2021-2022 Executive Training Course for Policy Makers on The 2030 Agenda for Sustainable Development

Addressing Marine Plastic Pollution in the Context of Myanmar

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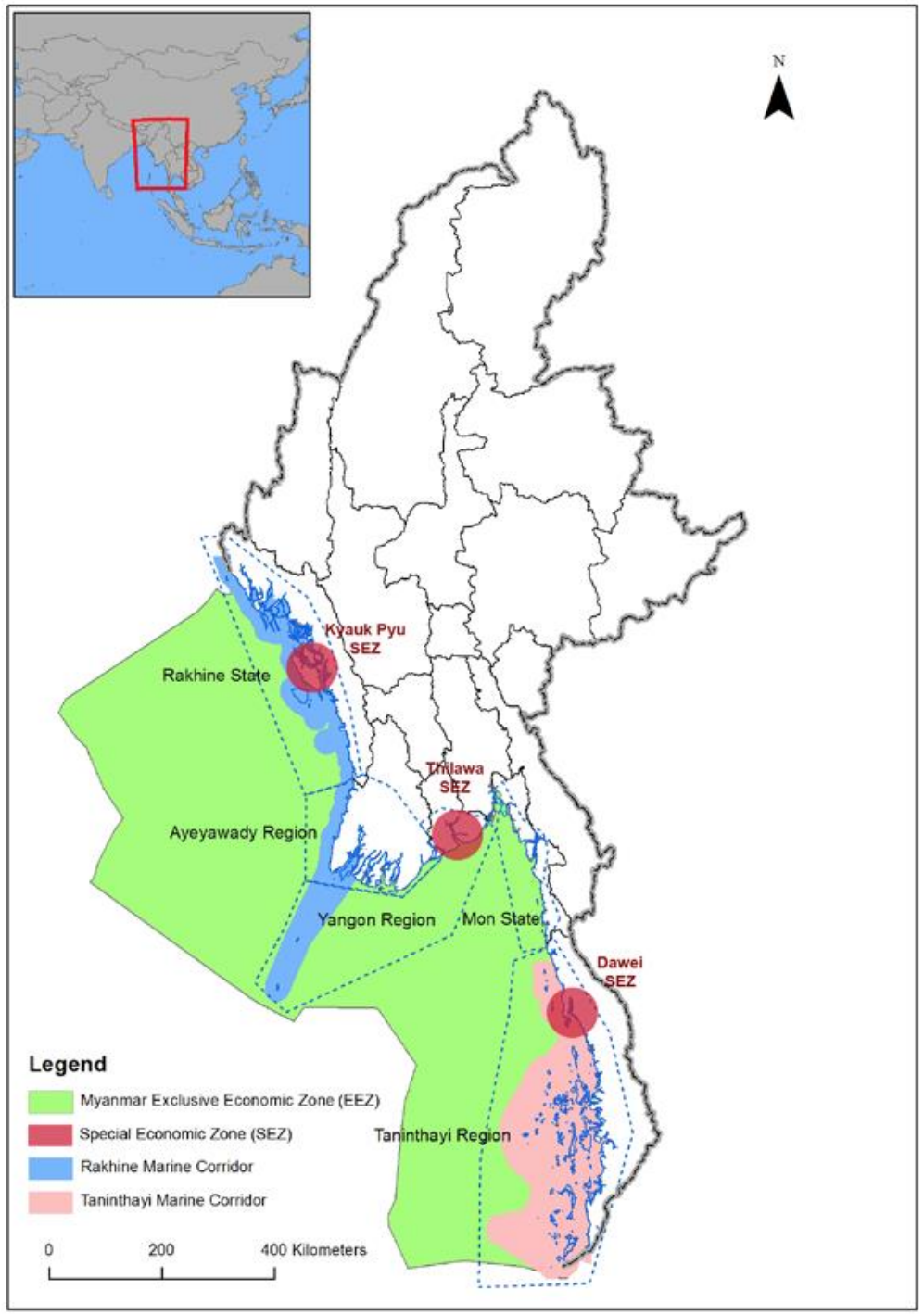
Nay Pyi Taw, Myanmar

Outline

- Coastal Regions of Myanmar
- Marine debris in Myanmar
- Policy Support and Planning to combat marine debris
- Projects for combating marine debris
- Activities for Systematic Plastic Waste Management
- International and Regional Cooperation
- Challenges
- Way forward

