a beach to facilitate private sector's participation in coastal clean-up activities.

Achievements

Positive improvement

Samoa

Policy actions for encouraging plastic alternatives

(a) Waste (Plastic Bag) Management Regulations 2018, Consultations and public awareness

Consultations were conducted in development of the Regulations on banning certain plastic items for government agencies, private sector including business communities and the public.

Achievements

Positive improvement - During consultations, alternatives were identified and now in place to substitute the banned plastic items. This includes the use of recycled materials and local fabrics and plant based materials.

Public-private partnerships for creating and implementing innovative solution

(a) Pilot projects

Pilot projects with private sector are about to kick start in reusing, re-purposing of plastics (PET) to create new products.

Achievements

Not any particular trend - Opportunities exist through SPREP executed regional projects such as the PACWASTE PLUS Project, SWAP AFD Project and the recently launched UNDP executed CERO Project.

Saudi Arabia

Policy actions for encouraging plastic alternatives

(a) Adopted diversion and recycling targets to be achieved by 2035

The adopted targets for diversion from landfills, recycling and resource recovery are to be achieved by 2035, including a 82% diversion rate from landfills. In addition, EPR concepts adopted in the new draft law will further help to develop recycling activities and the implementation of circular economy principles.

Public-private partnerships for creating and implementing innovative solution

(a) The Mandate of National Center for Waste Management

The NCWM Mandate calls for promoting private investments in waste activities for the purpose of developing innovative solutions and achieving economic sustainability for the sector.

Singapore

Policy actions for encouraging plastic alternatives

(a) Zero Waste Masterplan

Singapore is working towards becoming a Zero Waste Nation and has launched a Zero Waste Masterplan. The Masterplan outlines Singapore's strategies to reuse and recycle resources, turn trash into treasure, as well as produce and consume sustainably. To support our circular economy approach, we are investing in research and development and collaborating with the industry to develop and promote innovative solutions to turn our waste into resources. As part of efforts under the Zero Waste Masterplan, Singapore has introduced Mandatory Packaging Reporting (MPR) in 2021 to close the packaging loop. Under the MPR framework, producers of packaged products, as well as retailers will be required to submit packaging data and 3R plans to the NEA.

(b) Chemical Recycling of Plastic Waste

NEA is also studying the feasibility of both mechanical recycling and chemical recycling of plastics. In the latter, waste plastics could be recycled through pyrolysis for use by the petrochemical sector to manufacture chemicals and plastics.

Achievement

(a) Positive improvement

Since the launch of the Zero Waste Masterplan in 2019, policies have been further developed.

In Singapore's context, replacing conventional non-degradable single-use plastics with biodegradable alternatives is not necessarily better for the environment, as all incinerable waste, including biodegradables, are not directly landfilled but disposed of at waste-to-energy plants. A life-cycle assessment study on carrier bags and food packaging commissioned by the National Environment Agency (NEA) also found that each type of packaging material results in different environmental impact such as global warming, high water consumption or land use change. Hence, a more sustainable approach is to reduce the excessive use of all types of disposables and promote the use of reusables where possible.

Public-private partnerships for creating and implementing innovative solution

(a) Engage domestic stakeholders to reduce the amount of solid waste, generated and disposed of, including plastics.

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. These include convening Citizens' Workgroups on recycling right and reducing the excessive consumption of disposables, where citizens come together to learn and brainstorm innovative and contextually relevant solutions to these issues; and co-delivering these solutions with the 3P sectors where feasible.
ii. The Singapore Manufacturing Federation (SMF) has partnered the NEA to introduce an industry-led programme called the Packaging Partnership Programme (PPP) to support companies in their journey towards adopting sustainable packaging waste management practices. The PPP is a joint capability development programme that will support companies in fulfilling their new obligations under the Mandatory Packaging Reporting framework from 1 January 2021 as well as enable the exchange of best practices in sustainable packaging waste management. Prior to the PPP, there was the Singapore Packaging Agreement, a voluntary agreement undertaken by government, industry and non-governmental organisations to reduce packaging waste from 2007 to 2020.
iii. National Recycling Programme, in which recycling bins are provided at every HDB block, landed property, opt-in condominium, and various trade premises all over Singapore to serve as convenient means for households to recycle, thereby reducing the amount of plastic waste being sent for disposal.

Achievements

Not any particular trend - Monitoring in progress as PPP is recently implemented

Sri Lanka

Policy actions for encouraging plastic alternatives

Achievements

Positive improvement - The related activities are identified in the National Action Plan on Plastic Waste Management.

Public-private partnerships for creating and implementing innovative solution

(a) Agrochemical container collection programme

This was started in 2012 as a PPP programme. The plastic (as well as glass) containers collected are directed for recycling.

We are planning to improve the programme further by introducing container collection week for each growing season and a soft wear to network collection centers and collectors.

Thailand

Policy actions for encouraging plastic alternatives

(a) It is under the roadmap of plastic waste management 2018-2030

To encourage and collaborate with private sector to produce biodegradable utensils and eco-design containers, etc.

Public-private partnerships for creating and implementing innovative solution

(a) GC Circular living Platform/ Shaping waste-free future by INSEE and Nestle partnership /SCG circular way

Private sector applies value chain to plastic container of the products by recycle to be material for fabric factory, to build road etc.

Achievement

Positive improvement

UK

The UK government recognises that innovation into biodegradable plastics could help reduce the environmental impacts of plastics if they are disposed of in the right way.

However, this is often not the case. If biodegradable plastics are put in the domestic waste bin, for example, they are likely to end up in landfill and can break down to release powerful greenhouse gases, such as methane.

If mistakenly recycled with other plastics, they have the potential to damage the quality of the new products made from the recycled plastic. We welcome further evidence on the development and application of robust standards for biodegradability which are proven to apply outside of laboratory conditions.

Policy actions for encouraging plastic alternatives

(a) The Government 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 our current waste system.

Consultation response can be found here Standards for biodegradable, compostable and bio-based plastics: call for evidence - GOV.UK (www.gov.uk)

https://www.gov.uk/government/consultations/standards-for-biodegradable-compostable-and-bio-based-plastics-call-for-evidence

We are exploring some issues raised in the responses to this call for evidence in our consultation on an extended producer responsibility scheme for packaging as well as our consultation on introducing greater consistency for household and business recycling collections in England which will be published in due course.

We may introduce a ban on oxo-degradable plastics, subject to further consultation.

Achievement

Positive improvement

Public-private partnerships for creating and implementing innovative solution

(a) Research and Innovation Fund
   i. Plastics and Waste Innovation Fund
   ii. Industrial Strategy Challenge Fund
   iii. Sustainable Manufacturing and Environmental Pollution (SMEP)

(b) The UK has put together a package of over £100m for research and innovation to tackle the issues that arise from plastic waste:
   i. £40m has been set aside through the Plastics Research and Innovation Fund and the Plastics and Waste Innovation Fund for research and development, including £10m specifically to pioneer innovative approaches to boosting recycling and reducing litter.
   ii. The Government has also announced £60 million of funding through the Industrial Strategy Challenge Fund, alongside a £150m 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.
   iii. SMEP is a wide-ranging programme with a specific stream of work on finding ways to reduce pollution (including from plastics) from manufacturing in poor 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. funghi).

(c) Public Private Partnerships (PPP)

Through public-private partnerships with Unilever and the mobile industry association (GSMA), RED are supporting the development of innovative business models that encourage plastics reduction, reuse, recycling 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 several 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 (see below) and a similar paper for South Asia (India and Bangladesh) is currently being prepared.

https://www.transform.global/news/mapping-the-integrated-supply-chain-for-plastics-in-africa/

(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 three such NPAPs in Indonesia, Ghana and Vietnam, with the former focused on devising a pathway to help the Indonesian Government to meet its target of reducing marine litter by 70% by 2025. GPAP plan to launch a fourth NPAP in Nigeria in 2021.

The partnership is funded and supported by the governments of Canada and the United Kingdom as well as corporate partners Coca-Cola, Nestlé, 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.

GPAP are also currently creating a toolkit called 'Systems Toolkit to Eliminate Plastic Pollution – STEP', a digital platform that will allow partner countries to engage with the NPAP model and share research and evidence to better develop policies on waste management and reducing plastic pollution.

Uruguay

Policy actions for encouraging plastic alternatives

(a) Decree No. 3/019

It prohibits the manufacture, import, distribution, sale and delivery of plastic bags that are not compostable or biodegradable.

Excludes from the previous prohibition bags made with 100% recycled materials of national origin.

(b) Ministerial Resolution: 271/2021

On January 1st, 2025, manufacturers, bottlers and importers of non-alcoholic beverages and waters, who sell their products in plastic containers, may only do so in containers that contain at least 40% by weight of recycled material.

Achievement

(a) Positive improvement

(b) Numerical data - plastic bags reduction of 70%

Public-private partnerships for creating and implementing innovative solution

(a) COTAMA – Decree Nº 261/993

The working group on the National Waste Management Plan was established within the framework of COTAMA (Technical Advisory Commission for Environmental Protection - Decree No. 261/993, June 4, 1993) and has representation from the public sector (Ministry, Academy), private (Business Chambers, Professional Associations, Academy, workers' unions) and citizenship.

(b) CTPLAS

The Plastic Technology Center (CTplas) is a joint initiative of the Uruguayan Association of Plastic Industries (AUIP), the Uruguayan Chamber of Industries (CIU), the Technological Laboratory of Uruguay (LATU) and the Julio Ricaldoni Foundation (FJR) , in co-financing with the National Research and Innovation Agency (ANII), which aims to consolidate the sustainable development of the plastic and recycling industry in Uruguay through the provision of technological services that allow incorporating innovation, training and transfer technology in companies, considering aspects of competitiveness and environmental impact.

US

Public-private partnerships for creating and implementing innovative solution

(a) EPA Sustainable Materials Management Electronics Challenge

(b) Resource Conservation and Recovery Act (EPA) Voluntary Programs

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" programs to be recycled at third-party certified electronics refurbishers and recyclers, and 2) can showcase innovative ways they manage materials, such as closing the loop on plastics recycling and using renewable packaging materials.

Achievement

(a) 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 program 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

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

EU

Policy actions for encouraging plastic alternatives

(a) Commission Implementing Decision of 10.2.2021 on a standardization request to the European Committee for Standardisation as regards circular design of fishing gear in support of Directive (EU) 2019/904

The standard for circular design of fishing gear should provide the level playing field for organizations to develop higher quality and lower environmental impact fishing gear that is easily reused, repaired, re-manufactured, and recycled at the end of life stage, and should provide organizations the opportunity to act sustainably for healthier planet.

(b) Biobased, biodegradable and compostable plastics

The 2020 new Circular Economy Action Plan has confirmed the intention to develop an EU policy framework for biobased, biodegradable and compostable plastics, as a follow up action to the 2018 Plastics Strategy. In particular, the following sustainability challenges should be addressed: 1) Sourcing, labelling and use of biobased plastics (BBP), based on assessing where the use of biobased feedstock results in genuine environmental benefits, going beyond reduction in using fossil resources; 2) Use of biodegradable and compostable plastics (BDCP), based on an assessment of the applications where such use can be beneficial to the environment, and the criteria for such applications. Labelling a product as 'biodegradable' or 'compostable' should not mislead consumers to dispose of it in a way that causes plastic littering or pollution due to unsuitable environmental conditions or insufficient time for biodegradation. The European Commission has started preparatory work in view of this framework, which is due in 2022.

Public-private partnerships for creating and implementing innovative solution

(a) 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.

Others

(a) European Circular Economy Stakeholder Platform

(b) Commission Implementing Decision of 10.2.2021 on a standardization request to the European Committee for Standardisation as regards circular design of fishing gear in support of Directive (EU) 2019/904

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.

International Organisations and NGOs

ASEAN

Technology development for plastic alternatives

(a) Southeast Asia Regional Program to Combat Marine Debris (SEA-MaP) (upcoming)

ERIA

Technology development for plastic alternatives

(a) ERIA's RKC-MPD shares information with regards to Biodegradable and Compostable Plastics in ASEAN+3 context on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/27/reduction/biodegradable

IAEA

Technology development for plastic alternatives

(a) Working descriptor: "Advanced Packaging Materials"

Radiation technologies can be used for making plastics, in particular for generating crosslinks between polymer chains. When bio-based feedstocks are used, eco-friendly, sustainable alternatives to petroleum-based plastics, such as biodegradable single use polymers, can be generated. Crosslinks needed for ensuring the plastic's performance (e.g. heat resistance) can often be generated using radiation without adding linker compounds. Additionally, radiation processing can be used to render specific agents compatible with the bio-based plastic and thus tailor the material's performance to a target application. For example, active packaging products can be created, such as antibacterial packaging for food.

OECD

Technology development for plastic alternatives

(a) Global Plastics Outlook (Innovation chapter) [ENV/EPOC/WPRPW/WPIEEP(2021)1]

(b) Follow-up to Global Forum on Design of Sustainable Plastics: Development of general considerations for the design of sustainable plastics

https://www.oecd.org/env/waste/global-forum-on-environment-plastics-in-a-circular-economy.htm

UNIDO

Technology development for plastic alternatives

(a) UNIDO project "Support for transitioning from conventional plastics to more environmentally sustainable alternatives" in South Africa supports pilot production of single-use food containers with alternative material, of which sustainability is confirmed by life cycle sustainability assessment.

WB

(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. Education and Awareness-raising

Responses from 29 countries stated that they encourage education system for encouraging public awareness-raising campaigns. Moreover, awareness-raising campaigns were held at national, local and international levels, in 30, 14 and 18 countries respectively. National campaigns are more widespread, compared with local and international levels.

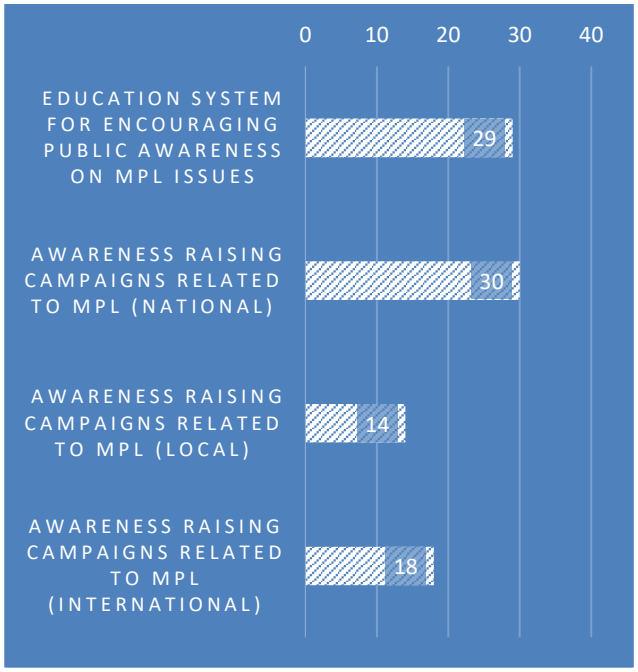


Figure 9: Countries - Education and Awareness-raising"

*Number of countries responded YES among 41 responses

Countries

Australia

Awareness raising campaigns related to MPL

National level

(a) Australia is implementing the Threat Abatement Plan 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.

(b) Boomerang alliance

The Department conducted a closed non-competitive ad hoc grant (Jan 2021) to deliver a national Plastic Free Beaches program, which would be an expansion of Boomerang Alliance's existing Plastic Free Places initiative.

Up to $600,000 (ex GST) in departmental funding over two years, sourced from the $35 million to implement the National Waste Policy Action Plan, has been earmarked to deliver the grant.

A funding agreement was recently finalised with project activities commencing in May 2021.

Through the proposed grant, Australian businesses in selected areas (yet to be identified by Boomerang Alliance) will be supported to transition away from single use plastics to reduce the amount of problematic single-use plastics and packaging that leaks into the environment.

Locations will be selected on the basis that they:

i. Are geographic areas that disproportionately contribute to marine plastic litter (e.g. high visitor numbers, density of retail and food outlets offering single use plastic items, proximity to the coast or waterways through which plastic pollution is transported); and
ii. Demonstrate local community and business support, noting that the program's success ultimately depends on business and community support

(c) Boost multi-stakeholder involvement and awareness raising

On 2 March 2020 the Australian Government convened Australia's first ever National Plastics Summit, bringing together over 200 leaders from government, industry, and the community to identify solutions to Australia's plastic challenge.

Ideas and solutions generated at the National Plastics Summit were used to inform the National Plastics Plan.

The Minister for the Environment has stated that the Government intends to convene a second plastics summit, focussed on design, later this year.

Local level

(a) Plastic Free Beaches initiative

Plastic Free Beaches will be delivered in partnership with Boomerang Alliance to eliminate single-use plastics from Australia's favorite beaches and support local businesses to switch to alternative products, simultaneously raising consumer awareness of the issue.

Achievements

Positive improvement for both national and local actions

Bhutan

Education system for encouraging public awareness on MPL issues

(a) Incorporated waste management in school curriculums of science textbooks for class 4-8 of Bhutan

(b) Development of SOP on waste management with Ministry of Educations

Achievements

Positive improvement

Awareness raising campaigns related to MPL

International level

(a) Member of SACEP project on South Asia marine pollution project

Brunei

Education system for encouraging public awareness on MPL issues

(a) Outreach to Schools

Established a platform under STEAM Outreach Programme with the Ministry of Education via Science, Technology and Environment Partnership (STEP) Centre in: (i) organizing a series of talks and activities related to environment, including on MPL; (ii) conducting workshops on facilitating schools' environmental programmes including providing training to teachers and school community to carry out green school initiatives. Similar initiative also conducted by other parties including NGOs.

Awareness raising campaigns related to MPL

National level

(a) No Plastic Bag Everyday Initiative

First introduced as 'No Plastic Bag Weekend Initiative' in 2011, which later expanded to No Plastic Bag Everyday Initiative by 1st January 2019. A voluntary initiative aimed to uptake the 3R (Reduce, Reuse and Recycle) concept and habit. To discourage the use of single use-plastics at department stores, shops and businesses and encourage the use of reusable bags and/or recyclable packaging among both consumers and businesses when purchasing from shops.

(b) Plastic Bottle Free Initiative

Realizing that plastic bottles are also major contributors of plastic waste and particularly MPL, the Plastic Bottle Free Initiative was introduced in 2018 to encourage green and sustainable habits by swapping plastic bottled water to other (reusable) alternatives and means during events, meetings etc.

(c) Social Media Outreach

Infographics and videos are shared on different social media platforms by various stakeholders including government agencies, NGOs and individuals to better educate the public on MPL including the current issues and challenges, impacts of MPL, ways to tackle MPL, alternatives or changes people can go for, etc.

Achievements

Positive improvement

Canada

Education system for encouraging public awareness on MPL issues

(a) Canada has supported educational resources 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 an online video game - Climate Kids Plastics and Oceans – to engage youth about the issue.

URL:

https://anthropocene.canadiangeographic.ca/

https://plasticsedkit.ocean.org/

https://climatekids.ca/

Achievement

(a) Positive improvement

(b) Numerical data - Over 1.2 million Canadians have been reached through engagement including social media, educational outreach, as well as education and awareness materials (e.g. infographics and signage)

Awareness raising campaigns related to MPL

National level

(a) Canada's comprehensive zero plastic waste agenda

(b) 10,000 Changes

(c) Be Plastic Wise

(d) Anti-litter social media campaigns

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.

The Government of Canada supports organizations 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.

Canada has also used social media to raise awareness of PPE waste and litter.

URL:

https://10000changes.ca/en/

https://pledge.ocean.org/

Achievement

(a) Positive improvement

(b) Numerical data

- Over 24,000 Canadians pledged to take action to reduce plastic waste and pollution through The 10,000 Changes and Plastic Wise campaigns
- The number of Canadian pledges to national campaigns has improved since 2018. Access to educational and awareness materials has increased since 2018.
- In 2018, Canada held an online public consultation seeking input from Canadians on how to move toward zero plastic waste. Canada received over 13,000 comments from Canadians.

Local level

(a) Municipal governments and local organizations implement awareness raising initiatives to address local and regional needs. For example, through the Zero Plastic Waste Initiative, Canada supports the Ocean Friendly Nova Scotia program created by Coastal Action. This is a business recognition program to reduce single-use plastics in Nova Scotia.

International / Regional level

(a) Participation in international initiatives

Canada participates in initiatives that increase awareness of marine plastic litter regionally and internationally. For instance, Canada, the United States and Mexico work collaboratively through the Commission for Environmental Cooperation to implement pilot projects, facilitate community action and increase awareness of marine plastic litter in North America. Canada is also a member of the Global Partnership on Marine Litter and has pledged to the Clean Seas campaign, both initiatives have awareness raising components.

Chile

Education system for encouraging public awareness on MPL issues

(a) The National Marine Litter and Microplastics Management Strategy considers as one of its main lines of action Strengthening environmental education and national capacities to prevent the generation of MR.

Awareness raising campaigns related to MPL

National level

(a) Communication campaigns on social media on marine litter

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.

Achievement

Positive improvement

China

Education system for encouraging public awareness on MPL issues

(a) In primary and middle schools, lessons about the classification of garbage, including plastic wastes, are opened to raise public awareness on wastes management and recycling.

Awareness raising campaigns related to MPL

National level

(a) Opinions on Further Strengthening Plastic Pollution Control

Reinforce the publicity of plastic pollution control, guide the public to reduce the use of disposable plastic products and participate in garbage classification, and avoid excessive packaging. Make use of newspapers, radios and televisions, new media, and other channels in deepened publicity of the effectiveness and typical practices of plastic pollution control. Guide industry associations, business groups, and charity organizations to conduct professional seminars and voluntary activities in an orderly manner, build a consensus, and to create a good atmosphere for the participation of the whole society.

Supported by non-governmental organizations and environmental protection volunteers, marine plastic survey and cleaning activities shall become a norm, playing an active role in preventing land-based garbage from entering the sea. Use newspapers, televisions, the Internet, and other media to promote the prevention of marine plastic pollution by strengthening public education and other methods, also raise the public's awareness on prevention and control of marine plastic pollution.

Local level

(a) Clean Beach Action and Education in Coastal Cities of China

Founded in 2003, Dalian Municipal Environmental Protection Volunteers Association is committed to the publicity, education, and public participation of marine litter. At present, the association has 125 member units and more than 12,000 registered volunteers. The association has organized 32 large publicity activities and nearly one thousand activities throughout the year, with nearly 200,000 brochures of marine conservation being issued. Its publicity for marine conversation has reached over one million people and its cleanup activities for marine litters have seen participation of 200,000 person times.

From 2009 to 2019, the Blue Ribbon Ocean Conservation Association has been carrying out publicity, education, and public participation on marine litters. This association has a total of 128 member units and nearly 100,000 registered volunteers. In 2019, the association organized 798 publicity activities on marine litters, distributed 68,000 copies of publicity materials, publicized marine protection to more than 7.114 million people. A total of 317,300 volunteers have participated in marine litter cleanup activities, 38.49 tons of litters on the beach and 0.25 tons of litters on the seabed were cleaned up.

Achievement

Positive improvement

International / Regional level

(a) International Coastal Cleanup

In 2020, the national beach clean public welfare activity, themed "guarding the beautiful coastline and acting together" and hosted by the China Oceanic Development Foundation, was held in 27 coastal cities in China. More than 300 related organizations and more than 10,000 volunteers have participated in the activity, with coverages by nearly 150 media. This activity was strongly supported by the authorities of the coastal cities. Four local marine charity organizations hosted the beach cleanup activities in four main venues, and 24 local marine charity organizations hosted the activities in 23 sub-venues.

Dominican Republic

Education system for encouraging public awareness on MPL issues

Awareness raising campaigns related to MPL

National level

(a) Law 225-20 provides for the creation of communication plans for education and social participation as an instrument of policy for the integral management of solid waste, Article 47

Achievement

Positive improvement

Fiji

Education system for encouraging public awareness on MPL issues

(a) Ongoing awareness and outreach programs (with communities, schools, public) on the impacts of litter on the marine environment

Achievement

Positive improvement

Awareness raising campaigns related to MPL

National level

(a) Awareness raising using various media platforms such TV commercials, pamphlets, radio, social media has been ongoing.

Talk back shows on radios are done in vernacular languages to create the awareness and learnings around various environmental issues such as Littering, developments and plastics.

Achievement

(a) Positive improvement - Positive feedback received from the communities and gives an opportunity for the public to clarify their issues around the Environment Management Act 2005.

(b) Numerical data - An average of 3 talkback shows every 6 months

Local level

(a) Local Municipal Councils assist in creating awareness through clean schools program.

Local Municipal Councils organize the programs for respective schools to promote self-compliance towards anti-litter behaviour in Fiji; reduce litter through effective implementation of campaigns, readiness programs, and volunteer activities; and effective enforcement of the Litter Act 2008 and where applicable other relevant legislations.

Achievement

(a) Positive improvement

(b) Numerical data - The Ministry of Environment participated in the Suva City Councils clean schools program in 2019 whereby all the schools within the Suva City Council boundary were assessed. This included all secondary and primary schools.

International / Regional level

(a) Fiji is calling for a legally binding instrument to address Marine Litter.

(b) Fiji also looks forward to financial resources to expand its Trash net in larger number of rivers as these waste ends in the marine environment.

Achievement

Not any particular trend

Finland

Education system for encouraging public awareness on MPL issues

(a) The Strategic Programme to Promote a Circular Economy recognizes the importance of education and training. The circular economy awareness will be built on from early childhood education onwards. Circular economy education is to be implemented to high school national curriculum in 2021.

Awareness raising campaigns related to MPL

National level

(a) The Plastics Roadmap for Finland - Reduce and Refuse, Recycle and Replace

(b) A voluntary Green Deal

A voluntary Green Deal to reduce the use of plastic carries 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 means 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.

Information and knowledge spreading by NGO Pidä Saaristo Siistinä

https://www.pidasaaristosiistina.fi/ymparistotietoa/roskaantuminen

Achievement

(a) Finland's Plastic Roadmap was developed in 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 web sites 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

Education system for encouraging public awareness on MPL issues

(a) In 2020, the Ministry has launched the "Beaches without plastic litter" chart in link with local authorities. This chart is composed of 3 categories of actions and public awareness is one of them. Raising awareness through education is a commitment that local authorities are to implement. Multiple educational actions are already taking place.

(b) Creation of educative marine protected areas and organization of collection of marine litter.

Awareness raising campaigns related to MPL

National level

(a) Actions on the seashore and at sea;
   i. Implement awareness raising actions to 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. Develop awareness raising and 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).

Local level

(a) Support the associations that launch awareness raising actions and clean-ups;

(b) Put in place a "Beaches without plastic litter" chart in link with local authorities;

International / Regional level

(a) Actions under OSPAR convention

In the context of the ICG-ML, the working group dedicated to marine litter, the OSPAR Secretariat has developed a communication kit on the actions led by the Contracting Parties in the implementation of the Marine Litter Regional Action Plan. This kit also aims at raising awareness on the work implemented through OSPAR and on the impact on marine litter.

Germany

Awareness raising campaigns related to MPL

National level

(a) [Beach] litter collecting actions

(Mostly NGO- or privately driven) voluntary initiatives to collect litter (from the environment (rivers/beaches)

(b) Broad membership of a Round Table on Marine Litter (RT ML)

RT ML– jointly initiated by Federal and Federal Laender-Governments; bringing together all government levels (3 levels in GER), NGOs, Industry, Associations etc. – aiming at finding solutions to stop the entry of plastic litter into the environment,, ideally at the source, but also addressing niche topics such as 'how to recycle ALDFG' efficiently.

International / Regional level

(a) Various awareness raising campaigns in East and Southeast Asia

As part of the project "Rethinking Plastics" (see section 5 for more details)

Achievement

Positive improvement

Indonesia

Education system for encouraging public awareness on MPL issues

(a) As part of marine debris management, strategy 1: national movement to increase awareness of stakeholders (see section 2.1).

Ministry of Education was appointed to chair the working group to initiate/develop training/workshop program for students in the area of waste management.

Indonesia has also been implementing a "green school" program called "Adiwiyata", promoting green generation through green scouts, and a Junior Environmental Champion program for elementary school students. These programs include aspects related to 3Rs and sustainable waste management in schools.

