

ASEAN Regional Action Plan for  
**COMBATING MARINE DEBRIS**  
in the ASEAN Member States  
(2021-2025)



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one identity  
one community



**ASEAN Regional Action Plan for Combating Marine Debris  
in the ASEAN Member States**

The ASEAN Secretariat  
Jakarta

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia.

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# CONTENTS

Foreword .....	vi
Preface.....	vii
Abbreviations and Acronyms .....	viii
<b>Chapter 1. Introduction.....</b>	<b>2</b>
1.1 Background and Rationale .....	2
1.2 Opportunities Across the Plastic Waste Value Chain .....	3
1.3 International Commitments .....	4
1.4 Other ASEAN Initiatives on Marine Debris .....	5
<b>Chapter 2. Rationale for Actions on Marine Plastic Debris in ASEAN.....</b>	<b>7</b>
2.1 Current Status and Challenges.....	7
2.1.1 Policy support is crucial to create an effective framework and legal conditions for addressing marine plastics.....	7
2.1.2 Knowledge sharing and adequate capacity are essential for effective policies and programs .....	11
2.1.3 Raising public awareness and supporting behaviour change are critical for tackling marine plastic debris .....	13
2.1.4 The private sector is key to marine plastic solutions and needs the right enabling conditions .....	14
2.2 Regional Governance and Cooperation .....	15
2.3 Emerging Issues of Plastic Debris During COVID-19.....	16
<b>Chapter 3. ASEAN Vision and Mission for Marine Plastic Debris.....</b>	<b>19</b>
3.1 Supporting Marine Debris Initiatives in the ASEAN Region.....	19
3.2 Stakeholder Consultation on the ASEAN Regional Action Plan .....	19
3.3 Goal, Objectives and Strategies of the ASEAN Regional Action Plan .....	20
<b>Chapter 4. Regional Action plan for Combating Marine Plastic Debris.....</b>	<b>22</b>
4.1 Component I: Policy Support and Planning .....	23
4.2 Component II: Research, Innovation and Capacity Building .....	25
4.3 Component III: Public Awareness, Education, and Outreach .....	26
4.4 Component IV: Private Sector Engagement.....	27
<b>Chapter 5. Implementation Plan.....</b>	<b>30</b>
5.1 Proposed Implementation Arrangements .....	30
5.1.1 Planning Phase: Enabling Conditions.....	30
5.1.2 Implementation Phase.....	32
5.1.3 Monitoring, Reporting and Evaluation Phase.....	33
Annex 1. Existing and Planned National Strategies in the AMS Related to Plastic and Plastic Waste .....	39
Annex 2. Existing Policies for Single-Use Plastics Already Implemented in the AMS.....	41
Annex 3. Regulations On Use Of Recycled PET in Food Packaging Across ASEAN.....	42
Annex 4. Bangkok Declaration on Combating Marine Debris in ASEAN Region.....	43
Annex 5. ASEAN Framework of Action on Marine Debris .....	44

# Foreword

Marine debris pollution is a global concern which threatens the health of our ocean biodiversity, industries and communities. Addressing this issue will help curb the adverse impacts on the environment as well as address a wide range of implications towards economies and societies. The preservation of coastal and marine habitats is crucial to ensure the sustainability of vital ecosystem services and sources of livelihood for communities living in coastal areas and beyond.

In November 2017, the ASEAN Conference on Reducing Marine Debris held in Thailand recommended an integrated land-to-sea policy approach by developing and implementing a Regional Action Plan for Combating Marine Debris in the region. Subsequently, the 34th ASEAN Summit in June 2019 adopted both the *Bangkok Declaration on Combating Marine Debris in the ASEAN Region* and the *ASEAN Framework of Action on Marine Debris*. These efforts demonstrate ASEAN's commitment to advance concrete action in environmental protection.

As a follow up, the *ASEAN Regional Action Plan for Combating Marine Debris* was developed from October 2019 to July 2020 through extensive consultation with relevant experts and stakeholders. This regional action plan, led by Thailand and with the support of the World Bank, proposes the phased implementation of a systematic and integrated response to guide regional actions in addressing the issue of marine plastic pollution in ASEAN over the next five years (2021-2025). This publication also highlights the current status and challenges faced by ASEAN Member States (AMS), as well as identifies potential solutions along the value chain to overcome unsustainable plastic consumption, waste management and marine debris pollution.

The implementation plan presented in this publication is envisioned to leverage the region's collective experience by sharing best practices and lessons learned, as well as utilize the economies of scale to be found in areas such as standards, innovation, financing and training. Ultimately, this approach aims to support and encourage AMS to strengthen policies and practices at the national level, while enhancing collaboration and coordination at the regional and international levels in order to achieve sustainable management of coastal and marine environments.

I hope this initiative will guide our region's actions in addressing marine debris pollution in a holistic manner, while complementing ASEAN's efforts in incorporating more circular economy principles in our approach. This plan also serves as a fundamental roadmap for ASEAN's future direction in advancing cooperation with various stakeholders in the region and globally, while building a caring, prosperous and sustainable ASEAN community.



A handwritten signature in black ink, which appears to be 'Lim Jock Hoi'.

**Dato Lim Jock Hoi**  
Secretary-General of ASEAN

# Preface

Plastics are valuable resources. Their versatility and low cost of production reinforce how integral and important they are to the global and ASEAN economies. But the characteristics that make plastics so critical to our modern lives are causing our world—and in particular, our oceans—significant environmental stress.

There is a pressing need for ASEAN countries to come together to provide comprehensible, scalable solutions to address marine debris. The volume of solid waste and marine debris generated across Southeast Asia is on the rise. Coupled with expanded urbanization and a growing consuming class, the long-term effects are only just emerging. Without waste management infrastructure improvements and enhanced plastics circularity, the amount of plastics available to enter marine environments is predicted to increase tenfold by 2025 (Jambeck 2015). Growing plastic pollution will not only worsen pollution of our waterways and endanger marine wildlife; it also has the potential to damage human health via microplastics entering the food chain and could decimate the tourism and fishing industries that are so vital to the region's economies.

Fortunately, there is a growing number of champions in countries, corporations and communities that are helping reduce unnecessary plastics usage, increase plastics recycling, and reduce plastics leakage on land and in water bodies. Many ASEAN Member States (AMS) are already implementing national policies and strategies to mitigate the impacts of marine debris, but there are still gaps in measurements, funding and technical capacities that need to be addressed. This ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States will help support regional policies, platforms and programs, even while providing support and guidance to national level plastics actions.


The ASEAN Working Group on Coastal and Marine Environment (AWGCME) has been tasked by ASEAN leaders to facilitate the implementation of the Regional Action Plan. Operating as the lead implementing body, AWGCME is well-positioned to support the rollout of this strategy and make a meaningful impact on marine plastics pollution. The World Bank will continue to support this important regional initiative and help align to national marine plastics agendas.

*ASEAN 2025: Forging Ahead Together*, adopted by the ASEAN Leaders at the 27th ASEAN Summit in Kuala Lumpur, Malaysia, envisions ASEAN as a community of Southeast Asian nations, living in peace, stability and prosperity—with enhanced capacity to respond effectively to the challenges of the coming years. The Regional Action Plan for Combating Marine Debris will play an important role in helping ASEAN achieve this vision and protect the vital marine environments that sustain the region for generations to come.



  
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## ABBREVIATIONS AND ACRONYMS

<b>ACCSQ</b>	ASEAN Consultative Committee on Standards and Quality
<b>ACSN</b>	ASEAN Corporate Secretaries Network Meeting
<b>AMS</b>	ASEAN Member States
<b>APEC</b>	Asia-Pacific Economic Cooperation
<b>ASEAN</b>	Association of Southeast Asian Nations
<b>ASEANO</b>	ASEAN-Norway Cooperation Project on Local Capacity Building for Reducing Plastic Pollution in the ASEAN Region
<b>ASUS</b>	ASEAN Sustainable Urbanisation Strategy
<b>AWGCME</b>	ASEAN Working Group on Coastal and Marine Environment
<b>AWGCW</b>	ASEAN Working Group on Chemicals and Waste
<b>AWGEE</b>	ASEAN Working Group on Environmental Education
<b>AWGESC</b>	ASEAN Working Group on Environmentally Sustainable Cities
<b>BAT</b>	Best Available Technology
<b>BIT</b>	Behavioral Insights Team
<b>COBSEA</b>	Coordinating Body on the Seas of East Asia
<b>COST</b>	ASEAN Committee on Science and Technology
<b>EC</b>	European Commission
<b>EAST</b>	Easy, Attractive, Social and Timely
<b>EPR</b>	Extended Producer Responsibility
<b>EPS</b>	Expanded Polystyrene
<b>ERIA</b>	Economic Research Institute for ASEAN and East Asia
<b>EU</b>	European Union
<b>GESAMP</b>	Group of Experts on the Scientific Aspects of Marine Environmental Protection
<b>GPP</b>	Green Public Procurement
<b>ICC</b>	International Coastal Clean-up
<b>IMO</b>	International Maritime Organization
<b>ISO</b>	International Organization for Standardization
<b>IUCN</b>	International Union for Conservation of Nature
<b>JICA</b>	Japan International Cooperation Agency
<b>LIB-SI</b>	Leading Implementing Body for Sustainable Infrastructure
<b>MSME</b>	Micro, Small and Medium-sized Enterprise
<b>MSW</b>	Municipal Solid Waste
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PET</b>	Polyethylene terephthalate
<b>PP</b>	Polypropylene
<b>PPP</b>	Public Private Partnership
<b>RAP</b>	ASEAN Regional Action Plan for Combating Marine Debris
<b>SATREPS</b>	Science and Technology Research Partnership for Sustainable Development
<b>SEAFDEC</b>	Southeast Asian Fisheries Development Center
<b>SPI</b>	Society of the Plastics Industry
<b>SUP</b>	Single-Use plastics
<b>SWM</b>	Solid Waste Management
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea
<b>UNDP</b>	United Nations Development Program
<b>UNEP</b>	United Nations Environment Program
<b>UNESCAP</b>	United Nations Economic and Social Commission for Asia and the Pacific
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UN SDG</b>	United Nations Sustainable Development Goals
<b>WBG</b>	World Bank Group
<b>WEF</b>	World Economic Forum
<b>WWF</b>	World Wide Fund for Nature



# Chapter 1

## Introduction



# INTRODUCTION

## 1.1 BACKGROUND AND RATIONALE

**Plastic is estimated to account for 80% of all marine debris in the oceans,<sup>1</sup> therefore the majority of marine debris can be addressed through plastic value chains.** Developing actions for marine debris more broadly would require interventions across many varied industries and value chains that are not realistic to cover in a single regional action plan. For this reason, this ASEAN Regional Action Plan for Combating Marine Debris (RAP) focuses specifically on marine plastic debris.

**Plastic is an important product that is used throughout the economy and everyday life. However, the way plastics are currently produced, used and managed often does not reflect the economic benefits of an approach to a more “circular” economy and results in harm to the environment.** More than half of the plastics ever produced entered the market during the last 15 years alone. With this growth in plastic production and consumption —especially of single-use plastics — many negative externalities have emerged including littering, toxicity and longevity of plastic in landfills and dumpsites<sup>2</sup>; land and ocean contamination impacting ecosystems and economies; and human health issues<sup>3</sup> including potentially from microplastics<sup>4</sup>. Plastic waste dumped into the marine environment

from land- and sea-based sources causes significant economic and environmental damage. According to estimates, the share of plastic waste in marine litter is over 80 percent<sup>5</sup> and by 2050, it is projected there will be more plastics than fish in the oceans<sup>6</sup>. While the total economic impact is still unclear, some recent studies suggest that the economic costs of marine debris – including to tourism, to fishing, and shipping – is estimated at around \$10.8 billion dollars for countries in the APEC region.<sup>7</sup> Insufficient collection for recycling means that the value of plastic materials is also lost to the economy after a very short cycle of use. This transboundary, regional and, ultimately, global environmental problem results largely from insufficient solid waste management (SWM), unsustainable plastic production and consumption patterns, urbanization, and economic growth.

**The volume of solid waste and marine debris generated across Southeast Asia has rapidly increased in recent years.** According to one estimate, just six AMS (Indonesia, Thailand, Viet Nam, Philippines, Malaysia and Singapore) generated a total of 243

**The way plastics are currently produced, used and managed often does not reflect the economic benefits of an approach to a more “circular” economy and results in harm to the environment.**

- 1 IUCN (2018), IUCN Issues Brief – Marine Plastics, May 2018. Available at: [https://www.iucn.org/sites/dev/files/marine\\_plastics\\_issues\\_brief\\_final\\_0.pdf](https://www.iucn.org/sites/dev/files/marine_plastics_issues_brief_final_0.pdf)
- 2 Secretariat of the Convention on Biological Diversity (2016), *Marine Debris: Understanding, Preventing and Mitigating the Significant Adverse Impacts on Marine and Coastal Biodiversity*. Available at: <https://www.cbd.int/doc/publications/cbd-ts-83-en.pdf>
- 3 Prevalence of Health Hazards Associated with Solid Waste Disposal- A Case Study of Kolkata, India. *Journal of Procedia Environmental Sciences*, Vol. 35., 2015. Available at: <https://www.sciencedirect.com/science/article/pii/S1878029616301700>
- 4 Chen et al (2019), “Mini-review of microplastics in the atmosphere and their risks to humans”. *Science of the Total Environment*. Vol 703, Issue 135504. Available at: <https://www.sciencedirect.com/science/article/pii/S0048969719354981> and National Geographic (2019), “You eat thousands of bits of plastic every year”. Available at: <https://www.nationalgeographic.com/environment/2019/06/you-eat-thousands-of-bits-of-plastic-every-year/>

- 5 IUCN (2018), IUCN Issues Brief – Marine Plastics, May 2018. Available at: [https://www.iucn.org/sites/dev/files/marine\\_plastics\\_issues\\_brief\\_final\\_0.pdf](https://www.iucn.org/sites/dev/files/marine_plastics_issues_brief_final_0.pdf)
- 6 World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company (2016), *The New Plastics Economy — Rethinking the future of plastics* (<http://www.ellenmacarthurfoundation.org/publications>).
- 7 McIlgorm, A., K. Raubenheimer and D.E. McIlgorm (2020). Update of 2009 APEC report on Economic Costs of Marine Debris to APEC Economies. A report to the APEC Ocean and Fisheries Working Group by the Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, Australia, December.

million tons of waste in 2016.<sup>8</sup> At present, it is estimated that 53 percent of the waste generated in ASEAN is uncollected. Of the waste that is collected, less than a quarter is recycled. The remaining quantities are either illegally dumped after collection (around 34 percent of collected waste) or treated and disposed of (around 43 percent of collected waste).<sup>9</sup> Taking into account the population in these six countries (in 2016) and the share of plastics in the municipal waste in each<sup>10</sup>, it could be estimated that 31.7 million tons of plastic waste is generated (16.8 million tons of which is uncollected). The percentage of uncollected plastic waste that enters the marine environment from the six countries is currently not known. However, for comparison, a 2015 study<sup>11</sup> suggests that 275 million metric tons (MT) of plastic waste was generated in 192 coastal countries in 2010, with a staggering 4.8 to 12.7 million metric tons of plastic entering the ocean.

**Increasing urbanization and growth in the consuming class will create further pressures on marine debris in ASEAN going forward.** Today, half of all people in ASEAN are already living in urban areas and an additional 70 million more are forecast to live in cities by 2025.<sup>12</sup> Much of the growth is happening in mid-level cities where there is a lack of resources and waste management systems are underdeveloped. A further challenge is that ASEAN's consuming class is expected to double to include 163 million households by 2030. The growth of the consuming class will result in increased demand for a range of packaged goods putting further pressure on waste systems. There is also a strong linkage between plastic waste management, and urban resilience with mismanaged plastic waste clogging drain systems and increasing flooding risk.

**Transboundary factors, such as marine debris transported by rivers and ocean currents coupled with international plastic waste trade restrictions, complicate addressing marine debris in the region.** In ASEAN, countries such as Indonesia, Malaysia, Thailand and Viet Nam have received more plastic waste after China's "National Sword" policy restricted plastic waste imports<sup>13, 14</sup>. For example, Malaysia's imports of plastic waste from its ten biggest source-countries jumped to 456,000 tons in the first six months of 2018 compared to 316,600 tons purchased in all of 2017, and 168,500 tons in 2016.<sup>15</sup> This influx of plastic waste imports resulted in many illegal plastic recycling factories using low-end technology and environmentally harmful methods of disposal.

**Through decisive actions to create a thriving and sustainable economy in the plastics sector, these challenges can become opportunities.** To this end, the present RAP provides a bold set of actions to tackle the plastic waste littering and marine debris issues in the ASEAN, and aims to make the vision of a more sustainable approach to plastics a reality. The identified measures are designed to make decisive progress within the period of validity of the plan, while creating the conditions for longer-term action.