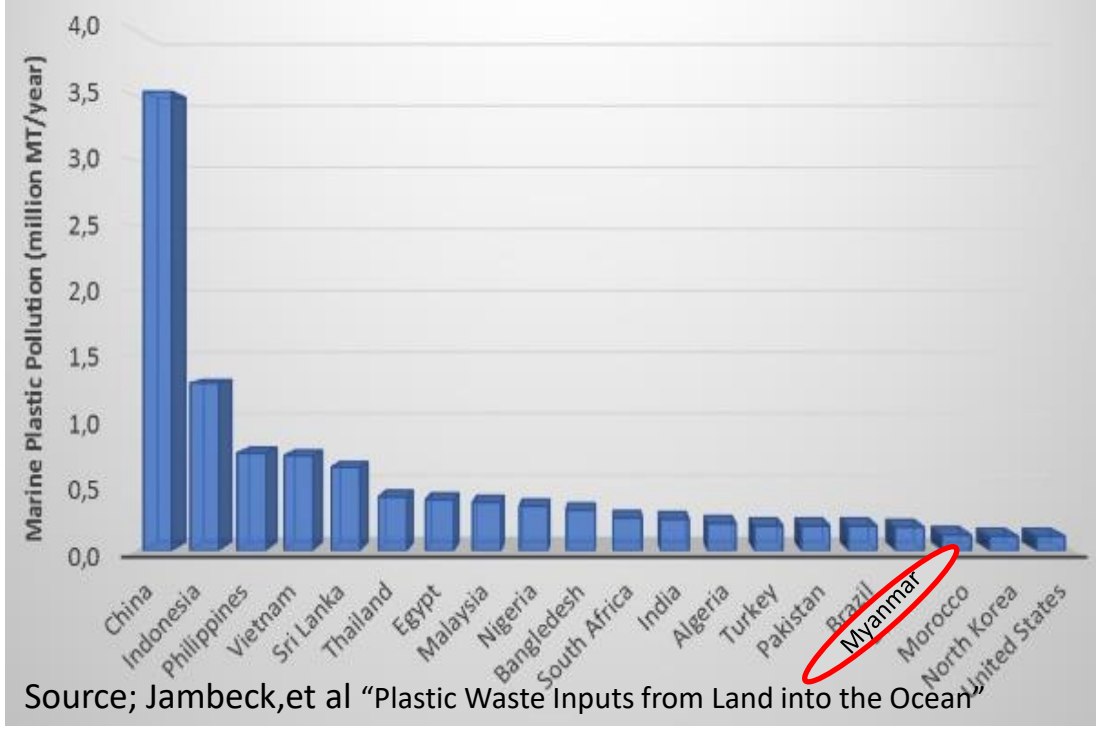
Coastal Regions of Myanmar



Coastline of Myanmar - 2832 km

- Rakhine coastal region - (740 km; 367,780 sq-km)
- Ayeyarwady delta region -(892 km; 35,138 sq-km)
- Taninthayi coastal region - (1200km;34,340 sq-km) Myeik Archipelago - (over 800 islands)
- Continental shelf area – ca. 230,000 km2
- Exclusive Economic Zone (EEZ) – ca. 486,000 km2 200 nm from the coast
- Territorial Waters – 12 nm from baseline

Marine Debris in Myanmar



Source; Jambeck,et al "Plastic Waste Inputs from Land into the Ocean"

Table 1 | Top 20 polluting rivers as predicted by the global river plastic inputs model.

Catchment	Country	Lower mass input estimate ($t\,yr^{-1}$)	Midpoint mass input estimate ($t\,yr^{-1}$)	Upper mass input estimate ($t\,yr^{-1}$)	Total catchment surface area (km^2)[21]	Yearly average discharge ($m^3\,s^{-1}$)[21]
Yangtze	China	3.10×10^5	3.33×10^5	4.80×10^5	1.91×10^6	1.58×10^4
Ganges	India, Bangladesh	1.05×10^5	1.15×10^5	1.72×10^5	1.57×10^6	2.08×10^4
Xi	China	6.46×10^4	7.39×10^4	1.14×10^5	3.89×10^5	5.53×10^3
Huangpu	China	3.35×10^4	4.08×10^4	6.73×10^4	2.62×10^4	4.04×10^2
Cross	Nigeria, Cameroon	3.38×10^4	4.03×10^4	6.5×10^4	2.38×10^3	2.40×10^2
Brantas	Indonesia	3.23×10^4	3.89×10^4	6.37×10^4	1.11×10^4	8.18×10^2
Amazon	Brazil, Peru, Columbia, Ecuador	3.22×10^4	3.89×10^4	6.38×10^4	5.91×10^6	1.40×10^5
Pasig	Philippines	3.21×10^4	3.88×10^4	6.37×10^4	4.07×10^3	2.07×10^2
Irrawaddy	Myanmar	2.97×10^4	3.53×10^4	5.69×10^4	3.77×10^5	5.49×10^3
Solo	Indonesia	2.65×10^4	3.25×10^4	5.41×10^4	1.58×10^4	7.46×10^2
Mekong	Thailand, Cambodia, Laos, China, Myanmar, Vietnam	1.88×10^4	2.28×10^4	3.76×10^4	7.74×10^5	6.01×10^3
Imo	Nigeria	1.75×10^4	2.15×10^4	3.61×10^4	7.92×10^3	2.79×10^2
Dong	China	1.57×10^4	1.91×10^4	3.17×10^4	3.33×10^4	8.54×10^2
Serayu	Indonesia	1.33×10^4	1.71×10^4	2.99×10^4	3.71×10^3	3.70×10^2
Magdalena	Colombia	1.29×10^4	1.67×10^4	2.95×10^4	2.61×10^5	5.93×10^3
Tamsui	Taiwan	1.16×10^4	1.47×10^4	2.54×10^4	2.68×10^3	1.08×10^2
Zhujiang	China	1.09×10^4	1.36×10^4	2.31×10^4	4.01×10^3	1.33×10^2
Hanjiang	China	1.03×10^4	1.29×10^4	2.19×10^4	2.95×10^4	7.35×10^2
Progo	Indonesia	9.80×10^4	1.28×10^4	2.29×10^4	2.24×10^3	2.79×10^2
Kwa Ibo	Nigeria	9.29×10^4	1.19×10^4	2.08×10^4	3.63×10^3	1.92×10^2