Awareness raising campaigns related to MPL

National level

(a) "National Waste Management Day"

Serial campaigns are designed annually for public to raise their awareness about waste management (what and how to start dealing with their waste or not produce waste)

Achievement

(a) Positive improvement

(b) Numerical data

- Based on Kompas Daily Newspaper survey conducted in 2019 showed that 61% community agreed to bring their own reusable shopping bag, 90% community has implemented reducing use of SUP, and 97% community was intended to reduce waste plastic.
- Reducing use of SUP consist of using reusable shopping bag (40%), tumbler (34.4%), and reusable cutlery (24.6%).
- Behavioral change of community is caused by campaign (18.5%), being green lifestyle (13.8%), no more provided SUP (9.1%,) and government regulation (7.1%).

International / Regional level

(a) The establishment of the Regional Capacity Center for Clean Seas (RC3S)

The mandates of the RC3S include (not limited to) efforts to promote public awareness in taking initiatives and effective measures to control the marine pollution from land-based activities.

Achievement

Positive improvement

Italy

Education system for encouraging public awareness on MPL issues

(a) ISPRA program of environmental education initiatives for sustainability, aimed at schools of all levels https://www.isprambiente.gov.it/it

(b) The Researchers' Night is an initiative promoted by the European Commission since 2005 that involves thousands of researchers and research institutions in all European countries every year. The goal is to create opportunities for researchers and citizens to meet to spread scientific culture and knowledge of the research professions in an informal and stimulating context

(c) ScienzaInsieme to promote scientific dissemination. It offers to a wide audience the opportunity to experience science in laboratories, in conferences, seminars, scientific cafes, tours, exhibitions and during the numerous activities designed for children and families and the schools.

ScienzaInsieme spreads information, news, videos on the main events and initiatives in the scientific world https://www.scienzainsieme.it/

Achievement

Positive improvement - The initiatives and the number of participants are increasing.

Awareness raising campaigns related to MPL

National level

(a) 2018. Plastic free campaign (#PFC)

Plastic free campaign (#PFC) is an initiative launched by the Minister of the Environment, Land and Sea, that aims to involve people, companies and institutions (at national and local level) to commit themselves to reducing or eliminating single-use plastics in public and private offices.

The Ministry adopted a set of measures aimed at the elimination of single-use plastics, including: the elimination of plastic beverage bottles from the vending machines, the installation of natural or sparkling water dispensers, free distribution to employees of reusable aluminum bottles, the replacement in the vending machines of plastic cups with paper ones, and of plastic stirrers with wooden ones, the elimination of single-use products in the Ministry's kindergarten.

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.

Achievement

Positive improvement

Japan

Education system for encouraging public awareness on MPL issues

(a) "Plastics Smart" campaign was launched to encourage all stakeholders to prevent generation of marine litter

Achievement

(a) Positive improvement

(b) Numerical data

Number of registered cases for "Plastics Smart" campaign

	FY2020
Total	2,012 cases

(Reference)

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

Awareness raising campaigns related to MPL

National level

(a) Plastics Smart

"Plastics Smart" campaign was launched to encourage all stakeholders to prevent generation of marine litter

(b) UMIGOMI Zero Award

"UMIGOMI Zero Award" is held to award good practices ("umigomi" means marine litter in Japanese). There were 314 applications in 2020

(c) Good Practices for Reducing Microplastics

"Good Practices for Reducing Microplastics" is a collection of Japanese companies' efforts and technologies contributing to the prevention, reduction, and collection of microplastics, in order to disseminate them domestically and internationally.

Achievement

(a) Positive improvement

(b) Numerical data

Number of registered cases for "Plastics Smart" campaign

	FY2020
Total	2,012 cases

(Reference)

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

Local level

(a) Local Blue Ocean Vision Project

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 FY2021.

Achievement

Positive improvement

International / Regional level

(a) Regional Knowledge Center for marine plastic litter

Regional Knowledge Center for marine plastic litter, established at ERIA (Economic Research Institute for ASEAN and East Asia) in 2019 with the support of the Ministry of the Environment, Japan, deals with information sharing to raise awareness and to promote efforts taken by private sector and citizens.

The specific approaches are as follows;

i. Creation of online platform to share good practices accomplished by the private sector
ii. Providing information on related policies for the private sector
iii. Sharing positive case studies of good practices of private companies

Achievement

Positive improvement

Kiribati

Education system for encouraging public awareness on MPL issues

(a) We paid a visit to a school. Its goal is to teach primary school students about the importance of waste management. In the presentation, the color receptacles used in Kiribati are discussed, which are green (organic waste), red (plastic waste/general waste), and yellow (Recyclable waste). The presentation also includes waste sorting.

Achievement

Positive improvement – but there's lack of funding for materials to enhance the awareness activity

Awareness raising campaigns related to MPL

National level

(a) Meetings with Ministries

(b) Clean-up activity with the Ministries

Local level

(a) Clean up campaign with the communities

(b) Workshops with the securities of the community

(c) Waste Repurposing Initiative (Communities- Women)

These are the initiatives that have been put in place in Kiribati. These also help with waste reduction, resource recovery and value creation.

International / Regional level

(a) Virtual Meetings

The virtual call was to seek advices from Secretariat/ Consultants in regards to plastic nappies etc.

Maldives

Education system for encouraging public awareness on MPL issues

(a) Teacher Handbook

Developed to educate teachers about best waste management practices. This will include impacts of single use plastics on marine organism. Content for the handbook is currently being developed.

(b) School awareness sessions

School sessions are on hold this year due to covid pandemic. However, there was one session taken for a school regarding single use plastic phase-out plan. There is a plan to conduct virtual sessions for schools starting from Mid August, These sessions will focus of SUP, best waste management practices, laws and regulations for waste management.

(c) Farukoe program

Farukoe is an ocean exploration program by the Ministry of Education of the Maldives that invites every single school student of the Maldives to explore the reefs around them. There are set of activities under this program with given timelines. Activities as such includes, banning single-use plastics in all schools and aware students about the impacts of single-use plastics. In addition, this program encourages and educated students on marine plastic pollution issues and guide them how they can be part of the change. More information on this program can be via: https://www.farukoe.com/

Achievement

Positive improvement

Awareness raising campaigns related to MPL

National level

(a) "Saafu Raaje campaign" initiated in 2015

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

(b) National Awareness campaign on phasing out Single Use Plastic in Maldives ("PlastikaaNulaa" campaign)

With the Implementation of Single use plastic phaseout plan, an awareness campaign was launched to address to reduce the consumption of single use of plastics, and nudge consumers to shift away from single use plastics and use sustainable alternatives.

(c) Community mobilization sessions

Aims to aware the community about waste management policy, best waste management practices, effects of marine pollution, ways we can reduce and refuse plastic consumption and the importance of 3R. These sessions are targeted to selective audiences at Island Level.

Local level

(a) Clean blue Maldives

Clean Blue Maldives is a programme led by commonseas, UK based NGO, in partnership with the government of Maldives. This programme is currently being conducted in the B.atoll. Namoona Baa initiative was launched by the signatories of the Charter, as a pilot project to demonstrate what sustainable waste management can look like on small islands. Namoona means 'exemplary' in the Dhivehi language. More information via:

https://commonseas.com/countries/clean-blue-maldives

Achievement

Positive improvement

Myanmar

Awareness raising campaigns related to MPL

Local level

(a) State and region Environmental Conservation Department staff conducted awareness raising activities in states and regions with the cooperation of relevant stakeholders and department.

In order to raise awareness of people on plastic pollution and environmental conservation and to get people more practices, awareness raising and capacity building for local government and communities are conducted by government, NGO and other organizations in Myanmar.

Netherlands

Education system for encouraging public awareness on MPL issues

(a) VANG Buitenshuis, an educational programme focused on waste disposal habits in youngsters.

Education program in Netherlands

- Onderwijs - VANG Buitenshuis

  https://vangbuitenshuis.nl/branches-0/onderwijs/

- Zoeken - Zoekresultaten - VANG Buitenshuis

  https://vangbuitenshuis.nl/vaste-onderdelen/zoeken/?mode=zoek&zoeken_term=english&zoeken_sortering=PubSttDtm&Zoeken_button=

Awareness raising campaigns related to MPL

National level

(a) Communication initiative to promote good waste disposal habits in consumers

Communication initiative with municipalities, companies and NGO´s to promote good waste disposal habits in consumers

New Zealand

Education system for encouraging public awareness on MPL issues

(a) The national waste strategy may provide new opportunities for waste disposal levy funds to be used for behaviour change. This is ongoing work for the Ministry to identify where public awareness and behaviour change tools can support policy objectives.

(b) The Government has also committed to identifying opportunities to improve teacher resources on plastics, and will coordinate this with future behaviour change campaigns.

(c) KNZB also operate in the citizen science space: https://www.knzb.org.nz/resources/research/local-litter-toolkit/

Achievement

Not any particular trend

Awareness raising campaigns related to MPL

National level

(a) Plastic Free July

Summary of programmes run by Keep New Zealand Beautiful

https://www.knzb.org.nz/programmes/education/

https://www.knzb.org.nz/programmes/rewards-and-recognition/

International level

(a) WMF funding to the Territorial Authorities Organisation Forum to promote the Plastic Free July campaign.

Achievement

Not any particular trend

Norway

Education system for encouraging public awareness on MPL issues

(a) Blue Responsibility (Blått ansvar) educational videos and material.

(b) Several initiatives make teaching material available for free such as the non-profit Loop. The Norwegian Broadcasting Company also has available programs for children often used in schools on waste management/plastics. Waste Management Companies (both public and private) provide videos on sorting of waste, plastics etc.

(c) In higher education more courses on circular economy.

(d) The Norwegian Directorate for Fisheries adopted in 2021 a dedicated action plan on marine litter. This action plan includes compulsory educational modules on marine litter for professional fishermen.

Achievement

Positive improvement

Awareness raising campaigns related to MPL

National level

(a) The Directorate of Fisheries has launched an Action Plan on Marine Litter.

(b) Keep Norway Beautiful has extensive information campaigns.

(c) Several active NGOs in the field, such as Friends of the Earth Norway Naturvernforbundet) and World Wildlife Fund (WWF) Norway.

(d) School children are for example included in beach clean-up actions run by various voluntary local and national organisastions.

The action plan addresses marine plastic litter from fisheries, aquaculture and recreational fishing.

In Norway there is a yearly fundraising event run by the Norwegian Broadcasting Corporation (NRK). It is a nationwide charity campaign that raises money for a chosen cause. In 2020 WWF Norway was the chosen organisation on a project for combating marine litter in the global South, and 239 million Norwegian kroner were collected and dedicated to projects to improve waste management in Thailand, Viet Nam, Indonesia og the Philippines.

Local level

(a) Beach clean-ups and other clean-up initiatives.

All around the country people are engaged in beach clean-ups and clean-up actions in other areas (by lakes, rivers and in other parts of nature).

International level

(a) In May 2021 the Arctic Council launched the Regional Action Plan on Marine Litter.

(b) In 2014 the Contracting Parties of OSPAR agreed on a Regional Action Plan (RAP) for Marine Litter for the period 2014-2021. The plan is under revision.

https://www.ospar.org/documents?v=34422

The Regional Action Plan on Marine Litter in the Arctic will enable the members to take targeted and collective action to address this problem within the Arctic and contribute to awareness of the Arctic-specific impacts.

Norway has since 2016 been part of and a contributor to the UNEP Clean Seas Campaign.

Oman

Education system for encouraging public awareness on MPL issues

(a) A lot of programs have been done for schools and higher education to raise awareness on MPL issues

Awareness raising campaigns related to MPL

Local level

(a) Governmental sectors are doing campaigns regularly in cooperation with private sectors and NGOs.

The campaigns are targeting not only open beaches, but also the mangrove habitats.

International level

(a) Clean up Oman in collaboration with UNEP

Campaign has been conducted in cooperation with schools, university and colleges under funded by the UNEP.

Achievement

Positive improvement

Pakistan

Awareness raising campaigns related to MPL

National level

(a) Clean Green Pakistan Movement (Karachi has conducted beach cleaning activity as a Social Project

CGPM is expected to change attitudes towards the plastic pollution problem. Individuals, institutions and cities from across the country compete on five indic ators namely (solid waste, clean water, plantation, liquid waste and sanitation). Winners get financial awards and recognition from federal government.

Achievement

Positive improvement - 20 cities competed in the pilot phase of the project in 2019. The number of competing cities has risen to 80 in the second round. Several Clean Green Champions have also been rec ognized and awarded by the Federal Government.

International / Regional level

(a) “Plastic Free Rivers and Seas in South Asia” collaboration with the World Bank and SACEP

The Ministry of Climate Change is collaborating with the World Bank and South Asia Cooperative Environment Programme (SACEP) to clean the rivers and seas of the region.

Achievement

Not any particular trend - The project is ongoing and results will be evident in a few months.

Palau

Education system for encouraging public awareness on MPL issues

Awareness raising campaigns related to MPL

Achievement

Awareness programs exist, however there is room for improvement.

Panama

Education system for encouraging public awareness on MPL issues

(a) The Ecological Flag initiative, which has led to collaboration with educational centers led by “Ministerio de Ambiente”, and “Ministerio de Educación” and the Environmental Volunteers Program.

(b) Additional Green classrooms that provide environmental education, both to teachers and students, with the support of Audubon and Marea Verde.

Achievement

(a) Positive improvement - Currently there is a waiting list to enter the ecological flag program in the Educational Centers category and the new Communities category has begun.

(b) Numerical data – Currently the Ecological Flag program has one hundred and five (105) schools, in various regions of our country.

Awareness raising campaigns related to MPL

National level

(a) Campaigns “Sin carrizo, por favor” y “Chifea tu bolsa”

These are initiatives of the Tortuguía Foundation, its main objective is to educate the population about the damages caused by the high consumption of single-use plastics with a direct focus on reeds and plastic bags.

(b) “Yo celebro reciclando”

In celebration of the National Recycling Day, coordinated by Recicla por tu futuro, state entities and other key actors.

(c) “Reutilizando plástico con Ruben Blades”.

As part of the public awareness strategies on the problem of excessive consumption of disposable plastics, the MarViva Foundation launches the campaign taking advantage of the clear message of one of the classics of the artist Rubén Blades.

Achievement

(a) Positive improvement - In 2018, 203 restaurants were added nationwide for the campaign without reed, please. In its second version in 2019, 50 restaurants participated.

(b) Numerical data

In 2018, 710,500 reeds were prevented from being consumed in one month.

International / Regional level

(a) Campaings #ChaoPlasticoDesechable

Fundación Marviva seeks to change consumption habits, reduce the use and consumption of single-use plastic bottles, inform and raise awareness about the impact of disposable plastic in marine and coastal environments, as well as disprove myths and misperceptions about waste treatment and recycling.

Achievement

Positive improvement – Greater awareness and knowledge in the population.

Papua New Guinea

Education system for encouraging public awareness on MPL issues

(a) It is not specific to marine litter, but provided as pollution covering both terrestrial and marine ecosystems taught at higher secondary school levels.

Achievement

Positive improvement - Students at higher secondary school levels have some idea on marine plastic litter prior to entering tertiary institutions which becomes a specific subject.

Awareness raising campaigns related to MPL

National level

(a) Plastic Litter Campaign

During World Environment Day and World Oceans Day commemorations and other days of significance, awareness and environment education are conducted at primary and secondary schools, and at different communities.

Achievement

Positive improvement - Students, children and communities are aware of plastic bag pollution. They are also aware of the values of maintaining a plastic free environment. In addition, they make every effort to maintain a clean environment by disposing plastic bags in a proper way.

Local level

(a) Coastal Community Clean-up

This action is led by community leaders in the form of Ward Councilors, who organize community youths to conduct awareness by undertaking coastal clean-up and spreading the message of clean and hygienic environment.

Achievement

Positive improvement - Communities are aware of maintaining a plastic free coastal environment. They are experiencing large fish catch and growth in mud crab population. Mangrove ecosystems are healthy and well maintained.

Philippines

Awareness raising campaigns related to MPL

National level

(a) Partnership of DENR BMB with United Nations Development Programme (UNDP) and CORA being involved in the Clean Seas Pilipinas

Clean Seas Pilipinas aims to establish a national network of partners working with communities and schools to organize, support, and sustain a campaign to reduce ocean plastics. The campaign was launched during the celebration of the International Year of the Reef in 2018 and supports an integral part of United Nations Environment Programme’s Clean Seas: Turn the Tide Against Plastics campaign. The campaign aims to produce the following outcomes; 1) help identify and convince national partners, both public and private, to support a grassroots campaign 2) help partner academic institutions develop and implement policies that would ban, reduce, or lessen the selling and use of PET Bottles, Plastic Straws, and Plastic Bags within school premises. 3) help and encourage partner LGUs and communities improve their system of collecting, managing, and consolidating discarded/ used fishing nets and other types of plastic waste.

(b) Celebration of Month of the Ocean (MOO) 2019

MOO 2019’s theme is “Free the Seas from Marine Debris.” MOO is celebrated every month of May

(c) Coral Triangle Day (CT Day)

The CT Day 2018 was celebrated with an Instagram Campaign that focuses on ACTION and PLEDGES inviting people to join the #PLASTICRESISTANCE and to encourage their family and friends to do the same! CT Day was envisioned as be an annual, open-sourced event that brings together individuals, organizations, and establishments on one special day of the year to shed light on ocean conservation and the numerous ways to protect and conserve the Coral Triangle every June 9.

(d) Conduct DENR-BMB’s CY 2020 Webinar on Marine Litter 101

The Webinar is an orientation, awareness raising and capacity building designed for the Protected Area Superintendents (PASus) about the problems related to the marine litter.

(e) Partnership of DENR BMB with the Department of Social Welfare and Development (DSWD)

The DENR BMB and DSWD partnership has developed modules on solid waste management and prevention, reduction and management of marine litter for the low-income families' awareness and education.

Achievement

Positive improvement

Republic of Korea

Education system for encouraging public awareness on MPL issues

(a) "The comprehensive plan on marine environment education (2021-2025)" will be announced this year in accordance with the "Environment education promotion act". Based on the plan, MOF will provide online education programs to raise awareness on marine litter and to encourage people to protect the marine environment starting from this year.

Along with this, "The 1st national action plan on marine litter and marine contaminated sediments (2021-2030)" includes the comprehensive public awareness plan to provide marine litter education targeting all age groups through collaborative work between MOF and KOEM.

Achievement

Positive improvement

Awareness raising campaigns related to MPL

National level

(a) Comprehensive plan on raising marine litter awareness

MOF and KOEM establish a comprehensive plan every year to effectively raise public awareness on marine litter using various measures such as online and offline public campaigns and collaboration with the private sector.

(b) Collaborative work with the private sector

KOEM which is an affiliated organization of MOF signed MOU with two major corporations P&G korea and Terracycle korea to recycle marine plastic litter and jointly work on public campaigns and clean-up activities to reduce the use of plastic products and to protect the marine environment.

International / Regional level

(a) Strengthening and Improvement for Marine Litter response in Indonesia

"Strengthening and Improvement for Marine Litter Response in Indonesia" is an ODA project of MOF which aims to enhance the marine litter response capacity of Indonesia through a capacity bulding workshop and marine litter monitoring education program targeting marine litter related stakeholders such goverment officials, NGOs and Local residents.

Achievement

Positive improvement

Samoa

Education system for encouraging public awareness on MPL issues

Achievement

(a) Positive improvement - Consultations and school programs have been conducted to promote preventive measures to avoid dumping of wastes in river systems ending up in our ocean. The MNRE through the Divisions of Environment and Conservation and Water Resources Management work closely with local communities through national clean-up campaigns for targeted rivers and mangrove areas. Awareness programs include community consultations, school programs, radio talk-back shows and televised advertisements.

(b) Numerical data - See MNRE Annual Reports

Awareness raising campaigns related to MPL

National level

(a) TV and radio talk shows, billboards

Ongoing media shows(tv and radio) with feedback from the audience on live shows were positive.

Achievement

Positive improvement - Positive feedback from the public on live radio shows supporting national efforts on plastic ban and littering. For example, the Ministry has received very positive response from villages involved in the mangrove clean-up campaign such as the Moataa and Vaiusu villages.

Local level

(a) Community outreach programs

Community clean ups and presentations

Achievement

Positive improvement - Community based clean ups have been very effective in promoting awareness programs on proper waste disposal, impact on mangroves and community actions needed.

International / Regional level

(a) International and regional dialogues

Discussions of possibilities of having a legal global instrument to address plastic pollution.

Saudi Arabia

Education system for encouraging public awareness on MPL issues

(a) This item has been listed as a key component of the National Action Plan as described above.

Awareness raising campaigns related to MPL

National level

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia

- Produce, publish and / or disseminate education and awareness materials, using electronic media, information sheets, brochure, booklets, videos, CDs and other media.
- Organise awareness workshops on the impact of marine litter for various stakeholders, such as teachers and government officials.
- Develop strong linkages with key government departments to inform officials/decision-makers about important information relating to the environmental effects of marine litter.
- Develop strong linkages with newspaper reporters/editors to encourage them to communicate information about the environmental and health impacts of marine litter.

International / Regional level

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia

Singapore

Education system for encouraging public awareness on MPL issues

(a) Nationwide “Say YES to Waste Less” campaign which is aimed at influencing the public to reduce the use of disposables

(b) 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 retails partners to provide incentives to encourage consumers to use their own reusable containers, bottles and bags leading to reduction in plastic waste

(c) Singapore’s MPA organises maritime environmental outreach programmes including talks on marine conservation, underwater clean-up, and online content such as quizzes, animation videos and tutorials, to raise awareness on the importance of protecting the marine environment.

(d) Singapore National Parks Board (NParks), together with the Friends of Marine Park stakeholder community, conducts various outreach and educational programmes and activities to promote marine conservation and highlight impacts like marine plastic litter; for example, by hosting the Singapore pavilion and giving talks at the yearly Asia Dive Expo (ADEX); interactive marine litter activities at the Marine Park gallery; research and citizen science programmes like guided walks and beach clean-ups.

Achievement

Positive improvement

(a) Since the “Say YES to Waste Less” was launched in 2019, the number of retail partners have increased from 59 to 90 organisations in 2020. Collectively, they cover more than 2,100 retail outlets in Singapore. All of them have put in place different measures to encourage consumers to reduce their consumption of single-use products, such as through incentivisation or reminding customers to opt out of disposables.

(b) Engaged over 40000 participants from around the world at the yearly Asia Dive Expo and 10000 yearly visitors to the Marine Park public gallery.

Spain

Awareness raising campaigns related to MPL

National level

(a) Preparation of awareness/communication materials

(b) 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.

(c) Creation of "Guardians of the Beach" program, aimed at associations, environmental organizations, fishermen, fishing associations and other groups and a network of "guardians" organizations to ensure environmental preservation of rivers and beaches and awareness to this problem at local, regional and national levels.

(d) Additionally, some horizontal measures in the Marine Strategies may include marine litter as a subject among other marine aspects:

i. Awareness programs for beach tourists, nautical tourism companies, as well as fishermen and civil society in general, including schools.
ii. Training programs for fishermen, observers on board, stranding networks personnel, and training for Public Administration managers.
iii. 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 masters’ official courses (yacht and fishing).

Sri Lanka

Education system for encouraging public awareness on MPL issues

Achievements

Positive improvement - Most of the schools are implementing “zero waste” program and have banned bringing plastic bags to school. Waste management is included in the school curriculum.

Awareness raising campaigns related to MPL

National level

(a) Government as well as private institutions are engaged in various type of awareness programmes

Local level

(a) Government as well as private institutions are engaged in various type of awareness programmes

International/Regional level

Achievements

Positive improvement - Awareness programs will be carried out as an activity of “Marine litter and microplastics: Promoting the environmentally sound management of plastic wastes and achieving the prevention and minimization of the generation of plastic wastes” project, when it is started.

Thailand

Education system for encouraging public awareness on MPL issues

(a) Set up the Waste Bank and zero-waste school at school and local community and encourage students, local communities to segregate waste to earn extra income

Other government organization take responsibility on this matter

Awareness raising campaigns related to MPL

National level

(a) International Beach Clean-up Day

In September, Dept. of Marine and Coastal Resources held the beach clean-up activity

Local level

(a) Beach and water outlet clean-up

Beach clean-up and water outlet waste collecting campaign on special events

International / Regional level

(a) Collaboration among ASEAN Member States to combat marine debris

ASEAN Regional Action Plan for combating marine debris in the ASEAN Member States aims to enhance coordination for achieving sustainable management of coastal and marine environments through responding to the marine plastic pollution

Achievements

Positive improvement

Turkey

Education system for encouraging public awareness on MPL issues

(a) Awareness raising activities are planned and conducted both nationally and locally.

Achievements

Positive improvement - Under the scope of the zero waste project the number of people receiving training has reached 12 million.

Awareness raising campaigns related to MPL

National level

(a) Public service announcements (appeared on TV’s regularly)

(b) Zero waste blue promise (an encouragement campaign both for companies and citizens)

Zero waste blue promise is a promise given by companies and citizens, committing that they will reduce their wastes at source and help attending awareness raising campaigns for others as well.

Local level

(a) Studies planned and conducted under Circular on Marine Litter Provincial Action Plans’ Preparation and Implementation for all 28 coastal provinces of Turkey.

Tailor made awareness raising campaigns conducted locally

Achievements

Positive improvement

UK

Education system for encouraging public awareness on MPL issues

Domestic

(a) Through the British-Irish Council commitment the UK is working to improve marine litter education materials for professional fishers.

(b) The UK delivers Eco-schools programmes through various delivery partners. Each include modules on the importance and harm of litter in relation to terrestrial and marine environment health.

International

(a) The UK funds the Tide Turners Plastic Challenge Badge which 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 370,000 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.

Awareness raising campaigns related to MPL

National level

(a) UK Litter Strategies

The UK's litter strategies bring 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. They are also aiming to improve relevant public and business behaviours, reducing sources, improving monitoring and strengthening co-ordination nationally and internationally.

International / Regional level

(a) Blue Planet Fund (BPF)

The UK has launched a £500 million Blue Planet Fund that will support developing countries to protect the marine environment and reduce poverty.

Financed from the UK Official Development Assistance Budget, the Blue Planet Fund will help eligible countries to reduce poverty, protect and sustainably manage their marine resources and address human-generated threats across four key themes: biodiversity, climate change, marine pollution, and sustainable seafood.

The BPF aims to reduce marine pollution through action on land-based and sea-based sources that also contributes to improved livelihoods and healthier environments.

(b) The Commonwealth Clean Ocean Alliance (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.

The UK has committed up to £70m 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) Commonwealth Litter Programme (CLiP), working in partnership with seven countries across the Commonwealth to identify real world contextualised solutions to the environmental and socio-economic challenges created by marine litter. Over three years, CLiP has focused on knowledge sharing and capacity building and has supported countries to develop marine litter action plans, establish microplastic laboratories, and create and disseminate school and community education packs to raise awareness around plastic pollution. So far, generation of evidence through CLiP has directly contributed to change in legislation in Belize and Vanuatu to ban use of certain single use plastic items.

(d) Tackling Waste and Plastics Pollution Programme The programme includes up to £6m for pilot projects that aim to improve solid waste management approaches in up to 6 cities in developing countries, of which one has been live in this reporting period.

Uganda: Support for the Kampala Plastics Recycling Partnership, which includes private companies such as Coca-Cola, the Ugandan Government and other stakeholders, to improve the sustainable management of plastic waste in Greater Kampala.

The UK is supporting small projects in a number of countries.

i. Tearfund (£3m) Tearfund is working on a proposal to run a plastics project in Haiti (£1m) as well as Pakistan (£2m), working with communities on waste collection.
ii. WasteAid (£80k) Preventing plastics from reaching the ocean in Cameroon.

The UK is funding Waste Aid to deliver a two-year recycling project in Gambia and a second project in Kenya.

(e) Other UK programming:

WRAP Plastic Pacts: Having signed a UK 'Plastics Pact' in 2018, the UK is now funding WRAP to support other Commonwealth countries to develop their own Plastics Pacts. WRAP works to develop a network of Plastics Pacts around the world to support broader transition to a Plastic Circular Economy. The network of Pacts will enable efficient sharing of best practice guidance, practical solutions and resources between countries which share similar challenges.