## 1.2 OPPORTUNITIES ACROSS THE PLASTIC WASTE VALUE CHAIN

**Given that land-based sources account for approximately 80% of marine plastic debris, integrated solutions can be identified across the plastic waste value chain.** There are many opportunities for better management throughout the plastic life-cycle. An integrated approach is required to tackle marine debris with opportunities for action at three key stages of the value chain:

8 Temasek and AlphaBeta (2018), *Better Together: Business, Government, Society and our Sustainable Future*. Available at: <https://www.ecosperity.sg/en/ideas/better-together-business-government-society-and-our-sustainable-future.html>

9 Temasek and AlphaBeta (2018), *Better Together: Business, Government, Society and our Sustainable Future*. Available at: <https://www.ecosperity.sg/en/ideas/better-together-business-government-society-and-our-sustainable-future.html>

10 The share of plastics in the municipal waste in each country is taken from *Summary Report: Waste Management In Asean Countries*, published by United Nations Environment Programme, 2017

11 Plastic waste inputs from land into the ocean, Jenna R. Jambeck, 1 \* Roland Geyer, 2 Chris Wilcox, 3 Theodore R. Siegler, 4 Miriam Perryman, 1 Anthony Andrady, 5 Ramani Narayan, 6 Kara Lavender Law

12 ASEAN Secretariat (2018), *ASEAN Sustainable Urbanisation Strategy*. Available at: <https://asean.org/storage/2018/11/ASEAN-Sustainable-Urbanisation-Strategy-ASUS.pdf>

13 Based on data from US Census Bureau, Japan e-Stat, Eurostat, Statistics Canada. Analysis by Financial Times (2018). *Why the world's recycling system stopped working*. Published on 25 October 2018. Available at: <https://www.ft.com/content/360e2524-d71a-11e8-a854-33d6f82e62f8>

14 Pickin, Joe; Randell, Paul; Trinh, Jenny; Grant, Bill (2018): *National Waste Report 2018*. Department of the Environment and Energy, Australia. Canberra.

15 World Economic Forum [WEF] (2018), "Plastic waste is good and bad for Malaysia. Here's why". Available at: <https://www.weforum.org/agenda/2018/10/swamped-with-plastic-waste-malaysia-struggles-as-global-scrap-piles-up>

- **Reduce inputs into the system** by designing products to be reusable or recyclable, improving business and consumer awareness on their waste plastic footprint, clarifying standards on biodegradability and compostability and reducing consumption of single-use plastics.
- **Enhancing collection and minimizing leakage** by improving key SWM infrastructure — especially poorly sited dumpsites, promoting sorting and appropriate fee structures, developing stronger enforcement mechanisms to discourage littering and clarifying packaging labels for end of life disposal/recycling.
- **Create value for waste reuse** by guaranteeing feedstock volumes, developing off take markets, improving consumer segregation of waste, increasing knowledge of suitable technologies and minimising investment risk in key solutions.

### 1.3 INTERNATIONAL COMMITMENTS

Marine plastic debris is a global problem, therefore international action will remain key to tackling the most significant sources of plastics litter in the oceans. With a view to curbing marine debris, several international conventions have been adopted. They are focused on preventing and restricting the deliberate or accidental release of litter into the sea or ocean and regulating the export of plastic waste to countries where more labor-intensive, low-tech treatment processes remain widespread.

These conventions include the United Nations Convention on the Law of the Sea (UNCLOS), London Convention (1972), the MARPOL Convention and Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

**UNCLOS** is an international agreement that defines the rights and responsibilities of nations concerning their use of the world's oceans, establishing guidelines for businesses, the environment and the management of marine natural resources. UNCLOS enforces restrictions on pollution, including requirements on land-based

**Marine plastic debris is a global problem, therefore international action will remain key to tackling the most significant sources of plastics litter in the oceans.**

sources. All AMS have ratified the Convention with exception of Cambodia, which signed the Convention but has not ratified it.

The objective of the **London Convention** is to control all sources of marine pollution and to prevent waste pollution of the sea. It adopts a “permitted unless prohibited” approach to banning dumping of substances listed in Annexes II and III. It applies another approach — a substance may only be dumped if it is included in Annex I, which contains only inert wastes and organic material of natural origin. London Convention bodies adopted a statement on ‘*Recommendation to Encourage Action to Combat Marine Litter*’ and carryout various initiatives on plastics. The standards developed under the London Convention are implemented by UNCLOS and observed by all AMS. However, the standard-setting process and other initiatives only involves countries that have ratified the London Convention and its protocol; among the AMS this is only the Philippines.

Regarding plastic pollution from vessels and ships, the International Maritime Organization (IMO) regulates the discharges of garbage from ships in the context of the **MARPOL Convention**. Annex V of the convention bans waste discharge from ships into the sea (with some exceptions) and requires the establishment of port reception facilities where the garbage can be delivered and managed. All AMS have ratified MARPOL Annex V except for Lao PDR, which is a landlocked country, and Thailand, which is under the internal process in order to accede to Annex 5 of the Convention and has already implemented many of the requirements.

The **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal** is designed to reduce the transboundary movement of hazardous waste and prevent the transfer of hazardous waste from developed to less developed countries. The Convention does not regulate shipments of non-hazardous recyclable wastes — which are restricted only by national regulations, but its recent amendment that enters into force starting in January 2021 empowers countries to stop the import of plastic waste. After this date, only certain single and mixed plastic waste types (e.g. polyethylene, polypropylene, and PET etc.) that are sorted, clean and uncontaminated, and effectively destined for recycling can be freely traded globally. All other types of plastic waste will require the importing country's prior informed consent before it can be exported.

There are also existing regional partnerships including Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), created to manage marine pollution,



and the Coordinating Body on the Seas of East Asia (COBSEA), with the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region. PEMSEA has six AMS partner countries<sup>16</sup> and COBSEA has seven AMS countries<sup>17</sup> participating in the Action Plan.

The approach for this RAP has built on other regional action plans, such as the COBSEA action plan, and has the potential for replicability to other regions that are tackling the issue of plastic pollution, such as South Asia.

## 1.4 OTHER ASEAN INITIATIVES ON MARINE DEBRIS

Several regional initiatives addressing marine debris in ASEAN are complemented by existing national-level initiatives.

The *ASEAN Conference on Reducing Marine Debris in ASEAN Region* was held in November 2017 in Phuket, Thailand<sup>18</sup>. The Conference reviewed the status of marine debris pollution in the ASEAN region; exchanged information on the existing national policies, initiatives and best practices; identified gaps and challenges; and discussed solutions. The Conference brought

together more than 200 participants including representatives from the AMS, development partners, the private sector and academia. Participants agreed to recommend measures to address marine debris across policy support and policy strengthening; capacity building; education, research and innovation; private sector engagement; and public awareness and outreach. These key focus areas were consistent with the findings of the 2019 study *Circular Economy and Plastics: A Gap Analysis in ASEAN Member States*<sup>19</sup>. Other subsequent initiatives aiming to highlight the issue have included the *East Asia Summit Leaders' Statement on Combating Marine Plastic Debris* released in November 2018 and the *ASEAN+3 Marine Plastics Debris Cooperative Action Initiative* also launched in November 2018.

Key regional knowledge initiatives include the Regional Knowledge Center for Marine Plastic Debris (intended as a data center) managed by the Economic Research Institute for ASEAN and East Asia (ERIA) and the Regional Capacity Center for Clean Seas (RC3S) managed by Indonesia<sup>20</sup>. There are also ongoing regional projects and activities such as the ASEAN-Norway Cooperation Project on Local Capacity Building for Reducing Plastic Pollution in the ASEAN Region (ASEANO) Project, which commenced in 2019<sup>21</sup>.

The AMS are already active in tackling marine debris through the development of national policy strategies and measures such as National Action Plans<sup>22</sup> to tackle marine debris and plastic waste, national waste management strategies and circular economy strategies. These documents and policies are described in Annexes 1, 2 and 3. However, there are still gaps among AMS between the existing measures and what would be needed to effectively address the problem<sup>20</sup>. Chapter 2 provides further detail on the status quo and challenges associated with key areas relevant to tackling marine debris and plastic waste in ASEAN.

16 Cambodia, Indonesia, Lao PDR, the Philippines, Singapore and Viet Nam

17 Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam

18 ASEAN 2017. ASEAN Conference on Reducing Marine Debris in ASEAN Region. Available at: <http://environment.asean.org/wp-content/uploads/2017/12/Summary-of-ASEAN-Conference-on-Marine-Debris-26-Dec-2017.pdf>

19 E-READI 2019. *Circular Economy and Plastics: A Gap Analysis in ASEAN Member States*. This 2019 study identified gaps across information and knowledge, policy and governance, technical capacity and markets and finance.

20 Y Lyons, Theresa Su and Mei Lin Neo (2019), *A review of research on marine plastics in Southeast Asia: Who does what?* Available at <https://www.gov.uk/government/publications/a-review-of-research-on-marine-plastics-in-sea-who-does-what>

21 UNEP 2020. CounterMEASURE Project. <https://www.unenvironment.org/news-and-stories/press-release/japan-uneep-deep-en-cooperation-plastic-pollution-and-post-conflict>. Norwegian Institute for Water Research (NIVA) 2019. ASEANO Project. <https://www.niva.no/en/projectweb/aseano> JICA 2020. Tackling the issues of marine plastic waste. [https://www.jica.go.jp/english/news/field/2019/20200317\\_01.html](https://www.jica.go.jp/english/news/field/2019/20200317_01.html)

22 There is an ASEAN-Japan capacity building project focused on preparing National Action Plans to tackle marine debris.

## Chapter 2

# Rationale for Actions on Marine Plastic Debris in ASEAN



## 2.

# RATIONALE FOR ACTIONS ON MARINE PLASTIC DEBRIS IN ASEAN

This chapter describes the current challenges that the AMS are facing in tackling plastic consumption, plastic waste management and marine plastic debris. It outlines the rationale for the regional actions that will be proposed in Chapter 4.

## 2.1 CURRENT STATUS AND CHALLENGES

### 2.1.1 Policy support is crucial to create an effective framework and legal conditions for addressing marine plastics

#### ATTRACTING FUNDING AND INVESTMENT

There is **limited implementation of comprehensive policies to support waste and plastic waste cost-recovery mechanisms in ASEAN**. Cost recovery mechanisms are essential to ensure basic waste management services, such as waste collection and recycling, are economically feasible. Different examples of cost-recovery mechanisms exist and are successfully applied worldwide, such as waste fees, EPR, Environmental Funds, landfill taxes, PPP, etc. However, many of the AMS require further guidance for the adoption and implementation of these mechanisms to make waste management services cost-effective.

At present, there are not enough investments for the management of plastic waste during the whole life-cycle of plastic-containing products. Such investments are essential to address not just the environmental cost of plastics but also the economic costs to industries such as fisheries, shipping and tourism. Currently, investments are focused mainly on selective plastic types that have a price (primarily PET and some PP waste) high enough to cover the costs for collection, pre-treatment and recycling. There are also investments in some innovative products replacing single-use plastics driven by raising consumers' demand and bans adopted in some AMS. Donor or low-interest rate funding drives large infrastructure projects, and separate collection and recycling of plastic waste is

usually funded through municipal waste fees — often awarded using PPP mechanisms

One of the main obstacles for increasing the investments in plastic waste management projects and innovative products is that many of the companies involved are too small to attract financing and there is a lack of proper channels for connecting investors with entrepreneurs and service providers. Another obstacle for attracting more capital in the sector is that, at present, few plastic related waste management projects are capable of returning investments and therefore lack bankability. Additional funding mechanisms are needed for financing the separate collection and recycling of plastic waste types whose price is not enough to cover the costs for collection, pre-treatment and recycling, and improvement of residual waste infrastructure. It is also essential to create proper conditions for making more plastic management projects bankable. Innovative financing structures such as social impact bonds, attracting impact investors or results-based financing should also be promoted to help bridge the financing gap for smaller companies.

#### ADDRESSING SINGLE USE PLASTICS (SUPs)

The issue of SUPs<sup>23</sup> is significant, due to their high consumption generating huge amounts of waste after a relatively short life. More **policy efforts are needed to address the issue of single-use plastic items, including the root causes that have engendered the culture and habits of using disposable items**. Such policy efforts can show an immediate positive impact, drastically reducing the amount of plastic waste. For example, a study on the effects of the ban on plastic bags introduced in California suggests that the ban reduced plastic bag consumption by 71.5%, and took 100% of those plastic grocery bags out of the recycling

23 Common plastic items include: plastic bags, straws, drink stirrers, sachets (for shampoo, noodles, coffee, sugar, etc.), EPS containers, cutlery, cups for beverages incl. their covers and lids, single-use bottles toiletry products used in hotels, crisps and sweets bags, plastic bottles, cigarette butts, cotton bud sticks, plastic plates, balloon sticks, sanitary towels, wet wipes.

system, where they bound up machinery and increased costs. In Europe, estimates reveal that banning and taxing single-use plastic bags in European countries have motivated consumers to reduce their plastic bag waste between 66 to 90 percent.<sup>24</sup> Recently, the EU has adopted a Single-Use Plastic Directive as part of the EU Plastic Strategy<sup>25</sup>, which aims to phase-out certain single-use plastics. Meanwhile, countries in Africa are leading the way on plastic bag policies with more than half adopting bans and taxes<sup>26</sup>. Other policy options for SUPs include economic incentives, taxes and consumer levies. Most of the AMS have enacted some sort of single-use plastic regulation, especially concerning plastic bags.

A summary of current single-use plastic policies adopted in the AMS is provided in Annex 2. However, more coherent actions at the regional level are needed, particularly to avoid industries moving towards countries that have not implemented stricter regulations on the use of plastic.

## STIMULATING THE MARKET FOR SUSTAINABLE PLASTICS AND ALTERNATIVES

Another gap in the ASEAN is that demand for recyclates and, in more general terms, the recycling of plastic waste remains very low in most of the AMS. For the development of a market for plastic recyclates (from mechanical and chemical recycling) **specific quality standards are needed as a guarantee that recycled plastics are safe and fit for use as raw material.** Standards are also needed for separately collected and sorted plastics to demonstrate that they are sufficiently clean and homogenous to meet the requirements of recycling facilities. Both quality standards (for sorted plastics and recyclates) are needed to increase the trust in recyclers to use the recycled material.

An important criterion in establishing quality standards is the **plastic grade classification quality for recycled plastic.** However, the quality requirements towards plastic recyclates differ from application to application

and from processor to processor and depend on the desired characteristics of the final product. For this reason, unified market-wide standardization classifying the grades of all types of waste plastics does not exist yet. However, globally, organizations such as the International Organization for Standardization (ISO) have led initiatives to develop plastic waste related standards. In 2018, the ISO established a new working group to update the standard *ISO 15270 Plastics - Guidelines for the Recovery and Recycling of Plastics Waste*, intending to explore the need for additional standards related to plastics recycling, design for recycling and use of recycled plastics.<sup>27</sup>

In the AMS, different standards are applied. For instance, some products in the AMS currently bear specific SPI (Society of the Plastics Industry) codes or resin identification numbers. These SPI codes are used to classify the different types of plastics (e.g., SPI code 1 for Polyethylene Terephthalate and SPI code 2 for High-Density Polyethylene) and guide waste separation and recycling operations. Mutual recognition of these recycling standards is needed.

Homogeneous standards **for plastic product and packaging in the AMS** are also lacking. Product and packaging standards can increase the quality of plastic products and their recyclability by removing product design components that could prove a barrier to recycling (e.g., chemical additives), harmonizing components which lower the cost of recycling (e.g., similar materials) and enabling their use in recycled products (e.g. for food contact products). To be effective, standards must be widely recognized and adopted. Currently, there is a range of differing product standards across the AMS covering the acceptability of recycled plastics in food contact, product gap-filler requirements, chemical additives, etc. (see Annex 3). The adoption of standards for plastic packaging also varies across the AMS (see Box 1). The existence of different product standards is a key barrier to supporting the development of recycling markets in the ASEAN<sup>28</sup> and there is a need for coordination on standards. Their mutual recognition would also increase the amount and quality of recycling.

24 Nielsen, T. D., Holmberg, K. & Stripple, J. (2019), "Need a bag? A review of public policies on plastic carrier bags – Where, how and to what effect?" *Waste Manag.* 87, 428–440 (2019). Available at: <https://pubmed.ncbi.nlm.nih.gov/31109543/>

25 European Union 2020. European strategy for plastics. Available at: [https://ec.europa.eu/environment/waste/plastic\\_waste.htm](https://ec.europa.eu/environment/waste/plastic_waste.htm)

26 Knoblauch, D., Mederake, L. & Stein, U. (2018), "Developing countries in the Lead – What Drives the Diffusion of Plastic Bag Policies?" *Sustainability.* 10. Available at: <https://www.mdpi.com/2071-1050/10/6/1994/pdf>

27 European Union and ASEAN Secretariat (2019), *Circular economy and plastics: A gap analysis in ASEAN Member States.* Available at: <https://www.iges.or.jp/en/pub/ce-plastics/en>

28 European Union and ASEAN Secretariat (2019), *Circular economy and plastics: A gap analysis in ASEAN Member States.* Available at: <https://www.iges.or.jp/en/pub/ce-plastics/en>



## BOX 1.

### Examples of Plastic Packaging Standards across the AMS

In Thailand, the Pollution Control Department (PCD) has implemented light-weighting measures (replacement of packaging material with a lighter weight alternative or reducing excess plastic packaging materials) by eliminating plastic cap seals on drinking water bottles (while ensuring hygiene and safety standards).<sup>29</sup>

In the Philippines, businesses are allowed to use recycled plastics in food contact packaging if materials meet the U.S. Food & Drug Administration (FDA) Code of Federal Regulations. Malaysia also has in place a set of ecolabelling criteria (technical standards) related to biomass-based products for food-contact applications.