- Myanmar is one of the top 20 countries (Rank 17) in terms of mismanaged plastic with the quantity of marine plastic debris up to 0.07 - 0.18 million metric tons per year in 2010. (Jambeck and et al, 2015).
- As many plastics that has not recycled but disposed in open dumps or landfills ends up in rivers that later to be transported to oceans, Ayeyarwaddy, (Rank 9), discharges more than 0.03 MMT/ yr into the ocean(Lebreton, et al,2017).

Marine Debris in Myanmar

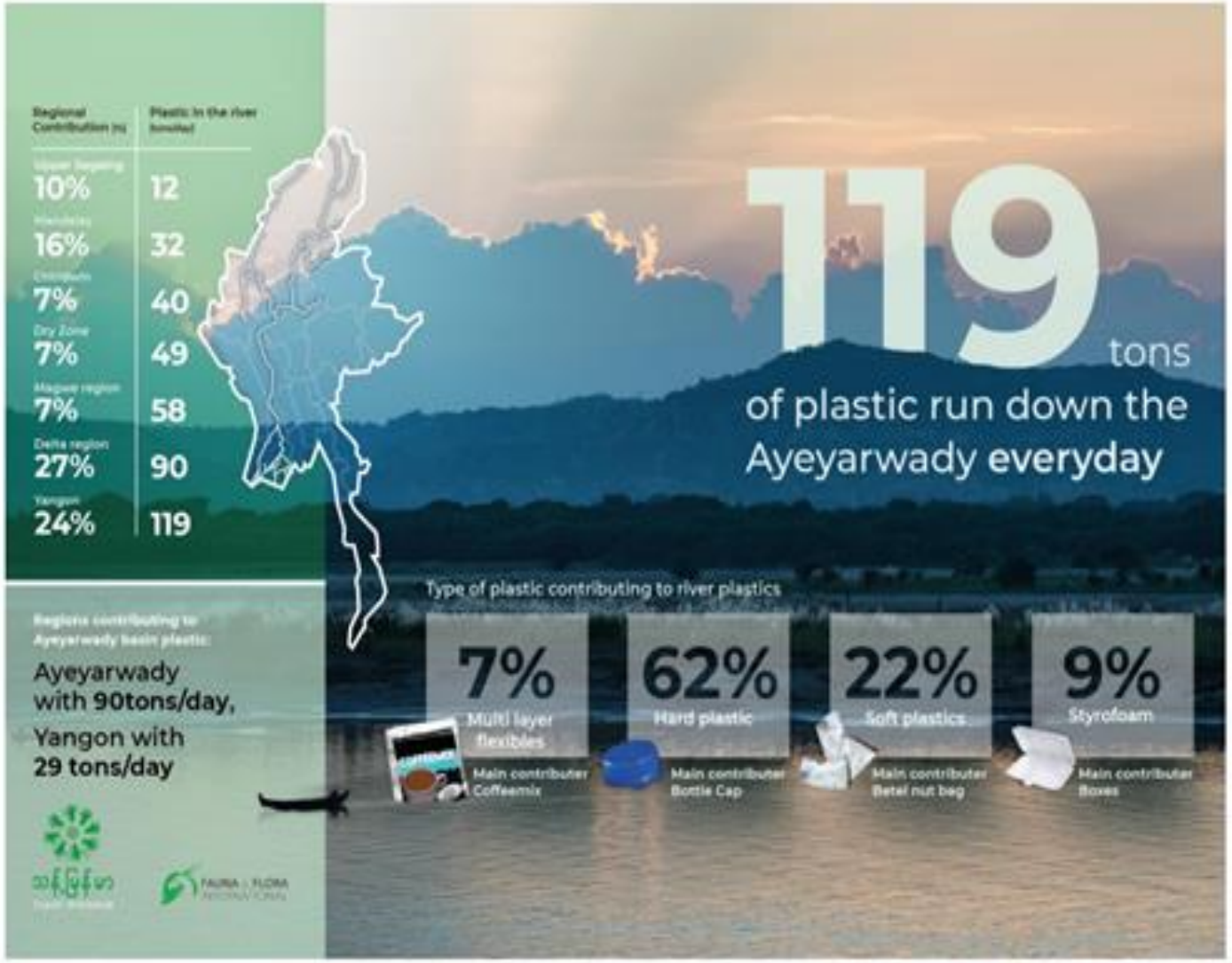


Figure 12. The combined data of leaked plastic entering the river from different regions and the contribution of the main four different kinds of plastic contributing to Myanmar's plastic pollution.