Uruguay

Awareness raising campaigns related to MPL

National level

(a) Coastal Cleanup Day

https://www.gub.uy/ministerio-ambiente/politicas-y-gestion/dia-internacional-limpieza-internacional-costas-2020-uruguay

On Saturday, November 14, 2020, the cleaning took place in 46 beaches of Uruguay (Colonia, Canelones, Maldonado, Montevideo, Rocha and San José), having collected about 5000 kg of waste. Heads of the Presidency, the Ministry of the Environment and the Ministry of Tourism participated in this activity. This day was an example of awareness. Additionally, different organizations that carry out the cleaning in the 6 coastal departments carry out educational work on how waste affects the coastal marine ecosystem and how we can act to reverse this situation.

International / Regional level

(a) Ministry of Environment is member of the Plastic Waste Partnership (PWP).

A Plastic Waste Partnership (PWP) has been established under the Basel Convention to mobilize 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 fourteenth meeting, in its decision BC-14/13 , the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal:

i. welcomed the proposal to establish the Basel Convention Partnership on Plastic Waste and decided to establish the Partnership and its working group;
ii. adopted the terms of reference for the Partnership; and
iii. requested the working group to implement its workplan for the biennium 2020−2021.

The goal of the PWP is to improve and promote the ESM of plastic waste at the global, regional and national levels and to prevent and minimize its 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.

(b) Ministry of Environment is member and Co-chair of the Household Waste Partnership (HWP).

At the Conference of the Parties to the Basel Convention at its twelfths meeting in May 2015, Parties agreed to include in the work programme of the Open-ended Working Group the development of a work plan on the environmentally sound management of household waste with a focus on the needs of developing countries and countries with economies in transition (BC-12/13). The work plan include, but is not limited to developing guidance documents and/or manuals on, inter alia, best practices, business models and innovative solutions for the circular economy in various socioeconomic contexts, as well as a concept for a partnership to assist municipalities.

(c) Ministry of Environment is member of the Steering Committee of the Intergovernmental Network on Chemicals and Waste (Latin-American and the Caribbean or GRULAC Region).

The Intergovernmental Network on Chemicals and Waste for Latin America and the Caribbean was established by Decision No. 8 of the XX Meeting of the Forum of Ministers of the Environment in Latin America and the Caribbean (28-31 March 2016). The Network has the main objective of strengthening the environmentally sound management of chemicals and waste through regional cooperation and the exchange of information and experiences among countries.

(d) The second Action Plan developed by the Network for 2021-2024, addresses plastics and marine litter, under the following item:

i. Environmentally Sound Management of plastic through their whole life cycle, including marine litter and microplastics.
ii. Identify an information tool to share and disseminate trends and gaps in plastics and marine litter regulations in the region.
iii. Elaboration of a report/workshop of experts to evaluate public policies to reduce marine pollution and its impacts.
iv. Capacity building to government and municipal governments on the prevention and reduction of marine pollutants.

(e) Ministry of Environment is member of the Partnership for Action on Computing Equipment (PACE).

Computing equipment has improved the lives of people everywhere. As global use expands, society everywhere faces new challenges from the impacts of the entire life-cycle of computing equipment. According to United Nations Environment Programme, some 20 to 50 million metric tonnes of e-waste are generated worldwide every year, comprising more than 5% of all municipal solid waste.

(f) Ministry of Environment is member of the Steering Committee of the Voluntary coalition of governments and relevant organizations for the gradual closure of dumpsites in Latin America and the Caribbean.

Within the framework of the XXI Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean (Buenos Aires, Argentina, October 9-12, 2018), the Voluntary coalition of governments and relevant organizations for the gradual closure of dumpsites in Latin America and the Caribbean was established. The main purpose of the Coalition is to develop a Roadmap for the progressive closure of dumpsites and the effective transition towards integrated waste management in the region, as well as to promote the development of technical guidelines, facilitate the strengthening of capacities and exchange of information, and raise awareness on the importance of the sound management of waste.

Achievement

(a) Uruguay cannot access to funds such as the Special Programme (UNEP)

https://www.unep.org/explore-topics/chemicals-waste/what-we-do/special-programme

(b) Or NORAD 1/2

http://www.basel.int/Implementation/Plasticwaste/Technicalassistance/Projects/BRSNorad1/tabid/8343/Default.aspx

(c) In plastics due to the OECD list https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-List-of-ODA-Recipients-for-reporting-2020-flows.pdf

US

Awareness raising campaigns related to MPL

National level

(a) EPA National Recycling Strategy

(b) EPA WasteWise

(c) Resource Conservation and Recovery Act (EPA) Voluntary Programs

i. National Recycling Strategy –The draft National Recycling Strategy was published in fall 2020 and identifies strategic objectives and actions needed to create a stronger, more resilient, and cost-effective U.S. municipal solid waste recycling system. Recycling has been a critical component of the Environmental Protection Agency's (EPA) decades-long efforts to implement the Resource Conservation and Recovery Act (RCRA) and its more recent efforts to pursue a Sustainable Materials Management (SMM) approach, which aims to reduce the environmental impacts of materials across their lifecycle. Building on the National Framework for Advancing the U.S. Recycling System and EPA's long history of providing data, tools, information and other resources to support recycling in the United States, the draft strategy identifies strategic objectives and actions needed to create a stronger, more resilient, and cost-effective U.S. municipal solid waste recycling system. The strategy, when finalized in 2021, will be aligned with and support implementation of the national recycling goals.

ii. WasteWise – EPA works with businesses, governments, and nonprofit organizations 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 and 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.

Achievement

(a) WasteWise

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 organizations were recognized 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.

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 program, WasteWise participants have prevented more than 247 million tons of waste from going to the landfill.

(b) 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."

i. More than 200 partner programs engaged nationally,
ii. Twenty trash capture projects,
iii. Sixty source reduction projects,
iv. Forty data collection projects,
v. More than thirty projects funded by various EPA competitive grant programs – such as Urban Waters Small Grants and Environmental Justice Small Grants.
vi. Twenty-five of the twenty-eight National Estuary Programs have developed Trash Free Waters Projects.
vii. Two of the EPA Geographic Programs have recently announced funding recipients for their new Trash Free Waters grants. In order to allow participants additional time to provide data and information due to the Coronavirus pandemic, EPA decided to postpone the 2020 WasteWise award announcement. In November 2021, EPA will recognize achievements of WasteWise participants for both 2020 and 2021.

(c) Marine Debris Act

Development of public awareness materials and social media platforms for sharing information to increase awareness and drive behavioral change to reduce the amount and impacts of marine debris.

International / Regional level

(a) NOAA International Marine Debris Conference (IMDC) Series

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

EU

Education system for encouraging public awareness on MPL issues

(a) Network of European Blue Schools

The Network of European Blue Schools is an initiative of EU4Ocean, the European Ocean Coalition that connects diverse organisations, projects and people contributing to ocean literacy and the sustainable management of the ocean. EU4Ocean is the place where new ideas and joint actions come to life to make a bigger change. Supported by the European Commission, this bottom-up inclusive initiative aims at uniting the voices of Europeans to make the ocean a concern of everyone.

This Network of European Blue Schools aims to inspire teacher, school director or staff of education services, to challenge their students, from kindergarten, primary, lower and upper secondary, technical or vocational schools, to develop a “Find the blue” project that links them to the ocean or the sea. By successfully completing the project and sharing its results, schools will receive the European Blue School label.

Awareness raising campaigns related to MPL

National level

(a) The European Commission launched an awareness raising campaign to highlight the role of citizens in combatting plastic pollution and marine litter. 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. 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

URL:

https://ec.europa.eu/info/news/single-use-plastics-are-you-readytochange-2018-jun-05_en

https://europa.eu/rapid/press-release_IP-18-6203_en.htm

International Organisations and NGOs

ADB

Awareness raising

(a) The project will design all knowledge products to raise awareness of and facilitate cooperation on marine pollution as well as provide recommendations and guides to transition to a circular economy (eliminate, innovate and circulate). This will incorporate country-specific recommendations through case studies and country focused workshops as well as regional recommendations including enabling environments and opportunities through regional cooperation.

(b) Knowledge desk research and stakeholder consultations identified the following thematic knowledge priorities in line with country demands and areas where the project can add value:

- Digital Technology Solutions (through knowledge products and knowledge sharing and capacity building events)
- Finance Solutions (through knowledge products and knowledge sharing and capacity building events)
- Green Jobs and Business Development (through knowledge sharing and capacity building events)
- Policy Advisory (through knowledge sharing and capacity building events) on: Circular Economy; Recycling and Waste Management; and Fiscal Reform.

(c) The project will lead in the development and implementation of the following events:

- Healthy Oceans Technology and Innovation Forum: This international forum will be held to share the latest science, technology and innovation, as well as current trends, successes and challenges for meaningful impacts on ocean health including a focus on a circular plastics economy to reduce marine pollution.
- Regional workshop/conference on circular plastics business opportunities
- Regional Circular Economy Finance Conference
- Workshops and stakeholder consultations for policy development in Thailand
- Viet Nam Forum for Circular Plastics Packaging
- Community workshops for Viet Nam and Indonesia pilot projects
- Stakeholder Workshops and Capacity Development Activities for City Action Plan Preparation for Indonesia, Philippines, Thailand, and Viet Nam
- Partner knowledge sharing webinar series
- Green/Blue Finance Forums and Roundtables

(d) The project will also lead in the development of the following knowledge products in Indonesia:

- Technical report on market analysis of plastics value chain
- Report on the role of small and medium enterprises (SMEs) in the transition to a circular economy as input to the National Circular Economy Strategy and Roadmap in Indonesia
- White paper on Extended Producer Responsibility (EPR) implementation and recommendations for enabling policy actions
- Case studies on circular economy financing models for Indonesian cities/regencies
- Green jobs toolkit on how to create 'decent' (safe, fair, dignified) jobs in inclusive circular economy investments

(e) Study on current spending and investment landscape and opportunities for circular economy projects

- Study on the business case, issues, and solutions for reducing plastic pollution and promoting circular and green business practices, goods, and services in the tourism sector
- Report on the business case and recommendations for governance measures, instruments and fiscal incentives that promote gender and socially inclusive integrated solid waste management investments and action-led responses for a circular economy
- Assessment methodology for green jobs in the waste sector and circular plastics economy
- Successful business models for a circular plastics economy in Indonesia and Southeast Asia
- Baseline analysis report of the circular economy at city level
- Awareness raising and training materials

ASEAN

Education system creation

(a) ASEAN-Japan Centre (AJC) FY2021 Marine Plastic Programme - Hiroshima ASEAN Eco School (upcoming)

Awareness raising

(a) ASEAN Plus Three Youth Environment Forum (AYEF) 2019: “Clean up Our Sea, Change Our Future”, September 2019, Phuket, Thailand (Completed)

(b) Public Forum – ASEAN on Point: How Policies can Support the Private Sector in Combatting Marine Plastic Debris (completed)

(c) ASEAN-Norwegian Cooperation Project on Regional Capacity Building for Reducing Plastic Pollution (ASEANO) (ongoing)

(d) ASEAN-Germany Project on Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs (3RproMar) (ongoing)

ERIA

Awareness raising

(a) One of the goals of ERIA’s RKC-MPD is to raise awareness surrounding marine plastic debris in ASEAN+3 region through its activities.

ERIA’s RKC-MPD has attended, organized or co-organized 29 seminars, 10 workshops, 8 dialogues, and 1 conference since its establishment to discuss marine plastic debris in ASEAN+3 region. Through the presentations given by the RKC-MPD at public events, over 1,400 people including policy makers, were informed of the issues of marine plastics.

IAEA

Awareness raising

(a) NUTEC Plastics Roundtables; Partnership with GPAP, ASEAN, UNEP, ESCAP, etc.

The IAEA brings added value to existing partnerships addressing the global plastic challenge by providing accurate assessment of the abundance and impact of marine plastics, to inform environmental policy making and management decisions; and by offering novel plastic recycling options through radiation technologies to complement conventional methods. The IAEA has stepped up its engagement with relevant partners to increase the awareness of the unique advantages of nuclear technologies for addressing plastic pollution and to seek partnerships to accelerate the transition to a circular plastic economy. To this end, the IAEA is holding a series of virtual Roundtables on “Atoms Contributing to the Search for Solutions to Plastic Pollution”. The first was held for the Asia and Pacific Region on 18 May 2021, where presentations and discussions by experts and representatives from IAEA Member States focused on innovative nuclear solutions to plastic pollution. The next Roundtables are scheduled for in the 3rd and 4th quarters of 2021, for the Americas, European and African regions. Formal collaborative agreements will continually be established with relevant organizations for synergies, cooperative and convergent work particularly under the implementation framework of the Osaka Blue Ocean Vision, the ASEAN Bangkok Declaration on Combating Marine Debris in ASEAN Region, the Regional Seas Conventions and Programmes through IOC-UNESCO, UNEP and other organizations. IAEA already became an affiliate member of the Global Plastic Action Partnership (GPAP) to jointly address the global plastic waste issue in a coordinated and strategic manner.

Ocean Conservancy

Awareness raising

(a) U.S. Recycling

Publicly advocated for federal policies to combat plastic waste and ocean plastic pollution, including the Save Our Seas 2.0 Act (signed into law, December 2020) and the Break Free from Plastic Pollution Act

Data: Save Our Seas 2.0 calls for numerous reports to guide the U.S. Congress in improving recycling and the creation of a Marine Debris Foundation.

(b) SPLASH (Strategic Litter Abatement in the Song Hong)

Together with installing the trash capture devices along the Red River, local communication activities will be conducted to improve awareness about the sources and the solutions to plastic pollution.

UNEP

Education system creation

(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). 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 is available for enrollment in 10 languages (Arabic, Chinese, English, French, Indonesian, Portuguese, Russian, Spanish, Thai and Vietnamese). Some 9,636 participants registered for the MOOC to date.

(b) On World Ocean Day 2021, UNEP and Coordinating Body on the Seas of East Asia (COBSEA) partnered with the Economic and Social Commission for Asia and the Pacific (ESCAP) to launch an e-learning course, Cities and marine plastic pollution: Building a Circular Economy. UNEP and COBSEA contributed to Module 6 on 'Engaging Stakeholders to Reduce Plastic Pollution' and chapter 4.6 on 'Marine Litter Monitoring and Assessment' building on the UNEP Massive Open Online Course (MOOC) on Marine Litter and experience from both the SEA circular project supported by the Government of Sweden and the CounterMEASURE project supported by the Government of Japan. As of 18 June, 291 participants – from Government, Private Sector or Academia - start the course. 63% of participants from the Asia region, the majority from South and South-East Asia sub-regions. India and Thailand had highest individual country uptakes. Good global representation with participants from all UN sub-regions and 70 countries including Malaysia, Indonesia, China, Japan, Kazakhstan, Iraq, Qatar, Nigeria, Kenya, Ghana, Peru, Mexico, Madagascar and many more.

URL: https://www.unescap.org/projects/ctl/elearning

Awareness raising

(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 63 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 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. In India, the Programme is in its third phase and has, since 2019, reached out to nearly 300,000 youth. In this phase, it will engage with the eco-club network of the government to further enhance the reach of the challenge.

URL: https://www.unep.org/explore-topics/education-environment/what-we-do/tide-turners-plastic-challenge-badge

(b) UNEP and COBSEA held the SEA of Solutions 2020 successfully in November 2020 as a hybrid event, enabling exchange across 750 participants from 55 countries and more than 300 organizations through a virtual platform and with another 120 participants connected through a physical hub in Hanoi, Viet Nam. Government ministers from 10 countries in Southeast Asia addressed the high-level session. Malaysia will host the SEA of Solution 2021.

(c) Under the India-Norway Marine Pollution Initiative, UNEP is supporting a public awareness campaign on Single Use Plastics led by the Ministry of Environment, Forest and Climate Change, Government of India. The campaign was launched on 8th June 2021, World Oceans Day by India's Environment Minister, in collaboration with GIZ, and Federation of Indian Chambers of Commerce and Industry (FICCI) with the aim to create awareness on the usage single-use plastics and engage with key stakeholders on plastic waste management in the country. The launch event had over 50,000 registrations, covered by 34 media platforms that have a reach of more than 25 billion offline/online readership.

(d) Outreach on Source-to-Sea approach and role of rivers in plastic pollution is actively carried out by UNEP through the Japan funded CounterMEASURE II project using social media, partner websites, and press releases. For example, the collaboration with Google, Asian Institute of Technology and UNEP was shared widely (with a reach of over 118,000). The National Geographic featured in their story, highlighting the importance of fighting plastic pollution in freshwater bodies, such as the Ganges and the Mekong, to reduce marine plastic litter. Articles are regularly published in leading newspapers of India. Four articles highlighting the issue of single-use plastics have been published have reached an audience of approximately 321,800 offline and online.

URL:
http://www.nationalgeographic.com/environment/article/plastic-gets-to-oceans-through-over-1000-rivers

UNIDO

Awareness raising

All UNIDO projects promoting plastic circular economy have awareness raising components.

WB

Awareness raising

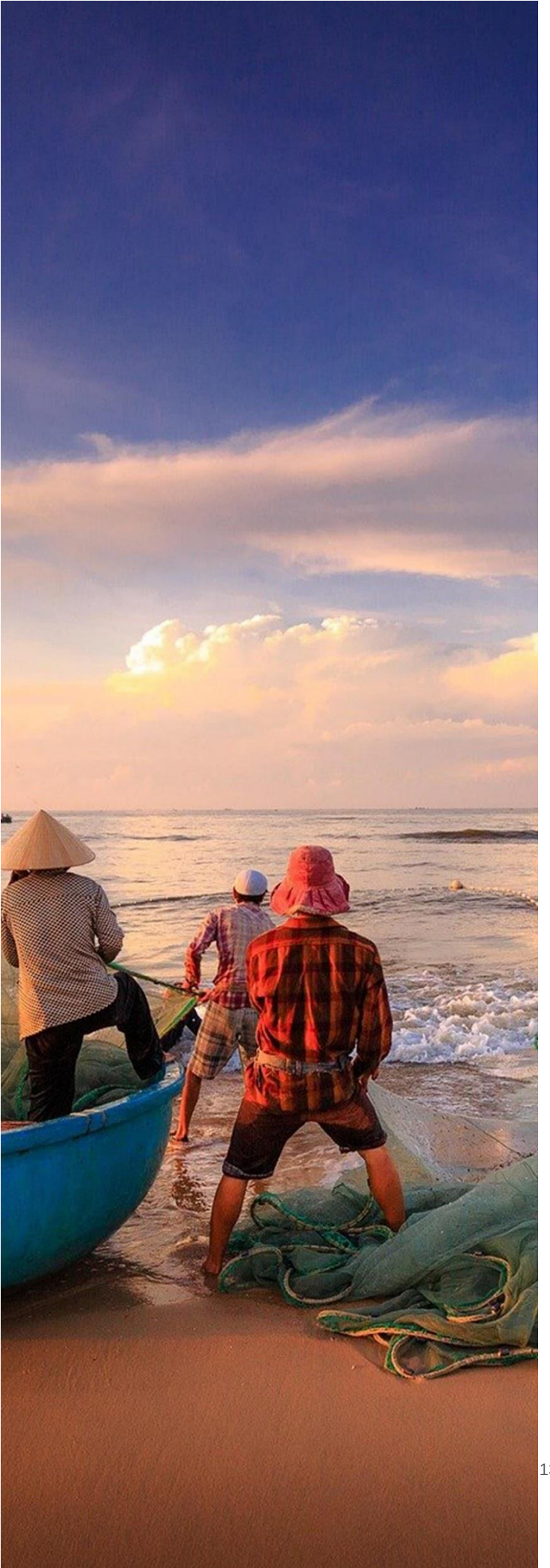
The World Bank support to countries systematically includes a component on multistakeholder mapping and engagement with relevant actors, awareness raising, communications campaigns.

WEF GPAP

Awareness raising

(a) Leveraging the World Economic Forum's event and media platform, as well as its multistakeholder approach, GPAP can raise awareness among governments, businesses and other decision-makers about plastic pollution and key solutions areas.

(b) Numerical data - Most recent year (2020-21):
   i. Hosted 32 multistakeholder events with 1,910 participants and 206,500 livestream views
   ii. 17 blogs, op-eds and thought leadership publications earning 87,397 impressions



3.6. Monitoring & Scientific Research on Marine Plastic Litter

It was seen that 26 countries encouraged monitoring / scientific research on plastic flows and ocean surface microplastics, and 22 countries are engaged in international/regional level platforms to encourage monitoring / scientific research on plastic flows and ocean surface microplastics. However, international engagement and scientific research actions are reported by more developed countries.

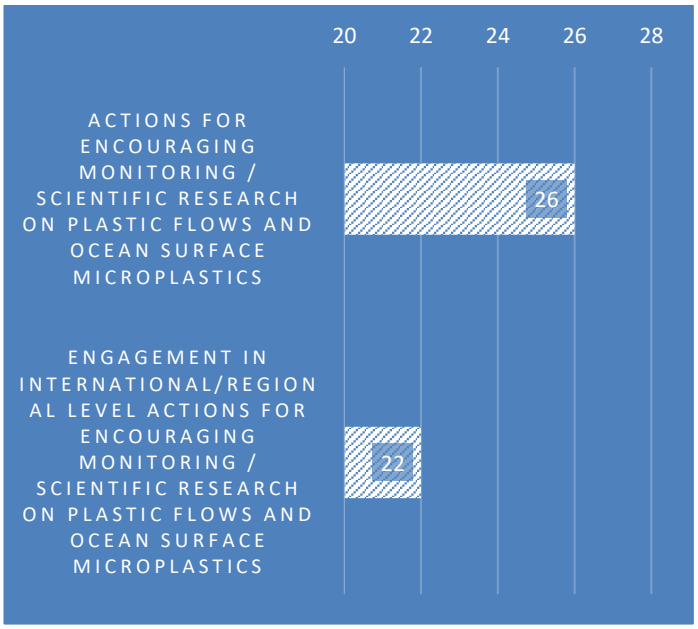


Figure 10: Countries - Monitoring & Scientific Research on Marine Plastic Litter*

*Number of countries responded YES among 41 responses

Countries

Australia

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) 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:

National Waste Report 2020:

https://www.environment.gov.au/protection/waste/national-waste-reports/2020#:~:text=The%20National%20Waste%20Report%202020%20report%3A%20provides%20data,for%20earlier%20years%20with%20better%20data%20now%20available.

(b) Other research

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.

(c) National Environment Science Program

The Australian Government has invested AU$149 million in the second phase of the National Environment Science Program to establish four new multidisciplinary and applied research hubs, including a Marine and Coastal Hub and a Sustainable Communities and Waste Hub. The program provides evidence for the design, delivery and on-ground outcomes for environmental programs, helps decision-makers build resilience and supports positive environmental, social and economic outcomes, including in relation to plastic flows and ocean surface microplastics.

(d) National plastics pollution monitoring protocol and database

The National Waste Policy Action Plan includes a number of actions under Target 7 to make comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions. More information is available at: https://www.environment.gov.au/protection/waste/publications/national-waste-policy-action-plan

Australia's 2021 National Plastics Plan includes a commitment for the Australian Government to partner with organisations to establish a national monitoring protocol and database for plastics pollution (currently in the early stages of development).

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Regional engagement

Under the Australian Government's AU$167 million Australian Recycling Investment Plan, AU$16 million has been committed 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 refuse, reduce and replace single-use plastics, such as plastic bags, cutlery, food containers and drink bottles, which make up much of the plastic waste in inshore waters and beaches in the Pacific region.

(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. Australia is also pursuing improved coordinated global action to address marine plastic pollution including through discussions towards a new global agreement at the United Nations Environment Assembly.

Achievements

Not any particular trend yet - Programs are commencing with monitoring and evaluation. It is too early to determine a trend.

Bangladesh

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Marine litter is now an important issue at national, regional and international level. To know the status of marine litter, Bangladesh has formulated a Country Report on marine litter status with the help of South Asia Co-operative Environment Program (SACEP) in 2018.

(b) A study report on ‘‘Sustainable Management of Plastic to leverage Circular Economy and Achieve SDGs in Bangladesh” has been formulated with the help of World Bank (WB). The primary objective of this study is to build an integrated solid waste management system for marine plastic waste reduction as well as a circular economy model for plastic in Bangladesh, using robust field sampling and stakeholder analysis. This assignment documented the current waste management system (e.g. hotspots for marine plastic debris, waste composition, and material flow of waste plastics). It also identified relevant stakeholders involved in the life cycle of plastic and their needs and potential opportunities around awareness rising. This report presents the findings of the assessment of hotspots for marine plastic debris around Dhaka, Chattogram and Cox's Bazar. For Chattogram and Cox's Bazar, a rapid survey was conducted around selected locations. For Dhaka city, the study was conducted in a detailed manner.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) For controlling plastic pollution at sea and for protecting ocean, Commonwealth Clean Oceans Alliance (CCOA) has been formed and Bangladesh has joined CCOA formally in 2019.

Canada

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Canada's comprehensive zero plastic waste agenda

(b) Canada's Plastics Science Agenda

(c) Investments in science

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:

i. Detecting plastics in the environment;
ii. Understanding and mitigating potential impacts on wildlife, human health and the environment;
iii. Advancing sustainable plastic production, recycling and recovery; and
iv. Providing the evidence needed to support decision making as we move toward a zero plastic waste future.

Canada, as per the 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 harmonized approaches; and facilitate collaborative networks to share knowledge.

The Canadian Government has invested more than $10 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

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

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Canada's comprehensive zero plastic waste agenda

(b) Participation in international science

Canada participates in international and regional initiatives to advance effective science via method development, monitoring and information exchange. Some examples of participation are provided here.

Canada is active in the Arctic Council efforts tackling plastic pollution. Canada is working with international partners to coordinate research and monitoring on litter and microplastics through the Arctic Monitoring and Assessment Programme (AMAP). This includes producing internationally supported reviews and recommendations for monitoring plastics in 11 environmental compartments to assess fate and transport of plastic pollution. Canada also works on the Conservation of Arctic Flora and Fauna (CAFF) international team to assess what bird species in the Arctic can be used to track and assess plastic pollution, including seabirds and shorebirds as focal groups that feed specifically at the waters surface in many regions of the world. Through the Protection of the Arctic Marine Environment (PAME) working group, Canada participated in the desktop study on marine litter, including microplastics.

In addition, through the North Pacific Marine Science Organization (PICES), Canada is working with partners in the North Pacific on assessing potential indicators for the North Pacific region through a rubric exercise. This work will review the need for bioindicators to track plastic in marine food webs over time, identify baselines and targets, and determine if mitigation targets will be met in the future.

Achievement

Positive improvement - The value of investments and engagement has increased since 2018.

Chile

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Chile has sponsored various scientific activities (international workshops, scientific projects, etc.) to develop research on marine debris and its impacts on the environment, fishing, aquaculture and tourism.

Achievement

Positive improvement

China

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) National Marine Litter and Microplastics Monitoring Programme

The routine monitoring of China's national marine litter has been under way since 2007, covering beach, seawater, and seafloor litters. The routine monitoring of floating microplastics in coastal waters has been going on since 2016. The monitoring results have been published in Bulletin of Marine Ecological and Environmental Status of China every year.

(b) Scientific Research on Monitoring and Ecological Effect Assessment of Marine Microplastics

The number of Chinese academic papers on microplastics as of 2015 accounted for 17% of the world's total. The National Key Research & Development Program-Marine Microplastics Monitoring and Ecological Environmental Effect Assessment Technology Research was launched by the Ministry of Science and Technology in 2016, focusing on marine microplastics pollution monitoring, source analysis, ecological effects, and source control.

Achievement

Positive improvement

Fiji

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Research in this area has been ongoing with few academics publishing their results.

The Ministry of Environment is working with the Regional partners such as SPREP and NGOs (Local and International) to address waste management related issues. The Ministry has been working with JICA has been implementing many programs with JICA.

The Ministry established its thought leadership through putting together a waste management Think tank for Fiji. The group consisted of individuals and organisations from research, academia, private sector, NGO/CSO and other government agencies.

Achievements

Positive improvement

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Fiji is working through regional organizations and national academic institutions.