The Circular Materials Lab is a pre-competitive platform in Singapore with an initial focus on minimum specifications regarding films / flexibles as well as biodegradable / food-safe materials with good life cycle properties. It includes government agencies (the Singapore Economic Development Board and A\*STAR) and private sector representatives (Food Industry Asia, P&G, Nestle).

29 Thai Beverage (2018), "Eco-friendly Packaging". [http://sustainability.thaibev.com/2018/en/ecofriendly\\_packaging.php](http://sustainability.thaibev.com/2018/en/ecofriendly_packaging.php) and The Nation (2018), "Bottled water makers welcome cap seal ban" <http://www.nationmultimedia.com/detail/national/30342183>

**There are also challenges related to biodegradable and compostable packaging.** A variety of plastic products and packaging available on the ASEAN market are labeled as biodegradable but mostly degrade only under specific laboratory conditions, which may not always be replicated in the natural environment. Similarly, plastics packaging labeled as "compostable" may not be suitable for composting and can contaminate the final compost product or the composting plants. The lack of a clear understanding of these labels or standards creates confusion for consumers and waste operators on how to properly sort and recycle the labeled products. This leads to more unrecycled plastic waste and possibly more leakage into the environment. There is a responsibility from producers to provide clear information and engagement with the producers on this issue is needed. Consumer awareness is also essential to support consumers in understanding labelling and choosing sustainable products.

Existing global work on standards include the ISO standards for compostability and biodegradability<sup>30</sup>. In the region, Malaysia aims to revise eco-labeling criteria for biodegradable and compostable plastic packaging materials (ECO001) and develop testing

kits as part of the "Malaysia's Roadmap towards Zero Single-use Plastics 2018-2030"<sup>31</sup>. There is a need to coordinate such action at the regional level to improve the quality of recycling, especially in light of the existing trade with plastic packaging, plastic products and plastic waste across the AMS.

### GOVERNMENT PROCUREMENT COULD BE AN IMPORTANT STIMULUS FOR PLASTICS CIRCULARITY

Government procurement represents between 5 to 8 percent of economic output in AMS and would help encourage the use of recycled plastics<sup>32</sup>, promoting waste segregation and substituting single-use plastic consumption. For example, governments can promote the use of refillable water dispensers instead of plastic bottles, or they can integrate environmental criteria for the use of recycled plastics in selecting their suppliers. This could also carry significant symbolic importance by showing that governments are leading by example. Also, the creation of a list of environmental criteria

30 ISO 16620 and ISO 22526 on carbon and environmental footprint of biobased plastics; ISO 18830 on biodegradation test; ISO / CD 22766 on the disintegration of plastic materials in marine habits; ISO 15270 on recovery and recycling of plastic waste; and ISO 18830 on biodegradation testing

31 MESTECC (2018), *Malaysia's Roadmap towards Zero Single-Use Plastics 2018-2030*. Available at: <https://www.malaysia.gov.my/portal/content/30918>

32 Gourdon, J. and V. Bastien (2019), "Government Procurement in ASEAN: Issues and How to Move Forward", in Ing, L.Y., R. Peters and O. Cadot (eds.), *Regional Integration and Non-Tariff Measures in ASEAN*. Jakarta: ERIA, pp.182-221. Available at: [https://www.eria.org/uploads/media/15.ERIA\\_Book\\_2019\\_Reg\\_Int\\_NTM\\_Chapter\\_9.pdf](https://www.eria.org/uploads/media/15.ERIA_Book_2019_Reg_Int_NTM_Chapter_9.pdf)

could provide a common ground and understanding for the preparation of tenders and the inclusion of environmental requirements, when the procurer and the supplier belong to different AMS.

There is a lack of adoption of Green Public Procurement (GPP) criteria and practices across the AMS, although some AMS have already developed some GPP measures. Thailand, for example, implemented multiple GPP plans to change consumption behaviors.<sup>33</sup> More AMS (including Indonesia and Viet Nam) are considering similar green procurement regulations.<sup>34</sup> However, at present, no AMS has explicit government procurement requirements related to recycled plastics. More coordination on GPP and best practices could stimulate the market for sustainable plastics and alternatives across the AMS.

## TACKLING SEA-BASED MARINE PLASTIC DEBRIS

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Plastic products are particularly common in fishing activities, but in ASEAN countries there is a low level of transposition and implementation of the principles stated in international conventions to regulate fishing activities and their waste management operations. These include MARPOL and regional partnerships, including PEMSEA and COBSEA.<sup>35</sup> There are also some promising regional and international efforts to tackle sea-based litter. In 2019, the UN's Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) established a new working group that will explore sea-based sources of marine litter, including fishing gear and shipping related sources, and develop guidance on relevant interventions.<sup>36</sup> A set of four Regional Guidelines was

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33 Pollution Control Department (2015), *Green Public Procurement in Thailand*. Available at: [https://www.env.go.jp/policy/hozen/green/kokusai\\_platform/2015symposium/03Thailand.pdf](https://www.env.go.jp/policy/hozen/green/kokusai_platform/2015symposium/03Thailand.pdf)

34 United Nations Environment Program [UNEP] (2017), "Asia Pacific Green Public Procurement Partnership Project". Available at: <https://www.unenvironment.org/events/workshop/asia-pacific-green-public-procurement-partnership-project>

35 International Maritime Organization [IMO] (2020), "International Convention for the Prevention of Pollution from Ships (MARPOL)". Available at: [http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx) and Partnerships in Environmental Management for the Seas of East Asia [PEMSEA] (2020), "Pollution and waste management". Available at: <http://www.pemsea.org/our-work/pollution-and-waste-management>

36 Group of Experts on the Scientific Aspects of Marine Environmental Protection [GESAMP] (2019), *Sea-based sources of marine litter*. Available at: <http://www.gesamp.org/work/groups/wg-43-on-sea-based-sources-of-marine-litter>

prepared by the Secretariat of the Southeast Asian Fisheries Development Center (SEAFDEC) to support the implementation of responsible fisheries practices by AMS.

All AMS have ratified MARPOL Annex V except Lao PDR and Thailand, and therefore must ensure the provision of adequate reception facilities for ships' wastes in the ports (including end-of-life fishing gear). However, in some AMS, the management of solid and liquid wastes has not been fully applied at the port and onboard vessels and there are no specific regulations concerning vessel pollution prevention equipment on board. Some AMS have implemented licensing and registration systems for controlling fishing activities. The disposal of solid waste or any garbage (including fishing gear) into public water areas is strictly prohibited, but there is currently no legal obligation in all AMS for vessels to carry fishing gear retrieval equipment, to retrieve lost gear, or to report its loss and/or retrieval. Targeted clean-ups of marine litter are currently restricted to scattered voluntary initiatives. There is a need for further coordination in the regional effort for the proper implementation of the principles of the MARPOL and other conventions for the plastic generated by fishery activities. Innovative technologies to address marine plastic debris at the source (e.g. shipping and fishing vessels) could also help to tackle the issue of sea-based debris.

## COORDINATING EFFORTS ON THE PLASTIC WASTE TRADE

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Finally, an **important challenge concerns the plastic waste trade in the ASEAN**. This has been significantly disrupted in recent years, starting with the diversion of over 7 million tons / year of plastic waste intended for recycling through the adoption of China's "National Sword" policy<sup>37</sup>, which sets strict contamination thresholds on waste imports. However, if mechanisms to ensure appropriate quality levels are in place, imported plastic waste can be important for providing sufficient feedstock levels to create viable investment projects on recycling, which has been a key barrier to the development

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37 Brooks et al (2018), "The Chinese import ban and its impact on global plastic waste trade". *Science Advances*. Vol 4 no.6, eaat0131. Available at: <https://advances.sciencemag.org/content/4/6/eaat0131/tab-article-info>

of many recycling projects in the ASEAN<sup>38</sup>. In recent years, international organizations have revised trade standards and multilateral environment agreements to take account of the growing trade in waste, including the amendment to the Basel Convention.

Since China's restriction on waste imports, many countries in Asia have followed suit, including in several AMS. For example, Viet Nam limited plastic scrap imports by strengthening inspection standards (only "clean" plastic scrap with less than 2 percent impurity can be imported) and limited the issuance of plastic waste import licenses.<sup>39</sup> Similarly, Malaysia recently returned 42 shipping containers of illegally imported plastic waste to the UK, sending a clear message that the country does not want to become the dumpsite of the western world<sup>40</sup>. These developments create issues for the recycling industry. There is a need for coordination of regional efforts in addressing the plastic waste trade.

## 2.1.2 Knowledge sharing and adequate capacity are essential for effective policies and programs

### IMPROVING KNOWLEDGE ON MARINE PLASTIC DEBRIS

A key knowledge gap is a lack of data concerning plastic pollution sources that end up in the environment and, especially, in the oceans. Sea-based sources of plastic pollution need to be identified as they contribute about one-fifth of the waste and directly impact critical economic sectors such as the fishing industry.<sup>41</sup> This can include ghost nets, fishing gear, waste from fishing vessels, maritime transport and marine tourism. Land-based sources of plastic pollution are caused by waste littering, poor waste management

facilities — such as open landfills in the proximity of coasts, and waste transported by rivers.

Another emerging issue is constituted by microplastics, which are increasingly found in environmental and living samples. These are particles of less than 5 mm in size that could be intentionally added in cosmetics, detergents and other products, or generated during the use, production or supply of products. Studies show that humans are consuming large amounts of these micro-plastics through food, such as seafood, and health risks could be involved<sup>42</sup>. The potential impact of microplastics is still under investigation and more research efforts are needed to fully understand this issue.

The understanding of microplastics, land and sea-based leakage to the overall marine debris challenge in ASEAN is still limited, and only a few AMS have measures in place to tackle this.<sup>43</sup> Studies provide evidence base and inputs to decision-making on priority plastic items and rolling out potential policies to address them. There is a need for improving knowledge in ASEAN on quantifying and monitoring plastic marine debris; and to contribute to global research efforts to better understand the sources and impact of microplastic.

### COORDINATING RESEARCH EFFORTS

There is still limited research capacity in some AMS and research efforts are not coordinated at the ASEAN level, hampering knowledge exchange and causing potential duplication of efforts. Examples of initiatives promoting research and innovation collaboration across the AMS exist, including the Tropical Marine Science Institute based in Singapore, the Regional Knowledge Center for Marine Plastic Debris managed by ERIA and the RC3S managed by Indonesia<sup>44</sup>. Regionally, the Incubation Network — a platform by the Circulate Initiative and Second Muse — launched the Plastic

38 ASEAN Secretariat (2018), *ASEAN Sustainable Urbanisation Strategy*. Available at: <https://asean.org/storage/2018/11/ASEAN-Sustainable-Urbanisation-Strategy-ASUS.pdf>

39 Resource Recycling (2019), "Officials say Vietnam to end plastic imports in 2025". Available at: <https://resource-recycling.com/plastics/2019/04/03/officials-say-vietnam-to-end-plastic-imports-in-2025/> and Viet Nam Briefing (2018), "Vietnam to Restrict Surging Scrap Imports". Available at: <https://www.vietnam-briefing.com/news/vietnam-to-restrict-surging-scrap-imports.html/>

40 <https://www.bbc.com/news/uk-51176312>

41 Ocean Conservancy and McKinsey Center for Business and Environment (2015), *Stemming the Tide: Land-based strategies for a plastic-free ocean*. Available at: <https://oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>

42 Chen et al (2019), "Mini-review of microplastics in the atmosphere and their risks to humans". *Science of the Total Environment*. Vol 703, Issue 135504. Available at: <https://www.sciencedirect.com/science/article/pii/S0048969719354981> and National Geographic (2019), "You eat thousands of bits of plastic every year". Available at: <https://www.nationalgeographic.com/environment/2019/06/you-eat-thousands-of-bits-of-plastic-every-year/>

43 European Union and ASEAN Secretariat (2019), *Circular economy and plastics: A gap analysis in ASEAN Member States*. Available at: <https://www.iges.or.jp/en/pub/ce-plastics/en>

44 Y Lyons, Theresa Su and Mei Lin Neo (2019), *A review of research on marine plastics in Southeast Asia: Who does what?* Available at <https://www.gov.uk/government/publications/a-review-of-research-on-marine-plastics-in-sea-who-does-what>

Data Challenge in 2019, to develop solutions (ranging from robots to collect trash in water bodies to digital maps to enhance the collection of plastics) to end plastic pollution in South and Southeast Asia.<sup>45</sup>

Enabling collaboration between these initiatives could help strengthen information sharing on innovation, which is feasible given the pre-competitive nature of many of these efforts. There is a need to develop and enhance regional research cooperation and knowledge networks and databases to share information and solutions related to marine debris, and to close the coordination gap between research institutions and innovation initiatives established in the AMS.

## DEVELOPING CAPACITY ON PLASTIC WASTE MANAGEMENT

There is a general lack of capacity around plastic waste management in the AMS, both in the public and the private sectors. At the governmental level, local government officials often lack basic information on key issues such as alternative technologies to utilize waste (beyond simple incineration)<sup>46</sup>. Similarly, SMEs and MSMEs have significant capacity gaps, which makes it more challenging for them to comply with regulations related to plastic waste and to adopt circular economy approaches.<sup>47</sup> For instance, based on the Small and Medium-Sized Enterprise (SME) 2018 Policy Index's "Greening SMEs" score, most AMS did not have targeted environmental policies and programs (e.g., incentives and training programs) for SMEs<sup>48</sup>. The informal waste management sector and the waste pickers — especially women that usually belong to the most marginalized and vulnerable social groups — also suffer from a lack of capacity.

45 The Incubation Network (2020), "The Plastics Data Challenge". Available at: <https://www.incubationnetwork.com/plastics-data-challenge>

46 ASEAN Secretariat (2018), *ASEAN Sustainable Urbanisation Strategy*. Available at: <https://asean.org/storage/2018/11/ASEAN-Sustainable-Urbanisation-Strategy-ASUS.pdf>

47 Organization for Economic Cooperation and Development [OECD] and Economic Research Institute for ASEAN and East Asia [ERIA] (2018), *SME Policy Index. ASEAN 2018. Boosting Competitiveness and Inclusive Growth*. Available at: <https://www.oecd-ilibrary.org/docserver/9789264305328-en.pdf?expres=1589979373&id=id&accname=guest&checksum=8D3C1DD879D1C4ED5FF7CC541BBCCFF2>

48 Organization for Economic Cooperation and Development [OECD] and Economic Research Institute for ASEAN and East Asia [ERIA] (2018), *SME Policy Index. ASEAN 2018. Boosting Competitiveness and Inclusive Growth*. Available at: <https://www.oecd-ilibrary.org/docserver/9789264305328-en.pdf?expres=1589979373&id=id&accname=guest&checksum=8D3C1DD879D1C4ED5FF7CC541BBCCFF2>

Several training programs are currently underway in AMS, covering capacity building areas such as monitoring, enforcement, the integration of the informal waste sector into formal systems and potential EPR schemes (see Box 2). There is a need for further coordination of these training and capacity building efforts for waste management officials, SMEs and MSMEs and the informal waste sector.

### BOX 2. Examples of Capacity Building Programs in ASEAN

A number of different initiatives across the region are providing capacity building support and training at different levels on topics relating to plastics and its management. At the national level, a range of programs to address plastic waste is currently being led by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) under the Closing the Loop initiative. One program supports the professionalization of the informal sector in waste with a pilot conducted in Bangkok and a regional policy guide on how to support the integration of the informal sector released. Another program under Closing the Loop focuses on capacity building in ASEAN cities on innovation and smart technologies to address plastic waste. Capacity building on studying leakage, monitoring procedures and the impact on the marine environment are being conducted in Cho Buri (Thailand) by the Japan International Cooperation Agency (JICA) with local academia such as Chulalongkorn University. Regional-level training programs include the ASEAN-Norway Cooperation Project on Local Capacity Building for Reducing Plastic Pollution in the ASEAN Region (ASEANO). ASEANO is a program aiming to improve plastic management practices along the whole plastic value chain, and to contribute to meeting sound reduction targets through capacity building (e.g., training on river monitoring methods) and knowledge sharing. Building and strengthening capacity for plastic waste management is fundamental to ensure that government officials can execute supportive policies and that businesses (particularly Micro, Small and Medium-sized Enterprises or MSMEs) can adopt circular economy approaches.