- A survey on plastic pollution in Myanmar conducted by FFI reveals that 119 tons of plastic wastes enter the Ayeyarwady River every day.
- The upper and lower Irrawaddy regions contribute 90 tons of plastic pollution per day and Yangon, Myanmar's capital, add 29 tons a day.

Marine Debris in Myanmar

- Myanmar Ocean Project survey finds 95 percent of inspected marine ecosystems contaminated with abandoned, lost, or discarded fishing gear (ALDFG)

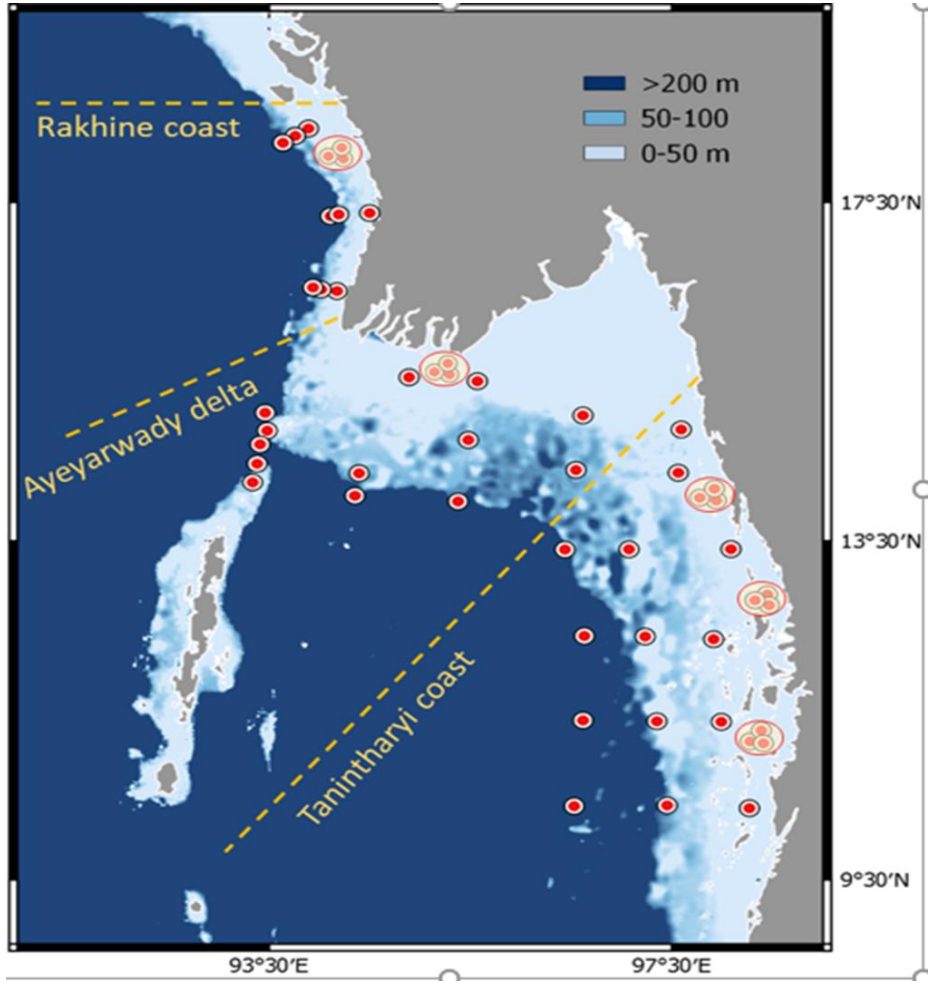
- Myanmar Ocean Project's first survey and clean-up expedition into the Mergui Archipelago removed 1,821kg of ALDFG also ghost gear.