Achievement

Not any particular trend

Finland

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Plastics roadmap for Finland

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) and;

(b) Finland’s Marine Strategy

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 Marine Strategy

URL:

https://www.ymparisto.fi/en-US/Sea/Finlands_marine_strategy/Finlands_Marine_Strategy(27019)

Achievements

(a) A New Plastics Center was established as part of the implementation of the Plastics Roadmap by industry actors. The Center 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.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Cooperation with UNEA, HELCOM, the EU, Nordic countries, Group of Friends to Combat Marine Plastic Pollution (New York/Nairobi)

Finland was participating to the UNEA member states discussions on marine litter and microplastics that come to an end in 2020. Currently, the member states are discussing/preparing for the second segment of UNEA5-meeting that will be held in February 2022. 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. HELCOM coordinates marine monitoring of Baltic Sea states and develops joint monitoring also on marine litter. Cooperation within the EU on marine plastic litter and microplastics is active both under several for a, including the Marine Strategy.

Achievement

(a) Since the Nordic Environment Ministers expressed support for a global plastic agreement in 2019, Finland, together with other Nordic Countries have actively supported the the international efforts to find a global governance solution to the marine litter and microplastics challenge and advocated for a global plastic agreement.

(b) Finland is a member of the European Plastics Pact.

France

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) The Ministry of Ecology partners up with national agencies and research centers (such as ADEME and CEDRE) to lead scientific research on marine litter

(b) Actions on rivers and waste and rain water
   i. Quantify the litter carried though 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.

(c) 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.

(d) 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.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Participation in regional sea conventions for knowledge and best practices sharing and implementation of action plans;

(b) Participation in international fora, negotiations and guidelines: JRC, UNEP,, IMO, UN World Ocean Assessment II, GESAMP, European Technical Group on Marine Litter, Basel convention, Barcelone Convention, etc;

(c) Organization 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”).

Germany

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Financing of the PlasM-Project (“Microplastics in Fish”) lead by the Thünen Institute since 2017

   This research project aims to measure how much microplastic can be found in different species in various areas and how it affects their health. It also looks at methods for detection of microplastic particles and their extraction.

Achievements

(a) Positive improvemnet - Publications and further research on the risks for fish and the impact on the ecosystem by microplastic particles and fibres

   https://literatur.thuenen.de/digbib_extern/dn063193.pdf

   https://doi.org/10.1016/j.scitotenv.2021.146045

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Waste Flow Diagram

   Rapid assessment tool for quantifying plastic leakage in cities (see section 5 for more details)

Achievement

(a) Positive improvement

(b) Numerical data - Application in 50 cities planned

Indonesia

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Studies and research conducted by government agencies (e.g. Indonesian Institute of Sciences).

(b) Indonesian Institute of Sciences conducted research on microplastic in 2015-2020, resulted in journals on the topic.

(c) The Regional Capacity Center for Clean Seas (RC3S) in Bali, Indonesia. RC3S serves its purpose to contribute to the reduction and mitigation of land-based sources of marine pollution, with particular focus on nutrient, wastewater, marine litter and microplastics; which includes activities related to the optimization of technologies and innovation to monitoring marine litter and microplastics.

RC3S has conducted forum that brought experts with technologies and innovation that can be optimized to contribute to the monitoring of land-based pollution (including plastic and micro-plastic).

Achievement

Positive improvement

Italy

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Marine Strategy Framework Directive Article 11 Monitoring Programmes

Beach litter

i. Scope. Data collection on quantity, composition, trends and possible sources of marine litter present on beaches.
ii. Parameter. Number of objects per category on 100 m of beach.
iii. Method. Monitoring of transects represented by a strip of beach of 100 m. Counting and characterization of Items larger than 2.5 cm (longest side) including cigarette butts.
iv. Frequency. Twice a year
   - From 01 February to 30 April (Spring)
   - From 01 October to 31 December (Autumn).

Floating litter

i. Scope. Data collection on quantity, composition, and territorial distribution of waste in the surface layer of the water column.
ii. Parameter. Numbers of items by category per square kilometre (km^2) in the surface layer of the water column.
iii. Method. A visual census monitoring with a dedicated observer within a defined strip along the entire path of the transect of a maximum of 5 m.
iv. Frequency.
   Coastal waters: six surveys a year, every two months.
   Offshore: three / five surveys per season for each transect.

Riverine inputs of litter entering the sea

i. Scope. Data collection on floating litter entering the sea.
ii. Parameter. Within the same river, number of items (divided by category) / hour.
iii. In order to normalize the data with other rivers, the parameter becomes: number of items (divided by category) / hour / $meter^2$
iv. Method. Visual census of floating macro-litter larger than 2.5 cm to be carried out on at least half the width of the river (the observation strip) and from a height not exceeding 10 m.
v. Frequency.
   Five monitors per season (20 monitors per year).

Seafloor litter

i. Scope. Data collection on spatial distribution, type and quantity of litter in the seabed and the possible impact that it can cause to benthic organisms.
ii. Parameter.
iii. Number of items per category per km^2
iv. Spatial distribution of litter on the bottom.
v. Number of individuals of each species affected by litter.
vi. Method.
vii. Hard bottom: using ROVs along transects of known length, georeferenced high-resolution image-data (photos / videos) will be acquired and analyzed.
viii. Soft bottom: MEDITS / SOLEMON samplings with trawl nets.
ix. Frequency.
   Biennial for hard bottom.
   Annual for soft bottom.

Microlitter

i. Scope. Evaluate the abundance and composition of microlitter, in particular microplastics, present in the surface layer of the water column.
ii. Parameter. Number of micro particles per m^2 by shape and colour.
iii. Method. Use of a “manta net” (330 µm mesh) towed for 20 minutes along a linear path, with a speed between 1 and 2 knots.
iv. Frequency.
v. Coastal waters: twice a year.
vi. Offshore: once a year.

Marine litter ingested by Caretta caretta

i. Scope. Establish the quantity and composition of ingested marine litter on dead specimens of Caretta caretta analyzing the gastro intestinal contents.
ii. Parameter. F0% =% of turtles that have ingested litter on the total number of stranded specimens.
iii. (g) = amount of marine litter ingested in grams.
iv. Method. The specimens of Caretta caretta are subjected to necropsy. The analysis of litterin C. caretta is carried out in the laboratory immediately after the recovery of dead organism
v. Frequency. Based on the findings of specimens stranded throughout the year.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Marine Strategy Framework Directive

The Directive requires from Member States detailed and coordinated input. In order to facilitate this work, Member States and the European Commission have set up an informal programme of coordination, the Common Implementation Strategy (CIS).

(b) UNEP-MAP Barcelona Convention

Implementation of the Ecosystem Approach (EcAp) in the Mediterranean by the Contracting parties in the context of the Barcelona Convention for the Protection of the Marine Environment and the Coastal region of the Mediterranean and its Protocols.

(c) The GESAMP WG 23 is headed 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

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Harmonization of Microplastics Monitoring Methodologies in the Ocean

Taking the lead on international harmonization of monitoring methods. In June 2020, the guidelines for harmonizing monitoring methods were revised to make them easier to use for developing countries

"Guidelines for Harmonizing Ocean Surface Microplastic Monitoring Methods"

http://www.env.go.jp/en/water/marine_litter/guidelines/guidelines.pdf

(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) Positive improvement

(b) Numerical data

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

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Data hub of monitoring data on floating micorplastics

Taking the lead on international compilation of ocean surface microplastic monitoring data.

MOEJ organized the "G20 workshop on harmonized monitoring and data compilation of marine plastic litter" in September 2020, and based on the Workshop results, started discussions and consultations with national and international experts to develop a data sharing system for ocean surface microplastics.

Achievement

(a) Positive improvement

(b) Numerical data - Participants of the "G20 workshop on harmonized monitoring and data compilation of marine plastic litter" was about 160 people from 31 countries

(Reference)

Workshop website

https://g20mpl.org/archives/893

Maldives

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Development of a microplastic testing lab in MMRI (Maldives Marine Research Institute)

Currently, with the help of UK government, under the CLiP (Commonwealth litter program) project, there is a development of microplastic lab in MMRI. This is great opportunity for Maldives to explore and improve research areas related to marine plastic pollution.

Achievement

Not any particular trend

Myanmar

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Pilot scientific field surveys on abundant plastic items leaking into the environment

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.

(b) A study conducted by the Fridtjof Nansen research vessel

A study conducted by the Fridtjof Nansen research vessel recently found that micro-plastic 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.

(c) Plastic survey in Ayeyarwaddy river

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 wastes enter the Ayeyarwady River every day. The upper and lower Ayeyarwady regions contribute 90 tons of plastic pollution per day and Yangon, Myanmar's capital, add 29 tons a day. The majority of plastic found in the river is likely to be mismanaged plastic waste.

Achievements

(a) Based on these survey result, plastics policy options and a roadmap (draft) have been developed.

(b) Numerical data

The top 10 most abundant plastic items leaking into the environment in Myanmar are as follows;

i.	Small plastic bags andpcs	30.8%
ii.	Crisp and sweet packages	17.7%
iii.	String & cord (less than 1cm)	10.5%
iv.	Styrofoam (food and other)	7.6%
v.	Plastic pieces< 50cm	4.2%
vi.	Straw cutlery, tray	1.3%
vii.	Medical waste	1.3%
viii.	Caps/Lids	1.2%
ix.	Furnishings	1.2%
x.	Fertilizer Bags	0.9%

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) The Ministry of Environment Japan supported Myanmar in training of monitoring methods for floating litter and floating microplastics training based on the 3rd Myanmar-Japan Policy Dialogue on Environmental issues.

Netherlands

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Monitoring of microplastics in rivers, as part of the microplastics program.

(b) Monitoring of microplastics in the ocean, as part of OSPAR.

For microplastics in rivers, Rijkswaterstaat is developing a monitoring system.

Others

(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 working group and for example through the funding and lauch of a special capsule at the island of Texel, coordinated by Wageningen University & Research. The live position of this *'Plastic in a Bottle*' capsule can be tracked online and shows the route that plastic waste may travel once it enters the North Sea. In March 2021 the NL Arctic Ambassador gave a keynote speech on the importance of combatting marine litter e.g. by transitioning to a circular economy at the Arctic Council's *International Symposium on Plastics in the Arctic and sub-Arctic Region*.

New Zealand

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Monitoring of remediation opportunities in the Pacific

Achievements

Not any particular trend

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Participating in global discussions on tackling plastic pollution. Implemented new requirements under the Basel convention. Ongoing engagement with Australia's federal government on waste-related issues, including exploring infrastructure support for Pacific Island countries to manage their waste.

New Zealand supports discussions towards a global agreement to tackle plastic pollution. We are working with Australia on future international engagements to seek alignment on policy positions and pursue better regional outcomes in the long term.

(b) New Zealand has work underway to collaborate with Australia on data collection on waste and material flows.

Collaboration with Australia on data will be in the following areas:

i. Data collection audits
ii. Investigating commercial confidentiality needs of waste operators
iii. Identifying connections between data and policy workstreams
iv. Improving the accessibility of waste data
v. Improving waste material flows

Achievements

Not any particular trend

Norway

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) The National Monitoring Program for Microplastics was established in 2021

The monitoring program measures levels and types of microplastic particles in Norwegian water bodies according to guidelines given by international expert groups such as GESAMP (The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection) that provide advice to the UN and AMAP (Arctic Monitoring and Assessment Programme) a working group of the Arctic Council. Data will be made available through IECES (International Education and Credential Evaluation Services) Dome.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Update of the regional action plan of marine litter under OSPAR for 2022-

(b) Collaboration between Norway and Russia report on the status and recommendation on marine litter and microplastics in the Barents Sea

Norway is actively engaged in relevant processes under EU, OSPAR, Nordic Cooperation and the Arctic Council.

Oman

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Published papers in 2004 to quantify and identify MPL

(b) Published paper in 2019 to quantify and identify MPL in WET LAND of Oman

(c) Published papers entitled Shore litter along sandy beaches of the Gulf of Oman by (Claereboudt MR.,2004)

(d) Published paper entitled Fishing gear dominates marine litter in the Wetlands Reserve in Al Wusta Governorate, Oman (van Hoytema, et al., 2020)

(e) Conferences, webinars and other events hold by Sultan Qaboos university attended by experts from oversea to share information and methodologies to study marine litters and microplastics

Achievements

Positive improvement - A lot of papers targeting studying MPLs in Oman will be published later on by Sultan Qaboos University (SQU).

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Participating with UNEP to have standardized framework and guideline to reduce the plastic litters from the ocean

Oman was participating to the UNEA member states discussions on marine litter and microplastics that come to an end in 2020. The meetings still continuous via online due to the current situation of COVID-19, next meeting will be in February 2022.

Pakistan

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Planned under the PLEASE Project in collaboration with World Bank

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) PLEASE Project in collaboration with World Bank, SACEP and Parley for the Oceans

Panama

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Project FID16-044 called: "Analytical determination of microplastic in water and sediments.

Project led by the Center for Hydraulic and Hydrotechnical Research (CIHH), of the Technological University of Panama (UTP).

Finances the National Secretariat of Science and Technology and Innovation (SENACYT), its objective is to determine the presence of microplastics as a point source of contamination in water and sediments and to establish measurable indicators for their quantity and origin, which allow managing actions of a normative type and achieve a decrease in its entry into the sea through surface waters.

Philippines

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Coastal Resources and Ecotourism Research, Development, and Extension Center (CRERDEC) Project

ERDB, which is the principal research and development (R&D) unit of the DENR, has been conducting a study since 2018 to determine the extent of microplastic waste and contamination in the selected major water bodies of the Philippines. The objective is to determine the extent of microplastic pollution in Philippine marine waters, water samples were collected at shorelines at less than 1 meter, and at the subsurface about 5, 15 and 30 meters below and 1.5 and 3 km from the shoreline. At the laboratory, samples were subjected to filtration and microscopic analysis. Initial findings from the nine study sites, collecting more than 50,000 pieces of microplastics.

Achievement

We are yet to see improvement and have to find ways to act on this. However, we find this study very good and should be replicated in other water bodies.

Republic of Korea

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) National Marine Litter Monitoring Program

To understand the pollution level of marine litter in the seaside and elucidating the origin of it, MOF has been conducting National Marine Litter Monitoring program at 40 spots since 2008.

(b) Microplastic distribution monitoring research

From 2021, MOF conducts microplastic monitoring research to evaluate the pollution level of microplastic in the marine environment. The research is carried out with 4 target subjects; sea surface, seaside, marine biota and marine sediment.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Strengthening and Improvement for Marine Litter response in Indonesia

"Strengthening and Improvement for Marine Litter response in Indonesia" project aims to enhance the marine litter monitoring capacity of Indonesia through a joint pilot marine litter monitoring conducted in Labuan Bajo, Indonesia. Through this project, MOF is also working with the Indonesian government to establish a guideline to properly conduct marine litter monitoring in Indonesia through.

Achievements

Positive improvement

Samoa

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

Achievements

Not any particular trend - Monitoring including law enforcement ongoing. But more needs to be done. The implementation of Samoa's Ocean Strategy will see more attention given to scientific research on ocean and microplastics.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

Achievement

Not any particular trend - Need stronger engagement to build capacity in monitoring and to undertake scientific research on plastic flows and ocean surface micro-plastics.

Saudi Arabia

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) National action plan for sustainable management of Marine Litter in the Red Sea coast of Kingdom of Saudi Arabia

Expand the number of beaches along the Red Sea coast of Saudi Arabia where marine litter baseline has been established.

Regularly (1-2 years) re-survey beaches that have baseline data. Encourage and support local marine institutes and universities to undertake research to determine the social and economic impacts of marine litter in the Red Sea region of Saudi Arabia.

Encourage and support local marine institutes and universities to conduct research on protective and regulatory measures for protecting the coastal and marine environments from litter arising from urban or rural areas.

Engagement in international/regional level actions for encouraging monitoring/scientific research on plastic flows and ocean surface microplastics

(a) PERSIGA

PERSGA together with support from the World Bank is implementing the GEF fund- ed project “Strategic Ecosystem Based Management of the Red Sea and Gulf of Aden”.

The SEM Project focuses on improving management of marine resources in the Red Sea and Gulf of Aden through building on resource protection, incentive systems for communities and harmonization of the knowledge base of marine resources between PERSGA member countries. These outcomes will be achieved through the provision of technical assistance for selected MPAs, including awareness of participatory approach in using marine resources applying Ecosystem Based Management principles.

Singapore

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(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 was done 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

A marine debris research project was done by Singapore’s National Parks Board (NParks) and the National University of Singapore (NUS). The study, which started in 2016, provided baseline data on marine debris on Singapore's shores.

(c) The National Research Foundation (NRF), in collaboration with UK's Natural Environment research Council (NERC), is funding a 3-year regional programme titled "understanding the Impacts of Plastic Pollution on Marine Ecosystems in South East Asia", from 2020-2023.

Achievements

Positive improvement

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Regional Training Programmes

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) Capacity Building Assistance

Organising capacity building and sharing with 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 onset of the Singapore-IMO TCTP, Singapore has provided technical sharing with over 2,100 participants from over 90 countries, from Africa, the Americas, Asia, Caribbean, Eastern Europe, Middle-East and the Pacific Islands.

(c) Adoption of regional frameworks addressing marine debris

(d) Active participation at regional marine litter initiatives.

i. 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.

ii. 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.

iii. Adoption of the ASEAN Regional Action Plan (RAP) on Combating Marine Debris, alongside other ASEAN member states, outlining regional initiatives that will enhance the region's capacities to address marine debris pollution through both upstream and downstream measures.

iv. 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).

Achievement

Positive improvement

Sri Lanka

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

Achievements

Positive improvement - Material flow analysis will be done in the project on "Marine litter and microplastics: Promoting the environmentally sound management of plastic wastes and achieving the prevention and minimization of the generation of plastic wastes".

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

Achievements

Positive improvement - Presented a "resolution" on plastic waste to UNEA 4.

Thailand

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Monitoring on microplastics in surface seawater

To conduct survey and monitor the microplastic in surface seawater in Thai waters.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Sharing methodologies and knowledge at participated international and regional meetings

Sharing data, methodologies and experiences among the ASEAN member States participated countries

Achievements

Positive improvement - To get the baseline data of microplastic in marine ecosystem

Turkey

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) "Integrated Marine Pollution Monitoring Programme (IMPM)" in other words National Marine Monitoring Programme.

Ministry of Environment and Urbanization (MEU) has implemented "Integrated Marine Pollution Monitoring Programme (IMPM)" in order to monitor the quality and pollution of marine environment and coasts of Turkey- Aegean Sea, Black Sea, Mediterranean Sea and Marmara Sea- which provides the basis for national marine and coastal management policy and strategies

Achievements

Positive improvement - new marine litter monitoring parameters/indicators have been added to the National Marine Monitoring Programme.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) "Integrated Marine Pollution Monitoring Programme (IMPM)" in other words National Marine Monitoring Programme.

The programme is complying with the the national legislation, Regional Marine Conventions (Bucharest and Barcelona Conventions), and EU directives (MSFD and WFD).

UK

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) The UK water industry has been working to reduce the amount of litter entering the environment from sewage and waste water systems through extensive investment measures to improve coastal sewage treatment works and collecting systems, including adding screening to and/or reducing volumes from overflows to limit polluting events. In addition, campaigns by water companies to educate the public and businesses on items and material that should not be disposed of in sewers, avoiding blockage and reducing items that might otherwise pass through sewers and treatment processes. Measures to address pollution from surface water runoff and drainage are also likely to reduce litter entering rivers and other water bodies.

(b) Current monitoring for the UK Marine Strategy

i. Seafloor litter bycatch data is recorded during fisheries surveys, providing a spatial coverage of benthic macro-litter.
ii. Floating litter washed ashore is monitored by beach litter surveys for macroplastic, surveyed quarterly from around the UK mainland.
iii. An indicator for assessing the prevalence of microplastics in sediments is under development, with the expectation that sediment grain size can be included.

(c) Recent and ongoing research:

i. A fishing gear inventory for England, and knowledge on the economics and process of recycling end-of-life fishing gear to allow an informed assessment of the impacts of an Extended Producer Responsibility scheme.
ii. Defining and evaluating the pathways of terrestrial litter to the marine environment - evidence review.

(d) Currently funded relevant UK government research includes:

i. Bio-Plastic-Risk - Investigation of Biodegradable plastics as an environmental pollutant in terrestrial and marine environments.
ii. Tyre-Loss – Investigation into the prevalence and impact of tyre-wear particles in the marine environment.
iii. MINIMISE - Current and future effects of microplastics on marine ecosystems.

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic)

The UK monitors surface litter in the Greater North Sea by recording the volume and type of plastics found in the stomachs of the Northern Fulmar seabird. This data is reported to OSPAR to contribute to the monitoring of surface litter in the North Atlantic Maritime area.

(b) Commonwealth Litter Programme (CLiP)

Over three years, CLiP has focused on knowledge sharing and capacity building and has supported countries to develop marine litter action plans, establish microplastic laboratories, and create and disseminate school and community education packs to raise awareness around plastic pollution. So far, generation of evidence through CLiP has directly contributed to change in legislation in Belize and Vanuatu to ban use of certain single use plastic items.

Uruguay

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) Sampling in coastal beaches of Maldonado and Rocha

(b) Sampling of Maldonado stream

(c) Sampling of microplastics on beaches including analysis of polymers and pollutants

http://dx.doi.org/10.1016/j.envpol.2016.08.041

https://doi.org/10.1016/j.scitotenv.2020.137734

(d) Sampling of microplastics transported by the Maldonado stream

Member of REMARCO:

https://remarco.org/remarco/

Achievements

National actions are done as international funds are obtained; there is not a specific budget line from the government to encouraging research in this area.

US

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) NOAA Marine Debris Monitoring and Assessment Program

NOAA implements its Marine Debris Monitoring and Assessment Program (MDMAP), a citizen science initiative that engages partner organizations 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.

i. 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/publications-files/MDMAP_Shoreline_Survey_Guide_2021.pdf

ii. 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: https://mdmap.orr.noaa.gov/login

Achievement

Not any particular trend

Engagement in international/regional level actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) APEC Marine Debris Shoreline Monitoring Decision Framework

The Department of State and NOAA are leading a project in the APEC region to develop tool to assist in the shoreline monitoring of marine debris in the Asia Pacific Region. This project will develop a decision framework that helps non-technical audiences select the most appropriate shoreline marine debris monitoring protocol.

Others

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

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 analyzes MSW trends in generation and management, materials and products, and economic indicators affecting MSW. The most recent Facts and Figures report contains data through calendar year 2017.

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) Department of Energy Plastics Innovation Challenge

The Plastics Innovations Challenge will focus resources from across the U.S. Department of Energy to create a comprehensive program to accelerate innovations that will dramatically reduce plastic waste in oceans and landfills and position the U.S as global leaders in advanced plastics recycling technologies and in the manufacture of new plastics that are recyclable by design. The Plastics Innovation Challenge will draw on both fundamental and applied research capabilities within National Labs, universities and industry. Using a coordinated suite of funding opportunities, critical partnerships, and other programs, the Plastics Innovation Challenge sets the following 5 goals for the United States to reach by 2030:

i. Develop collection technologies to prevent plastics from entering waterways or facilitate its removal.
ii. Develop biological and chemical methods for deconstructing plastic wastes into useful chemicals.
iii. Develop technologies to upcycle waste chemical streams into higher value products, encouraging increased recycling.
iv. Develop new plastics that are recyclable by design and can be scaled for domestic manufacturability
v. Support a domestic plastics upcycling supply chain by helping companies scale and deploy new technologies in domestic and global markets.

Achievements

(a) Clean Water Act

i. Waste Management and Inclusive Capacity Building- Trash Free Waters
ii. In US Federal fiscal years FY19-20, the Trash Free Waters program has verified 100 waterbodies cleaner from trash from efforts related to program activity.

iii. 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

iv. 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

i. Development of technical papers summarizing the state of the science on several marine debris-related topics.

ii. Development of Marine Debris Monitoring Shoreline Protocols and media for protocol training.

iii. Funding a number of research projects to examine the fate, transport, and impacts of marine debris in partnership with academic universities.

EU

Actions for encouraging monitoring / scientific research on plastic flows and ocean surface microplastics

(a) EU Research and Innovation

Through the EU Research and Innovation Programmes 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/
- ResponSeable: https://www.responseable.eu/
- EUROqCHARM: https://cordis.europa.eu/project/id/101003805
- SEALIVE, Bio-Plastics Europe, MAELSTROM, In-No-Plastic, and LABPLAS.

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/
- NetTag: http://net-tag.eu
- BLUENET: https://www.bluenetproject.eu/
- OCEANETS: http://oceanets.eu/

Engagement in international/regional level actions for encouraging monitoring/scientific research on plastic flows and ocean surface microplastics

(a) 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;

(b) 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.

(c) The EU finances projects in its neighbourhood that provide technical assistance to stakeholders, and promotes regional cooperation (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).

(d) 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 EU is signatory of the Barcelona Convention for the Protection of the Marine environment and Coastal Region of the Mediterranean.

(e) The EU Member States are also required to have dedicated monitoring programmes in their marine strategies under the Marine Strategy Framework Directive (Directive 2008/56/EC) to cover marine litter, including plastics and micro plastics. This is further specified in Decision 2017/848/EU).

International Organisations and NGOs

ADB

Monitoring of country policy status related to MPL

(a) The project will support the passing of national policies in Thailand for waste management, and city action plans to develop and/or strengthen local policies in Indonesia, Philippines, and Viet Nam.

ASEAN

Monitoring of plastic flows and ocean surface microplastic

(a) ASEAN-Norwegian Cooperation Project on Regional Capacity Building for Reducing Plastic Pollution (ASEANO) (ongoing)

Monitoring of country policy status related to MPL

(a) ASEAN-EU Gap Analysis on Circular Economy and Plastics (completed)

https://environment.asean.org/wp-content/uploads/2020/02/Circular-Economy-gap-analysis-final.pdf

(b) Regional Knowledge Center for Marine Plastic Debris (under ASEAN Plus Three cooperation) hosted by ERIA (https://rkcmpd-eria.org/)

Scientific research

(a) ASEAN-Norwegian Cooperation Project on Regional Capacity Building for Reducing Plastic Pollution (ASEANO) (ongoing)

Others

(a) Phuket Conference on Reducing Marine Debris in ASEAN Region, 22-23 November 2017 (completed)

(b) The Special ASEAN Ministerial Meeting on Marine Debris (SAMM-MD), 5 March 2019, Bangkok, Thailand (completed)

(c) ASEAN-UNDP Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management in ASEAN (upcoming)

ERIA

Monitoring of country policy status related to MPL

(a) ERIA's RKC-MPD has been gathering and regularly updating information on laws, regulations, action plans etc. from all ASEAN+3 Member States' along with the regional initiatives on its website.

Related link:

https://rkcmpd-eria.org/goodpractices/26

Scientific research

(a) ERIA's RKC-MPD shares scientific knowledge related to marine plastic debris in ASEAN+3 context on its website. As of June 2021, "Life Cycle Assessment" and "Chemical Impacts of Plastics on the Marine Ecosystem" are shared, and a paper on EPR (in Waste Management & Research) was published.

Related link:

https://rkcmpd-eria.org/goodpractices/28

https://doi.org/10.1177/0734242X211013412

IAEA

Monitoring of plastic flows and ocean surface microplastic

(a) Isotopic tracers and nuclear imaging techniques

Isotopic tracers and nuclear imaging techniques offer several advantages in assessing the impact and stress caused by plastic in the marine environment: i) they are analytically sensitive, allowing for more precise and therefore reliable projections; ii) cross contamination of samples is typically much less of an issue compared to working with organic or inorganic contaminants, which facilitates broad interlaboratory exchange; iii) they permit non-destructive analyses, which allow for experimental work on live organisms and iv) they provide an overview of the effects and movement of contaminants on and within the whole organism. This provides an important marker for the potential toxicity of plastics on living organisms and reveals in great detail the impacted organs and systems, which in turn allows the tracing of actual toxicological stress and possible propagation in food chains that can ultimately affect humans through our consumption of seafood.

Monitoring of country policy status related to MPL

(a) NUTEC Plastics Monitoring Network

The IAEA initiated measures to establish a NUTEC Plastics Monitoring Network as a global network of laboratories capable of monitoring and assessing the impact of marine plastic to enable exchange of data, knowledge and best practices. These laboratories will serve as regional resource centres for continuous provision of services and learning.