## 2.1.3 Raising public awareness and supporting behavior change are critical for tackling marine plastic debris

### DEVELOPING BEHAVIOUR CHANGE CAMPAIGNS

Modern lifestyles, daily routines and schedules, affordability and the influence of social media influence consumer choices and the way and type of waste they generate. This holds also in the ASEAN context, where many countries are experiencing rapid economic growth and an increase in consumption. A recent review of the readiness of AMS to develop a circular economy for plastics identified several gaps, including around consumer behavior and their perception of waste segregation.<sup>49</sup> Raising awareness becomes, now more than ever, an exercise to identify different consumer groups and tailor awareness-raising actions to achieve the maximum effect.

There are already national-level efforts underway in all AMS, including campaigns to educate consumers and businesses on recycling and waste segregation, development of related educational materials and coastal clean-ups (see Box 3). These existing public awareness, education and outreach programs can provide valuable lessons and experiences to craft future programs. There is a need to share and consolidate these lessons at a regional level to leverage the collective experiences of the AMS and reduce design costs in creating effective business and consumer campaigns. It is important to note that these behavioral insights will often need to be paired with system change to ensure that people have access to the preferred alternatives. Private sector engagement is also needed as the commercialization of products has a big impact on consumers' behavior.

### IMPROVING CONSUMER AWARENESS

A second challenge related to public awareness is the large variety of products and their packaging marked with a range of end-of-life labels. This makes it difficult for consumers to choose sustainable purchases. Most of the labels that provide information on recyclability, type of plastic material, compostability, biodegrad-

49 European Union and ASEAN Secretariat (2019), *Circular economy and plastics: A gap analysis in ASEAN Member States*. Available at: <https://www.iges.or.jp/en/pub/ce-plastics/en>

### BOX 3. Examples of National Level Behaviour Change Campaigns in ASEAN

In Brunei Darussalam, campaigns and public surveys were conducted to increase public awareness as well as gather better understanding on the level of awareness on the 'No Plastic Bag Everyday' Initiative, where people have shown growing acceptance towards the initiative as reflected in their habit of bringing reusable bags when shopping. The Government of Indonesia has developed a behavioral change communications strategy "playbook", which aims to inform communications strategies relating to specific behaviors to address plastic pollution in Indonesia.<sup>50</sup> Also, Sea-Circular recently published the findings of a survey conducted on more than 2000 people from different target groups, which identifies how consumers and food and beverage businesses perceive plastic waste issues in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. In Singapore, non-governmental organizations such as Zero Waste SG conduct talks and workshops to help companies reduce waste.<sup>51</sup> Some campaigns target specific groups such as tourists. In 2019, the Ministry of Culture, Sports and Tourism of Viet Nam launched a campaign on green tourism for environmental protection. In Lao PDR, organizations such as BambooLao worked with the hospitality industry in Luang Prabang to promote bamboo straws to businesses and tourists<sup>52</sup>. Furthermore, coastal clean-ups are frequent in the AMS. The Philippines authorities shut down its most famous holiday destination, Boracay island, to conduct massive clean-ups.<sup>53</sup> Local chapters of global groups such as Trash Hero and International Coastal Clean-up (ICC) are also engaged in beach clean-up activities.

50 World Bank and GA Circular forthcoming report.

51 Zero Waste SG (2020), "Programs". Available at: <http://www.zerowastesg.com/programmes/>

52 The World Bank (2019), "Meet the Innovators Battling Plastic Waste in Laos: Arounothay Khoungkhakoune". Available at: <https://www.worldbank.org/en/news/feature/2019/05/31/meet-the-innovators-battling-plastic-waste-in-laos-arounothay-khoungkhakoune> and The Laotian Times (2018), "Simple, Natural, Innovative As BambooLao Straws Slurp Up Tourism Award". Available at: <https://laotiantimes.com/2018/10/22/bamboo-straws-slurp-mist-tourism-award/>

53 Gulf News (2018), "Philippines: Boracay island shuts down for 6 months as clean-up begins". Available at: <https://gulfnews.com/world/asia/philippines/philippines-boracay-island-shuts-down-for-6-months-as-clean-up-begins-1.2212000>

ability, Oxo-Degradability of products and packaging are simultaneously placed on the package with other labels like Ecolabels (i.e. bio, zero carbon footprint, sustainable forest certification, etc.) or labels related to health (i.g. vegan, gluten-free, sugar-free products, etc.), social impact (i.e. fair trade marks), or cultural and religious aspects (i.e. halal products). This, paired with a general lack of information, transparency and clarity about the labels, makes it confusing and difficult for consumers to properly distinguish and interpret the end-of-life labeling and properly dispose of the packaging. This is especially relevant to biodegradability and compostability. Also, since no standardization of labels exists, greenwashing often occurs. For example, the current labels used on oxo-degradable plastic claim it is environmentally friendly. However, several countries have already banned oxo-degradable plastic, e.g. plastic bags, due to literature on its negative impact on the environment.

Since many companies have common markets across the AMS, selling a wide range of brands and products, there is a need to simplify the understanding of labeling in ASEAN countries and facilitate widespread recognition of end-of-life labeling for plastic products. If there are sufficient products with the same labels, it can help raise awareness on proper waste segregation, resulting in lower contamination risks and increased recycling rates.



Photo: Nokuro / Shutterstock.

## 2.1.4 The private sector is key to marine plastic solutions and needs the right enabling conditions

### ENHANCING PRODUCER RESPONSIBILITIES FOR PLASTIC WASTE

In the AMS, plastic producers do not currently have responsibility for the waste their products generate. Assigning such responsibility can provide incentives to prevent waste at the source, promote product design for the environment and support the achievement of public recycling and materials management goals. Mechanisms such as Extended Producer Responsibility (EPR), a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products, have been in place for over 20 years and are in about 60 countries worldwide (including ten in the Asia-Pacific region). In Southeast Asia, countries are considering implementing EPR initiatives (such as roadmaps and pilots): Indonesia has recently released its EPR implementation roadmap; Malaysia is expected to release the Circular Economy Roadmap for single-use plastics; Singapore will introduce a mandatory packaging reporting framework in 2021, and aims to introduce an EPR scheme for packaging waste management, including plastics no later than 2025, starting with a Deposit Refund Scheme for beverage containers; and in Viet Nam, a coalition of leading consumer goods and packaging companies has established Packaging Recycling Organization Viet Nam (PRO Viet Nam).

While EPR design may vary by country (taking into account the local context), there are some common principles of effective EPR systems that all countries can benefit from knowing. Given the different country contexts, having one single harmonized approach for EPR is not likely to be suitable. For instance, the mix of EPR frameworks will be different depending on the types and quantities of plastic waste as well as waste management infrastructure in the country. These factors differ significantly across the AMS. However, there are clear benefits from the sharing of best practices, design principles and experiences to help countries develop sustainable EPRs as more AMS start to consider these policies.

## SUPPORTING INNOVATION IN PLASTICS AND PLASTIC WASTE MANAGEMENT

Attracting investment is vital for the realization of a wide spectrum of innovative projects, ranging from large infrastructural projects for separate collection and recycling of plastics to small startups for production and marketing of innovative products replacing single-use plastics. However, innovators (and especially startups, SMEs, and MSMEs) still face challenges in finding investment to scale up. Some key challenges noted by investors for investing in addressing marine plastics in ASEAN include the lack of proper channels for connecting investors with entrepreneurs and service providers, the lack of a pipeline of projects and the lack of bankability of plastic projects that cannot guarantee sufficient return on investment.

There are various AMS national multi-stakeholder partnerships dedicated to managing plastic waste issues and including supporting investments. Examples include the Development Bank of the Philippines (DBP), which has committed to allocate more funds for loans to infrastructure and waste management investments, and the Thailand Public-Private Partnership in Plastic and Waste Management (Thailand PPP Plastics). However, while the existing multi-stakeholder partnerships are either operating at the national level or focusing on broader issues (as with the ASEAN Business Incubator Network (ABINet)), there is a gap in coordinating multi-stakeholder partnerships at the regional level. This is needed to match waste management service providers and financing institutions or individual investors, and create opportunities for the return of investments that make plastic management projects bankable.

## 2.2 REGIONAL GOVERNANCE AND COOPERATION

ASEAN cooperation is guided by ASEAN Community Vision 2025: Forging Ahead Together, which consists of ASEAN Political Security Community (APSC) Blueprint, ASEAN Economic Community (AEC) Blueprint, and ASEAN Socio-Cultural Community (ASCC) Blueprint. Environmental cooperation is guided specifically by the ASEAN Socio-Cultural Community (ASCC) Blueprint 2025.

The issue of marine debris is currently supervised by the ASEAN Working Group on Coastal and Marine Environment (AWGCME), as the lead working group to



coordinate matters related to marine debris, among the ASEAN Senior Officials on the Environment (ASOEN) working groups. Further, the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC) has been involved in the implementation of ASEAN initiatives related to plastic waste in cities and circular economy, together with the ASEAN Working Group on Chemicals and Waste (AWGCW) as the lead working group on waste issue. Related to Sustainable Consumption and Production (SCP), the ASEAN Working Group on Environmental Education (AWGEE) currently holds the mandate, with regard to ASEAN actions on SCP, to include its focus on strengthening Public-Private Partnership (PPP) and enhancing stakeholders' awareness on SCP practices.

The main functions of each working group and relevant programmes are listed in the table on the following page.

Because marine plastic pollution is a cross-cutting sectoral issue, it is both a challenge and opportunity for the ASEAN to collaboratively address this agenda and to strengthen the coordination of the respective focuses of four working groups. The current governance system of ASEAN has not yet been able to establish a platform for the relevant ministries in each AMS to collectively discuss and address this cross-cutting issue. Therefore, an integrated approach of coordination and cooperation is necessary among the sectoral bodies, as well as the stakeholders working towards the same issue to effectively implement RAPs and to create synergistic impacts at various levels of government and sectors.

Moreover, this issue needs to be addressed with strong cooperation with the private sector, industrial associations, entrepreneurs and standardization bodies, among others who may not have been traditional stakeholders for the Sectoral bodies of the ASCC.

Working Group	Main Function	Relevant Programmes
<b>AWGCME</b> <i>Current Chair:</i> <b>Thailand</b>	Ensure a well-coordinated and integrated approach to the conservation and sustainable management of the coastal and marine environment.	<ul style="list-style-type: none"> <li>• Tanker Desludging and Oil Spill Reduction</li> <li>• Coastal and Marine Pollution Mitigation (nutrients, marine debris, eutrophication etc.)</li> </ul>
<b>AWGEE</b> <i>Current Chair:</i> <b>Brunei Darussalam</b>	Ensure a well-coordinated and integrated approach to promoting environmental education in AMS.	<ul style="list-style-type: none"> <li>• Sustainable Consumption and Production (SCP)</li> </ul>
<b>AWGCW</b> <i>Current Chair:</i> <b>Singapore</b>	Address chemicals-related issues under relevant multilateral environmental agreements such as Basel Convention, Rotterdam Convention, Stockholm Convention and Minamata Convention, as well as internationally agreed-upon systems such as the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).	<ul style="list-style-type: none"> <li>• Hazardous Waste Management and Other Waste Defined Under the Basel Convention</li> <li>• Transboundary Movements of (Hazardous) Chemical and Hazardous Waste</li> <li>• Chemicals and Hazardous Wastes Accident Prevention, Preparedness and Emergency Responses</li> <li>• Remediation of Contaminated Sites from Chemicals and Hazardous Wastes</li> </ul>
<b>AWGESC</b> <i>Current Chair:</i> <b>Malaysia</b>	Address environmental sustainability challenges in the areas of clean air, clean water and clean land as well as the green and blue issues, towards achieving liveable cities/ urban areas.	<ul style="list-style-type: none"> <li>• Sustainable Urban Planning, Development, and Implementation</li> </ul>

Because plastic pollution issue relates to not only environment, but also to economy and society, there needs to be a platform for dialogue and cooperation involving such stakeholders.

## 2.3 EMERGING ISSUES OF PLASTIC DEBRIS DURING COVID-19

The increased use of plastics during the COVID-19 pandemic has raised concerns that the crisis is leading to more plastic waste reaching the environment. The ongoing global pandemic is being seen as a setback to the momentum to address plastic pollution.

**Single-use plastic use sees exponential increase from PPE and takeout.** COVID-19 triggered an estimated global use of 129 billion face masks and 65 billion gloves every month.<sup>54</sup> With the economic crisis making the average consumer more price-sensitive, affordable goods are taking precedence over environmentally

friendly ones. Social distancing has also led to a flood of products delivered daily to homes — wrapped in a plethora of packaging — as people turn to online shopping and takeout services. Much of this kind of plastic is not recyclable. 2020 is on pace to see 30 percent more waste than 2019.

**The oil market collapsed, making plastic cheaper to use than ever.** COVID-19, along with OPEC politics, contributed to a global crash in the oil markets. Oil and natural gas are the key raw materials used to make plastic. Their all-time low cost has increased the price disparity between alternative materials (cellulose,

**The increased use of plastics during the COVID-19 pandemic has raised concerns that the crisis is leading to more plastic waste reaching the environment. The ongoing global pandemic is being seen as a setback to the momentum to address plastic pollution.**

<sup>54</sup> Joana C. Prata, Ana L.P. Silva, Tony R. Walker, Armando C. Duarte, and Teresa Rocha-Santos. *COVID-19 Pandemic Repercussions on the Use and Management of Plastics*; Environmental Science & Technology 2020 54 (13), 7760-7765. DOI: 10.1021/acs.est.0c02178



seaweed) and virgin plastic, which has always been the most inexpensive way to package goods.

**Recycling systems are starting to break down; health risks rise.** With COVID-19 budget strains, many waste-management services have not been operating at full capacity, owing to social-distancing rules and stay-at-home orders; and recycling systems are breaking down. Companies that are advancing innovative methods of recycling and reusing waste plastics are reporting reduced amounts of plastic coming through waste streams. In addition, in light of the COVID-19 pandemic, the health risks for waste pickers rise enormously, since they often come in contact with unsorted waste which can contain infected disposed equipment such as face masks and gloves, and are not properly educated and equipped to protect themselves<sup>55</sup>.

If these aspects of COVID-19 are not specifically addressed, they could lead to increased plastic leakage to the environment and a worsening marine debris problem. Now, even more than ever, there needs to be urgent and coordinated government commitment

to circular economy approaches, including recycling practices and strict policies against plastic pollution. Companies should continue efforts to curtail virgin plastic use and increase plastic recycling to live up to their corporate social and environmental responsibilities.

The economic slowdown of the COVID-19 pandemic provides an **opportunity to redesign systems and to build back better**. Economic recovery plans could include new green jobs and green stimulus opportunities. Reducing plastic use through single-use/reusable alternative materials and through recovering and retaining plastic value in a low-technology environment are labour-intensive tasks. For example, many alternative materials to single-use plastic are not yet produced at scale, leaving an opportunity for locally made options. Furthermore, encouraging reusable alternatives, for example, through upgrading market facilities to allow for improved cleaning and sorting of dine-in utensils would create jobs in these areas. On improving plastic value for recycling, there are many job opportunities from collection and sorting through to cleaning and compressing the plastic. More broadly, investments in general waste management, including collection, clean-up and disposal, will also create jobs while preventing plastics from entering waterways and the marine environment.

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55 WIEGO (2020). Impact of public health measures on informal workers livelihoods and health. Available at: [https://www.wiego.org/sites/default/files/resources/file/Impact\\_on\\_livelihoods\\_COVID-19\\_final\\_EN\\_1.pdf](https://www.wiego.org/sites/default/files/resources/file/Impact_on_livelihoods_COVID-19_final_EN_1.pdf)



Photo: Chanchai Phetdikhai / Shutterstock.

## Chapter 3

# ASEAN Vision and Mission for Marine Plastic Debris



### 3.

## ASEAN VISION AND MISSION FOR MARINE PLASTIC DEBRIS

ASEAN Member States (AMS) recognise the urgent need to take action and have made notable progress in combating marine debris through the adoption of the Bangkok Declaration on Combating Marine Debris in ASEAN Region and ASEAN Framework of Action on Marine Debris.

### 3.1 SUPPORTING MARINE DEBRIS INITIATIVES IN THE ASEAN REGION

The ASEAN Conference on Reducing Marine Debris, held in Thailand in November 2017, recommended an integrated land-to-sea policy approach by developing and implementing a Regional Action Plan for Combating Marine Debris in the ASEAN region. This RAP will build on existing concrete action in the ASEAN Region, with the adoption of the “Bangkok Declaration on Combating Marine Debris in ASEAN Region” and the associated “ASEAN Framework of Action on Marine Debris”.

During the 34th ASEAN Summit in Bangkok, Thailand, on 22 June 2019, the Heads of State / Government of Member States of the ASEAN, adopted the “Bangkok Declaration on Combating Marine Debris in ASEAN Region”. It aims to “promote cooperation for the protection, restoration and sustainable use of coastal and marine environment, respond and deal with the risk of pollution and threats to marine ecosystem and coastal environment, in particular in respect of ecologically sensitive areas”. The Declaration reaffirms the AMS commitment to take concrete action in combating marine debris (as demonstrated in the *East Asia Summit Leaders’ Statement on Combating Marine Plastic Debris*) and in particular, it emphasizes the importance of multi-stakeholder cooperation among the AMS and other stakeholders including on knowledge sharing, technology and innovation transfer and increasing public awareness. Further details on the specific objectives outlined in the Declaration are provided in Annex 4.