Marine Debris in Myanmar

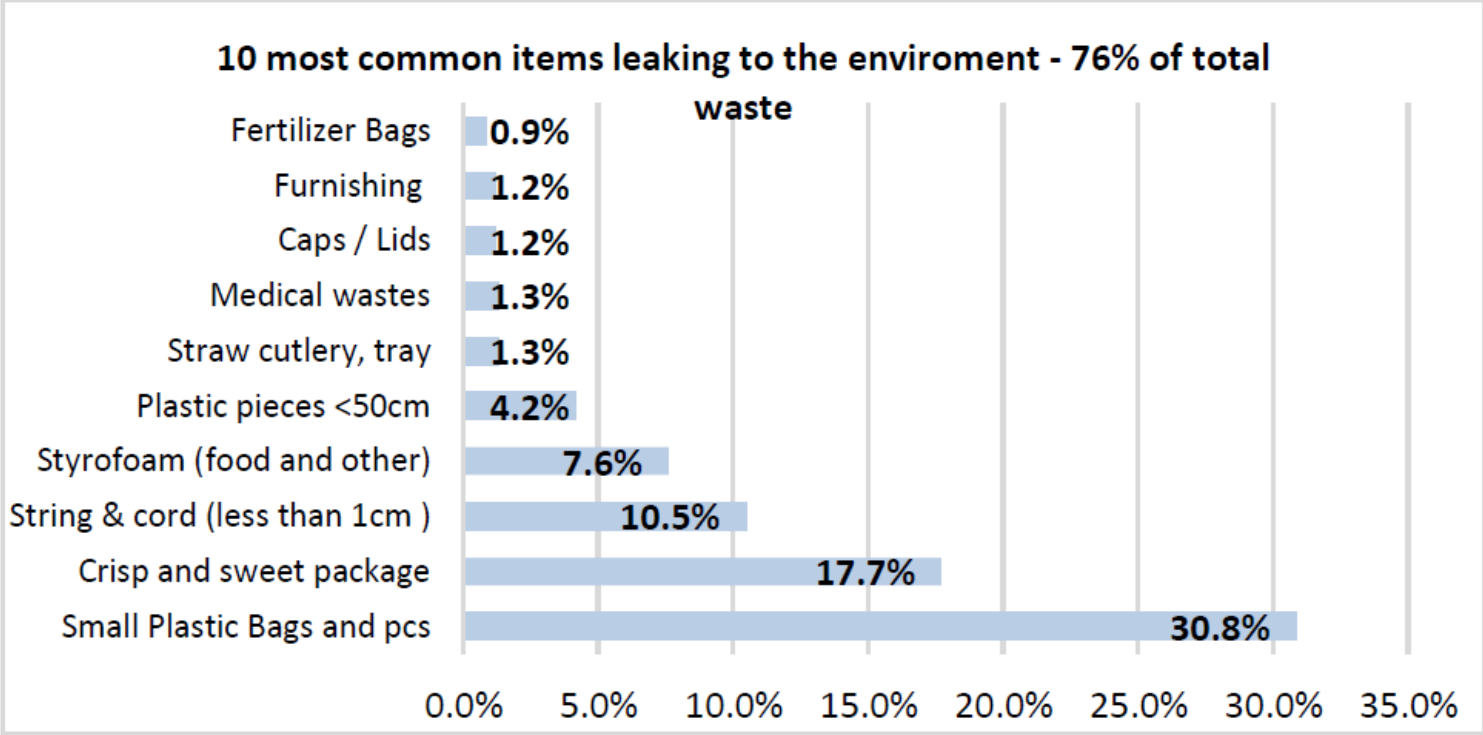
- A study conducted by the Fridtjof Nansen research vessel recently found that plastic fragments are most abundant from Rakhine and Delta area, while fibers are most abundant from Tanintharyi coast.

Surface microplastics by Manta trawl

Survey area



Top 10 most abundant plastic items leaking into the environment



- Plastics are responsible for around 90% of all waste leakage. The top 10 most abundant plastic items leaking into the environment make up 76% of all waste, and the top 5 plastic items are responsible for 71% of the waste leakage. Plastic bags alone account for over 30% of the plastic pollution.

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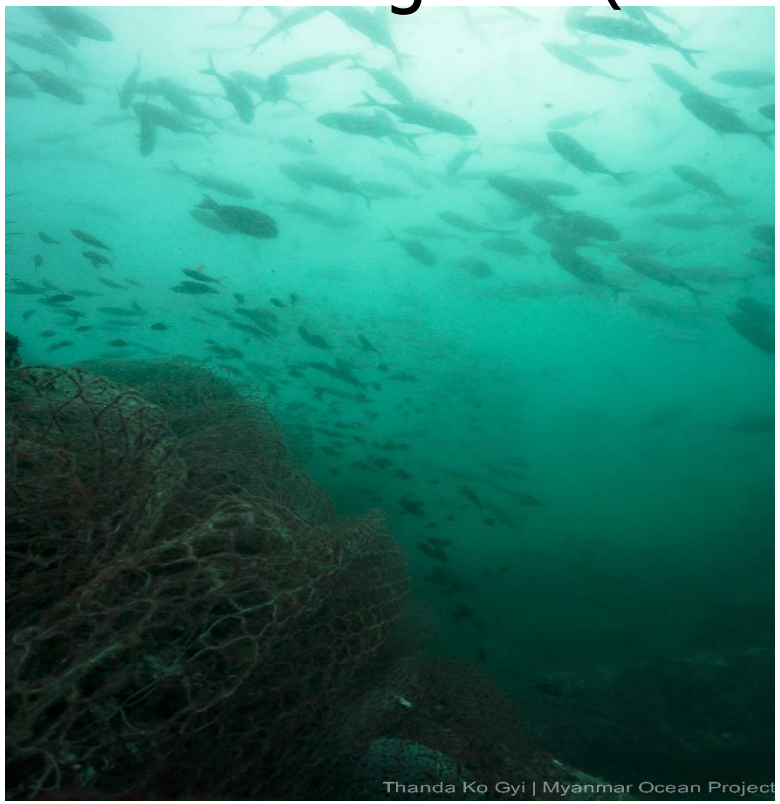
Impacts of Marine Plastic Pollution

Beach litter along the coastline

- Capture, entangle, and kill target and bycatch species; damage habitats;
- economically detrimental to fishery and tourism industries
- Obstruction for ship sailing
- Impacts on the residential environment along the coast