Scientific research

(a) Coordinated Research Programme and Collaborating Centres schemes

The IAEA undertakes R&D activities not only in its own laboratories but also through its extended research networks, composed of research institutions, academia and reference laboratories around the world. It does so through its Coordinated Research Programme and Collaborating Centres schemes. A number of Collaborating Centres are of direct relevance to NUTEC Plastics. Whereas some partner institutions have a particular expertise in radiation processing of polymers, waste polymers and biocomposites, others have their

research focus on marine and oceanographic studies, including marine environment pollution. The potential benefits from NUTEC Plastics are enhanced for regions and countries that have these IAEA Collaborating Centre designations in place. Beyond its Collaborating Centre scheme and the work in its laboratories, the IAEA also encourages and assists research, development, and the practical use of nuclear technologies and applications in Member States. It brings together research institutions from its developing and developed Member States to collaborate on research projects of common interest in so-called coordinated research projects (CRPs). Through these CRPs, the IAEA, as coordinating body, awards research, technical and doctoral contracts and research agreements to institutes in Member States.

IRP

Scientific research

(a) Development of the International Resource Panel think piece 'Policy Options to eliminate additional marine plastic litter by 2050 by the G20 Osaka Blue Ocean Vision' commissioned by the G20, to qualitatively consider possible policy options to achieve the Osaka Blue Ocean Vision

The think piece shows, through the scenario modelling analysis published in “Breaking the Plastic Wave” by The Pew Charitable Trusts and SYSTEMIQ (2020), the marine plastic litter trends relevant to 2050, highlighting that:

i. The annual discharge of plastic into the ocean is estimated to be 11 million tons
ii. Through an ambitious combination of interventions using known technology and approaches (called the System Change Scenario), marine plastic litter entering the ocean can be reduced by 82 per cent compared to business as usual.
iii. Current government and industry commitments add up to a mere 7 per cent reduction in plastic pollution to the ocean by 2040 relative to business as usual.

Based on these facts the think piece proposes:

i. Nine policy areas (upstream and downstream), dissected into specific policy measures that policymakers should consider to achieve the System Change Scenario, to consider their potential role in marine plastic litter reduction.
ii. A set of policy measures to further deliver on the Osaka Blue Ocean Vision and to transition to the systemic changes needed to the plastic economy.

Ocean Conservancy

Monitoring of country policy status related to MPL

(a) U.S. Recycling

Served on the U.S. Plastics Pact Policy Work-group, identifying the primary policy areas that Pact members (~100 companies, organizations, and local governments) could agree to support in the United States

Data: Policies the U.S. Plastics Pact members support: EPR, Deposit Return Systems, and Post-Consumer Recycled Content mandates

Scientific research

(a) Global Ghost Gear Initiative

The GGGI data portal is the largest global collection of ghost gear records, thanks to the contributions from multiple data partners around the world. Version 1.0 of the data portal, while ground-breaking at the time of its launch, was primarily a proof of concept and could not provide the level of interaction with the data that was originally envisioned. Version 2.0 truly brings the data portal to life and fulfills the original vision.

Some major updates include:

- Integrates new data sharing agreement directly into the online portal;
- Allows data contributions to define level of shareability for each data set at time of upload;
- Supports organization/individual logins to allow interaction with user-specific data;
- Includes a suite of new interactive and custom reporting tools;
- Integrates with ARCGiS to allow high resolution data on map view;
- Allow users to retrieve data instantly within a userdrawn shape on map view;
- Includes several new application programming interfaces (APIS);
- Expanding possible integration and data transfer with other platforms in the future

The GGGI Ghost Gear Reporter App will be updated concurrently and will include the ability to log in using the same credentials as with the data portal if desired, in order to track individual projects and contributions on a per-user basis. The Ghost Gear Reporter app – already available in Chinese (courtesy of WWF Hong Kong), English, French (courtesy of the government of Canada), Spanish (courtesy of the Manta Caribbean Project) and Portuguese (courtesy of World Animal Protection Brazil) – was translated into seven more languages courtesy of Nomad Foods – Danish, Dutch, Finnish, German, Italian, Norwegian, and Swedish – bringing the total number of languages for the app to 12. As a result, the app is now linguistically accessible to some 3.5 billion people around the world – just under half the world’s population. Both the app and the data portal version 2.0 updates will be rolled out in 2021.

(b) Microplastics in the human food system

With every corner of the earth contaminated with microplastics, concerns surrounding health of the ecosystems, plants, animals and even humans have arisen. Recent studies have determined humans are exposed to microplastics, not only through consumed food and beverages such as seafood, beer, honey, salt, and water, but also from breathing air. Despite our knowledge of the ubiquity of microplastics in marine ecosystems and presence in marine organisms, numerous important U.S.-harvested seafood species remain unstudied or understudied. At the same time, there is a disproportionate focus on the potential/perceived risk to humans by consuming plastics in seafood with little consideration and research of the relative risks compared to other forms of protein consumption. There is, however, increasing evidence of widespread microplastic contamination throughout the global ecosystem and in the majority of human-consumed food and beverage products tested to date. Therefore, Ocean Conservancy is currently working with academic and industry partners to shed light on potential human microplastic exposure resulting from consumed food items. We are actively leading a study to compare and contrast microplastic burdens of minimally-processed and highly-processed aquatic and land-based animal proteins, including some of their plant-based analogs, over the next 2-years. At the same time, we are working to gauge public perception on the knowledge about and perceived risk of microplastics in food and assess the desire among the U.S. general public for source reduction policies on plastic products most damaging to our ocean. This work is being conducted through a digital survey of OC membership and via a national research panel in summer 2021.

We anticipate this work will highlight the ubiquity of microplastics in the human food system, allowing communication opportunities regarding the global microplastic cycle, animal and ecosystem impacts of plastics, and human health implications of plastics in common food items. The combination of our microplastics investigation and social survey results will help inform our plastic and microplastic reduction policy work moving forward.

(c) Fate and effects of microplastics in freshwater ecosystems

OC serves as a key partner on the “pELAstic: whole-ecosystem experiment to understand the fate and effects of microplastics” project. This research, led by University of Toronto microplastics expert Dr. Chelsea Rochman, and conducted at the International Institute for Sustainable Development’s Experimental Lakes Area in Canada, involves experimental manipulation of an entire lake system, to test the broad, hypothesized impacts of microplastics at the whole-ecosystem scale. Objectives of this experiment include determining: 1) the physical, chemical, and biological fate of microplastics in an aquatic ecosystem; 2) impacts of microplastics across all levels of biological organization within this aquatic ecosystem; 3) impacts of microplastics on ecosystem processes and functions (i.e. nutrient cycling and photosynthesis); and 4) physical and chemical changes to microplastics over time. This comprehensive body of work is currently underway, as dosing of lakes with various microplastic resin types and forms occurred in early summer 2021. Findings from this important research will help close existing scientific knowledge gaps regarding fate and effects of microplastics in aquatic ecosystems and generate findings and data that inform risk assessments and policies in Canada and beyond.

(d) International Coastal Cleanup

The COVID-19 pandemic has dramatically increased the use of certain types of plastic products. This includes personal protective equipment (PPE) that can harm our communities and the ocean and present waste management challenges. A few months after the pandemic began, Ocean Conservancy made updates to our data collection protocols, to allow volunteers to track PPE pollution, where and when it was safe to do cleanups. With these data, along with survey responses from cleanup volunteers and experts, Ocean Conservancy published a report in March, 2021. The report intended to shed light on the growing presence of PPE pollution burdening the environment since the start of the pandemic. It also includes recommendations for how all of us can help prevent plastics from entering the environment in the first place while ensuring PPE and other plastics are responsibly managed. Link to full report: Pandemic Pollution: The Rising Tide of Plastic PPE.

https://oceanconservancy.org/wp-content/uploads/2021/03/FINAL-Ocean-Conservancy-PPE-Report-March-2021.pdf

OECD

Monitoring of plastic flows and ocean surface microplastic

(a) Global Plastics Outlook (Projections of marine plastic litter to 2060) [ENV/EPOC/WPRPW/WPIEEP(2021)2]

Monitoring of country policy status related to MPL

(a) Global Plastics Outlook (Policy landscape chapter) [ENV/EPOC/WPRPW/WPIEEP(2021)1]

UNEP

Monitoring of plastic flows and ocean surface microplastic

(a) In partnership with the Ministry of Foreign Affairs, Japan, and in support of the G20 Implementation Framework for Actions on Marine Plastic Litter and the “Osaka Blue Ocean Vision”, UNEP Asia and the Pacific Office implements the project “Promotion of action against marine plastic litter in Asia and the Pacific” (CounterMEASURE II). This project generates scientific knowledge on plastic pollution in the Ganges, Mekong and selected rivers in Sri Lanka and shares the knowledge 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. As of June 2021, seven dry-season macroplastic assessments along the

Ganges river basin, dry-season microplastic surveys in four locations along the lower Mekong river basin have been conducted. Over 1,000 hotspots have been geo-tagged and mapped along the two river basins. Over 360,000 social media posts have been generated on this project's knowledge since June 2020.

Monitoring of country policy status related to MPL

(a) The global project, Protecting the Marine Environment from Land-Based Pollution through Coordinated and Strengthened Global Action, launched the Sanitation and Wastewater Atlas of Africa, after a four-year joint effort of UNEP, GRID-Arendal, and the African Development Bank (AfDB). Since the conclusion of the process of The ad hoc open-ended expert group on marine litter and microplastics (https://www.unep.org/environmentassembly/expert-group-on-marine-litter) in November 2020, ongoing support to multiple country-led informal initiatives and conversations has been provided to a number of country-led initiatives including: the Group of Friends to combat Marine Plastic Pollution (New York), led by Antigua and Barbuda, Norway and Maldives, the Ministerial Conference on Marine Litter and Plastic Pollution by the Co-conveners, Germany, Ghana, Ecuador and Vietnam; the Group of Friends on Marine Litter and Plastic Pollution (Nairobi), and the Forum on the Multi-stakeholder Platform on Marine Litter and Microplastics on 13 July 2021, led by Japan.

(b) 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). This Action Plan and those of other Regional Seas Programmes such as the UNEP Northwest Pacific Action Plan (NOWPAP) Regional Action Plan on Marine Litter (RAP-MALI) continue providing countries with an overarching regional framework for addressing marine litter as a transboundary issue and 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) In partnership with Norway, UNEP supports India to engage globally on the issue of marine pollution under the 'Indo-Norway Marine Pollution Initiative'. By the Letter of Intent signed 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. In July 2021, studies on 'Single use plastics: a country wide analysis of the status of regulation, implementation and compliance in India" and "Status of Research Capacities and Information systems of Marine Plastic Litter in India", and a policy brief, 'Reducing Marine Plastic Pollution from Land Based Sources: Strategies to reduce Single Use Plastics' in 2020, have been completed. The studies have been submitted to the Marine Litter Cell of MoEFCC for further inputs

Scientific research

(a) The assessment "From pollution to solution" will be launched in August 2021 (UNEA Resolution 4/6 para 2b)

WB

Monitoring of plastic flows and ocean surface microplastic

(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 meet their commitments around 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.

(b) 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.

Monitoring of country policy status related to MPL

(a) Given the World Bank's reach, the organization is ideally placed to facilitate cooperation and knowledge sharing on a global and regional level. 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 (see also section 4.4). Other examples include the Plastic free Rivers and Seas for South Asia project, which aims to strengthen innovation and coordination of circular economy solutions to plastic pollution flowing into South Asian Seas. The project facilitates the exchange of circular plastic economy knowledge between eligible organizations and selected South Asian countries and promotes awareness raising activities.

WEF GPAP

Monitoring of plastic flows and ocean surface microplastic

(a) GPAP has helped improve the accessibility and quality of data analysis related to plastic pollution by establishing a national baseline tool based on a groundbreaking model first developed by the Pew Charitable Trusts and SYSTEMIQ. GPAP also establishes expert committees and metrics task forces in all NPAPs to ensure unbiased, evidence-based data collection and evaluation, as well as multistakeholder consultation on the national baselines, including representatives from government, academia, industry and civil society. Beyond the baseline assessment, GPAP has also built a scenario modelling tool that allows countries to identify the right mix of actions (e.g., policies, regulations, financing models, solution support) needed to achieve national targets.

In Indonesia, for example, by conducting a thorough baseline analysis through a participatory process with over 30 experts, NPAP Indonesia identified the country's municipal solid waste and plastic waste flows and quickly gained agreement on its data and potential future scenarios to inform plastic action at the national level.

Monitoring of country policy status related to MPL

(a) All NPAPs conduct a detailed assessment of the current local plastics situation and estimate potential future plastic flows. Sector experts review the data and develop policy options to address the challenges raised. From these insights, NPAPs publish an evidence-based action roadmap towards the country's plastic pollution targets. Our partnerships have also contributed to national policies and legislation on circular economy, plastic waste management and extended producer responsibility schemes in Viet Nam, influenced national plastics management policy in Ghana and fostered agreement on targets in Indonesia. Regional Project Reduce marine plastics and plastic

3.7. Others/Cross-cutting Activities

Countries

Australia

(a) Participate in international cooperation through international organizations, multi-national groups, etc.

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. Australia is also pursuing improved coordinated global action to address marine plastic pollution including through discussions towards a new global agreement at the United Nations Environment Assembly.

Netherlands

(a) The implementation of the MSFD program of measures, focusing on many sectors, and supported by the implementation of the micro plastics policy program and the Single Use Plastics Directive as well as the great number of local and voluntary (clean-up) initiatives, has led to significant decreasing trends of beach litter and plastics in the stomachs of fulmars. The new MSFD program will continue this wide approach including:

i. NL Clean Beaches program: focuses on knowledge exchange, support for collaboration projects and improvement of local collaboration between municipalities and entrepreneurs. A dedicated set of measures must lead to the structural maintenance of clean beaches in the Netherlands. This includes additional monitoring, custom advice to coastal communities, municipalities and beach pavilions, and innovative beach cleaning pilots. Doe mee met de jaarlijkse Boskalis Beach Cleanup Tour van Stichting De Noordzee - Stichting De Noordzee: URL: https://www.noordzee.nl/doe-mee/beach-cleanup-tour/
ii. Further development and implementation of River basin approach to litter: cooperation between various stakeholders along different river basins; together with Clean River consortium; further implementation of Litter Collection Regulation (supporting voluntary clean-up operations); pro-actively put litter on agenda of other land- and water management organizations including international river commissions
iii. Shipping: beside implementation of new Port waste Reception Facilities (PRF): additional measures to tackle persistent floaters by asking for additional prewash procedures

iv. The approach to litter that ends up in the sea from fisheries builds on the experiences and network of the Green Deal Fisheries for a Clean Sea and is optimally in line with the implementation of the SUP and PRF directives. Additional focus is being devoted to some actions, namely the reduction of dolly rope and lead in the sea. Includes Fishing for Litter program Fishing for Litter — Netherlands
URL: https://fishingforlitter.org/netherlands/

v. Land Sources: the amended and additional MSFD measures concern tackling balloons and pre-production pellets. Because much of the approach to plastic products in litter takes place via the SUP Directive and the Plastic Bags Directive, no additional measures are included in the MSFD.
However, involvement continues from the MSFD with respect to developments around these directives. If necessary, additional measures may be taken in due course.
In 2021, it will be studied how to continue the actions being taken for microplastics and river waste in the framework of the microplastics policy programme. If necessary, additional measures may be taken here too in due course

International Organisations and NGOs

ASEAN

(a) Phuket Conference on Reducing Marine Debris in ASEAN Region, 22-23 November 2017 (completed)

(b) The Special ASEAN Ministerial Meeting on Marine Debris (SAMM-MD), 5 March 2019, Bangkok, Thailand (completed)

(c) ASEAN-UNDP Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management in ASEAN (upcoming)

GEF

GEF has funded several projects during the GEF-7 period that directly and indirectly address marine plastic litter issues, building on previous investments, analyses and partnerships to address the lifecycle of marine plastics with targeted interventions that emphasize circular solutions, public-private partnerships and on the ground investments.

(a) Projects under the GEF-7 directly address marine plastic litter

- Establishing a circular economy framework for the plastics sector in Ghana (UNIDO, GEF funding $7M, co-financing $60M): its concept approved by the GEF Council in December, 2019.

  https://www.thegef.org/project/establishing-circular-economy-framework-plastics-sector-ghana
  - Numerical data: It is expected to achieve 7,300 metric tons of marine litter avoided.

- "Plastik Sulit": Accelerating Circular Economy for Difficult Plastics in Indonesia (ADB, GEF funding: $7M, co-financing: $61M): its concept approved by the GEF Council in June, 2020.

  https://www.thegef.org/sites/default/files/web-documents/10546_MFA_PIF_v1.pdf
  - Numerical data: It is expected to achieve about 0.3 million metric tons marine litter avoided.

- Reduce marine plastics and plastic pollution in Latin American and Caribbean cities through a circular economy approach (UNEP, GEF funding: $7M, co-financing: $28M): its concept approved by the GEF Council in June, 2020.

  https://www.thegef.org/sites/default/files/web-documents/10547_MFA_PIF.pdf
  - Numerical data: It is expected to achieve about 5,000 metric tons marine litter avoided

- Promoting Resource Efficiency and Circularity to Reduce Plastic Pollution for Asia and the Pacific (ADB): its concept approved by the GEFCEO in June 2020.
  - Numerical data: It is expected to achieve 0.65 million metric tons of marine litter avoided.

(b) Projects under the GEF-7 indirectly address marine plastic litter

- Implementing Sustainable Low and Non-Chemical Development in SIDS (ISLANDS) (UNEP, GEF funding: $56M, co-financing: $389M): its program framework document approved in December 2019.

  https://www.thegef.org/sites/default/files/web-documents/10185_PFD_SIDS_PFD.pdf
  - Numerical data: It is expected to achieve 0.2 million metric tons of marine litter avoided.

- AFLDC-2 Scaling-up Investment and Technology Transfer to Facilitate Capacity Strengthening and Technical Assistance for the Implementation of Stockholm and Minamata Conventions in African LDCs (AfDB, GEF funding: $21M, co-financing: $514M): its concept approved by the GEF Council in June 2019.

  https://www.thegef.org/project/afldc-2-scaling-investment-and-technology-transfer-facilitate-capacity-strengthening-and
  - Numerical data: It is expected to achieve 63,000 metric tons of marine litter avoided

- Innovating Eco-Compensation Mechanisms in Yangtze River Basin (YRB) (ADB, GEF funding: $8M, co-financing: $111M): its concept approved by the GEF Council in December 2020.

  https://www.thegef.org/project/innovating-eco-compensation-mechanisms-yangtze-river-basin-yrb
  - Numerical data: No target on marine litter avoided is envisaged.

- Circular Economy Regional Programme Initiative (Near Zero Waste) (EBRD, GEF funding: $13M, co-financing: $142M): its concept approved by the GEF

Council in December 2019.

https://www.thegef.org/project/circular-economy-regional-programme-initiative-near-zero-waste

- Numerical data: It is expected to achieve 50,000 metric tons of marine litter avoided.

OECD

(a) The OECD Environment Directorate currently develops an OECD Global Plastic Outlook to 2060. This flagship publication comprises macroeconomic modelling of plastic production, use and recycling, as well as a policy stocktake and policy recommendations. The project also includes analyses of plastic innovation and improving markets for secondary plastics. Projections, which also account for the economic impact of the Covid-19 pandemic, would show that without new policy action, plastic use and plastic leakages in the environment would continue to increase.

(b) The OECD has been assisting the Czech, Slovak and Hungarian governments within the EU's Technical Support Instrument framework in developing a new national circular economy strategic framework. Support is provided for the development of the scope of the circular economy strategy, the prioritisation of key action areas and sectors, the identification of key policies and policy targets, and setting up an institutional platform for broader co-operation among relevant stakeholders. Further such country support projects are expected in the coming years.

(c) Several of the OECD's recent Environmental Performance Reviews have focused on issues relating to resource efficiency and provide policy recommendations to foster the transition towards a circular economy. Such reviews have been conducted for the following countries between 2019 and 2021: Ireland, Belgium, Luxembourg, Greece, Denmark, Latvia, Indonesia, Australia, Turkey. Further countries will be covered in the coming years.

UNEP

(a) Through the Global Partnership on Marine Litter (GPML) a guidance document for developing action plans was developed.

URL: https://www.gpmarinelitter.org/what-we-do/action-plans

4. Challenges

Improving the recycling system is a concern raised by 27 countries. Implementing proper waste management due to insufficient local capacity is a concern for 21 countries.

Data collection on general waste remains a challenge for 19 countries. Furthermore, data collection on marine plastics remains a significant challenge even for several developed countries, with 33 countries marking the issue.

Twenty-two countries mentioned a lack of awareness among citizens, businesses, local governments as a concern. Lack of financial incentives for waste treatment and technology development remains a concern for 23 and 22 countries, respectively. Not all countries are affected by COVID-19, as 21 countries mentioned project delays due to COVID-19.

Many developing countries shared many challenges simultaneously, while some developed countries only cited COVID-19 as a challenge. Only data collection on marine plastics was mentioned as a challenge among the developed countries.

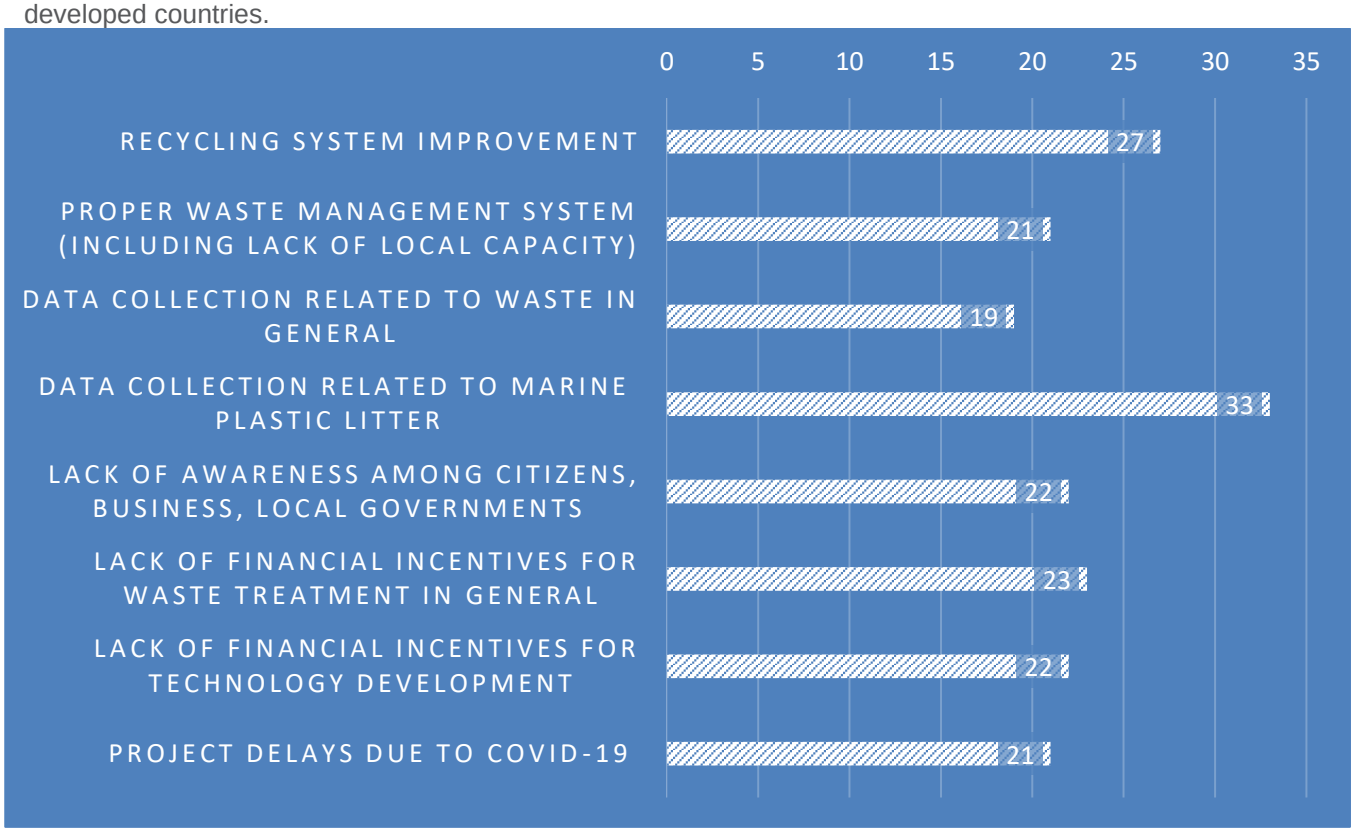


Figure 11: Countries – Challenges*

*Number of countries responded YES among 41 responses

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.

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.

Germany

(a) Cf. Data collection: Comparable, i.e. coordinated cross border and/or international monitoring is missing.

(b) Cf. Project delays: ML-projects, funded by the Federal Government at international level have been delayed.

Sri Lanka

(a) Poor cooperation among government institutions

(b) Some administrative barriors

(c) Poor attitude of some responsible individuals towards taking actions.

Turkey

(a) Data collection related to litter ingested by or entangling marine organisms on selected mammals, marine birds, and marine turtles is another challenge however; studies are going on for getting better coordination between the institutions.

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 does not match 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 United States. 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 standardized metrics can then be used to create effective goals and track progress.

International Organisations and NGOs

Data collection on marine plastic litter is the biggest challenge reported by organisations, garnering eight responses. Project delays due to covid-19 pandemic and data collection on general waste remain significant challenges for six and seven organisations, respectively.

A lack of awareness among various stakeholders is a barrier conveyed by five organisations, highlighting the success of raising the profile of marine pollution due to plastic litter.

Based on the responses, a lack of financial investment for technology development is not a significant barrier, with only four responses. Lack of financial support for waste management was seen as a barrier, as there were five responses citing this option. Overall, financial support could be seen not the most significant barrier according to the response from these organisations.

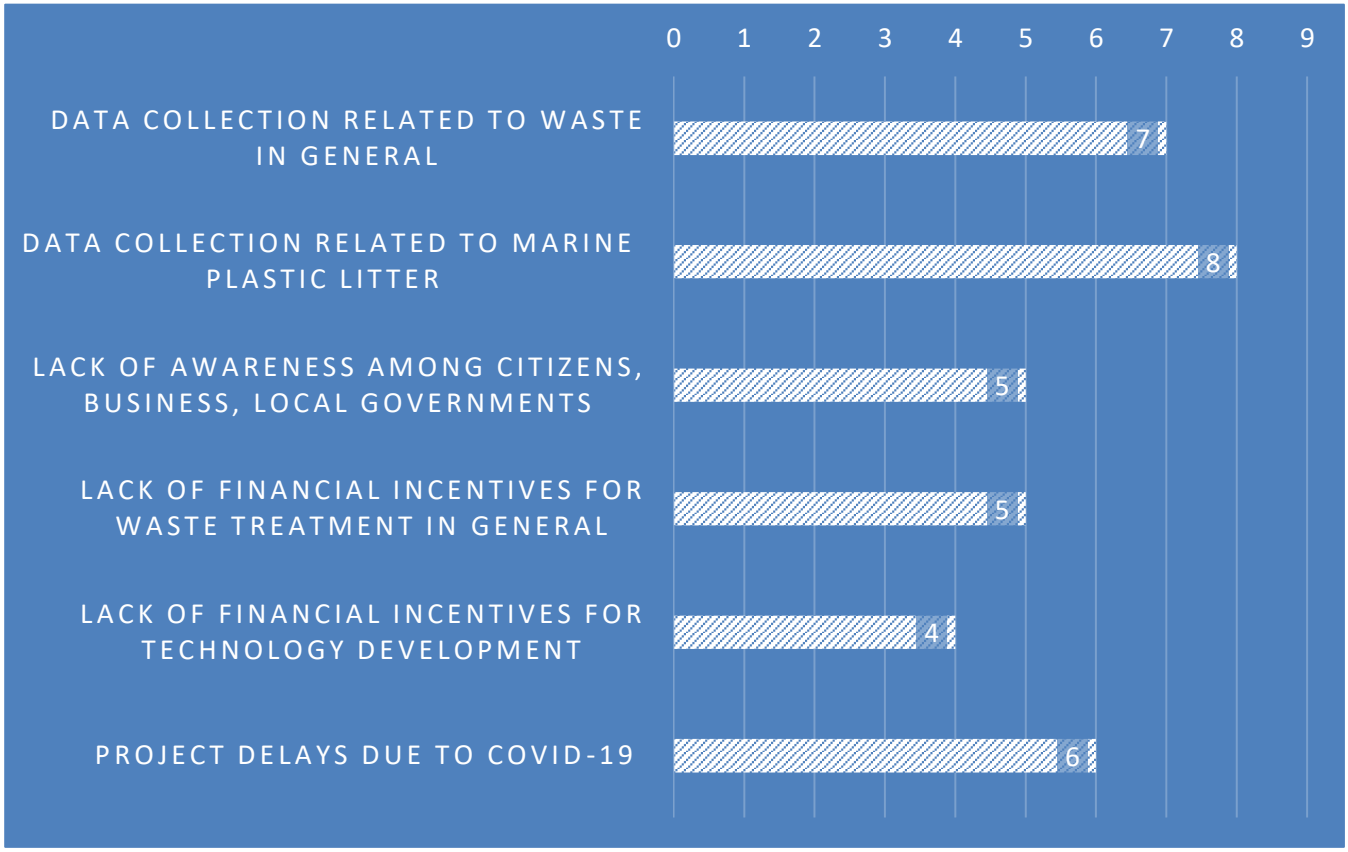


Figure 12: Organisations – Challenges*

*Number of organisations responded YES among 12 responses

5. Best Practices

5.1. National Level

Countries

Bhutan

(a) National Environment Commission Secretariat Reinforced the ban on Limited plastic such as plastic carry bags, homemade ice cream pouches and doma wrappers in 2019.