The ASEAN Framework of Action on Marine Debris was developed to act on the recommendations of the ASEAN Conference on Reducing Marine Debris. It covers four priority areas, namely: (1) Policy Support and Planning; (2) Research, Innovation and Capacity Building; (3) Public Awareness, Education and Outreach; and (4) Private Sector Engagement. Suggested activities to combat marine debris at the national and regional levels are listed under each priority area, with a focus on collaboration among ASEAN and its partners in combating marine debris. Further details on the Framework of Action are provided in Annex 5.

### 3.2 STAKEHOLDER CONSULTATION ON THE ASEAN REGIONAL ACTION PLAN

Building on the aim of the Bangkok Declaration, this RAP was developed through extensive stakeholder consultation with relevant experts and the AMS since October 2019. In order to identify and prioritize potential actions for the RAP, three workshops were conducted with development partners, private sector experts, leading academics and relevant government officials from the AMS, including the AWGCME, AWGCW and AWGESC:

- **Workshop 1 (Bangkok, Thailand) – 29-30 October 2019**
  - > The inception workshop identified priority areas from the Framework of Action that the AMS representatives felt were crucial to be part of the RAP. A range of global and ASEAN policy experts from development partners and AMS shared their perspectives. Key lessons focused on the importance of coordination and collaboration to avoid duplication of efforts and work area silos, and ensuring a rigorous approach to monitoring impact. The workshop was used to understand policy gaps across the plastic waste value chain and revealed a strong focus on downstream issues rather than incorporating circular economy

principles. The possibility of establishing an ASEAN centre for addressing marine debris was also discussed during the workshop. Based on these discussions, potential regional actions were identified to support the first component of the Framework of Action - Policy Support and Planning.

- **Workshop 2 (Singapore) – 21-22 January 2020**

- The second workshop enabled discussions among the AMS representatives on potential collaborative actions with the private sector and industry associations. Potential challenges and opportunities for private sector engagement on marine debris issues were presented by public and private sector experts and discussed with the AMS representatives. Key areas discussed included investment, product standards and labelling, and green procurement. This discussion generated potential regional actions to support the fourth component of the Framework for Action – Private Sector Engagement.

- **Workshop 3 (Virtual) – 26 March 2020**

- The third workshop was held remotely and involved presentations from key development partners, private sector experts and government officials on innovation, metrics methodologies, capacity building, behaviour change and public awareness. Subsequent discussion, including a follow-up survey to the AMS, identified potential regional actions related to the second and third components of the Framework of Action – Research, Innovation & Capacity Building and Public Awareness, Education & Outreach.

Consultation on the resulting draft list of actions was undertaken with relevant subject matter experts from development partners and industry associations based in ASEAN. Two consultation meetings were held on 9 and 13 July 2020. Feedback from experts have been incorporated into this report where relevant, or noted for consideration during future implementation of actions. The RAP, which had been consulted with and supported by the relevant sectoral bodies, was endorsed ad-referendum by AWGCME on 17 February 2021, by ASOEN on 8 March 2021, and subsequently adopted ad-referendum by the ASEAN Ministerial Meeting on the Environment (AMME) in May 2021.

### 3.3 GOAL, OBJECTIVES AND STRATEGIES OF THE ASEAN REGIONAL ACTION PLAN

The goal of the present RAP is to *enhance coordination at the regional and international levels for achieving sustainable management of coastal and marine environments through responding to marine plastic pollution*. The objectives are aligned with the eight objectives under the Bangkok Declaration (as outlined in Annex 4), with a specific focus on marine plastic debris. These are operationalised across the four components outlined in the Framework of Action, directly addressing action (D) under Framework I (Policy Support and Planning) and contributing to many of the other suggested activities within the Framework of Action (Annex 5).

The strategy for addressing marine plastic debris is to implement actions at three key stages of the the plastic waste value chain: (1) reducing inputs into the system; (2) enhancing collection and minimizing leakage; and (3) creating value for waste reuse. These are implemented at the regional level; while the AMS have national-level policies, programs and initiatives to address the different elements of the waste value chain, ASEAN can help reinforce and complement these existing activities across three key areas. Firstly, given many common challenges faced by the AMS in tackling marine debris issues, there is an opportunity for sharing lessons and experiences on best practices. Secondly, there are significant economies of scale or “tipping points” that can be leveraged, particularly in areas such as standards, innovation, financing and training. Finally, the combination of shared marine areas and water bodies and intra-ASEAN trade markets mean that this is a transboundary issue that must be tackled at a regional level.

## Chapter 4

# Regional Action Plan for Combating Marine Plastic Debris



# 4.

## REGIONAL ACTION PLAN FOR COMBATING MARINE PLASTIC DEBRIS

Tackling plastic waste poses many challenges, but at the same time, different solutions can be implemented along the plastic value chain, as highlighted in the problem analysis in Chapter 2. The political commitment of the AMS to tackle this urgent issue, as highlighted in Chapter 3, provides huge opportunities for a common action to address plastic waste and marine littering on a big, regional scale, where plastic policy implementation and processes can be homogenized across the AMS, creating value for common markets, shared knowledge and homogeneous tools, approaches and technologies.





In order to enable the possibility for coordinated action, this Chapter proposes 14 Regional Actions for the AMS. The Actions aim at addressing a variety of

plastic issues along the value chain and are categorized according to the four Framework of Action components (Section 3.1). The interrelated nature of the value chain results in some overlap between the actions, and potential synergies, which will be explored during implementation.

The Actions have been thoroughly discussed within the stakeholder consultation process as described in Chapter 3.5, and are shown in the following figure and introduced in Section 4.1 to 4.4.

Based on the challenges and opportunities introduced in Chapter 2, the main steps necessary to develop each Action are described. Indication on the character of the steps, including which tasks are developed

ELEMENTS OF THE WASTE VALUE CHAIN

		Reducing inputs into the system	Enhancing collection and minimizing leakage	Creating value for waste reuse
FRAMEWORK COMPONENTS	 <b>Policy Support and Planning</b>	2. Guiding principles for phasing out select single-use plastics 4. Best practice manual for development of minimum standards and technical requirements for plastic packaging and labeling 5. Regional stocktaking of green public procurement	1. Regional guidebook on financial mechanisms for investments in plastic waste management 6. Best practice manual for reducing, collection and treatment of sea-based litter	3. Regional guidebook on standards for responsible plastic waste trade, sorted plastic waste and recycled plastics
	 <b>Research, Innovation and Capacity Building</b>	8. Strengthen ASEAN regional knowledge network on marine plastics 9. Regional study on microplastics	7. Guidebook for common methodologies for assessment and monitoring of marine litter 10. Coordinate regional training programs on plastics and waste management	
	 <b>Public Awareness, Education and Outreach</b>	11. Behavioral change communication strategy playbook	12. Enhance regional awareness for consumers of labeling of plastics and packaging	
	 <b>Private Sector Engagement</b>		13. Establish a regional platform for EPR knowledge support and implementation support	14. Establish a regional platform to support innovation and investments in plastics and plastic waste management

at the regional level and which aspects need to be implemented at the national level, are also provided. Finally, an indication of the leading implementing ASEAN Working Group, which shall be appointed to develop each Action and any supporting bodies, is also provided.

Direct beneficiaries of the actions would be expected to include the officials of different ministries, including Ministries of the Environment, in charge of the implementation of plastic waste management policies. For some actions, private sector stakeholders such as investors and innovative companies will also directly benefit. Indirect beneficiaries will include stakeholders across the plastic value chain such as consumers, communities associated with the fishing and informal waste sectors and various private sector organisations and companies.

In the context of the COVID-19 pandemic (Section 2.3), each action will include consideration of COVID-19 and future pandemics during implementation, where relevant. Examples of aspects to consider include medical waste and changes in patterns of plastic consumption. Other disasters, such as tsunamis or earthquakes, may also impact plastic use. However, as these would be acute and geographically limited compared to a pandemic, it is not expected that the actions will specifically address these.

It is important to note that plastic waste management is just one component of overall SWM and improvements should be considered for overall waste management systems and circularity. That said, plastic waste warrants special attention for SWM given its longevity in the environment if landfilled or discarded and ubiquitousness as a material. The following actions attempt to address this, by enhancing AMS' capacity to prevent and reduce plastic pollution.

## 4.1 COMPONENT I: POLICY SUPPORT AND PLANNING

### 1. Develop Regional Guidebook on Financial Mechanisms for Investments in Plastic Waste Management

**Objective:** To provide guiding principles to AMS for promoting investments in plastic waste management.

**Focus:** The guidebook will focus on mechanisms for plastic waste management and should cover at least the following contents: EPR principles, EPR fees and eco-modulated fees, deposit refund schemes; waste

fees mechanisms for waste collection; data reporting and audits; other financial instruments supporting plastic waste prevention, separate collection, and recycling — landfill tax, incineration tax, pay-as-you-throw; Public-Private Partnership contracts; the establishment of Environmental Funds; and explain steps needed for implementation of cost recovery mechanisms, assessment of financial and administrative resources needed per option and affordability for the population. This can be used by the AMS as a supporting tool for investment decision-making, and will be disseminated to the AMS through i.e. a dedicated webinar, or through the Investment Platform established through Action 18.

The AMS may use the regional guidebook to enhance access to investments and information relating to plastic waste management.

### 2. Develop Guiding Principles for Phasing out select Single-use Plastics (SUPs)

**Objective:** To provide guiding principles for the implementation of different policy measures in the AMS to address the issue of SUPs and the root causes that have engendered the culture and habits of using single-use items, and by doing so, to support coherent progress among the AMS in reducing the amount of SUPs placed on the market, consumed and littered in the environment.

**Focus:** The guiding principles is expected to cover at least: 1) Single-use plastics that have to be addressed and suitable policy measures like consumption reduction (e.g. through consumers fees.), marketing restrictions (e.g. bans), product requirements (e.g. minimum recycling content, cap tethering, etc.), marking requirements, EPR for recycling, EPR for cleaning up litter and Deposit Refund Schemes; 2) Information for decision making — which could include economic impacts of SUPs, administrative capacity needed, financial evaluation of each measure, obligatory data reporting, availability of suitable standards, poverty implications and whether vulnerable stakeholders will be affected, possible obstacle and resistance from stakeholders concerned, degree of monitoring and enforcement needed; and 3) Draft provisions for the regulation of the SUPs and adoption in the national legislation (including provisions for collection and spending of the fees).

The AMS stakeholders may use the guiding principles to develop pilot initiatives to restrict the use of SUPs.

### 3. Develop a Regional Guidebook on Standards for Responsible Plastic Waste Trade, Sorted Plastics Waste, and Recycled Plastics

**Objective:** To develop a regional Guidebook containing principles and technical information needed for the development of quality standards for sorted plastics waste and recycled plastics with a view of supporting the markets and ensuring responsible plastic waste trade.

**Focus:** The Guidebook will lead to the formulation of principles and technical requirements for the adoption of harmonized quality standards for recycling practices and recyclates, and shall serve as a tool for supporting quality plastic waste trade, markets of recyclates and sorted plastics as well as actors along the plastic value chain in their efforts to increase quality and safety in the plastics. The regional Guidebook is expected to contain at least: a stocktaking of existing grade classification quality and trade requirements for recycled plastic (e.g. at international level); definition of a mechanism for quality assurance — procedure for proving that the grade classification and import/ export requirements are met by applying test methods; and a tracking code-system for the plastics to allow enough detail to describe the quality of the plastic.

Based on the results of the stocktaking exercise, a **regional consultation with the AMS** is proposed to be organized to achieve mutual recognition of the principles for the development of standards and towards the adoption of the harmonized grade classifications and trade requirements for different polymers common for the ASEAN countries.

The Guidebook, containing principles and technical information for the development and implementation of quality standards, may be used by AMS to develop and adopt standards in their respective national contexts.

### 4. Elaboration of Best Practice Manual for Development of Minimum Standards and Technical Requirements for Plastic Packaging and Labelling

**Objective:** To provide guiding principles to AMS for developing standards for sustainable packaging, biodegradability and compostability, thus creating significant economies of scale that would lower the cost of recycling and create large new end-markets across the AMS (e.g. clarity on using recycled PET in food packaging). The Action also intends to achieve mutual

recognition of different labels for plastic products put on the market so that consumers and waste recyclers can benefit from it.

**Focus:** The Action proposes to develop a Best Practice Manual containing principles and technical information needed for the development of minimum standards for plastic packaging, such as standards on recycled content, biodegradability, and compostability. The manual may also address traceability which can be used in the value chain to ensure that plastics have been collected and recycled in a sustainable manner. The manual is expected to contain as a minimum: 1) a review of existing packaging product standards and best practices for labeling for recycled content, biodegradability and compostability (applied in the AMS and worldwide) as well as an overview of the infrastructure required to support the appropriate disposal of such products (e.g. industrial composting facilities for compostable plastics); 2) the identification of guiding principles and minimum technical requirements for developing standards for plastic packaging and labeling for recycled content, biodegradability, and compostability, such as a list of permitted substances (plastic and other substances), restriction on the use of certain substances (e.g. for food packaging, including harmful additives, fillers, POPs, flame retardants), the maximum concentration of certain plastics/chemicals to be allowed to migrate from the packaging to the food and standards for recycled material content in new products; 3) development of tests for checking the quality of the standardized products; and 4) protocols for the monitoring of the application of the standards. The AMS and the industry sectors concerned shall be involved in the preparation of the manual through consultation processes.

The AMS may use the principles for the development of standards identified in the manual for the development of national standards.

### 5. Undertake Regional Stocktaking of Green Public Procurement

**Objective:** The Action proposes the development of approaches to stimulate GPP in the ASEAN. This Action could build on the long experience and materials available from the EU in developing GPP criteria and providing capacity building to AMS<sup>56</sup>.

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56 See: [https://ec.europa.eu/environment/gpp/eu\\_gpp\\_criteria\\_en.htm](https://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm)



**Focus:** GPP will be introduced at the ASEAN level and an entry point might include work on labeling and standards. At first, a **manual on GPP** best practices shall be prepared and contain as a minimum: 1) a stocktaking of good practices and GPP criteria in ASEAN and non-ASEAN countries for plastics-related product groups and services; 2) exemplary drafts / protocols on legal provisions for GPP and tenders for GPP; and 3) a harmonized minimum criteria catalog based on the EU example and existing documents, applicable voluntarily. During the preparation of the manual, a **stakeholder consultation with ASEAN representatives on GPP and minimum criteria** for different plastic product groups shall be organized.

The AMS may refer to this manual of good practice GPP to explore possible adoption and piloting at the national level. As in the case of the European Commission, AMS may voluntarily adopt the GPP criteria in accordance with their national needs and circumstances.

## 6. Develop Best Practice Manual for Reducing, Collection and Treatment of Sea-Based Litter

**Objective:** The Action proposes to support the AMS with the proper implementation and adoption of the principles expressed in Annex V of the MARPOL convention with the preparation of best practices manual for reducing, separate collection and treatment of fisheries marine plastic.

**Focus:** The manual is expected to include, at a minimum: 1) guiding principles for drafting regulations for vessels to dispose of the waste and for ports to develop Waste Handling Plans and provide Port Reception Facilities to the ships using their port; 2) description of direct and indirect fees charged by ports for waste management from ships; 3) best waste management practices for vessels and port reception facilities, including innovative technologies; 4) best practices for retrieving lost fishing gear and clean up operations; 5) guiding principles for marking fishing gear for easy retrieval, (i.e. based on FAO voluntary Guidelines on the Marking of Fishing Gear); and 6) best practices for incentives for fishers to bring more gear back to shore or for fishing.

At the national level, AMS may use this manual to inform on best practices and support training for officials and pilot projects in port reception facilities.

## 4.2 COMPONENT II: RESEARCH, INNOVATION AND CAPACITY BUILDING

### 7. Develop Guidebook for Common Methodologies for Assessment and Monitoring of Marine Litter

**Objective:** To provide guiding principles for **developing a standardized survey and common methodologies for monitoring marine litter**. This shall serve to the AMS to provide more clarity on the magnitude of land-based and sea-based sources of marine debris



Photo: Inside Creative House / Shutterstock.

in ASEAN, and hence as a decision-making tool for identifying the most common plastic items found in the environment and potential policies to address them.

**Focus:** The Guidebook for Assessment and Monitoring of Marine Litter will contain, at a minimum: 1) stocktaking of available global and ASEAN methodologies, metrics; 2) a toolkit for harmonized methodologies for different objectives relating to plastic leakage assessments; 3) national level and regional level templates; 4) benchmark indicators for reducing the amount of marine litter.