Abandoned and Lost Derelict Fishing Gear (ALDFG



Policy Support and Planning to combat marine debris

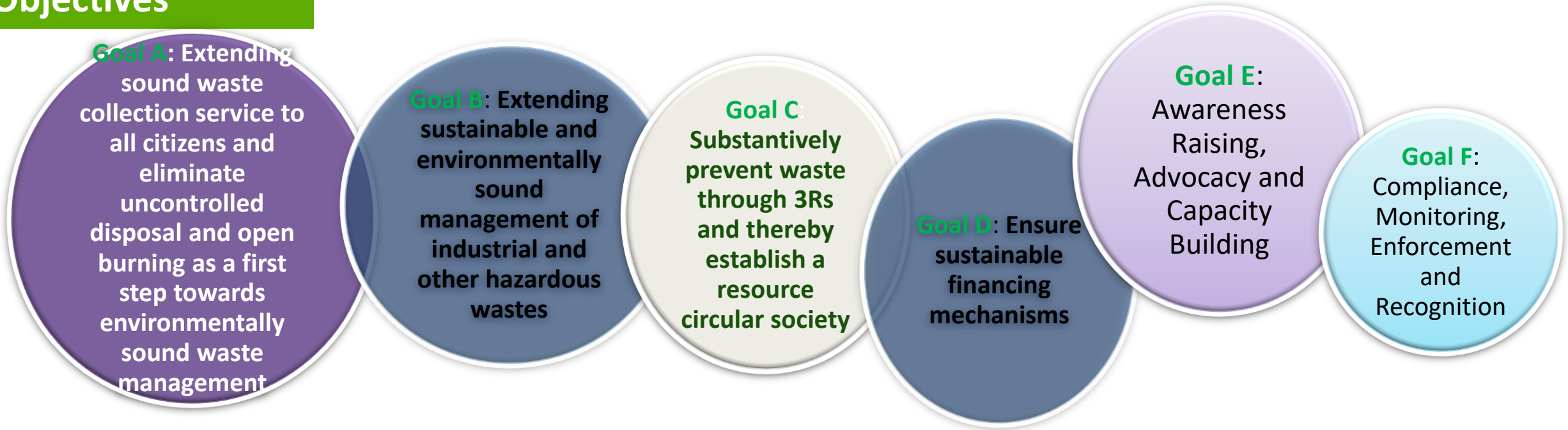
- Myanmar Sustainable Development Plan (2018-2030)
- National Environmental Policy
- Myanmar Climate Change Policy
- Myanmar Climate Change Strategy and Master Plan(2018-2030)
- National Waste Management Strategy and Master Plan (2018-2030)
- Myanmar National Hazardous Waste Management Master Plan (2020-2030) – Final Draft
- Procedure on Transboundary Movement of Hazardous Wastes and Other Wastes (Final Draft)
- Green Economy Policy Framework (Draft)
- Tourism Master Plan

National Waste Management Strategy and Master Plan (2018-2030)

Vision : Sustainable, Green, Clean and Healthy Environment towards a Brighter Future for Myanmar

Mission : To develop and implement the holistic/ integrated waste management strategy based **on principles of inclusiveness, zero waste and circular economy** to achieve **a greener, cleaner and healthier environment**.

Objectives



2030 Targets: Short term (2018-2020)/ Mid term (2020-2025) / Long term (2025-2030)

Policy Support and Planning to combat marine debris

- **Plastic Waste Management Action Plan (Outline**) has been developed based on the monthly reports of the State and Region Environmental Conservation Departments.
- **Plastic Policy Options and Roadmap (draft)** has been developed to manage the problem concerning plastic pollution based on the data from the survey led by the World Bank with the staff of the Environmental Conservation Department and Thant Myanmar Team.
- **National Plastic Action Plan** will be developed based on the Roadmap with the technical assistance of the Japan-ASEAN Integration Fund(JAIF) and collaboration of the stakeholders to reduce marine plastic debris by the Integrated Land-to-Sea approach.

Policy Support and Planning to combat marine debris

- Myanmar do not allow importing plastic waste but allow the import of plastic scrap only under these criteria:
  - Plastic scrap to be imported must be clean, homogenous and ready to be used as raw materials.
  - Recycling factories must have an Approval Letter or Environmental Compliance Certificate of an Environmental Management Plan, Initial Environmental Examination or Environmental Impact Assessment, which is approved by the Ministry of Natural Resources and Environmental Conservation.