(b) NECS conducts cleaning campaigns along the rivers on World Environment Day and World Water Day

(c) Distribution of clothes bags to vegetable vendors to propagate the use of reusable bags while shopping.

(d) Thimphu Thromde discourage the offering of plastic packaged food in religious sites under its jurisdictions.

Brunei

(a) No Plastic Bag Day Everyday Initiative

(b) Implementation of a 3 percent increase in excise duty on plastic imports products.

(c) Bring Your Own (BYO) Campaigns

(d) Green Protocol Campaigns

Canada

Examples:

(a) Best management practices for disposal bans, levies and incentives for end-of-life plastics

URL: https://ccme.ca/en/res/finaldisposalbansbmps-ensecured.pdf

(b) 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

(c) Canada-wide Action Plan for Extended Producer Responsibility.

URL: https://ccme.ca/en/res/cap-epr_e.pdf

(d) Canadian Code of Conduct for Responsible Fishing Operations.

URL: http://www.dfo-mpo.gc.ca/fisheries-peches/policies-politiques/cccrfo-cccppr-eng.html

(e) How Do We Use and Recover More Compostable Packaging? - Canadian Perspectives.

URL:

http://www.nzwc.ca/Documents/HowDoWeUseRecoverMoreCompostablePackaging.pdf

(f) Online Design Portfolio Celebrating Canadian design for waste prevention and systems-thinking.

URL:
http://www.nzwc.ca/Documents/DesignPortfolio2018.pdf

(g) 10,000 Changes public awareness campaign and education.

URL: https://10000changes.ca/en/

(h) Plastic Wise public awareness campaign.

URL: https://ocean.org/plastic-wise/

(i) Waste Literacy Education

URL: https://rochmanlab.com/waste-literacy-education/

(j) Anthropocene Education Program

URL: https://theanthropocene.org/education/

Chile

(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.

Fiji

(a) A National Waste Management Strategy has been finalized. The approach describes current waste management strategies as well as the system flaws. The suggested action plans include programs to be implemented at the national, local, and community levels.

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 actions and link 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 realize an annual evaluation of the actions.

(d) The extended producer responsibility schemes allows to finance the collection and recycling of certain waste. They can be particularly relevant when certain wastes are most found whose collection can be difficult to put in place (for instance: cigarette buds).

(e) The 2020 legislation against waste and for a circular economy creates a re-use observatory that will be responsible for assessing the relevance of reuse solutions from an environmental and economic point of view, for defining the national trajectory aiming at increasing the share of reused packaging on the market in relation to single-use packaging. It will also be in charge of supporting, in coordination with eco-organizations, experiments and the deployment of the resources needed to achieve the objectives defined in the terms of reference.

Indonesia

(a) Pilot of incineration plant in Jakarta Bantargebang Landfill site Bekasi City West Java

(b) Waste to electricity plant in Benowo Landfill Site Surabaya City East Java

(c) RDF plant in Jeruklegi Landfill Site Cilacap Regency Central Java

(d) The Interceptor a marine plastic removal ship in Cakung Drain Northern Jakarta.

Japan

(a) Japan has recently promulgated the Act on Promotion of Resource Circulation for Plastics.

(b) To comprehensively and systematically implement the promotion of resource circulation for plastics, basic policies should be formulated for the following items:
   i. Guidelines for design of plastic-containing products
   ii. Rational use of specified plastic-containing products
   iii. Sorted collection and recycling by municipalities
   iv. Collection and recycling by manufacturers, sellers and other businesses
   v. Waste reduction and recycling by waste generating businesses

Kiribati

(a) Clean up Activity

(b) Waste Repurposing Initiative

(c) Littering Enforcement

(d) Plastic Banning Under the Customs Regulation.

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 non-biodegradable waste generated in inhabited islands and ensure safe transportation to Thilafushi annually until the Regional Waste Management and Treatment Facilities are operational.

Netherlands

(a) National Plastic pact with citizens, companies, cities and countries

Plastic Pact NL: https://www.plasticpact.nl/

New Zealand

(a) Strategy:

We are taking a lead role in developing a new waste strategy for Aotearoa New Zealand. The strategy will set the direction and guide investment as we address waste and resource recovery challenges, including marine plastic litter, over the coming decades. We are working on the strategy with:

i. Māori
ii. the waste sector
iii. Industry
iv. waste producers
v. local government
vi. other interested parties.

The strategy will be supported by work to strengthen and update waste-related legislation, including the Waste Minimisation Act 2008 and Litter Act 1979.

(b) Action:

Ghost Fishing NZ are a national NGO collective who run coastal clean ups and education days on the effects of marine plastics.

Norway

(a) Norway has an environmental tax on plastic 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 the consumers get back when they return the bottles. 88 % of plastic bottles are returned in Norway today.

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

(c) In 2021 a new action plan for climate- and environmentally friendly Public Procurement was launched. The plan includes measures to avoid undesirable chemical additives in plastics and prescribes the waste hierarchy as a guiding principle for procurement (e.g. strive to avoid unnecessary products, measures to reduce consumption, demand products for re-use and/or more recycled material in products).

(d) Established a knowledge hub on beach clean ups and sea-based sources through a Norwegian Centre against Marine Litter (former Norwegian Centre for Oil Spill Preparedness and Marine Environment).

Pakistan

(a) Clean Green Pakistan Movement is an innovative movement that underpins behavioral change at the grassroo ts level. Citizens, institutions and cities have been empowered to take action to preserve their environment (including actions against plastic pollution). Federal government incentivizes this behavioral change through financial rewards and recognition.

Palau

(a) Public Works Solid Waste Management (BPW-SWM), Beverage Container Act

Panama

(a) Reduce single-use plastic by regulations.

(b) Law prohibits the use of polyethylene bags on markets and promotes the use of reusable bags.

(c) Reduce marine litter that reaches the shores through beach clean-up activities. Celebrate the Month of the Oceans (Sep.), Oceans Day (Jun 8) and Earth (Apr 22) with Cleanup activities in the most vulnerable coastal areas of the country.

Papua New Guinea

(a) The government sets up regulations to control the importation and production of plastic shopping bags. The Ban on plastic shopping therefore encourages local industries to venture into non-plastic shopping products such as carry bags, bilums (locally produced bags) and degradable paper bags. This practice has resulted in decrease in volume of plastic litter on the streets, coastal and marine environments.

Philippines

(a) Flagship Cleanup and Rehabilitation Initiatives

(b) April 2018 - closure of the Island of Boracay, the country's top tourist destination to immediately address the environmental concerns, which include the wetlands, terrestrial habitats, coastal and marine and their ecosystems services

(c) January 2019 - DENR started implementing the "Manila Bay Coastal Strategy 2017–2022" in cooperation with other Mandamus agencies. The Writ of Continuing Mandamus was issued by the Supreme Court on December 18, 2016, directing 13 government agencies to clean up, rehabilitate, and preserve Manila Bay, and restore and maintain its waters to levels fit for swimming, skin-diving, and other forms of contact recreation

Samoa

(a) Key interventions target improvements in four key areas, strengthening of the policy, regulatory and institutional framework for the sustainable management of solid waste; effective management of waste collection contracts; implementation of waste minimization strategies and sustainable infrastructure for managing solid waste and At present, Samoa has approved its Integrated Solid Waste Management Strategy 2019 - 2023 which integrates sound management of chemicals and hazardous waste as part of overall waste management strategies. The Waste Management Act 2010 and plastic ban (plastic shopping bags, plastic straws and plastic packing bags) Regulations 2018 are now in force. Waste audits are conducted at village level and as part of national clean up campaigns. Ongoing monitoring for plastic ban which includes only plastic shopping bags, plastic straws and plastic packing bags.

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. With a National Recycling Programme and regulations, recycling bins and a collection system are provided for all residents.

(b) The Zero Waste Masterplan and the Singapore Green Plan 2030 will guide Singapore's efforts towards becoming a Zero Waste Nation.

Related URL: https://towardszerowaste.sg/zero-waste-masterplan/ and https://greenplan.gov.sg/

(c) Prevention of littering, illegal dumping, release of waste into the ocean:

(d) Singapore has a routine cleaning regime put in place 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.

Spain

(a) Monitoring (macrolitter and microplastics) on beaches, floating litter, seabed litter, and also biota (target species differ in each marine region: in Spanish water: marine turtles + other options such as fish or mussels in study). 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 by the moment 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) Agrochemical container collection programme

Thailand

(a) Reduce single-use plastic campaign "Say no to plastic bag"

This national campaign has been started on 1 January 2020. The ministry of natural resources and environment collaborates with more than 70 wholesalers in Thailand to stop providing plastic shopping bags to customers for free. Thailand expects to reduce at least 13,000 bags per year.

This campaign aims to change people's behaviors to reduce using plastic bags and/or use more eco-friendly bag.

Turkey

(a) Ministry of Environment and Urbanization (MEU) has implemented "Integrated Marine Pollution Monitoring Programme (IMPM)" in order to monitor the quality and pollution of marine environment and coasts of Turkey-Aegean Sea, Black Sea, Mediterranean Sea and Marmara Sea- which provides the basis for national marine and coastal management policy and strategies. This programme has been designed as a three-year programme since 2014 in order to obtain regular and continuous data, to monitor seasonally.

Details of the programme; National monitoring programme covers monitoring in marine water, sediment, biota and sea floor of some specific indicators of biodiversity, commercial fisheries, food web, eutrophication, sea floor integrity, hydrographical conditions, contaminants and marine litter descriptors.

Micro plastics have been studied in sea water and sediment during all summer seasons, in fish stomach at only one term (once every three year) for one each of the marines. Macro litter has been at the sea bottom during the trawl surveys.

This programme has been designed as a three-year programme since 2014 in order to obtain regular and continuous data, to monitor seasonally. 20202-20202 monitoring programme is now ongoing and will be finalized at the end of 2022. In 2020-2022 periods, in addition to microplastics, marine litter (in marine water and sediment), digested litter (fish stomach), litter on the beach; litter ingested by or entangling marine organisms will be studied in literature and by collecting data from other institutions.

In addition; the Zero Waste Project was initiated by the Ministry of Environment and Urbanization in 2017 in order to control waste within the framework of sustainable development principles and to leave a clean and developed Turkey and a livable world to future generations. Since the implementation started in 2017, 24.2 million tons of recyclable waste has been processed by facilities licensed by aforementioned Ministry and brought into the economy. From the collected wastes; 30 billion TL of economic gain was achieved, 356 million kwh energy savings, 437 million m3 water savings, 52 million m3 storage area savings were achieved, 3 million tons of

greenhouse gas emissions were prevented, 265 million trees were saved, 62 million barrels of oil, 409 million tons of raw material savings has been done. With the project, the recovery rate was increased from 13% to 22.4%. With the Zero Waste Project, it is aimed to establish a nationwide recycling and resource efficiency infrastructure, including issues that raise awareness in public and private institutions. The Ministry of Environment and Urbanization carries out intensive training and awareness activities for many segments of the society, especially our educational institutions, and public institutions/organizations. The number of people receiving training has reached 12 million.

UK

(a) Through our 25 Year Environment Plan the UK is committed to leading efforts to protect the marine environment. To tackle marine pollution, we 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. Our 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; and
ii. To minimise waste and its impact on the environment.

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 we can treat waste as a valuable resource and this Strategy takes forward a number of its recommendations. We 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; and
v. To not allow our ambition to be undermined by criminality.

Our 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 productivity16 by 2050; and
v. To eliminate avoidable waste of all kinds by 2050.

Uruguay

(a) The decrease in the use of plastic bags reached a 70% reduction in 2019.

(b) Advertising campaigns "Get the bag out of the way", to minimize the consumption of plastic bags within the framework of Decree No. 3/2019.

https://www.gub.uy/ministerio-ambiente/comunicacion/campanas/campana-saca-bolsa-del-medio

US

(a) NOAA Reports and Technical Memos on Marine Debris: https://marinedebris.noaa.gov/reports-and-technical-memos#pub-term-39

(b) 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

International Organisations and NGOs

ERIA

(a) ERIA's RKC-MPD has been working to enhance national level capacity building to address marine plastic pollution in ASEAN+3 region.

Given the multiplicity of stakeholders involved in the production, consumption, disposal, and recycling of plastic, the RKC-MPD has pointed out the necessity to establish National Coordination Mechanism in each country, to mainstream multi-sector policy measures to tackled marine plastics.

On recycling, national level good practices in Asia was underscored and the need to enhance recycling mechanism was highlighted.

Related links:

https://www.mmtimes.com/news/tackling-aseans-marine-plastic-waste.html

https://www.thejakartapost.com/academia/2019/08/01/tackling-marine-plastic-pollution-together.html

https://rkcmpd-eria.org/publication/15

Ocean Conservancy

(a) Accelerating Efforts to Reduce Ocean Plastic in Vietnam

Ocean Conservancy, with funding from the U.S. Department of State, is supporting Viet Nam in the implementation of its marine debris National Action plan. 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
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: including report of Informal Waste Sector and Financial Instrument Survey Report
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: including scientific research and "train of trainer" sessions

WB

(a) At the national level, the World Bank supports countries in developing national inventories and developing roadmaps to help them meet their targets for litter reduction, landfill diversion, and recycling initiatives. We support countries transitioning to a circular economy in places like Bangladesh, Lao PDR, Mozambique, Morocco, Pakistan and the Caribbean. The World Bank's national engagements cover all regions of the world.

WEF GPAP

(a) Integrating the informal sector in Indonesia is critical to improve livelihoods and meet the NPAP's goal of doubling Indonesia's waste collection and recycling capacity. In collaboration with the Incubation Network and the Ocean Plastic Prevention Accelerator (OPPA), GPAP launched an UpLink innovation challenge calling for ideas to solve key issues. All submitted solutions were assessed by a dedicated expert group. Twelve innovators were selected to receive support from the Incubation Network and OPPA to refine their solutions. The top three will be awarded a $5000 grant supported by Suntory and Indorama Ventures. In addition, the innovators gain access to UpLink events and the exposure via the World Economic Forum social media platform.

(b) NPAP Indonesia created a financing roadmap that outlines recommendations on mobilizing investment to meet the national marine plastic waste reduction target. It estimates a need for $18 billion in capital investment and an extra $1 billion per year in operational financing for solid waste management systems by 2040. As a member of the NPAP Indonesia Financing Task Force, the Alliance partners multiple stakeholders to tackle plastic waste, such as Project STOP in Jembrana, Bali. When complete in 2022, the integrated waste management system will serve about 140,000 people and divert about 3,000 tons of plastic waste annually. From these learnings, the aim is to mobilize fresh investment and scale a new purpose-built system to serve 2.5 million people in Malang, Java, by taking on early-development risks.

5.2. Local Level

Countries

Bhutan

(a) Many Districts promote the use of reusable bags for shopping instead of plastic bags. The water filters are also encouraged in offices. In many rural areas, people reuse the water bottles, plastic bags etc. they carry their own plates and cups while going for gathering, some use banana leaves as a plate instead of plastic cutlery's.

Canada

Examples:

(a) Best Practices Guide for the Collection and Handling of Polyethylene Plastic Bags and Film in Municipal Curbside Recycling Programs.

URL:

https://albertaplasticsrecycling.com/wp-content/uploads/2011/10/bestpracticesguidefilm.pdf

(b) Information for municipalities considering a ban on single-use shopping bags.

URL:

https://www.recyc-quebec.gouv.qc.ca/sites/default/files/documents/document-municipalites-bannissement-sacs.pdf

(c) Great Lakes Plastic Cleanup (reports & technical guides, including best practices for litter Seabins)

URL:

https://www.greatlakesplasticcleanup.org/guides-reports

China

(a) Xiamen establishes the "Xiamen Model" of marine litter management
   i. Establish a multi-department integrated management platform and coordination mechanism managed by the chief person in charge;
   ii. Use GIS to develop a marine litter monitoring and forecasting system, a visual model that can be used to track the floating path of marine litter;
   iii. Establish a comprehensive marine litter removal mechanism including the construction of collection stations along the coast;
   iv. Reduce the use of plastic fishing equipment and formulate mandatory rules to recycle fishery waste;
   v. Establish a land-ocean coordination model to coordinate and control both land-based and ocean-based sources, including jointly managing rivers and marine litters.

(b) Public in Fujian Province spontaneously organizes activities to recycle marine fishery garbage
   i. Established in 2015, Xiangzhi Beautiful Coast Volunteers Association of Fujian Province have carried out coastline beach cleanup operations many times. As of 2020, nearly 1,000 tons of floating garbage on the coastline had been cleaned up;
   ii. On December 10, 2019, the Minshiyu 06053 and Minshiyu 07186 fishing boats returned to the port, brought back domestic garbage and wastes accumulated during several days of offshore operation, and started the spontaneous campaign of "Garbage on Boats Does Not Stay in the Sea";
   iii. In 2020, the Quanzhou City Shishi Ecology and Environment Bureau, together with the Xiangzhi Town People's Government and the Shishi City Xiangzhi Beautiful Coast Volunteers Association, developed an operational plan for the "Garbage on Boats Does Not Stay in the Sea" campaign, focusing on effectively solving the problem of marine litter pollution from ships. With the promotion and recognition of the demonstration experience of the campaign, a long-term sound operating mechanism will be established;
   iv. All fishing boats and auxiliary boats in Shishi City have adopted four "fixed" measures to form a long-term operating mechanism of marine fishery garbage recycling:
      - First, assigning a certain person in charge. Boat owners participating in the "Garbage on Boats Does Not Stay in the Sea" campaign need to designate a crew member on board as the person in charge of garbage collection, and each township needs to designate corresponding departments and staff in contact with crew members.
      - Second, regular recycling. Before returning to the port, the person in charge of the fishing boat's garbage collection should notify the relevant person in charge of the garbage collection volunteer team by phone or WeChat, and volunteers are responsible for receiving the garbage landed ashore.
      - Third, fixed-point storage. If volunteers are unable to come and collect garbage at certain time, the boat's garbage can be stored in collection points set up at various fishing ports. And a volunteer team will collect and count garbage the next day.
      - Fourth, quantifying rewarding points. Pilots are set up, in which rewarding points can be obtained for boat garbage collection, qualified townships can implement voluntary reward point measures, and corresponding volunteer points can be obtained according to the weight and value of garbage on the boats.

(c) Implementation Plan of Hainan Province to Ban the Production, Sale and Use of Non-degradable Single-use Plastic Products

In order to actively promote the construction of the National Pilot Zone for Ecological Conservation and strengthen the prevention and control of plastic waste pollution, the production, sale, and use of non-degradable single-use plastic products are completely prohibited in Hainan Province. By the end of 2020, Hainan Province had banned the production, sale, and use of non-degradable single-use plastic bags and tableware. By the end of 2025, the province will impose an all-out ban on the production, sale, and use of plastic products listed for prohibition. The province has also actively advocated the whole society to form a green production and lifestyle, reduce the use of non-biodegradable single-use plastic products, and use biodegradable plastic, paper, cloth, and other substitute products, so as to reduce environmental pollution.

Fiji

(a) Certain local councils in Fiji have established, implemented, and monitored a solid/waste plan as well as the 3 R and Clean Schools Program, all of which contribute to the reduction of marine pollution litter.

France

(a) An efficient waste management and fight against littering (fine)

(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.

Indonesia

(a) Central waste bank in the following locations: West Jakarta, Malang City, and Makassar City

(b) Recycling Center of Jambangan in Surabaya City

(c) TPS3R facility in Malang Regency East Java

Japan

(a) Support for collection and treatment of coastal marine litter by local government

We promote 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: JPY 3,695 million). In addition, fishery multi-functional measures (FY2020 budget: JPY 2,299 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, we 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 30 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

(e) Incentivise plastic free packaging on locally made food and other product

Mexico

(a) "Protection of the Mexican coastal regions and their marine ecosystems by reducing plastic waste" (PROCEP, as per its acronym in Spanish)

The objective of this project is to reduce the amount of plastic waste that enters Mexican marine ecosystems in the Pacific, through 3 lines of action:

i. Improve waste management and environmental management in the state of Oaxaca to reduce the estimated amount of plastics that enter marine ecosystems.
   - Determination of a baseline and regular monitoring of plastics input.
   - Reduction of the number of informal landfills through cooperation with local government and civil society.
   - Development of capacities for the local government on waste issues, advice on state-private financing measures.
   - Development of networks: universities, civil society, local communities to investigate marine animals that have died on the beach in order to document and monitor the impact of plastic.
   - Cooperation with CONANP to implement an awareness and communication campaign.

ii. Improve waste management in the tourism and fishing industry to reduce plastic consumption in the sector.
   - Determination of a baseline for plastic consumption in the tourism and fishing industry in Oaxaca and regular monitoring.
   - Cooperation with state stakeholders, the tourism and fishing industry.
   - Awareness campaigns with relevant actors from both industries.
   - Advice on replacement products and other measures to reduce plastic consumption.

iii. Disseminate best practices in the pilot region to other Pacific coastal areas of Mexico.
   - Systematic processing and validation of best practices with Mexican counterparts.
   - Establish exchange formats between 3 selected coastal regions.
   - Integration of the best practices of the pilot region in the programs of the national environmental practice.
   - Diffusion of best practices through regional (digital) platforms.

New Zealand

(a) Strategy:

The Local Government Waste Manifesto states that reducing waste and making full use of the value of materials will lead to the following positive outcomes for New Zealand:

i. Reduced greenhouse gas emissions
ii. More efficient industries and services
iii. Improved soil quality and the need to use less fertilisers
iv. A reduced reliance on importing materials
v. An increase in economic activity and jobs
vi. Reduced environmental and marine impacts

The updated Local Government Waste Manifesto can be viewed here. http://www.wasteminz.org.nz/wp-content/uploads/2020/07/Local-Government-Waste-Manifesto-2020.pdf

(b) Action:

Certain territorial authorities install stormwater traps to reduce macro plastics entering waterways and further breaking down in the marine environment. In addition, community groups have initiatives in place along coastal regions to remove beach plastics. Many mana whenua also have Iwi Environmental Management Plans in place in collaboration with local councils. Some of these plans include strategies to reduce pollution - including plastics

Norway

(a) The Polluter Control Act states that 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.

Pakistan

(a) Integrated Resource Recovery Centers (IRRCs) are locally recycling waste products to segregate plastic wastes and generate compost from organic waste. This is a step towards circular economy.

Palau

(a) Koror State Government Solid Waste Management (KSG-SWM)

Panama

(a) Establishment of recycling stations and training through the Recycle for your future program.

(b) Fishermen, public institutions, NGOs, diving institutions, University work together to extract abandoned ghost nets.

(c) As a solution to marine pollution, there are retaining barriers or floating traps. An example of these we can mention ecological solid trapping barriers (BEAS) installed by MiAMBIENTE, made by those deprived of liberty; ANCON, who in 2018 installed in the Juan Díaz River with funds from the Global Initiative “Trash Free Waters” of the UN Environment and EPA (United States Environmental Protection Agency); Marea Verde, places the so-called B.O.B (Barrera O Basura) in the Matías Hernández River.

Papua New Guinea

(a) Local communities are encouraged to engage in providing materials required for hand-made shopping bags. This requires local government intervention to support local Small, Medium Enterprises so that it becomes viable and sustainable.

Samoa

(a) Community driven mangrove clean up campaigns are very effective in raising awareness on the impact of plastic pollution. Local NGOs have also contributed positively in promoting community based initiatives through community driven mangrove clean ups and restoration programs.

Sri Lanka

(a) Plastic waste collection and recycling

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Thailand

(a) Introduce and apply circular economy for waste management at pilot sites – e.g. Rayong province

(b) The PTTGC (Petroleum company) collaborates with the governments, private sectors, and communities,
   i. To help managing the waste related issues and promote the use of plastics sustainably according to the Circular Economy concept. GC strives to reduce the volume of plastic wastes by promoting the use of biodegradable plastics which are environmentally friendly; promoting the development of plastic products which can be reused multiple times to replace with single-use plastics; and transforming plastic wastes into new products.
   ii. To implemented the Zero Waste to Landfill Projects in order to maximize the concept of reducing waste generated at source.

Turkey

(a) The achievements made by the zero waste project serve directly to protection of the receiving media, including seas and oceans. Zero Waste - Blue action born with this idea, includes clean-up activities on rivers, lakes and coastal areas. Public participation serves raising awareness among people, especially children.

(b) The new Circular published on June 10th, 2019 in Turkey, leads to preparation of marine litter action plans in all 28 coastal states. Since Turkey has a broad coastline on seas with different characteristics and two straits with heavy maritime traffic, measures are taken taking into account the needs to that special area.

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

(b) US EPA Trash Free Waters Best Practices Compendium: https://www.epa.gov/trash-free-waters/aquatic-trash-prevention-national-great-practices-compendium

International Organisations and NGOs

ERIA

(a) ERIA's RKC-MPD has been working to enhance local level capacity building to address marine plastic pollution in ASEAN+3 region.

The RKC-MPD has pointed out the necessity for a better regional waste management, and for that proposed inter-municipal cooperation and Public and Private Partnership as one way to address this challenge.

Related Link:

https://rkcmpd-eria.org/publication/18

Ocean Conservancy

(a) SPLASH (Strategic Litter Abatement in the Song Hong)

(b) The SPLASH project is implemented by our on-the-ground partner, MCD in Nam Dinh. We have focused on the engagement of local leaders and local stakeholders to increase awareness, including:
   i. Engagement of Nam Dinh Authorities, including around trash trap installation process and scientific research.
   ii. Involvement of local communities around communication activities to increase awareness.
   iii. Organization of different events including ICC clean-up event and public opinion survey to improve people behaviors.

World Bank

(a) 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 SWM lies under the responsibility of municipalities, support at the local level becomes an essential part of the solution to end leakages.

5.3. Private Sector

Countries

Bhutan

(a) Private sectors in Thimphu makes fencing poles out of plastics, many women entrepreneur group produces plastic bags.

(b) Samdrup Jongkhar Initiatives in eastern part of Bhutan adopted a town whereby the encourage the sustainable life style and reduces the use of plastics in the area.

Brunei

(a) Participation of department stores and groceries stores in the 'No Plastic Bag Day Everyday' Initiative

(b) Bring Your Own (BYO) Campaigns

Canada

Examples:

(a) Circular Economy Business Toolkit.

URL:

http://www.nzwc.ca/Documents/CircularEconomyBusinessToolkit.pdf

(b) Canadian Produce Marketing Association Preferred Plastics Guide.

URL:

https://www.cpma.ca/docs/default-source/industry/2020/CPMA_Preferred_Plastics_Guide_English.pdf

(c) Operation Clean Sweep.