## 8. Strengthen ASEAN Regional Knowledge Network on Marine Plastics

**Objective:** Strengthen existing **ASEAN regional knowledge networks on marine plastics**. Enabling research collaboration on plastics knowledge and solutions is important to pull together the existing knowledge, find synergies and avoid duplication of efforts.

**Focus:** The network is expected to address the lack of collaboration and data sharing between research institutions and innovation initiative through: 1) The identification of main existing research institutes and platforms; 2) the creation of a regional knowledge network and database for reporting on marine littering and statistics; and 3) the identification or enhancement of synergies with existing platforms for research / data on marine plastics across ASEAN. This could eventually lead to the creation of an ASEAN Regional Center for Marine Plastics Debris: technical and capacity building role in data support, networking, support to national reporting and analytics.

## 9. Conduct a Regional Study on Microplastics

**Objective:** To conduct a regional study on microplastics. There is an opportunity for ASEAN to contribute to the global efforts to research on microplastics, including investigating the linkages to human health. Doing so at the regional level would pull together resources and avoid the duplication of efforts, and could provide a solid base for decision making and dialogues with the industry.

**Focus:** The regional study is expected to contain, as a minimum: 1) baseline regional study on microplastics; 2) stocktaking of existing studies and methods on microplastics and research institutes; 3) analysis of samples from different microplastic-releasing products

to identify the rate of release; and 4) identification of main sources of release of microplastic in the environment. The study may benefit from the support from ASEAN Dialogue Partners such as the Republic of Korea, Japan and China, showing rising interest in the topic; and is expected to serve as a basis for the consultation on microplastics in the environment.

The AMS may promote the participation of their own research institutions and data centers in the study.

## 10. Coordinate Regional Training Programs on Plastics and Waste Management

**Objective:** To coordinate training programs on plastics and plastic waste management as an opportunity for developing capacity building programs at a regional level to leverage economies of scale and streamline design costs.

**Focus:** To develop this Action, a Best Practices Manual on how to conduct training programs is proposed to be developed. The manual will contain at least: 1) training needs assessment — a review across governments and public services institutions in AMS to understand key gaps (knowledge, analytical and technical) in plastic waste management, including stock-taking of existing national- and regional-level training programs; 2) the design of specific training programs building on initiatives supported by development partners, including city-level programs designed to improve local government officials' understanding of alternative waste management technologies and funding arrangements for waste management; and 3) specific training for women and informal waste pickers. In a second step, the Action will support the practical development and implementation of pilot training in the AMS, as well as the creation of online MOOC with available material and training. This Action will also aim to build key technical capacities across ASEAN by developing an improved curriculum on this topic that universities and other tertiary institutions can draw from.

## 4.3 COMPONENT III: PUBLIC AWARENESS, EDUCATION AND OUTREACH

### 11. Develop a Behavioral Change Communication Strategy Playbook

**Objective:** To develop communication strategies for different settings and countries for plastic and plastic

waste to create effective campaign designs for the different target groups reflecting different consumption behavior. These behavioral insights may need to be paired with system change to make sure that people have access to the preferred alternatives within their local context. It also needs private sector engagement since the way they commercialize their products has a big impact on consumer behavior.

**Focus:** To deliver this Action, a communication strategy (a “Playbook”) will be prepared through 1) conducting a stock-take of existing behavioral change programs currently underway in AMS; 2) identifying and analyzing different target groups’ current attitude and behavior towards the use of plastics in the ASEAN context, including young and senior, rural and urban consumers, tourists, religious groups, male and female, students and children; 3) identifying the most effective communication platforms and media (e.g. social media, education program) for targeting them; 4) developing communication campaign models on littering, usage of single-use plastics or single-use items, and sorting and recycling, then combining this with insights from behavioral change experts and cultural insights of the AMS; and 5) considering the utilization of the existing communication platforms and social media, and providing practical templates (such as step-by-step campaign roadmaps and samples of communication collaterals) that AMS can use to develop their campaigns.

In a second step, **a regional workshop on how the Playbook can be used** is proposed to be organized. The AMS may use the Playbook to implement pilot awareness campaigns based on the principles of the Playbook and evaluate its effectiveness in changing consumers’ behavior.



## 12. Enhance Regional Awareness for Consumers of Labeling of Plastics and Packaging

**Objective:** To enhance the understanding and awareness of consumers regarding in particular recyclable, compostable, biodegradable and oxo-degradable plastics. Tackling the understanding of consumers will enhance clarity for purchases and disposal of waste, support better waste separation at the source and improve recycling and its quality.

**Focus:** For enhancing consumer awareness **a manual for the recognition of different labels for plastics will be produced.** The aim of this manual will be to create consistent, simple messaging that can be used for consumers. The target groups are anticipated to be recyclers, policymakers and ultimately consumers. The manual will contain, as a minimum: 1) stocktaking of existing end-of-life labels for recycling, recycled content, biodegradability, and compostability (home and industrial compostability) in AMS; 2) comparative analysis of different labels, including test standards (where relevant) and building on the existing knowledge (i.e. from the EU Ecolabel and the existing studies in ASEAN); 3) development of consistent definitions of bioplastics, biodegradables, compostables, etc. and clear guidance on how and where these should be disposed of (e.g. home composting or industrial composting facility) based on established standards; 4) analysis of policies for promoting the use of clear and transparent end-of-life labeling in the AMS; and 5) a regional catalog on different labeling (e.g. recyclable, compostable, biodegradable). Depending on their respective national circumstances and needs, AMS could consider using the manual to help develop and implement **pilot awareness campaigns** for the recognition of different labels for plastics; and **training for waste pickers** to identify different types of plastics.

### 4.4 COMPONENT IV: PRIVATE SECTOR ENGAGEMENT

#### 13. Establish a Regional Platform for EPR Knowledge and Implementation Support

**Objective:** To establish a regional platform for EPR, knowledge sharing and implementation support among the ASEAN countries.

**Focus:** While EPR design may vary by country (taking into account the local context), there are some

common principles of effective EPR systems that all countries will benefit from knowing. The AMS are in different stages of development for introducing EPR frameworks. Given the different country contexts, having one single harmonized approach for EPR is not likely to be suitable. For instance, the mix of EPR frameworks will be different depending on the types and quantities of plastic waste as well as waste management infrastructure in the country. However, there are clear benefits of sharing the best practices, design principles and experiences. In order to guide the design process and create sustainable EPRs, at first **an EPR handbook shall be developed**. This will contain as a minimum: 1) EPR scheme and necessary steps for their implementation, institutional models and financing models; 2) reporting guidelines and mechanism for registering of products on the market; and 3) targets. This Action will build on existing work, such as the OECD's published updated guidelines, including one targeting emerging economies, for EPR.<sup>57</sup> As a second step, an online **knowledge-sharing platform** is expected to be implemented. Collaboration will be sought with the Action to develop a regional platform to support innovation and investments in plastics and plastic waste management. AMS are encouraged to participate in the platform to further exchange know-how and lessons learned with the other AMS and to liaise with the private sector- whose participation in the platform is also important.

The handbook will describe different EPR models for possible application across the region and can be consulted by the AMS for potential implementation of EPR principles at the national level. It will also help inform initiation of EPR pilot projects, amendments to legislation to promote EPR and support for making EPR schemes effective. The AMS may use the regional platform to further exchange know-how and lessons learned with the other AMS and to liaise with the private sector (whose participation in the platform is also important).

#### 14. Establish a Regional Platform to Support Innovation and Investments in Plastics and Plastic Waste Management

**Objective:** To establish a **regional platform to support innovation and investments** in plastic and plastic

waste management. While many multi-stakeholder partnerships are operating at the national level, there appears to be a gap of coordination efforts at the regional level. Hence, there is the opportunity to create a regional platform in ASEAN that would bring together academics, private sector, investors, civil society and policymakers to support innovation in waste management and marine debris related projects.

**Focus:** The establishment of the platform is expected to include, at a minimum: 1) development / strengthening of a regional (online) platform to share innovation (connect with investors); 2) connection to existing innovation incubators at a regional level; and 3) hosting or collaborating on a regional innovation incubator to attract, foster, incubate and commercialize innovations on marine plastic solutions, including at the city-level. As part of this Action, **annual technology / innovation expos for plastics solutions at the regional level**, inviting ASEAN and global innovators and investors, are proposed to be organized. The Action will also include an assessment of the PPP policy and regulatory environment, specifically understanding good practice and current barriers to private sector solutions for SWM service provider/operators; this will inform opportunities for PPP business and financing models.

This is a regional Action that does not require direct implementation at the national level by the AMS. However, the participation of AMS, national investors and innovators in the different activities organized by the platform shall be promoted.

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57 OECD (2016), Extended Producer Responsibility: Updated Guidance for Efficient Waste Management, OECD Publishing, Paris, <https://doi.org/10.1787/9789264256385-en>.

## Chapter 5

# Implementation Plan



Photo: Avigator Photographer / Shutterstock.

# 5.

## IMPLEMENTATION PLAN

### 5.1 PROPOSED IMPLEMENTATION ARRANGEMENTS

Marine debris issues are cross-sectoral in nature, and effective implementation of the RAP will require coordination among relevant stakeholders.

AWGCME will be the coordinating sectoral body to identify and engage with relevant sectoral bodies and stakeholders / partners for the implementation of RAP. Relevant sectoral bodies may include but are not limited to:

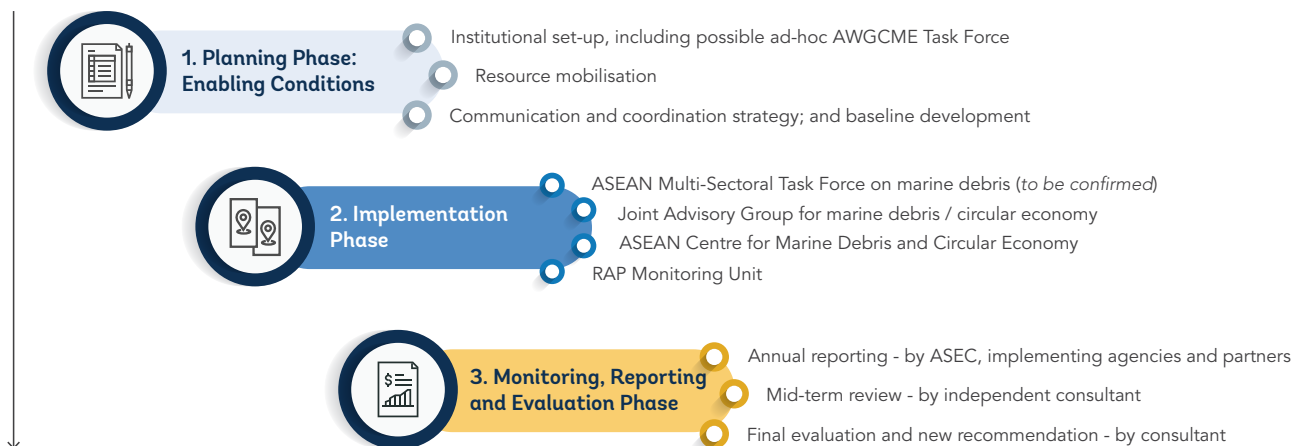
- ASEAN Working Group on Environmentally Sustainable Cities (AWGESC)
- ASEAN Working Group on Chemicals and Waste (AWGCW)
- ASEAN Working Group on Environmental Education (AWGEE)
- ASEAN Consultative Committee on Standards and Quality (ACCSQ)
- ASEAN Sectoral Working Group on Fisheries (ASWGF)
- ASEAN Maritime Transport Working Group (MTWG)
- ASEAN Business Advisory Council (ABAC)
- ASEAN Coordinating Committee on Micro, SMEs (ACCMSME)

Relevant partners include but are not limited to ASEAN Dialogue and Development Partners, international organisations, private sector, civil society, local governments, academia, and media.

This section will discuss three important phases that are proposed to serve as stepping stones towards successful implementation of the RAP, as shown in the figure below. These include: 1) planning phase: enabling conditions, 2) implementation phase and 3) monitoring, reporting and evaluation phase. The planning phase is the most critical to kick off actions towards achieving the objectives of the RAP by 2025.

#### 5.1.1 Planning Phase: Enabling Conditions

The success of the implementation of RAP will rely on a number of key enabling conditions, particularly the institutional set-up, resource mobilisation, baseline development, and communication and coordination strategy. Concurrently with implementation planning for the first actions proposed in the RAP (see Table 1), these need to be put in place and ready within 12 months after the endorsement of the RAP by the ASEAN Ministerial Meeting on Environment. These enabling conditions will serve as a foundation for implementation, monitoring and reporting of the RAP.



## INSTITUTIONAL SET-UP

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Options on the most effective and feasible institutional set-up will be assessed and recommended by a consultant in consultation with ASEAN Secretariat and AMS. An ad-hoc Programme Management Unit (PMU) may potentially be established at the ASEAN Secretariat, subject to availability of financial resources. The PMU would coordinate with the relevant ASEAN sectoral bodies (AWGCME, AWGCW, AWGESC, AWGEE and ACCSQ, and any other relevant bodies identified at a later stage), the ASEAN Secretariat divisions, partners and stakeholders to support the implementation of the RAP. Further assessment will be made on the possibility of using existing ASEAN cooperation mechanisms for cross-sectoral coordination among relevant ASEAN sectoral bodies for the implementation of RAP and / or the need to establish a new stand-alone cross-sectoral coordination body. An ad-hoc AWGCME Task Force could be established, under direct guidance of AWGCME when necessary to plan the implementation phase including engagement with relevant sectoral bodies, institutional set-up (e.g. development of draft Terms of Reference of potential institutional set-up as elaborated in Section 5.1.2 Implementation Phase), resource mobilisation (e.g. engagement with interested funding partners), baseline development and development of communication and coordination strategy.

## RESOURCE MOBILISATION

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Mobilisation of resources in various forms, such as human, financial or material resources, is key in ensuring successful implementation of the RAP. In order to secure the necessary funds to deliver on the RAP, a resource mobilization strategy needs to be developed in parallel with the institutional setup process.

The strategy will need to consider the full range of possible national, regional and international funding sources, both public and private. It will be geared towards implementation during an initial period of 2021-2025, and with the expectation of sustained funding in the subsequent 5 years, coinciding with the Sustainable Development Goals (2030).

The specific objectives of the *Marine Plastics Resource Mobilization Strategy* would be to:

- Ensure there is a **clear, coordinated approach** to soliciting, acquiring, utilisation monitoring

and managing of financial inflows and development cooperation support;

- Enhance the **effectiveness of development assistance** across the ASEAN Region, and improve the relationship and dialogue between the AMS and key development partners and bilateral agencies;
- Improve structures and systems to **facilitate better management of resources**; potential for a platform to align development partner support to the RAP, priority regional and national actions, systems, structures and procedures; and
- **Increase domestic resource mobilisation and broaden the resource channels by exploring alternative sources of funding** in order to reduce dependence on resources from development partners and to strengthen the ASEAN Secretariat leadership.

The strategy for resource mobilization is also intended to assist the AMS in considering the establishment of financial mechanisms and other options, to support the national actions to address plastics and plastic waste management, based on success stories and good practices. National implementation should include, as appropriate, the design and dissemination of a country-specific resource mobilization strategy, with the involvement of key stakeholders such as non-governmental organizations, local communities, environmental funds, businesses and donors, in the frame of national marine debris / plastics strategies and action plans.

The desired outputs of this strategy include, but are not limited to the following:

- identified committed funds / resources to support the RAP implementation,
- identified lead implementing agencies / countries / sectors, and
- identified shared or joint responsibilities of agencies / actors.

## BASELINE DEVELOPMENT

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Baseline indicators and data will form the first part of monitoring and evaluation system for the RAP. They will enable the tracking of progress, impacts and outcomes throughout and at the end of the implementation period of the RAP, which in turn will

provide essential information to build upon for future direction post-RAP. It will be developed in accordance with the monitoring, reporting and evaluation phase (under section 5.1.3).

A baseline report should therefore be part of the planning for the implementation of the RAP. A baseline report should be developed by a consultant in close consultation with AWGCME, other relevant sectoral bodies, and the ASEAN Secretariat, and should contain agreed targets and indicators, baseline data and information, and recommended M&E mechanism and methodology.

## COMMUNICATION AND COORDINATION STRATEGY

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For successful implementation of the RAP, effective communication and coordination with various ASEAN sectoral bodies, partners, stakeholders and the public at large is important to garner awareness, generate support, create synergy, and promote active participation and contribution.

The Communication and Coordination Strategy will lay out the details on the process and procedures for regular communication and coordination among the lead and coordinating sectoral bodies, national agencies, partners and implementing agencies to harmonise efforts to deliver the outputs and outcomes of RAP.

Aside from the lead and coordinating sectoral bodies, there are multiple existing institutions and actors which have activities relevant to the marine plastic pollution agenda. Considering the variety of actions proposed in Chapter 4, these institutions could potentially be partnering and supporting ASEAN and AMS in implementing the actions. On top of the Development Partners such as United Nations, Asian Development Bank and the World Bank which can be implementing the actions at project-based activities, there are theme-specific institutions and actors which include: Regional Capacity Centre for Clean Seas, ERIA's Regional Knowledge Centre on Marine Plastic Debris, ASEAN Center for Sustainable Development Studies and Dialogue (ACSDDSD), Coordinating Body on the Sea of East Asia (COBSEA), Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), among others.