"Capacity Building on Environmentally Sound Management of Single-use Plastic and its Waste in Asia-pacific Countries" Project

- Project will be implemented in Myanmar, Cambodia and Sri Lanka as the initial partner countries.
- Environmental Conservation Department and BCRC China/SCRCAP are cooperating to implement this project by signing Agreement between the parties.
- **Objectives of the project**
  - To improve the capacity for environmentally sound management of single-use-plastic and its wastes in Asia-pacific countries;
  - To protect and reduce the production of single-use-plastic and its wastes.
- **Expected Results / Outputs**
  - The baseline report of single-use-plastic and its waste in Myanmar;
  - The report on inventory and standards for single-use-plastic and its waste in Myanmar;
  - The restricted list of single-use-plastics and policy suggestions for environmentally sound management in Myanmar;
  - Report on Successful case study on the advanced experience;
  - Disseminate the questionnaires; and Participation in international/regional/national meetings

Strengthening Capacity for Marine Debris Reduction in ASEAN region through the formulation of National Action Plans for the ASEAN Member States and Integrated Land-to-Sea Policy Approach (Phase1)

- **Objectives of the Project**
  - To reduce Marine Debris in ASEAN Region through the Formulation of National Action Plans for AMS and Integrated Land-to-Sea Policy Approach
  - To develop a Capacity Building Program
  - Identify major challenges/ needs
- **Outcome of the Phase 1 project**
  - Developing Outline of the National Action Plan (NAP)
  - Identifying major challenges/ needs
    - ✓ Need for an institutional arrangement
    - ✓ Lack of regulations for combating marine debris
    - ✓ Need for land to sea approach action plan and waste collection system
    - ✓ Lack of monitoring system for marine debris
    - ✓ Need for awareness-raising of sustainable consumption and production

Strengthening Capacity for Marine Debris Reduction in ASEAN region through the formulation of National Action Plans for ASEAN Member States and Integrated Land-to-Sea Policy Approach (Phase2)

➢ Objectives of the Project

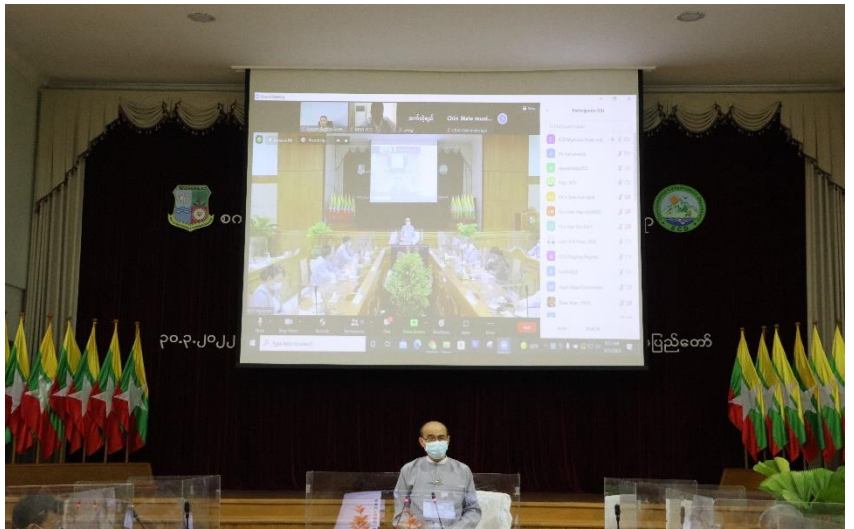
- ❖ To reduce Marine Debris in ASEAN Region through the Formulation of National Action Plans for AMS and Integrated Land-to-Sea Policy Approach
- ❖ To implement the Capacity Building Program
- ❖ To develop the Implementation, Monitoring, and Evaluation Framework

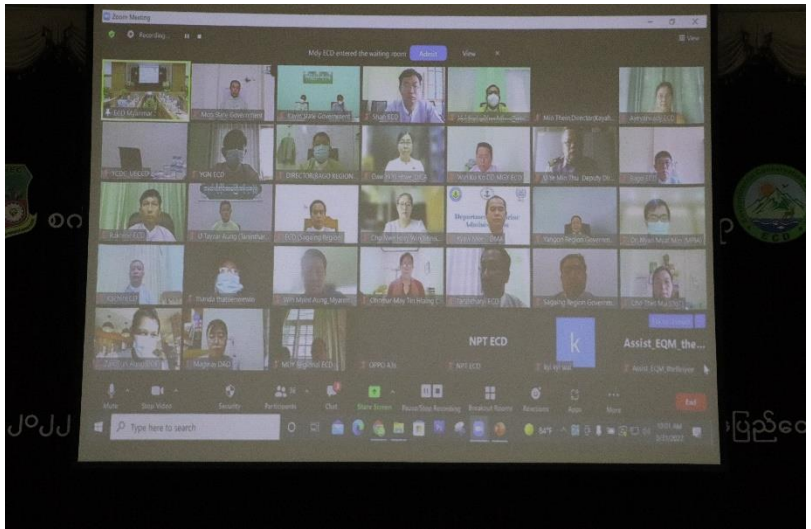
➢ Expected Results / Outputs

- ❖ Develop National Action Plan for combating marine debris
- ❖ Promote Capacity for solid waste management activities (including identification of Hotspot and Leakage sources)
- ❖ Develop the Implementation, Monitoring, and Evaluation Framework

Technical Working Group for National Plastic Action Plan development

- Setting up of Technical Working Group for NPAP has been approved by the 1st National Environmental Committee meeting.
- 1st TWG meeting has been held on 31-3-2022
  - Identify the gap and opportunities for the development of the National Action Plan
  - How data to be collected
  - Selection of pilot city





National Plastic Action Plan outline

Objective and Scope

- To achieve the overall goal, four pillars of activities are set.
- The four pillars are in line with regional frameworks in ASEAN, such as ASEAN Framework of Action and ASEAN Regional Action Plan

Overall Goal

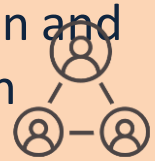
Reducing marine plastic debris by **Integrated Land-to-Sea approach** with:

- ✓ Concrete plans focusing on implementation
- ✓ Maximizing the use of reginal/national resources through cooperation
- ✓ Consistency with existing regional/national framework.