URL:

https://canadianchemistry.ca/sustainability/operation-clean-sweep/

(d) Medical PVC Recycling Pilot Program – PVC 123

URL:

https://www.vinylinstituteofcanada.com/medical-pvc-recycling-pilot-program-pvc-123/

(e) A Roadmap to Support the Circularity and Recycling of Plastics in Canada

URL:

https://www.csagroup.org/article/research/a-roadmap-to-support-the-circularity-and-recycling-of-plastics-in-canada/

(f) Guidelines for how to start and run a bulk reuse and refillery business

URL:

https://scoutenvironmental.com/bulk-reuse-refillery-guide/

(g) Plastic Reduction Partner (for restaurants, chefs and other food professionals to reduce plastic waste)

URL:

https://plasticreduction.ocean.org/food-professionals/

Chile

(a) The Chilean fishing industry has signed a Clean Production Agreement (APL) "Sustainable Management of Solid Waste Assimilable to Households in Industrial Fishing Vessels". The purpose of which is to promote the reuse, recycling and recovery of assimilable domestic waste, especially plastics, generated by industrial fishing vessels.

Fiji

(a) The Ministry is engaging with the private sector through initiatives such as Zero Waste Organization Recognition Program and Recycling initiatives.

France

(a) Development of links with the industrial sector: the "National Pact on plastic packaging" allows a commitment from the companies and the implementation of recycling, reusing and reducing plastic packaging targets. Moreover, an exceptional financial support scheme for the sale of recycled materials (to compensate the difference between the price of recycled materials and virgin materials" has been implemented by the ADEME at the end of 2020, enabling 60 projects to be supported. In 2021, the ADEME has also launched the ORPLAST project, a financial scheme aiming at increasing the incorporation of plastic recycling raw materials by plastic manufacturers as a substitute for virgin material by supporting feasibility/test studies and investments (adaptation of equipments, etc…).

(b) The Clean Sweep Operation is an international program for the actors of the plastic industry, and designed to prevent the loss of plastic pellets in the aquatic environment. It provides companies a guide with good practices to follow.

Indonesia

(a) Recycling Business Unit of DanoneAqua Indonesia in several locations.

Japan

(a) Released "Good Practices for Reducing Microplastics" compiling a collection of good practices on the efforts and technologies of Japanese companies. Available from May 2021.

Kiribati

(a) Waste Recycling Scheme

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 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 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.

Netherlands

(a) Operation Clean Sweep, which is now being converted to a formalized certification scheme.

New Zealand

(a) Action:

The Waste Minimisation Fund has funded an initiative by Plastics New Zealand to run a programme of work aimed at helping Aotearoa New Zealand change its relationship with plastic. The three-year programme focuses on: circular plastics training, establishing a design advisory to connect businesses with the right advice for sustainable product and packaging design, and setting up working groups on specific plastic streams.

Norway

(a) Several initiatives initiated and lead by the industry themselves. The Producer Responsibility Organization Green Dot Norway (Grønt Punkt Norge) has launched a Plastic Pledge. Businesses pledge to use more recycled plastic material, avoid unnecessary use of plastic, and design for recycling.

(b) According to the provisions in the Pollution Control Act, the industry has the responsibility to ensure environmentally sound treatment of their own plastic waste.

(c) Norway has EPR systems on plastic packaging, drinking bottles and beverage cans, and on e-waste. New EPR systems will be assessed for other plastic single use products in line with the EU SUP-directive, plastic equipment used in fisheries and aquaculture included.

Pakistan

(a) CoRE alliance group formed by private sector stakeholders is a commendable effort to recycle and reduce plastic packaging waste, which constitutes a primary source of plastic in waterways.

Palau

(a) Major corporation and various hotels partnership with KSG-SWM

Panama

(a) Promote innovative solutions: Raise awareness to contribute to the collection of plastic material and its transformation into recycled plastic

Papua New Guinea

(a) Small, Medium Enterprise have emerged and flourished within a small space of time after a ban on plastic shopping bags was announced. This sector has formalized arrangements with commercial banks and major retailers to fund and sell their products respectively, replacing plastic shopping bags in general.

Philippines

(a) National Ecosavers Program is partly Information Education Campaign (IEC) and partly waste segregation and recycling, encouraging children to bring their recyclables to school in exchange for incentives such as school materials. Under this Program, the country' cities and municipalities have also taken the lead in promoting segregation at the household level.Similar programs have likewise been made in partnership with private organizations and with different targets (e.g. collection of soft plastics, bottles, etc.) and institutions (e.g. barangays, schools). Despite banking on financial incentives to drive participation, it has a strong potential for scaling up to a larger population and scaling out to other institutions if properly linked to local recycling industries. The country's cities and municipalities have also taken the lead in promoting segregation at the household level under the National Ecosavers Program.

(b) AUDEO Manufacturing OPC. AUDEO is introducing an alternative eco-friendly building system to the Philippines that will help solve the plastic pollution crisis and the mass housing backlog in the country. AUDEO is committed to accomplishing two major goals in the Philippines: (1) Reducing the mass housing backlog and (2) Solving the country's plastic waste issue. The material of their building system is composed of 90% upcycled plastic which can be directly sourced from landfills, oceans, waterways, and streets. Additionally, they can transform the "hard to recycle" plastics into their bricks, thus reducing the country's plastic footprint.

(c) Plastic 3R Hacks PH or the so-called "Hackaton". This initiative is supported by UN-Habitat's Healthy Oceans and Clean Cities Initiative, HOCCI in partnership with Red Wizard (private sector). This is an open call to the youth aged 18-30 to suggest 3R (Reduce, Reuse, Recycle) Ideas/Solutions. The "Hackaton" is a series of events, i.e., Pre-Hack Event entrants will be given an overview on the challenge to be solved; cities will present challenges), Orientation on (SWM101, Plastics101 Circular Economy 101, MarineConservation101 and Waste and SDGs101), Mentoring (upon request of entrants) and Finals Judging. Winners will have prizes and so far, our partner from Red Wizard already sent out invites to its tech networks as well as universities.

(d) CEMEX Holdings Philippines in partnership with Unilever Philippines for TSEK Clean Community Program. The 2 companies recently inked a Memorandum of Understanding for the intensified implementation of TSEK or Tamang Segregasyon para sa Kalikasan which is a solid waste management program initiated by CEMEX Philippines Foundation for the said Program. The TSEK clean community program is driven by a multi-stakeholder collaboration to promote proper waste segregation and proper disposal of residual waste through co-processing, implemented through an Information, Education and Communication (IEC) campaign. Through the "Basuraffle", households are encouraged to surrender properly segregated wastes to their municipality, where for every kilo of dry plastic wastes, community resident participants are given a raffle coupon. Raffle items, which will now include Unilever products, are awarded during the raffle draws held every last Friday of the month. Unilever will also coordinate with affiliated stores to help in the information dissemination of TSEK, and haul and deliver segregated plastic wastes collected from partner local government units to the CEMEX Solid Cement Plant in Rizal for co-processing.

Samoa

(a) Partnership in installing of collection cages at main super markets and public places as a primary interception measures to capture/recover plastics for recycling.

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 encourage consumers to bring reusables and decline disposables such as single-use bags or takeaway containers and cups.

Sri Lanka

(a) Plastic waste collection and recycling programs have been increased.

(b) Beach caretakers are recruited and some of them are sponsored by private organizations.

Thailand

(a) To support local activities and practices, followings have been implemented:
   i. Zero-waste companies:
      - The campaign is initiated by the business sector located nearby each other, to apply zero-waste campaign in their company.
      - It promotes and encourages employees to separate waste in the office, e.g. separating plastic, glass, and paper waste for recycling and separating food waste to be used as animal feed by the surrounding community, etc.

ii. Closing the loop:
- PTT Global Chemical Public Company Limited, or GC and Suranaree University of Technology teamed up to conduct a study project on a closed loop plastic waste management system which ranges from sources to destination. This project aims to add value to various types of contaminated plastic wastes through chemical recycling to transform contaminated waste into fuel or feedstocks used in the chemicals industry.
- GC, through our group subsidiaries, will assist the university in expanding the project nationwide. GC also co-researched and provided financial support to test the transformation of contaminated waste into fuel and feedstocks used in the industry, providing another effective way to add value to various types of contaminated plastic waste - Suranaree University is one of the lead university, located in the northeastern part of Thailand.

UK

The UK also supports non-governmental organisations and projects including 'Fishing for Litter', 'Marine Conservation Society' and the Global Ghost Gear Initiative.

(a) 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.

(b) Marine Conservation Society

The UK funds the Marine Conservation Society to record litter from sections of our coast which helps us monitor 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. We welcome 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.

(c) Global Ghost Gear Initiative + Food and Agriculture Organisation

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. We fund and collaborate with GGGI on regional interventions via technical workshops, bespoke training and other outreach initiatives.

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.

Uruguay

(a) SALUS, a non-alcoholic beverages company began with the sale of mineral waters in containers made with 100% recycled material and without labels.

(b) CEMPRE (Business Commitment for RECYCLING), developed an application with data on where to recycle the different materials (Where I Recycle).

https://cempre.org.uy/app-para-saber-donde-llevar-la-basura-reciclable/

https://dondereciclo.com.uy/intro/mapa

(c) RE-MARKET (free packaging store) a commercialization of cleaning products, grains, etc. nationwide, it began to sell its products, filling the containers that the customer himself carries.

https://www.facebook.com/Remarket.uy/

US

(a) Operation Clean Sweep provides guidelines to help plastics industry operations managers reduce the loss of pellets, flakes and powder to the environment.

https://www.opcleansweep.org/wp-content/uploads/OCS-Manual-2.pdf

(b) The Sustainable Packaging Coalition provides training and guides for sustainable packaging.

https://sustainablepackaging.org/

International Organisations and NGOs

ERIA

(a) ERIA's RKC-MPD has been working to promote good practices from the private sector to address marine plastic pollution in ASEAN+3 region.

ERIA's RKC-MPD has launched an online private sector platform in January 2021 on its website (https://rkcmpd-eria.org/story). The platform hosts information submitted by private companies from ASEAN+3 countries to showcase their products, services, or technologies contributing to the reduction of plastic waste and marine plastic debris. It aims to be conducive to Business-to-Business Business-to-Consumer and/or Business-to-Government opportunities in the ASEAN+3 region along with information exchange and awareness raising.

Ocean Conservancy

(a) Collaborating with the private sector is critical to advancing the circular economy and to preventing marine debris, particularly plastic pollution. Engaging the private sector is important not simply for funding, but for their expertise, potential for policy advocacy, and their often global influence. Their willingness to collaborate and engage with Ocean Conservancy has only grown over the years as the marine debris issue has gained awareness.

(b) The Global Ghost Gear Initiative

GGGI worked with UN Global Compact – the UN body representing the private sector - to integrate elements of the GGGI Best Practice Framework and GGGI related case studies into the Practical Guidance for the UN Global Compact's Sustainable Ocean Principles for capture fisheries. In addition, the GGGI has been working with its corporate partners to develop and implement ghost gear action plans – for example with Thai Union.

URLs:

https://www.unglobalcompact.org/take-action/practical-guidances-for-the-un-global-compact-sustainable-ocean-principles

https://www.thaiunion.com/files/download/sustainability/policy/Thai-Union-and-the-Global-Ghost-Gear-Initiative-Work-Plan-2018-2020-Overview.pdf

The Global Ghost Gear Initiative continued to engage on consultative processes for industry standards involving seafood sustainability where ghost gear is related, including participating on the technical working group for the Global Seafood Assurances' (GSA) Responsible Fishing Vessel Standard (RFVS). The RFVS is the only vessel-level certification program that is available on a global scale, and the latest revision – released in June 2020 – now includes ghost gear prevention measures in the environmental impact management section. We've also continued our conversation with the Marine Stewardship Council (MSC) to include ghost gear in their respective standard revisions to have preventive impact at scale.

WB

(a) 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.

5.4. International Cooperation

Countries

Canada

Examples:

(a) Ocean Plastics Charter

https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html

(b) Addressing Single-Use Plastic Products Pollution Using Life Cycle Approach

https://www.lifecycleinitiative.org/wp-content/uploads/2021/02/Addressing-SUP-Products-using-LCA_UNEP-2021_FINAL-Report-sml.pdf

(c) "Last Stop: The Ocean" Campaign Toolkit and Website

http://www.laststoptheocean.com/

(d) Reducing Marine Litter Through Local Action: A Toolkit for Community Engagement

http://www3.cec.org/islandora/en/item/11870-reducing-marine-litter-through-local-action

Chile

(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
v. Latin America Group on Marine Litter and Microplastic
vi. New York group of friends to combat marine plastic pollution
vii. Nairobi group of friends to combat marine plastic pollution

Dominican Republic

(a) Bio-fences installation experience: To reduce plastic pollution.

i. Installation of the first bio-fences in the Nigua River, in the basin at the municipal district of Doña Ana. September 2018, with the support of the Government of Guatemala.
ii. Installation of the second bio-fences, at the Malecon of Puerto Plata, September 2020, with the support of the Puerto Plata City Council and the Clean Ocean Foundation.

The bio-fences are a craft project made with recycling material specifically with loop, mesh and plastic bottles, its main objective is to be a barrier that stops all the plastic waste found in the water.

Its easy construction allows the communities to be integrated in the elaboration and while the waste is collected, they can carry out environmental education tasks.

It is an artisan cleaning system that is easy to prepare and is very successful and recognized by the World Economic Forum as an efficient project.

Fiji

(a) The Ministry of Environment is working with the regional partners such as Secretariat of the Pacific Regional Environment Programme (SPREP) and NGOs (Local and International) to address waste management related issues. The Ministry has been working with Japan International Cooperation Agency (JICA) and implementing many programs with JICA.

France

(a) Participation to meetings and working groups (UN, G7, G20, RSC, EU, etc)

France organized in 2017 and 2019 a workshop to share results and methodologies of existing projects analyzing riverine plastic pollution. Harmonized methodologies are needed for a long-term plastic pollution monitoring in rivers and should help assess measures efficiency. 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 summarizing advantages and disadvantages of every method discussed during the workshop.

Germany

(a) PREVENT Waste Alliance: Initiated under the patronage of the German Development Minister Gerd Müller, the PREVENT Waste Alliance was launched in May 2019. The PREVENT serves as a multi-stakeholder platform for exchange and international cooperation. After two years more than 200 organisations from the private sector, academia, civil society and public institutions work together on waste prevention, collection, and recycling as well as the increased uptake of secondary resources in low- and middle-income countries. During a call for solutions in 2020, member organisations jointly developed project ideas of which 8 are being piloted since the beginning of 2021. More information of the PREVENT and the pilots is available here:

https://prevent-waste.net/en/

https://prevent-waste.net/en/pilotprojects/

(b) EPR Toolbox: Extended Producer Responsibility (EPR) is a key concept for 'closing the loop' in the packaging value chain. The EPR Toolbox developed by the PREVENT Waste Alliance is a collection of internationally relevant knowledge on the topic of EPR for packaging. Its aim is to promote knowledge exchange and enhance development of EPR systems worldwide. The EPR Toolbox contains detailed training materials on EPR, practical country examples and a set of FAQs. It has been translated into Chinese and Vietnamese and translations for Indonesia and Thailand will follow. It has been used for workshops and trainings in different countries, for instance in South-East Asia.

Publicly available on the PREVENT website:

https://prevent-waste.net/en/epr-toolbox/

(c) Waste Flow Diagram (WFD): The WFD is a rapid assessment tool that maps municipal solid waste flows and estimates plastic waste leakage into the terrestrial and aquatic environment. It is developed for cities in low- and middle-income countries. It can be used both as baseline assessment and for scenario forecasting to plan and monitor local marine litter interventions. It is an excel-based tool combining primary and secondary data inputs with systematic observations.. The WFD was applied among others Mombasa in Kenya, Manila in the Philippines and Tulum in Mexico. Another 50 applications in among others Ethiopia, India or the Caribbean by actors such as WWF and the World Bank are planned. The tool and more information is available here:

https://www.giz.de/expertise/html/62153.html

https://plasticpollution.leeds.ac.uk/toolkits/wfd/

(d) Rethinking Plastics: The 'Rethinking Plastics – Circular Economy Solutions to Marine Litter' project supports a transition towards a circular economy for plastics in East and South East Asia with the objective to reduce plastic waste leakage into the sea. The project is co-funded by the German Government and the European Union since April 2019 and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Expertise France. The project provides advice, fosters exchange and experiences sharing, develops knowledge materials and supports 24 pilot projects in China, Indonesia, the Philippines, Thailand and Vietnam. These pilots were kicked off in the last 12 months and serve to establish and disseminate new approaches or up scaled good practices. Knowledge exchange is fostered, for instance, through workshops and conferences while awareness raising campaigns are also being implemented. One example is a Marine Litter Knowledge Quiz Campaign in late 2020 with more than 25,000 Chinese students aged 6-15 and teachers taking part. More information is available here:

https://beatplasticpollution.eu/rethinking-plastics/

(e) Clean Oceans Initiative (COI): Launched by the German development bank KfW, the European Development Bank (EIB), and Agence Francaise de Développement (AFD) in 2018 and reinforced by two other European development banks (CDP and ICO) in 2020, COI intends to support projects that reduce pollution in the oceans, with a particular focus on plastics. Together, the banks provide up to EUR 2 billion in lending between 2018 and 2023, focusing on waste management, wastewater and stormwater in Africa, Asia, and Latin America. As of today, about two-thirds of this goal have already been achieved.

(f) Grant Programme against Marine Litter 'Marine Debris Framework – Regional hubs around the globe' (Marine: DeFRAG). The primary goal here is to cut waste by avoiding it at the source, so plastic waste never ends up in the oceans in the first place. This includes both medium-term measures that work to reduce the volumes of plastic waste as well as short-term measures that establish and develop functional waste and closed-loop management systems. As well as coastal regions and island nations, there is also a focus on countries and regions where plastic waste is transported by river from the interior to the oceans.

Indonesia

(a) The establishment of Regional Capacity Center for Clean Seas (RC3S) in Bali, Indonesia.

RC3S serves its purpose to contribute to the reduction and mitigation of land-based sources of marine pollution, with particular focus on nutrient, wastewater, marine litter and microplastics.

In this respect, RC3S will follow-up Bali Declaration especially in: (1) Strengthening the Global Partnership on Marine Litter and Microplastics, Nutrient Management and the Wastewater Initiative; and the interlinkages between partnerships; (2) Improving the coordination, engagement and support of the work on marine pollution; and (3) Encouraging exchange of information, practical experience, scientific and technical expertise, as well as cooperative and collaborative action and partnership.

Japan

(a) International cooperation to developing countries

Under the "MARINE Initiative" explained above in 3.2.3,Japan is supporting 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".

Also, Japan, in cooperation with international organizations, has implemented numerous projects to tackle marine plastic pollution. For example, Japan has earmarked over USD 1,100,000 to support the United Nations Environment Programme (UNEP) for implementation of countermeasures against marine plastic litter in Southeast Asia and India (CounterMEASURE) 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. Since May 2020, the 2nd phase of CounterMEASURE has been implemented on a larger scale with Japan's contribution (USD 5,700,000). The project aims to generate scientific knowledge on plastic pollution in the Ganges, Mekong, and selected rivers in Sri Lanka and to share and disseminate to inform policy and decision-making process at local, national, regional, and global level.

UNEP International Environmental Technology Centre (IETC) has been implementing the project on safe and environmentally sound managed treatment and technology on the COVID-19 related medical and plastic waste, based on the Osaka Blue Ocean Vision, with the earmarked contribution from the government of Japan (USD909,090). The project has been revealed the needs and demands for plastic waste management in Asia to apply and support introducing integrated solid waste management.

Kiribati

(a) Plastic Proposal

(b) UDP Phase II Solid Waste

Maldives

(a) Commonwealth clean ocean alliance (CCOA)

In 2020, Maldives joined commonwealth clean ocean alliance, a working group aiming to take actions on tackling marine plastic pollution.

(b) Group of Friends

Maldives is one of the member states and co-chaire of the Group of Friends. The Group of Friends (GoF) would seek to push for action that would help to effectively address plastic pollution at the global level. Supporting the ongoing work under the UN Environmental Assembly will be one of the main objectives of the Group of Friends in this regard. Building on the efforts taking place in various forums and at various levels of government and society, the GoF will play a significant role to strengthen the political momentum and to shepherd the transformation of these different efforts towards an effective, coherent, and coordinated action and solutions to address plastic pollution. As all countries are represented through their UNHQ-based Missions (unlike at other forums where these issues are being addressed), the GoF is well-positioned to engage all stakeholders consistently.

The Group of Friends to Combat Marine Plastic Pollution has been established under the co-chairmanship of Maldives, Norway and Antigua & Barbuda to formulate a response at the global level to raise awareness and to advocate for action to combat marine plastic pollution. Presently, 46 member states of the UN have joined the Group of Friends.

Mexico

(a) CEC Strategic Plan 2021-2025

From 2017 to June 2021, Mexico collaborated with Canada and the United States within the framework of the Commission for Environmental Cooperation (CEC) in efforts focused on reducing marine litter in general (not just plastic), by strengthening the capacities of local communities to address the management of solid waste of land origin, in order to prevent, minimize and manage waste before its arrival at sea:

http://www.cec.org/es/category/ecosistemas/reduccion-de-la-basura-marina-es/

As part of these works, the participation of various local stakeholders and their involvement in the identification of small-scale solutions for the reduction of marine litter was encouraged; A set of tools available to the public was developed, which seeks to guide decision-makers in facilitating community participation in actions and initiatives that reduce marine litter from a local and preventive approach, and awareness-raising actions were carried out and raising awareness about the role of the population in preventing this problem, and the solutions available to citizens for its reduction.

As evidenced by the CEC Strategic Plan 2021-2025 approved by Mexico, Canada and the United States, the adoption of measures aimed at preventing and mitigating the problem of marine litter, including plastic waste and microplastics, will continue to be a priority in the collaboration between the three countries:

http://www.cec.org/files/documents/planes_estrategicos/cca-plan-estrategico-2021-2025.pdf

Netherlands

(a) At present the following partners/countries participate in the European Plastics Pact according to Ellen MacArthur Foundation (source / 13-12-2020:

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

(b) Europe

European Plastics Pact

https://europeanplasticspact.org/

As of April 2021, the 147 signatories of the European Plastics Pact come from 21 countries in Europe and include:

- 15 National governments
- 19 Packaging manufacturers
- 11 Waste management businesses
- 9 Plastics manufacturers
- 9 Brands (non-food)
- 6 Brands (food)
- 4 Retailers

(c) North America

U.S. Plastics Pact led by The Recycling Partnership

https://usplasticspact.org/

https://recyclingpartnership.org/

(d) South America

Circula El Plástico in Chile led by Fundación Chile

https://newplasticseconomy.org/news/chile-joins-plastics-pact-network

https://fch.cl/

(e) Africa

The South African Plastics Pact, led by Green Cape,

https://www.saplasticspact.org.za/

https://www.green-cape.co.za/

New Zealand

(a) Action:

Although New Zealand is focused on its domestic work on plastics currently, we are supporting discussions towards a global agreement to tackle marine plastic pollution under UN auspices.

Norway

(a) Norway has signed on to the G7 Plastics Charter, the 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 the Basel Convention.

(b) The Norwegian Development Program to Combat Marine Litter and Microplastics was launched in 2018. 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 1,6 billion NOK (approx. 200 mill. USD) on the development programme to combat marine litter and microplastics in the period 2019 to 2023. The main

objective of the Norwegian development program 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 organizations 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.

(c) Norway will support a draft resolution for consideration by the UNEA5.2 in 2022 to launch negotiations of a new global agreement on marine plastic litter and plastic pollution.

Pakistan

(a) The 'plastic free rivers and seas in South Asia' project in collaboration with SACEP, the World Bank and Parley for the Oceans is a robust initiative to address the marine plastic pollution problem in the entire region.

Palau

(a) Environmental Quality Protection Board (EQPB) is implementing a UNEP Special Programme project called "Strengthening the national institutional capacity for chemicals and waste management in Palau".

Panama

(a) Project GEF-LAC: Reduce marine plastics and plastic pollution in the cities of Latin America and the Caribbean through a circular economy approach promoted by UNEP.

(b) UNEP, Ocean Legacy and UNDP, through the Sustainable Azuero Project, support the development of the National Action Plan for Marine Litter.

(c) Battelle promoted through funding some activities of the National Action Plan for Marine Litter.

Papua New Guinea

(a) Some Environment Permit holders import plastic shopping bags from various countries. However, some have been found to be importing plastic bags that do not degrade rapidly which a requirement of an environment permit is issued, while others import allegedly beyond the allocated quotas. We have informed the Environment Permit Holders to production details so the origins can be traced if the international allows.

Samoa

(a) Access to funding to implement key priorities. This is evident in the many projects targeting waste management currently being implemented by the Ministry and key partners.

Saudi Arabia

(a) Regional cooperation by PERSIGA

Singapore

(a) Singapore actively participates in regional and global marine litter platforms under ASEAN and the UN.

Thailand

(a) Collaborate with ASEAN member states to combat marine debris

(b) Participate in a marine litter management program with the international organizations

UK

(a) International Maritime Organisation (IMO)

The UK is active at the IMO debating the issue of Marine Plastic Litter. The UK co-ordinated the correspondence group for to complete the MPL Action table, this work was completed at MEPC 74.

(b) United Nations (UN)

SDGs

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'. 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.

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.

(c) AHEG

The UK works through the ad hoc open-ended expert group (AHEG) established by UNEA resolution 3/7 and extended by UNEA resolution 4/6 towards UNEA 5.2. AHEG completed its mandate in November 2020.

The UK supports UN Clean Seas. The campaign contributes to the goals of the Partnership on Marine Litter. The UK also supports and is committed to the UN Partnership on Marine Litter.

(d) G7: UK's 2021 G7 presidency

Recognising the scale, urgency and transboundary nature of the global action needed to tackle marine plastic litter and microplastics the UK this year has driven the G7 to commit to fully engage in discussions or negotiations at the next session of UNEA on options including a potential new global instrument, strengthening existing agreements and a multi-stakeholder platform.

The G7 have also committed to step up international action to tackle ghost gear, which has a significant direct impact on marine life, including an agreement to support organisations such as the Global Ghost Gear Initiative and agreement to carefully consider the recommendations of the UK commissioned OECD report 'Towards G7 Action to Combat Ghost Fishing gear'.

Communique and OECD Ghost Gear report can be found here:

https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communique

(e) UK G7 Commitments

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 act 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.

As a member of the G7, we welcome 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.

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 June 9, 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.

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

https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html

(f) G20

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 we have 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. This was reaffirmed in 2020 at the 2020 G20 Riyadh Summit.
- We are 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.

(g) OSPAR

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. OSPAR's marine litter objective is to substantially reduce marine litter in the OSPAR Maritime Area to levels where properties and quantities do not cause harm to the marine environment. To achieve this, OSPAR adopted a Regional Action Plan on Marine Litter for the period 2014-2021. This contains 55 collective and national actions to address both land-based and sea-based sources of marine litter, as well as education and

removal actions. The UK worked to complete 3 collective actions, including co-leading on a project on the design and recycling of fishing gear. The UK and other contracting parties are currently developing ambitious marine litter objectives for the 2020-2030 North-East Atlantic Environment Strategy, reflecting on the successes of the current Regional Action Plan, and developing a new Regional Action Plan from 2021 onwards.

https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan

US

(a) The Trash Free Waters International Implementation Guide – a tool that provides step-by-step guidance for including all stakeholders, either at the national, state, or community level in decision-making to address land-based sources of marine litter.

https://www.epa.gov/sites/production/files/2021-01/documents/tfw_howtoguide_20201228_finalprint_508_final.pdf

(b) Best Practices for Solid Waste Management: A Guide for Decision-Makers in Developing Countries - The Guide covers a diverse set of important topics for city-level decision-makers around the world including stakeholder engagement, waste management planning and economics, waste collection and transportation, prevention, minimization, and recycling, landfill design and operation, and energy recovery.

https://www.epa.gov/international-cooperation/solid-waste-management-guide-developing-countries

(c) Virtual Landfill Construction & Operations Workshop - This virtual workshop contains module presentations, links to videos of the instructors delivering the modules, and the manuals/reference documents on which the workshop is based. The target audience is private and public sector solid waste management officials.

https://response.epa.gov/site/site_profile.aspx?site_id=15071

(d) 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/

(e) 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/

(f) 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/

(g) 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/

(h) Turning the Tide: How Can Indonesia Close the Loop on Plastic Waste? https://www.wilsoncenter.org/publication/insightout-issue-7-turning-tide-how-can-indonesia-close-loop-plastic-waste

International Organisations and NGOs

ADB

(a) The project team is preparing for implementation, so unable to report on implementation of best practices at this point.