Many of the actions in Chapter 4 are also actionable and expected to be implemented by private sector and civil society, in line with the ASEAN Framework of

Action on Marine Debris. The innovation and investment of private sectors in marine plastic issue are important and prerequisite to fully implement the RAP.

## STAKEHOLDER ENGAGEMENT AND CAPACITY BUILDING

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As the implementation of RAP will involve not only ASEAN sectoral bodies or governments but also various stakeholders such private sector, academia, and civil society, stakeholder engagement and empowerment are important to promote buy-in or sense of ownership as well as active participation. Dialogues with and capacity building activities for various stakeholders may be organised in the 12 months as part of the concerted efforts to create enabling conditions, leading to the full implementation period. The stakeholder engagement and capacity building are on-going processes in this enabling phase and the implementation phase of RAP. This will be the basis for further development and improvement during the implementation, and monitoring and evaluation phase.

### 5.1.2 Implementation Phase

Early implementation will occur concurrently with the Planning Phase. Following the creation of enabling conditions as outlined above, the RAP will be fully operationalised and implemented. The indicative timeline for the implementation of the RAP is in Table 1. Clear roles and responsibilities of lead and coordinating sectoral bodies, the ASEAN Secretariat, the implementing agencies and concerned partners will be identified and agreed following the indicative timeline.

Based on the assessment and recommendations by consultants and dialogues with ASEAN sectoral bodies, ASEAN Secretariat, and various stakeholders in Planning Phase, a number of potential implementation mechanisms could be further discussed and established.

## ASEAN MULTI-SECTORAL TASK FORCE ON MARINE DEBRIS

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The marine plastic pollution agenda is a multi-disciplinary agenda that involves diverse challenges and stakeholders. This is evident from the wide variety of actions that are depicted in Chapter 4. The establishment of an ASEAN Multi-Sectoral Task Force on Marine Debris may therefore be considered as a platform to coordinate the implementation the RAP



on an institutionalised and regular basis. The Task Force could consist of representatives from relevant sectoral bodies identified and engaged in the Planning Phase. AWGCME Chair could serve as Chair of the Task Force as it has been designated by ASOEN as the coordinating working group for ASEAN cooperation on marine debris pollution.

### JOINT ADVISORY GROUP FOR MARINE DEBRIS / CIRCULAR ECONOMY

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A Joint Advisory Group could be established, consisting of not only public sector representatives of AMS, but also private sector, industry sector, civil society and development partners. This Joint Advisory Group would play a very important role to bring key actors and players to join hands in providing shared solutions, and addressing marine plastic debris harmoniously.

The main role of this Joint Advisory Group would be to provide advice on the implementation of RAP in particular on partnership development, stakeholder engagement, resource mobilisation, and sustainability of the RAP as well as ways to address marine plastic debris. The Group may wish to promote / strengthen circular economic approach and SCP along with Corporate Social Responsibility (CSR) and Extended Producer Responsibility (EPR) and provide advice on the best practices and best technologies available to ASEAN. The Group would convene every six months, with the support of the PMU (if established) and / or Environment Division of ASEAN Secretariat, and partners.

### ASEAN CENTRE FOR MARINE DEBRIS AND CIRCULAR ECONOMY

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In the ASEAN Framework of Action on Marine Debris, a feasibility study / consultative meeting on the establishment of an ASEAN Centre on Combating Marine Debris is identified as one of activities under Framework I: Policy Support and Planning.

During the implementation phase of the RAP, such feasibility study or consultation process may be done to further assess the need to elevate the institutional mechanisms in place for the RAP implementation into an ASEAN Centre, considering potential benefits as well as drawbacks, such as lengthy and complex establishment process due to the cross-sectoral nature of the issues as well as legal, financial / sustainability and administrative implications.

Establishment of a Centre may require an endorsement of a high-level ASEAN meeting such as ASEAN Summit, and a strong political interest from AMS to lead and host the Centre. The pathway to realize a Center may follow the ASEAN procedure and processes following the past multiple experiences in establishing ASEAN Centres in different thematic areas.

### RAP MONITORING UNIT

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A dedicated RAP Monitoring Unit may be considered and further developed as part of the PMU to be established within the ASEAN Secretariat at the Planning Phase, if deemed necessary. RAP Monitoring Unit could focus on tracking and monitoring the progress of the RAP implementation, collating data and information, preparing progress reports and producing knowledge products based on the progress of the RAP implementation.

#### 5.1.3 Monitoring, Reporting and Evaluation Phase

A monitoring, reporting and evaluation mechanism of the RAP is needed to track:

- 1. The status of development of the Regional Actions:** The progress in rolling out and developing the Action Plan (e.g. if each regional Action has been completed and delivered within the given timeframe) and review if and how the regional actions are reflected, incorporated and implemented in the national context by the AMS. Specifically, the monitoring is proposed using simple indicators reflecting if the Action has been completed and endorsed, and by how many AMS; if the consultation has been carried out; and the status of implementation of related pilots in the AMS.
- 2. The impacts of the RAP on the environment:** Monitoring would be needed to assess the overall impacts of the RAP on improving environmental outcomes associated with tackling marine plastics across the AMS. This part of the Monitoring Framework aims at monitoring if the Action Plan has ultimately had an impact on the environment, namely if overall waste reduction (not only in terms of plastics) has occurred, collection and recycling of plastic waste have increased and marine littering has decreased. Also, monitoring the impacts of the RAP shall point out how the outcome will contribute to addressing the SDGs: the relationship

between the SDGs and the need to curb waste and plastic pollution is evident. Fighting waste and plastic leakage into the environment and the oceans are linked to the following SDGs:

- > SDG 3: Good health and well-being
- > SDG 6: Clean water and sanitation
- > SDG 11: Sustainable cities and communities
- > SDG 12: Responsible consumption and production
- > SDG 13: Climate action
- > SDG 14: Life below water (protection of the seas and oceans)
- > SDG 15: Life on land (restore ecosystems and preserve biodiversity)

The progress of the implementation of RAP could be measured against the agreed indicative timeline and reported using Checklist in Table 2, accompanied by a narrative regional and national level reports. The impacts of the RAP on the environment could be measured against the baseline indicators that are set, and baseline data collected, at the Planning Phase.

The monitoring, reporting and evaluation mechanism include:

## 1. ANNUAL REPORTING

The Programme Management Unit and / or RAP Monitoring Unit, in coordination with the ASEAN Secretariat, would report the status and progress of the implementation of RAP at regional level to the AWGCME as the lead endorsing body of the RAP, ASEAN Multi-Sectoral Task Force on Marine Debris (for further dissemination to other relevant sectoral bodies) and to the Joint Advisory Group for Marine Debris / Circular Economy, at least once a year at their regular meetings. In preparing for the annual progress report, the PMU would also collate progress updates from implementing agencies and national progress reports on the status of implementation at national level from the national focal points of the ASEAN Multi-Sectoral Task Force on Marine Debris.

## 2. MID-TERM REVIEW

A Mid-Term Review is proposed to be conducted halfway through the full implementation period to assess the progress and impacts of the implementation of RAP against the baseline data and indicators, identify any challenges and recommend solutions and way forward. The Mid-Term Review should be conducted by an appointed external consultant.

## 3. FINAL EVALUATION

A Final Evaluation is to be conducted towards the end of the implementation period of RAP to take stock of the progress and activities carried out during the implementation period, measure the outputs and outcomes against the baseline data and indicators, evaluate the impacts and recommend future direction of ASEAN cooperation on combating marine debris. The Final Evaluation should be conducted by an appointed external consultant.

### Monitoring Tools:

Table 1: Indicative Timeline of Implementation of RAP

Table 2: Status for Implementation of Regional Actions



Photo: Pavel Szabo / Shutterstock.

**TABLE 1.**  
Indicative Timeline of the Implementation of RAP (to be further adjusted)

Components/Action/Tasks	Coordinating Agency	2021	2022	2023	2024	2025
<b>Planning Phase</b>	<b>AWGCME</b>					
<b>COMPONENT I: POLICY SUPPORT AND PLANNING</b>						
1. Develop Regional Guidebook on Financial Mechanisms for Investments in Plastic Waste Management						
REGIONAL: Development of a guideline for waste cost-recovery and dissemination to the AMS	AWGCME					
2. Develop Guiding Principles for Phasing out select Single-use Plastics (SUPs)						
REGIONAL: Development of guidelines for phasing out Single-use Plastics (SUPs)	AWGCME					
3. Develop a Regional Guidebook on Standards for Responsible Plastic Waste Trade, Sorted Plastics Waste, and Recycled Plastics						
REGIONAL: Development of a Regional Standards for Responsible Plastic Waste Trade	AWGCME					
4. Elaboration of Best Practice Manual for Development of Minimum Standards and Technical Requirements for Plastic Packaging and Labelling						
REGIONAL: Preparation of guidelines on minimum standards for plastic packaging	AWGCME					
5. Undertake Regional Stocktaking of Green Public Procurement						
REGIONAL: Preparation of guidelines on GPP	AWGCME					
6. Develop Best Practice Manual for Reducing, Collection, and Treatment of Sea-Based Litter						
REGIONAL: Preparation of guidelines following Annex V of MARPOL convention	AWGCME					
<b>COMPONENT II. RESEARCH, INNOVATION AND CAPACITY</b>						
7. Develop Guidebook for Common Methodologies for Assessment and Monitoring of Marine Litter						
REGIONAL: Develop a standardized survey and common methodologies for monitoring marine littering	AWGCME					
8. Strengthen ASEAN Regional Knowledge Network on Marine Plastics						
REGIONAL: Develop or enhance existing ASEAN Regional Knowledge Networks on Marine Plastics	AWGCME					
9. Conduct a Regional Study on Microplastics						
REGIONAL: Develop and conduct a regional study on microplastics	AWGCME					
10. Coordinate Regional Training Programs on Waste and Plastic Waste Management						
REGIONAL: Development of training programs	AWGCME					

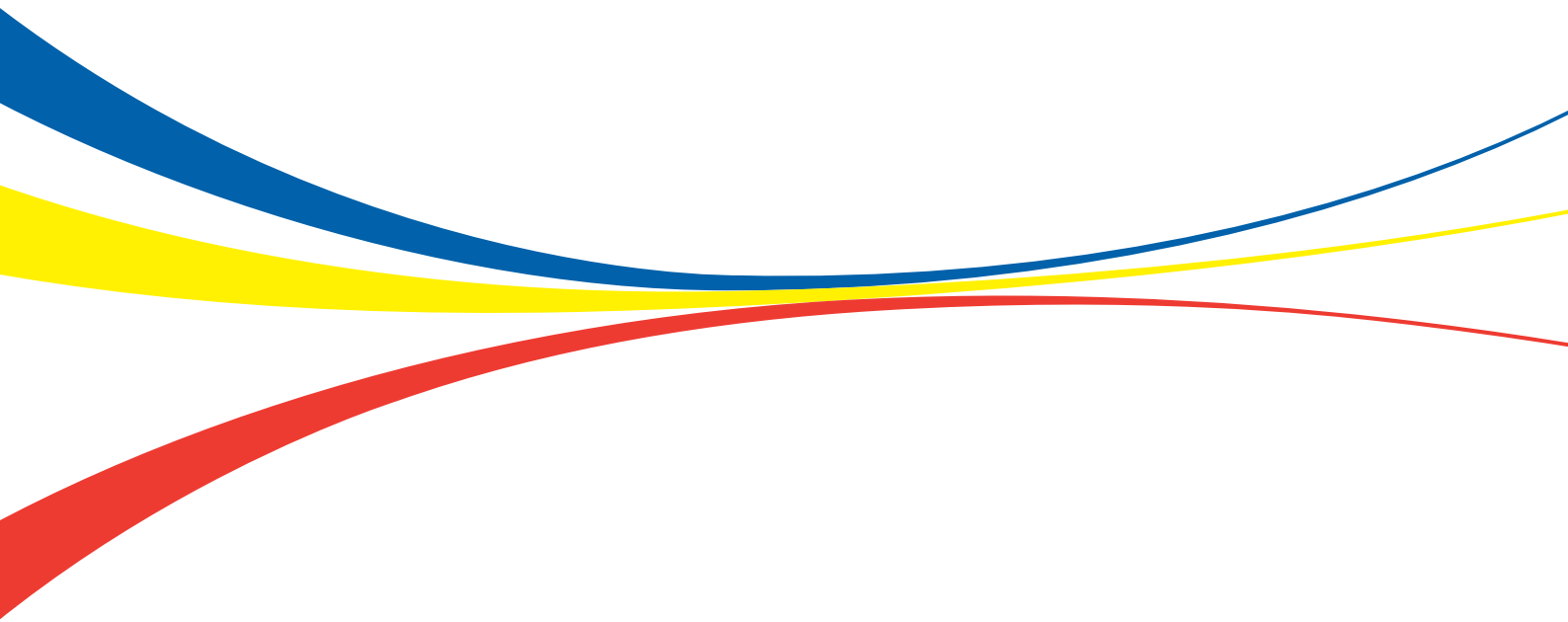
Components/Action/Tasks	Coordinating Agency	2021	2022	2023	2024	2025
<b>COMPONENT III. PUBLIC AWARENESS, EDUCATION, AND OUTREACH</b>						
Develop a Regional Behavioral Change Communication Playbook						
REGIONAL: Develop Regional Communications play-book for different contexts/groups on plastic and waste	AWGCME					
Enhance Regional Awareness for Consumers of Labeling of Plastics and Packaging						
REGIONAL: Develop guidelines for recognition of different labels for plastics will be produced	AWGCME					
<b>COMPONENT IV. PRIVATE SECTOR ENGAGEMENT</b>						
Establish a Regional Platform for EPR Knowledge Sharing and Implementation Support						
REGIONAL: Development of EPR implementation guidelines: establishment of an online sharing platform	AWGCME					
Establish Regional Platform to Support Innovation and Investments in Plastics and Plastic Waste Management						
REGIONAL: Establish a regional platform; organize annual tech/ innovation expos for plastic solutions	AWGCME					

**TABLE 2.**  
**Template for Status of development of Regional Actions**

Indicator	Complete Draft	Complete Consultation	Endorsement	Implementation/ Pilot	Remarks
<b>PLANNING PHASE: ENABLING CONDITIONS</b>					
Institutional setting					
Resource mobilisation					
Baseline development					
Communication and coordination strategy					
Stakeholder engagement and capacity building of concerned stakeholders					
<b>COMPONENT I: POLICY SUPPORT AND PLANNING</b>					
Develop Regional Guidebook on Financial Mechanisms for Investments in Plastic Waste Management					
Develop Guiding Principles for Phasing out select Single-use Plastics (SUPs)					
Develop a Regional Guidebook on Standards for Responsible Plastic Waste Trade, Sorted Plastics Waste, and Recycled Plastics					
Elaboration of Best Practice Manual for Development of Minimum Standards for Plastic Packaging					
Undertake Regional Stocktaking of Green Public Procurement					
Develop Best Practice Manual for Reducing, Collection, and Treatment of Sea-Based Litter					
<b>COMPONENT II. RESEARCH, INNOVATION AND CAPACITY</b>					
Develop Guidebook for Common Methodologies for Assessment and Monitoring of Marine Litter					
Strengthen ASEAN Regional Knowledge Network on Marine Plastics					
Conduct a Regional Study on Microplastics					
Coordinate Regional Training Programs on Waste and Plastic Waste Management					
<b>COMPONENT III. PUBLIC AWARENESS, EDUCATION, AND OUTREACH</b>					
Develop a Regional Behavioral Change Communication Strategy					
Enhance Regional Awareness for Consumers of Labeling of Plastics and Packaging					
<b>COMPONENT IV. PRIVATE SECTOR ENGAGEMENT</b>					
Establish a Regional Platform for EPR Knowledge Sharing and Implementation Support					
Establish Regional Platform to Support Innovation and Investments in Plastics and Plastic Waste Management					

*Key observations or lessons learned of each milestone are to be included in narrative report.*

# Annexes



# ANNEX 1.

## EXISTING AND PLANNED NATIONAL STRATEGIES IN THE AMS RELATED TO PLASTIC AND PLASTIC WASTE

The following national strategies have been adopted or are in the process of adoption in the AMS:

- **Brunei Darussalam.** The country has enforced the Minor Offences Act and the Environmental Protection and Management Order (2016), and is in the process of developing the first Waste Management Regulation for the management of non-hazardous solid waste in the country. In addition to that, the Government has also introduced a 3 percent increase in excise duty on plastic product imports effective from April 2017.<sup>58</sup>
- **Cambodia.** Cambodia has developed its National Waste Strategy and Action Plan (2018-2030) which focuses on segregation of plastic waste and management of plastic bags. The Phnom Penh Waste Management Strategy and Action Plan (2018-2035) focuses on plastic waste management issues such as actions supporting the development of plastic recyclers.<sup>59</sup>
- **Indonesia.** Indonesia's Plan of Action on Marine Plastic Debris (2017-2025) focuses on five pillars including improving behavior change, enhancing funding mechanisms, policy reform.<sup>60</sup> Indonesia has recently released its Extended Producer Responsibility (EPR) implementation roadmap.<sup>61</sup> The Ministry of National Development Planning (Bappenas) is developing a national circular economy roadmap, with a focus on plastic packaging.<sup>62</sup>
- **Lao PDR.** The country has environmental protection regulations such as the Environmental Protection Law (EPL) No 29 / NA and the Green Growth Strategy which provide the basic legal frameworks for SWM. Lao PDR also plans to develop a masterplan for SWM and the Vientiane government is considering regulations on single-use plastic shopping bags.<sup>63</sup>
- **Malaysia.** Malaysia has a Roadmap towards Zero Single-Use Plastics (2018-2030) which focuses on reducing single-use plastics and finding alternatives to plastic. Focus areas include developing eco-labeling criteria for biodegradable and compostable plastic packaging materials as well as biomass-based products.<sup>64</sup> The country is developing its Circular Economy roadmap for bottles and other single-use plastics, focusing on EPR schemes.