1. Policy Support and Planning

2. Research, Innovation and Capacity Building

3. Public Awareness, Education and Outreach



4. Private Sector Engagement

Expected Strategies and Activities of the Draft NAP for Myanmar

Framework Components	Elements of the plastic waste value chain				
	Reducing inputs into the system	Enhancing collection and minimizing leakages	Creating values for waste reuse/ recycle	Sustainable lifestyles/ consumer behavior	Partnership and international cooperation
1. Policy support and planning	- Programmes to promote developing alternatives of SUP - Reducing packaging - Phase-out and/or ban of SUP	- Cooperation between National and Local government - Strategy and plan on SWM for local/ community level - Guideline for O&M of landfill	- Promote Circular Economy and EPR related law and regulation - Informal sector involvement	- Programme for award, campaign, incentives - Guideline for training,	- Collaboration with neighbour countries - Consistency with regional and international context
2. Research, innovation and capacity building	- Biodegradable plastic standard and technology - Strengthen/Improve function of the intermediate and landfill	- Improvement of challenges of waste flow	- Collaboration with recyclers' associations - Develop recyclable collection and transportation system - Advanced technologies	- Develop guideline and training programme	- Development of waste flow data and reporting mechanism - Collaboration on research and innovation
3. Public awareness, education and outreach	- Education for consumer awareness	- Stop littering and separation - Clean-up activities at hotspots - Build monitoring programme	- Use of recycled and recyclable products - Waste separation - Awareness for repair/reuse opportunity		
4. Private sector engagement	- Development of alternatives of SUP - Development of design for easy to reuse, repair, recycle	- Community based management plan	- Plastic recycling (CSR, EPR, New business opportunity) - Buy-back system of plastic wastes	- Development of design for easy to reuse, repair, recycle	- Introduction and application of good practices - Investment on waste management services

Activities for Systematic Plastic Waste Management

- In order to implement systematic plastic waste management including the activities to protect marine environmental pollution by plastic wastes from land to streams, rivers, seas, oceans, the Environmental Conservation Departments are doing the following activities;
  - sharing the knowledge regarding plastic pollution,
  - cooperating with the related departments to protect environmental pollution by plastic wastes,
  - suggesting the plans and activities should be for systematic plastic waste management,
  - reducing the amount of plastic waste emitted based on the respective geographical conditions

Waste Collection Campaign and Awareness-raising activities in Myanmar

International and Regional Cooperation

- signed the United Nations Convention on the Law of the Sea in 1982
- acceded to the International Conservation for the Prevention of Pollution from Ship (1973) and the Protocol of 1978 in 1988
- ratified the Basel Convention in 2015 and the Convention entered into force for Myanmar in 2015.
- adopted the EAS Leaders' Statement on Combatting Marine Plastic Debris
- adopted Bangkok Declaration on combating marine debris and ASEAN Framework of Action on Marine Debris
- ASEAN+3 Marine Plastic Debris Cooperative Action Initiative
- Reporting to the Implementation Framework for Actions on Marine Plastic Litter for the G20 Information Sharing Report
- participating in AHEG and other related meetings
- Endorsed the Ministerial Conference on Marine litter and plastic pollution

Challenges

- Absence of evidence-based data and knowledge both upstream and downstream of plastic lifecycles/ value-chains.
- Unclear or overlapping mandates, roles, and responsibilities at different levels of agencies of government.
- Lack of integrated regulations on marine plastic debris
- Need for Reduction/collection of Land/Sea-based Debris
  - Identification of the source of marine debris (Waste or Plastic material Flow)
  - Wastes from ships, fishing, community, and tourism
  - Infrastructure of SWM (sanitary landfills, incinerator)
- Less experience in engagement with diverse stakeholders for policy making and implementation
- Limited technology and capacity on combating marine debris
- Lack of infrastructure for preventing environmental leakage of plastics
- Limited capacity for R&D and innovation

Way Forward

- Developing holistic policies and strategies on plastics use and production at a national level
- Strengthening technical skills and increasing financial resources of local governments to implement and enforce national waste management strategy and master plan
- Increasing the private investment for MSWM and technology development
- Developing capacity for implementing monitoring of marine debris and preliminary research on marine plastic debris
- Promoting awareness, research, and education on marine plastic debris
- Improving and promoting environmentally sound management of plastic waste, resource efficiency, and 3R" approaches
- Strengthen regional and international cooperation

Reference

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Thank You for Your Attention!