ERIA

(a) ERIA's RKC-MPD has been working to enhance capacity building to address marine plastic pollution in ASEAN+3 regional level.

(b) Strengthening the role as a network hub among ASEAN+3 countries (ASEAN Member States, China, Japan, and Republic of Korea)

Launch of RKC-MPD website as an information sharing platform in the region (https://rkcmpd-eria.org/). The main content of the website is Good Practices section, which shares National Framework to Tackle Marine Plastic Debris (including Ministries and Coordination Mechanism, National Laws and Regulations, Local Regulations, Action Plans and Roadmaps, and International Agreement), Government Initiatives, Scientific Knowledge, and Voluntary Initiatives.

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.

Strengthening cooperation with Institute for Global Environmental Strategies (IGES) by signing a MoU and scoping out Priority Works for 2021–2022.

Strengthening cooperation with related organizations. Conducting webinars and network meetings with research institutions and major international organizations in the region, including:

- 'ASEAN on Point' Public Forum: How Policies Can Support the Private Sector in Combatting Marine Plastic Debris
- ERIA-IGES Joint Webinar on Estimating Plastic Waste and Pollution for Data-driven Policy Making in Emerging Economies at the occasion of 7th 3RINCs
- CMMIA-MOEJ Online Workshop: Strengthening Capacity for Marine Debris Reduction and Waste Management in ASEAN Region through Knowledge Sharing on Marine Litter

- Indonesia-Japan Environmental Week Online Seminar 5: Strengthen Partnership between Public and Private on Marine Plastic Litter and Waste Management
- ERIA-AIPA Online Joint Dialogue on Waste Management in the Context of COVID-19 Pandemic.

(c) Information sharing for international frameworks or initiatives

Introduction of Regional Knowledge Centre for Marine Plastic Debris at various meetings and conferences conducted by Ministries of Environment of ASEAN+3 countries, ASEAN Secretariat, G7, G20, JICA, OECD, UN, COBSEA, and others.

Creation of videos for the awareness raising and introduction of Regional Knowledge Centre for Marine Plastic Debris (https://rkcmpd-eria.org/aboutus.php).

IAEA

(a) The IAEA Technical Cooperation Programme (TCP) provides the opportunity for Member States with the various stakeholders from specialized organizations, academe, private sector and the non-governmental organizations to collaborate on a common target addressing a developmental issue and where nuclear science and technology has an added value. Member States participate in the TCP through national, regional or interregional projects; and receive support for capacity building through expert services, training through courses, fellowships and scientific visits as well as enhancement of relevant facilities. South-South cooperation, Triangular Cooperation and Technical Cooperation amongst Developing Countries are amongst the best practices that facilitate effective and efficient capacity building in the countries.

Ref: Nuclear technology for development used safely, peacefully, securely | IAEA

https://www.iaea.org/services/technical-cooperation-programme

(b) The IAEA Coordinated Research Projects bring together research institutes in both developing and developed Member States to collaborate on research topics of common interest. Research, technical and doctoral contracts and research agreements are awarded to institutes in Member States for their completion of research work under these CRPs. Each established CRP consists of a network of 10 to 15 research institutes that work in coordination for three to five years to acquire and disseminate new knowledge.

Ref: How CRPs work | IAEA

https://www.iaea.org/services/coordinated-research-activities/how-crps-work

Ocean Conservancy

(a) 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 123 stakeholder groups, including 19 national governments as well as representatives from civil society, the private sector, public agencies, academia, intergovernmental organizations, and others from across the fishing industry to tackle ghost gear at a global scale. In 2020, three new governments joined the Initiative – Mexico, the United States and Iceland. In 2017, the GGGI developed the Best Practice Framework for the Management of Fishing Gear in Capture Fisheries, which has been adopted by a range of seafood companies and in national and regional marine litter and fisheries management action plans. An updated version of this Framework including the latest science will be launched in 2021 alongside a Best Practice Framework for the Management of Fishing Gear in the Aquaculture sector. The GGGI has hosted numerous virtual workshops in 2020 and 2021 for fisheries stakeholders and fishers in all corners of the world – from Maine to Sri Lanka – to build capacity and encourage the uptake of best practices.

URL:

https://www.ghostgear.org/resources

https://www.ghostgear.org/news/gggi-annual-report-2020

UNIDO

(a) In collaboration with UNIDO, UNEP and EU, the Global Alliance on Circular Economy and Resource Efficiency (GACERE) has been established in February 2021. Bringing together governments and relevant networks and organizations, the GACERE aims to provide a global impetus to initiatives related to the circular economy transition, resource efficiency, sustainable consumption and production patterns, and inclusive and sustainable industrialization.

Fourteen countries (Canada, Chile, Colombia, India, Japan, Kenya, Morocco, New Zealand, Nigeria, Norway, Peru, Republic of Korea, Rwanda and South Africa) and the European Commission on behalf of the European Union have joined the Alliance to date. Mexico, Singapore, and Switzerland maintain observer status.

WB

(a) As the ocean and marine litter do not respect national borders, 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 intuitional 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. is supporting regional cooperation on preventing and

reducing 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. The former launched the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021 – 2025), which provides a scalable, solution-focused joint strategy to address marine plastic debris across the region. Support for the development of the plan came from the World Bank Group, through PROBLUE.

WEF GPAP

(a) GPAP's core focus lies on bringing together and working closely with partners from government, business, NGOs, academia and others to drive vital impact. Through GPAP's Advisory Committee and other forums we also coordinate and collaborate with other key global platforms addressing plastic pollutions, including WWF, WRG the World Bank, WRAP, the Ellen Macarthur Foundation and UNEP. GPAP is also affiliated with the Platform to Accelerate the Circular Economy (PACE). GPAP focuses its activities in ODA-eligible countries, which means that many of the countries it engages in are not part of the G20 group.

6. Further Information

Countries

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://ccme.ca/en/res/strategyonzeroplasticwaste.pdf
- Canada-wide Action Plan on Zero Plastic Waste (Phase 1 & Phase 2): https://ccme.ca/en/res/1589_ccmecanada-wideactionplanonzeroplasticwaste_en-secured.pdf https://ccme.ca/en/res/ccmephase2actionplan_en-external-secured.pdf
- Canada's Plastics Science Agenda https://www.canada.ca/en/environment-climate-change/services/science-technology/canada-science-plastic-agenda.html
- Science Assessment of Plastic Pollution https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html
- A proposed integrated management approach to plastic products: discussion paper - Canada.ca https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/plastics-proposed-integrated-management-approach.html
- Canada Gazette, Part II, Volume 155, Number 10: Final Order Adding plastic manufactured items to Schedule 1 to the Canadian Environmental Protection Act, 1999 https://canadagazette.gc.ca/rp-pr/p2/2021/2021-05-12/html/sor-dors86-eng.html
- Microbeads in Toiletries Regulations: https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/microbeads.html
- Canadian Plastics Innovation Challenges: https://www.ic.gc.ca/eic/site/101.nsf/eng/00001.html
- Zero Plastic Waste Initiative: https://www.canada.ca/en/environment-climate-change/services/environmental-funding/programs/zero-plastic-waste-initiative.html
- Combatting marine litter: Ghost Gear: https://www.dfo-mpo.gc.ca/fisheries-peches/management-gestion/ghostgear-equipementfantome/index-eng.html
- Reducing plastic waste in federal operations: https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/government-canada-actions-plastic-waste-federal-operations.html
- Economic Study: https://publications.gc.ca/site/eng/9.871296/publication.html
- Socio-economic and environmental study on remanufacturing and other value-retention processes in Canada: https://www.canada.ca/en/services/environment/conservation/sustainability/circular-economy/consultation-page-remanufacturing.html

Dominican Republic

- https://ambiente.gob.do/

Finland

- A Plastics Roadmap to Finland: https://muovitiekartta.fi/in-brief/
- The National Waste Plan From Recycling to a Circular Economy National Waste Plan to 2023 https://ym.fi/en/national-waste-plan https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160889/SY_01en_18_WEB.pdf?sequence=1&isAllowed=y
- The Strategic Programme to Promote a Circular Economy: https://ym.fi/en/strategic-programme-to-promote-a-circular-economy https://ym.fi/documents/1410903/42733297/Government+resolution+on+the+Strategic+Programme+for+Circular+Economy+8.4.2021.pdf/309aa929-a36f-d565-99f8-fa565050e22e/Government+resolution+on+the+Strategic+Programme+for+Circular+Economy+8.4.2021.pdf?t=1619432219261
- Finnish Marine Strategy: https://www.ymparisto.fi/en-us/Sea/Finlands_marine_strategy
- EU Circular Economy Action Plan: https://ec.europa.eu/environment/strategy/circular-economy-action-plan_fi
- HELCOM Baltic Sea Action Plan, Helcom Marine Litter Action Plan: https://helcom.fi/baltic-sea-action-plan/ https://helcom.fi/action-areas/marine-litter-and-noise/marine-litter/marine-litter-action-plan/

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

Japan

- National Action Plan for Marine Plastic Litter (Japanese only) http://www.env.go.jp/water/Marine%20plastic%20litter%20countermeasure%20action%20plan.pdf
- Resource Circulation Strategy for Plastics (Japanese only) https://www.env.go.jp/press/files/jp/111747.pdf
- The Bill for the Act on Promotion of Resource Circulation for Plastics https://www.meti.go.jp/english/press/2021/0309_001.html
- Subsidy for the local government (Japanese only) http://www.env.go.jp/guide/budget/2019/19juten-sesakushu/032_3012.pdf
- Good Practices for Reducing Microplastics https://www.env.go.jp/en/water/marine_litter/gp_frmp.html
- Clean Ocean Material Alliance https://cloma.net/english/
- CounterMEASURE https://countermeasure.asia/

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 http://www.oceansplasticleanup.com/Cleaning_Up_Operations/Cleaning_Up_Oceans_Seas_Projects.htm
- Master Plan for sustainable fisheries https://openjicareport.jica.go.jp/pdf/12301677.pdf

Panama

- Recycle by your future https://reciclaportufuturo.org/
- Costa Recicla Foundation https://costarecicla.org/
- Tortuguias Foundation https://www.tortuguias.org/
- Marea Verde https://www.mareaverdepanama.org/
- Promar http://www.promarpanama.org/
- MarViva https://marviva.net/es/campanas http://www.investigadores.utp.ac.pa/proyectos/319 https://www.miambiente.gob.pa/biblioteca-virtual/ https://www.maggicentroamerica.com/pa-es/maggir-tv/

Republic of Korea

- Framework act on resources circulation
- The 1st National Resource Circulation Plan (2018-2027)
- The 3rd national action plan on rivers and estuaries (2021-2025)
- Marine litter and contaminated sediment Management Act
- The 1st National Action Plan on marine litter and marine contaminated sediment (2021~2030)
- Environment education promotion act
- Marine Environment Information Portal (www.meis.go.kr)

Samoa

- www.sprep.org
- www.mnre.gov.ws

Singapore

- Singapore's Zero Waste Masterplan: https://towardszerowaste.sg/zero-waste-masterplan/
- Singapore Green Plan 2030: https://greenplan.gov.sg/

Spain

- https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/basuras-marinas/default.aspx

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
- UK G7 Presidency Communique and OECD Ghost Gear Report https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communique
- OSPAR: Regional Action Plan on Marine Litter https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan

Uruguay

International Initiatives websites:

- http://www.basel.int/Implementation/Plasticwaste/PlasticWastePartnership/tabid/8096/Default.aspx
- http://www.basel.int/Implementation/HouseholdWastePartnership/Overview/tabid/5082/Default.aspx
- https://wedocs.unep.org/bitstream/handle/20.500.11822/34801/APWMEN.pdf?sequence=4&isAllowed=y
- http://www.basel.int/Implementation/TechnicalAssistance/Partnerships/PACE/PACEGuidelines,ManualandReports/tabid/3247/Default.aspx
- https://wedocs.unep.org/bitstream/handle/20.500.11822/34919/Roadmap_EN.pdf?sequence=7
- https://remarco.org/remarco/

US

- 2016 - 2017 Interagency Marine Debris Coordinating Committee Biennial Report: https://marinedebris.noaa.gov/sites/default/files/imdccreport__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
- EU threshold value for macro litter on coastlines https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=454
- Commission Implementing Decision of 10.2.2021 on a standardization request to the European Committee for Standardisation as regards circular design of fishing gear in support of Directive (EU) 2019/904 https://ec.europa.eu/growth/tools-databases/mandates/index.cfm?fuseaction=search.welcome
- Commission Implementing Decision (EU) 2021/958 of 31 May 2021 laying down the format for reporting data and information on fishing gear placed on the market and waste fishing gear collected in Member States and the format for the quality check report in accordance with Articles 13(1)(d) and 13(2) of Directive (EU) 2019/904 of the European Parliament and of the Council https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.211.01.0051.01.ENG&toc=OJ%3AL%3A2021%3A211%3ATOC

International Organisations and NGOs

ADB

- Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific: Technical Assistance Report https://www.adb.org/projects/documents/reg-53068-001-tar

ERIA

- Regional Knowledge Centre for Marine Plastic Debris (RKC-MPD) https://rkcmpd-eria.org/
- Private Sector Initiatives to Reduce Plastic Waste and Marine Plastic Debris https://rkcmpd-eria.org/story
- Applying the extended producer responsibility towards plastic waste in Asian developing countries for reducing marine plastic debris https://doi.org/10.1177/0734242X211013412
- Environmental and Sustainability Challenges in the Mekong Subregion https://rkcmpd-eria.org/publication/20
- 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/
- Marine Lives Matter https://theaseanpost.com/article/marine-lives-matter
- Marine lives matter: Plastic bag ban and further actions to reduce marine plastics https://www.manilatimes.net/2020/08/11/opinion/analysis/marine-lives-matter-plastic-bag-ban-and-further-actions-to-reduce-marine-plastics/753634
- Sea change: Japanese leads on marine plastic litter https://www.eastasiaforum.org/2019/10/26/sea-change-japanese-leads-on-marine-plastic-litter/
- Tackling marine plastic pollution together https://www.thejakartapost.com/news/2019/08/01/tackling-marine-plastic-pollution-together.html
- Plastic Recycling: Policies and Good Practices in Asia https://rkcmpd-eria.org/publicationsdetails.php?pid=15

IAEA

- NUclear TEChnology for Controlling Plastic Pollution https://www.iaea.org/sites/default/files/21/05/nuclear-technology-for-controlling-plastic-pollution.pdf

IRP

- This IRP think piece 'Policy Options to Eliminate Additional Marine Plastic Litter by 2050 under the G20 Osaka Blue Ocean Vision' was commissioned by the G20, to qualitatively consider possible policy options to achieve the Osaka Blue Ocean Vision, which voluntarily commits G20 countries to "reduce additional pollution by marine plastic litter to zero by 2050 through a comprehensive life-cycle approach", thereby ensuring that by 2050, the net volume of plastic entering the ocean is zero.
- In this endeavor, the think piece shows, through the scenario modelling analysis published in "Breaking the Plastic Wave", the marine plastic litter trends relevant to 2050, summarizes the current plastic policy landscape and explores policy upstream and downstream interventions to achieve the Osaka Blue Ocean Vision. Based on the analysis presented, it concludes with a set of policy messages to deliver on the Vision and to transition to the systemic changes needed to the plastic economy.
- The think piece will be available at: https://www.resourcepanel.org/reports/governing-coastal-resources (from 13 July 2021)

UNEP

- Global Partnership on Marine Litter https://www.gpmarinelitter.org/
- Global Partnership on Marine Litter – Digital Platform: https://digital.gpmarinelitter.org/
- Promotion of action against marine plastic litter in Asia and the Pacific (CounterMEASURE II) 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 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/
- UNEP Sustainability Action https://www.unep-sustainability-action.org/
- Basel Convention Plastic Waste Partnership http://www.basel.int/Implementation/Plasticwaste/PlasticWastePartnership/tabid/8096/Default.aspx
- Convention on the Conservation of Migratory Species of Wild Animals (CMS) https://www.cms.int/en/project/countermeasure-ii-project
- The Life Cycle Initiative https://www.lifecycleinitiative.org/

Reports

- Understanding the State of the Ocean: A Global Manual on Measuring SDG 14.1.1, SDG 14.2.1 and SDG 14.5.1" https://wedocs.unep.org/handle/20.500.11822/35086;jsessionid=15896984F315C012A9A482D07D481EEC

- Rethinking Single-Use Plastic Products in Travel and Tourism - Impacts Management Practices and Recommendations https://wedocs.unep.org/bitstream/handle/20.500.11822/36324/RSUP.pdf
- Single-use nappies and their alternatives: Recommendations from Life Cycle Assessments https://www.lifecycleinitiative.org/wp-content/uploads/2021/03/UNEP-D003-Nappies-Report_lowres.pdf
- Sanitation and Wastewater Atlas of Africa https://www.unep.org/resources/publication/sanitation-and-wastewater-atlas-africa
- Addressing Single-Use Plastic Products Pollution using a Life Cycle Approach https://www.unep.org/fr/node/29018
- Monitoring Plastics in Rivers and Lakes: Guidelines for the Harmonization of Methodologies https://www.unep.org/resources/report/monitoring-plastics-rivers-and-lakes-guidelines-harmonization-methodologies
- Catalogue of Technologies to Address the Risks of Contamination of Water Bodies with Plastics and Microplastics https://wedocs.unep.org/handle/20.500.11822/34423
- Water Pollution by Plastics and Microplastics: A Review of Technical Solutions from Source to Sea https://www.unep.org/resources/report/water-pollution-plastics-and-microplastics-review-technical-solutions-source-sea
- Neglected– Environmental Justice Impacts of Plastic Pollution https://www.unep.org/resources/report/neglected-environmental-justice-impacts-marine-litter-and-plastic-pollution
- Guidance on policy and legislation on integrated waste management in times of pandemic https://wedocs.unep.org/bitstream/handle/20.500.11822/33416/WMC-19.pdf?sequence=1&isAllowed=y
- Waste Management during the COVID-19 Pandemic: From Response to Recovery https://www.unep.org/resources/working-environment-protect-people-covid-19-response

UNIDO

- UNIDO Global project “Switch to circular economy value chains”: https://open.unido.org/projects/M0/projects/190161
- UNIDO project in Ghana, “Establishing a circular economy framework for the plastics sector in Ghana”: https://open.unido.org/projects/GH/projects/190244
- UNIDO regional project “Study on available sustainable alternative materials to plastics, and innovative packaging and recycling technologies that meet market needs in Africa to reduce plastics leakages to the environment”: https://open.unido.org/projects/M2/projects/190137 (Egypt, Kenya, and Nigeria)
- UNIDO project in South Africa “Support for transitioning from conventional plastics to more environmentally sustainable alternatives”: https://open.unido.org/projects/ZA/projects/190110
- UNIDO project in Egypt “Supporting the promotion of circular economy practices on single-use plastic value chain”: https://open.unido.org/projects/EG/projects/190152
- UNIDO project in Bangladesh “Integrated approach towards sustainable plastics use and (marine) litter prevention in Bangladesh”: https://open.unido.org/projects/BD/projects/190230
- UNIDO publication: “Addressing the challenge of Marine Plastic Litter using Circular Economy methods” https://www.unido.org/sites/default/files/files/2019-06/UNIDO_Addressing_the_challenge_of_Marine_Plastic_Litter_Using_Circular_Economy_0.pdf

WB

Programmes

- PROBLUE website: https://www.worldbank.org/en/programs/problue
- PROBLUE Annual Report 2020 https://documents1.worldbank.org/curated/en/564401603456030829/pdf/PROBLUE-2020-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 https://openknowledge.worldbank.org/bitstream/handle/10986/32245/9781464814594.pdf?sequence=3&isAllowed=y
- Bridging the Gap in Solid Waste Management: Governance Requirements for Results
- 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
- 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/983771527

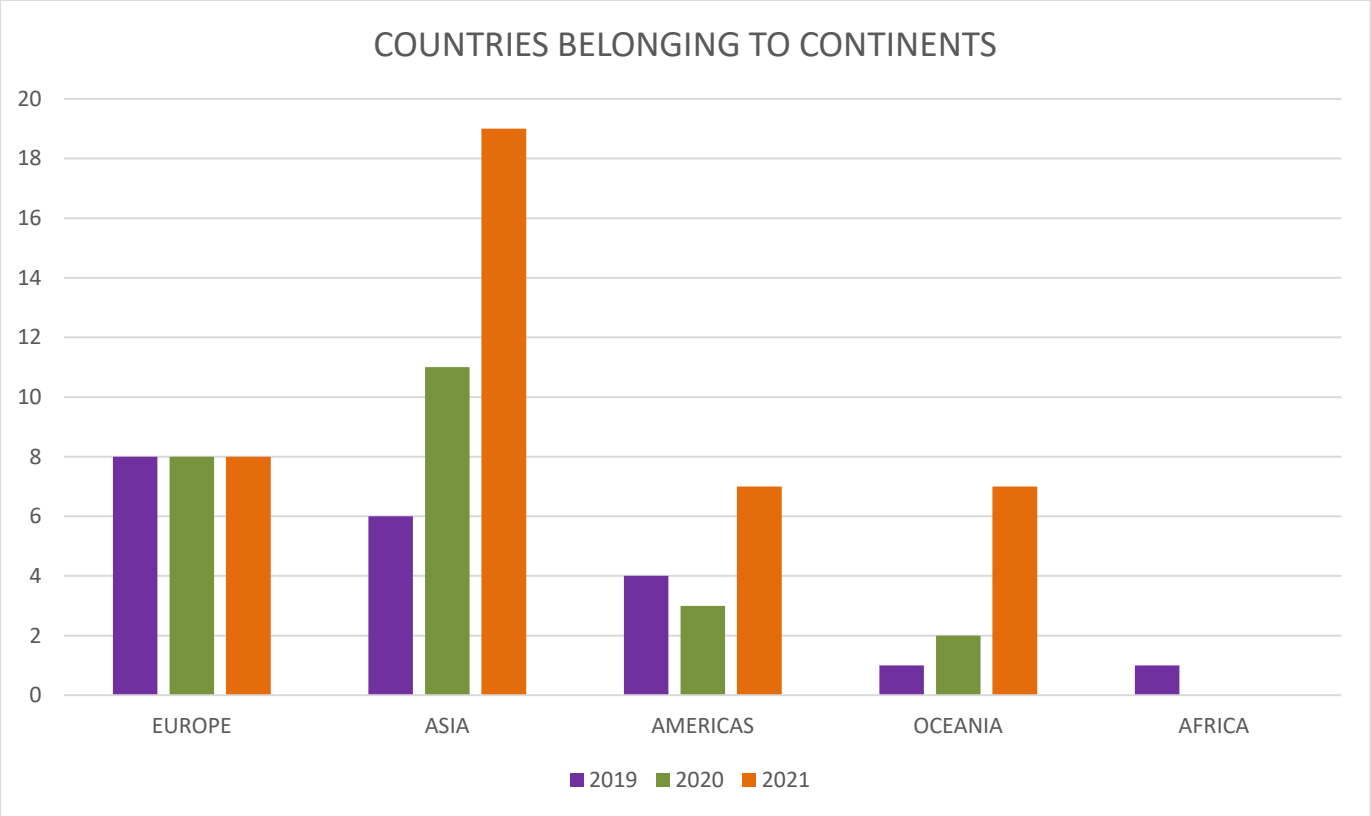
663689822/pdf/126686-29-5-2018-14-18-6-SynthesisReportFullReportAPRILFINAL.pdf
- Market Study for Thailand: Plastics Circularity Opportunities and Barriers
- Market Study for Malaysia: Plastics Circularity Opportunities and Barriers
- Market Study for the Philippines : Plastics Circularity Opportunities and Barriers
- Launch of the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021-2025)

WEF GPAP

Global resources
- GPAP website https://globalplasticaction.org/
- GPAP Annual Impact Report 2020 https://globalplasticaction.org/wp-content/uploads/GPAP-Annual-Impact-Report.pdf
- GPAP Annual Impact Report 2021 https://globalplasticaction.org/wp-content/uploads/GPAP-Impact-Report-2021.pdf
- Guide to Ensure Gender-Responsive Action in Eliminating Plastic Pollution https://globalplasticaction.org/wp-content/uploads/GPAP-Global-Gender-Guidance-May-2021.pdf
- Global Plastic Innovation Network (in collaboration with UpLink) https://uplink.weforum.org/uplink/s/
- GPAP Global Plastic Champions community https://www.weforum.org/agenda/2021/01/young-people-turning-the-tide-on-plastic-pollution/

Indonesia: National Plastic Action Partnership
- NPAP Indonesia website https://globalplasticaction.org/countries/indonesia/
- NPAP Indonesia Action Roadmap https://globalplasticaction.org/wp-content/uploads/NPAP-Indonesia-Multistakeholder-Action-Plan_April-2020.pdf
- NPAP Indonesia Financing Roadmap https://globalplasticaction.org/wp-content/uploads/NPAP-Indonesia-Financing-Roadmap.pdf
- NPAP Indonesia Innovation Roadmap https://globalplasticaction.org/wp-content/uploads/NPAP_InnovationTF_Roadmap_VF.pdf
- NPAP Indonesia Metrics Roadmap https://globalplasticaction.org/wp-content/uploads/NPAP-Indonesia-Metrics-Roadmap.pdf

7. Appendix



[Appendix graph: Countries belonging to continents]

For this year's report, ISPRA (Italian National Institute for Environmental Protection and Research) contributed to the developments of infographics based on the three year's reporting templates (shown in this Appendix chapter).

As you see above, this graph shows the summary of reported countries divided by continents. This graph described that the reported countries mostly belong to the Europe and Asia. An interesting feature can be seen in the OCEANIA - the number is still limited; however this year's report was actively reported by the OCEANIA countries such as Fiji and Palau. The 2019 report was contributed mostly by the G20 countries because of the fact that the reporting template was shared only with the G20 countries as an initial attempt. We however extended the targeting countries exceeding the G20 community from 2020, and so the total number and variance in the continents increased after the year 2020.

	Number of reported countries		
	2019**	2020*	2021*
Number of total reported countries	**20**	**25**	**42**
Number of reported countries having the National Action Plans for MPL	**17**	**17**	**26**
Number of reported countries having the legal framework for MPL	**18**	**22**	**35**
Number of reported countries having the indicators for MPL	**14**	**16**	**19**
Number of reported countries having the following policy actions			
Introduce Extended Producer Responsibility (EPR)	**7**	**16**	**26**
Reduce single-use plastic (shopping bags, straws etc.) by regulations or voluntary measures	**15**	**20**	**38**
Restrict microplastics for cosmetics etc.	**7**	**10**	**16**
Improve waste management recycling system	**17**	**20**	**35**
Conduct clean-up activities for rivers and coasts	**16**	**21**	**38**
Take action on fishing gear	**11**	**18**	**28**
Install Capturing trap/filter on drainage/river	**8**	**14**	**24**
Promote innovative solutions	**14**	**18**	**31**
Boost multi-stakeholder involvement and awareness raising	**18**	**21**	**38**
Share scientific information and knowledge: R&D and Monitoring	**15**	**20**	**33**
Participate in international cooperation through international organizations, multi-national groups, etc.	**16**	**21**	**39**
Target region supported by your international cooperation initiatives/projects: Southeast Asia	**10**	**15**	**22**
Target region supported by your international cooperation initiatives/projects: Africa	**4**	**7**	**9**
Target region supported by your international cooperation initiatives/projects: Latin America	**3**	**7**	**10**

[Appendix Table: Summary of policy measures during 2019-2021. (EU entries are excluded)]

*The number of 2020/2021 reports are based on the checklist responses by the country focal points.

**Since the checklist was not included in the 2019 reporting template, this number is subjective to the authors' measurements based on the descriptive reporting done by the country focal points.

For policy action analysis, this table summarizes how we see the major changes and updates in the national MPL policies and actions over the three years. In general, it should be noted that the total reported numbers increased, gradual increases can be seen in the numbers of the National Action Plans and legal frameworks on MPL. Additionally, there is a progress in individual policy measure categories such as EPR and single-use plastic regulations. Thus, the MPL policy measures have increased during 2019-2021 in overall.

The "G20 Report on Actions against Marine Plastic Litter" can be downloaded at the G20 MPL portal site (https://g20mpl.org/archives/1087).