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58 Ibid.

59 Phnom Penh City Authority [PPCA], Institute for Global Environmental Strategies [IGES], Nexus, United Nations Environment Program [UNEP], Cambodia Climate Change Alliance [CCCA]. (2018). *Phnom Penh Waste Management Strategy and Action Plan 2018-2035*. Available at: [https://www.ccet.jp/sites/default/files/2018-12/Phnom%20Penh%20Waste%20management%20strategy%20and%20action%20plan%202018-2035\\_web.pdf](https://www.ccet.jp/sites/default/files/2018-12/Phnom%20Penh%20Waste%20management%20strategy%20and%20action%20plan%202018-2035_web.pdf)

60 Marine Litter Network (2018), *Indonesia's Plan of Action on Marine Plastic Debris 2017-2025*. Available at: [http://marinelitternetwork.com/wp-content/uploads/2018/04/NAP-Marine-Plastic-Debris-Indonesia\\_Summary.pdf](http://marinelitternetwork.com/wp-content/uploads/2018/04/NAP-Marine-Plastic-Debris-Indonesia_Summary.pdf)

61 United Nations Industrial Development Organization [UNIDO] (2018), *From Waste Reduction Toward Circular Economy Implementation in Indonesia*. Available at: [https://www.unido.org/sites/default/files/files/2018-10/Laksmi%20Dhewanthi%20%28Indonesia%29%20CE%20in%20Indonesia\\_Laksmi\\_02102018.pdf](https://www.unido.org/sites/default/files/files/2018-10/Laksmi%20Dhewanthi%20%28Indonesia%29%20CE%20in%20Indonesia_Laksmi_02102018.pdf)

62 United Nations Development Program [UNDP] (2020), "UNDP, Bappenas and Denmark collaborate to support the development of Circular Economy in Indonesia". Available at: <https://www.id.undp.org/content/indonesia/en/home/presscenter/pressreleases/2020/Circular-Economy.html>

63 European Union and ASEAN Secretariat (2019), *Circular economy and plastics: A gap analysis in ASEAN Member States*. Available at: <https://www.iges.or.jp/en/pub/ce-plastics/en>

64 Ministry of Energy, Science, Technology, Environment and Climate Change [MESTECC] (2019). *Malaysia's Roadmap towards Zero Single-Use Plastics (2018- 2030)*. Available at: <https://www.mestecc.gov.my/web/wp-content/uploads/2019/03/Malaysia-Roadmap-Towards-Zero-Single-Use-Plastics-2018-20302.pdf>

- **Myanmar.** The National Waste Management Strategy and Master Plan (2018-2030), which includes plastic waste, will soon be launched. The policy has six goals ranging from extending sound waste collection service to all citizens to ensuring sustainable financing mechanisms.<sup>65</sup> For instance, the country aims to achieve 100 percent waste collection service, including plastic waste, for all citizens by 2030.
- **Philippines.** Major SWM legislation includes the Republic Act 9003 (which mandates universal waste collection services and source separation), Senate Bill No. 2759 (Total Plastic Bag Ban Act of 2011), Senate Bill No. 1948 (Single-use Plastics Regulation and Management Act of 2018), and House Bill No. 4922 (Beverage Container Disposal Act).<sup>66</sup> The government is expected to shortly release its National Plan of Action on Plastics and Marine Litter.<sup>67</sup>
- **Singapore.** The country launched its Zero Waste Masterplan in 2019, focusing on areas such as developing local recycling capabilities, implementing measures to address three priority waste streams (e-waste, food waste and packaging waste, including plastics), reducing waste so as to extend the lifespan of Singapore's only landfill and improving messaging on recycling.<sup>68</sup> Other policies focus on introducing a mandatory packaging reporting framework in 2021<sup>69</sup> and an EPR scheme for the management of packaging waste, including plastics, to be implemented in phases no later than 2025, starting with a Deposit Refund Scheme for beverage containers. A citizens' workgroup has been convened in 2020 to co-create solutions with members of the public to reduce the excessive consumption of disposables.<sup>70</sup>
- **Thailand.** In 2019, the government has announced the Thailand Roadmap on Plastic Waste Management (2018-2030)<sup>71</sup>, which focuses on phasing out certain types of plastics (such as plastic cap seals and plastic bags less than 36 microns in thickness), and incentives for using alternatives (such as biodegradable plastics).
- **Viet Nam.** Viet Nam has launched its "National Action Plan for Management of Marine Plastic Litter by 2030" in 2020.<sup>72</sup> The plan emphasizes behavioral change, collection and classification of plastic waste, control of plastic litter at source, international cooperation and consistent review of marine plastic litter management.

65 United Nations Centre for Regional Development [UNCRD] (2019), Overview on the 3R Practices at Waste Management in Myanmar. Available at: [https://www.uncrd.or.jp/content/documents/7713Country%20presentation\\_Myanmar.pdf](https://www.uncrd.or.jp/content/documents/7713Country%20presentation_Myanmar.pdf)

66 House of Representatives (2018), "An act banning the manufacture, importation, sale, and use of single-use plastic products, providing funds therefor and for other purposes". [http://www.congress.gov.ph/legisdocs/basic\\_17/HB08692.pdf](http://www.congress.gov.ph/legisdocs/basic_17/HB08692.pdf); "House takes up beverage container proper disposal". [http://www.congress.gov.ph/press/details.php?pressid=10689\\_](http://www.congress.gov.ph/press/details.php?pressid=10689_)

Senate of the Philippines (2018), "Total Plastic Bag Ban Act of 2011". [https://www.senate.gov.ph/lis/bill\\_res.aspx?congress=15&q=SBN-2759](https://www.senate.gov.ph/lis/bill_res.aspx?congress=15&q=SBN-2759), "Single-use Plastics Regulation and Management Act of 2018". [https://www.senate.gov.ph/lis/bill\\_res.aspx?congress=17&q=SBN-1948](https://www.senate.gov.ph/lis/bill_res.aspx?congress=17&q=SBN-1948).

67 World Bank (2019), "Opening Remarks by Agata E. Pawlowska at the Marine Plastics Conference in the Philippines". Available at: <https://www.worldbank.org/en/news/speech/2019/04/04/opening-remarks-by-agata-e-pawlowska-at-the-marine-plastics-conference-in-the-philippines>

68 Ministry of the Environment and Water Resources [MEWR] and National Environment Agency [NEA] (2020), "Zero Waste Masterplan - Introduction". <https://www.towardszerowaste.gov.sg/zero-waste-masterplan/>

69 National Environment Agency [NEA] (2019), "Waste Management - Mandatory Packaging Reporting". Available at: <https://www.nea.gov.sg/packaging>

70 National Environment Agency [NEA](2019), "NEA To Convene A Citizens' Workgroup To Tackle The Excessive Consumption of Disposables". Available at: <https://www.nea.gov.sg/media/news/news/index/nea-to-convene-a-citizens-workgroup-to-tackle-the-excessive-consumption-of-disposables>

71 Public Relations Department [PRD] (2019), "Roadmap on Plastic Waste Management". Available at: [https://thailand.prd.go.th/mobile\\_detail.php?cid=4&nid=7831](https://thailand.prd.go.th/mobile_detail.php?cid=4&nid=7831)

72 United Nations Development Program [UNDP] (2020), *National Action Plan for Management of Marine Plastic Litter by 2030*. [https://www.vn.undp.org/content/vietnam/en/home/library/environment\\_climate/national-action-plan-for-management-of-marine-plastic-litter-by.html](https://www.vn.undp.org/content/vietnam/en/home/library/environment_climate/national-action-plan-for-management-of-marine-plastic-litter-by.html)



## ANNEX 2.

# EXISTING POLICIES FOR SINGLE-USE PLASTICS ALREADY IMPLEMENTED IN THE AMS

**TABLE 3.**  
Policies for single-use plastics already implemented in the AMS

Marketing restrictions in specific locations	Market restrictions (national bans)	Economic restrictions (taxes, consumer levies)	Other regulation	Voluntary agreement / commitment
<p><b>Malaysia:</b> No-straw-by-default practice is among the key initiatives under the Roadmap Towards Zero Single-Use Plastics 2018-2030</p> <p><b>Indonesia:</b> Bali has instated the ban on single-use plastic on June 23, 2019. Styrofoam, plastic bags, and plastic straws are officially prohibited island-wide<sup>73</sup>.</p> <p><b>Philippines:</b> Plastic bags are banned in many local government units of Metropolitan Manila and similar bans are in effect in many other locations of the country</p>	<p><b>Thailand:</b> Has endorsed a plan to ban major single-use plastics (plastic bags, plastic cups, plastic straws, and Styrofoam containers)</p>	<p><b>Indonesia:</b> Retailers should charge consumers for each plastic bag used, according to guidelines issued by the Environment Ministry</p> <p><b>Malaysia:</b> Among the key initiatives under the Roadmap Towards Zero Single-Use Plastics 2018-2030 is the introduction of a plastic bag charge. Currently, the plastic bag charge applies to most permanent business premises, and it is planned that the charge will be extended to all types of business premises from 2022</p> <p><b>Cambodia:</b> All supermarkets and commercial centers are required to charge consumers per plastic bag.</p>	<p><b>Singapore:</b> Has introduced regulations to mandate that producers of packaged products and retailers with annual turnover of more than \$10 million have to collect and report data on the types and amounts of packaging, including plastics, that they place on the market. These businesses are also required to develop plans to reduce, reuse and recycle packaging. The obligated companies will need to start collecting packaging data and developing 3R plans for packaging, from 1 January 2021. This will pave the way for an Extended Producer Responsibility (EPR) framework to manage packaging waste, including plastics, in which producers will be responsible for the collection and end-of-life management of their packaging. This will encourage producers to reduce the amount of packaging that they put out. As part of the first phase of the EPR, a Deposit Refund Scheme (or DRS) will be introduced for beverage containers.</p> <p>A citizens' workgroup has also been convened in 2020 to co-create solutions with members of the public, to reduce the excessive consumption of disposables.</p>	<p><b>Thailand:</b> The major shopping malls and department stores nationwide have agreed to stop providing plastic bags starting in January 2020<sup>74</sup>.</p> <p><b>Brunei Darussalam:</b> A voluntary initiative created by the government, No Plastic Bag Weekend began in 2011 then Friday was added to the list in 2012 and Thursday in 2018.</p>

73 <https://thehoneycombers.com/bali/bali-plastic-bag-ban-2019/>

74 <https://coconuts.co/bangkok/news/dozens-of-thai-malls-pledge-to-drop-plastic-bags-for-2020/>

## ANNEX 3.

# REGULATIONS ON USE OF RECYCLED PET IN FOOD PACKAGING ACROSS ASEAN

The table shows the different regulations on the use of recycled PET in food packaging across the AMS.

**TABLE 4.**  
Regulations on the use of recycled PET in food packaging

Country	Use of recycled PET (rPET) in food packaging	Description
 Brunei Darussalam	Unclear	No outright ban on the use of rPET in food packaging
 Cambodia	Unclear	No outright ban on the use of rPET in food packaging
 Indonesia	Yes	Recycled materials can be used if they meet the requirements
 Lao PDR	Unclear	No outright ban on the use of rPET in food packaging
 Malaysia	Yes	Recycled materials can be used if they meet the requirements
 Myanmar	Unclear	No outright ban on the use of rPET in food packaging
 Philippines	Yes	Recycled materials can be used if they meet the requirements
 Singapore	Yes	Recycled materials can be used if they meet the requirements
 Thailand	No	It is prohibited to use plastic containers made from reused plastic to contain food except when the containers are used to package fruits with peel
 Viet Nam	Unclear	No outright ban on the use of rPET in food packaging

## ANNEX 4.

# BANGKOK DECLARATION ON COMBATING MARINE DEBRIS IN ASEAN REGION

The “Bangkok Declaration on Combating Marine Debris in ASEAN Region” aims to “promote cooperation for the protection, restoration and sustainable use of coastal and marine environment, respond and deal with the risk of pollution and threats to marine ecosystem and coastal environment, in particular in respect of ecologically sensitive areas”.

Eight key objectives were emphasized in the Declaration:

- 1. STRENGTHEN** actions at the national level as well as through collaborative actions among the ASEAN Member States and partners to prevent and significantly reduce marine debris, particularly from land-based activities, including environmentally sound management.
- 2. ENCOURAGE** an integrated land-to-sea approach to prevent and reduce marine debris and strengthen national laws and regulations as well as enhance regional and international cooperation including on relevant policy dialogue and information sharing.
- 3. PROMOTE** inter-sectoral coordination between ASEAN sectoral bodies to effectively address the multi-dimensional and far-reaching negative effects as well as sources of marine debris pollution.
- 4. ENHANCE** the multi-stakeholder coordination and cooperation to combat marine debris, including implementing joint actions and partnerships for addressing such a challenge.
- 5. PROMOTE** private sector engagement and investment in preventing and reducing marine debris, including partnerships between public and private sector through various mechanisms and incentives.
- 6. PROMOTE** innovative solutions to enhance plastics value chains and improve resource efficiency by prioritizing approaches such as circular economy and 3R (reduce, reuse, recycle), and welcome capacity building and exchange of best practices among ASEAN Member States as well as support from external partners in this regard.
- 7. STRENGTHEN** research capacity and application of scientific knowledge to combat marine debris, in particular, to support science-based policy and decision making.
- 8. ACCELERATE** advocacy and actions to increase public awareness and participation, and enhance education, with the aim to change behavior toward preventing and reducing marine debris.

# ANNEX 5.

## ASEAN FRAMEWORK OF ACTION ON MARINE DEBRIS

The four components of the ASEAN Framework of Action on Marine Debris<sup>75</sup> span the different elements of the waste value chain and can help address marine debris both at the national and regional levels.

### FRAMEWORK I: POLICY SUPPORT AND PLANNING

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- A.** Promote regional policy dialogue on prevention and reduction of marine debris from land- and sea-based activities by highlighting the issue, sharing information and knowledge, and strengthening regional coordination.
- B.** Mainstream multi-sectoral policy measures to address marine debris in national and ASEAN's development agenda and priorities.
- C.** Encourage ASEAN Member States to implement relevant international laws and agreements related to waste management- such as MARPOL Annex V ship generated waste, Basel Convention, and UN Environment Assembly resolutions 3/7 on Marine Litter and Microplastics.
- D.** Develop a regional action plan on combating marine debris in the ASEAN Region by applying integrated land-to-sea policy approaches.

### FRAMEWORK II: RESEARCH, INNOVATION AND CAPACITY BUILDING

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- A.** Compile regional baseline on status and impacts of marine debris in the ASEAN Region.
- B.** Strengthen regional, national and local capacities to develop and implement national action plans/initiatives.
- C.** Enhance scientific knowledge, transfer marine technology and promote innovative solution to combat marine debris.
- D.** Promote integration and application of scientific knowledge to enhance science-based decisions and policies on marine debris prevention and management.

### FRAMEWORK III: PUBLIC AWARENESS, EDUCATION AND OUTREACH

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- A.** Promote public awareness on status and impacts of marine debris and microplastics.
- B.** Accelerate advocacy strategy/programme to promote behavior change to combat marine debris, and to incorporate marine debris issue into ASEAN's Culture of Prevention Initiative.
- C.** Promote platforms for knowledge sharing, innovative solutions and best practices to combat marine debris.

### FRAMEWORK IV: PRIVATE SECTOR ENGAGEMENT

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- A.** Promote collaborative actions with private sector and industry associations to implement measures to address marine debris issues.
- B.** Encourage private sector investment in and contribution to combat marine debris.

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<sup>75</sup> ASEAN Secretariat (2019), ASEAN Framework of Action on Marine Debris. Available at: <https://asean.org/storage/2019/06/2.-Bangkok-Declaration-on-Combating-Marine-Debris-in-ASEAN-Region-FINAL.pdf>



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