



The Government of the Republic of Indonesia

EXECUTIVE SUMMARY

INDONESIA'S PLAN OF ACTION FOR COMBATING MARINE DEBRIS 2018-2025

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The key important aspects in handling marine debris in Indonesia are three-fold:

- 1 Coordination between institutions responsible for waste management. This involves strengthening regulation and human resources in various sectors and institutions;
- 2 Application of technology to control plastic debris, including the application of science-based management;
- 3 The significant importance of societal efforts to reduce, recycle and reuse plastic debris to be advanced since early age.

INTRODUCTION

Marine debris is a key environmental issue at the global and national levels and has become a major threat to marine and coastal biodiversity. It is regarded as one of the most significant problems for the marine environment and has been viewed as threat to health of both ocean and human. Marine debris, in particular usually defined as any persistent, manufactured or processed solid material discarded, disposed of, or abandoned within the marine and coastal environment.

Indonesia hosts the highest marine mega-biodiversity, known as the “*Amazon of the Ocean*”. Currently, the vast ecosystems of coral reef, mangrove, and seagrass are in jeopardy due to accumulation of marine plastic debris that are found along the coast line. United Nation (UN) experts defines 45-70% of all marine debris are plastic, a persistent and potentially hazardous pollutant, which fragments into microplastics that are toxic to wide range of fish and other marine organisms.

The key principle for combatting marine plastic debris is to prevent items becoming debris in the first place. Source prevention, through a combination of measures and approaches, is widely regarded as the most effective means to reduce the impact of plastic debris on marine and coastal biodiversity. This can be viewed as making the intervention through the different levels of human intermediation starting at the local or provincial to international communities.

In managing marine debris, scientific aspect should be considered in developing the policies and regulation. Without knowledge of the destiny and characteristics of marine debris, it will be impossible to come up with effective regulation and policies to reduce the debris, especially in form of plastic.





NATIONAL PLAN OF ACTION

General Obligation within UNCLOS mentions that: “States have the obligation to protect and preserve the marine environment”; also “States shall take, individually or jointly as appropriate, all measures within this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source”. A systemic solution to marine debris will need to go beyond simply containing the flow of waste and will require a critical examination of how waste is created within our supply chains and economies in the first place.

Indonesia realizes these harmful threats of waste on ocean and environment particularly plastic waste, thus developed a National Plan of Action for Combating Marine Debris which consist of **five main pillars** as follows:

1. NATIONAL MOVEMENTS FOR IMPROVING BEHAVIORAL CHANGE

Stakeholder awareness should lead to an efficient and effective involvement in managing marine plastic debris due to huge number of stakeholders spread out in all regions, while showing co-ownership in solving the problem will be the reflection of non-government stakeholders engagement. Collaborations amongst ministries for inclusion of non-government stakeholders and cross-sector collaborations nation wide regarding the National Plan of Action has been initiated by Coordinating Ministry for Maritime Affairs. For long-term solutions to the challenge of eliminating plastic waste from the world’s oceans and waterways would include improving the behavioral change.

2. CONTROLLING LAND-BASED LEAKAGE

Plastic debris could come from city streets or housings carried into the ocean from the storm-water drains. The effects marine pollution has on ecosystems and humans are starting to be well documented. Marine scientists have found harmful consequences of marine pollution to sea life, ecosystems and humans. Plastics leach cancerous toxins. After being consumed by marine species, they enter the food chain, eventually ending up in fish we eat. Research and production of alternative materials to plastic use are being encouraged in order to curb new plastic production.

3. HANDLING COASTAL & SEA BASED LEAKAGES

Garbage found in the ocean could come from many places; including ships, fishing lines and pleasure boats. Bilateral and Regional Collaborations are being pursued in order to control marine plastic debris from their sources. These efforts will be done through monitoring and collecting the plastic debris from the ocean employing relevant technologies to guarantee results. Improving of environmental awareness through education while also improving waste management facilities in ports, small islands and coastal areas would also be a big part of this management efforts.

Manufacturers of plastics and related products have not all been involving themselves actively in the efforts of managing plastic wastes. The Action Plan is designed to encourage these manufacturers to use recycled plastics as input materials as much as possible, while at the same time producing more biodegradable plastics.

4. ENHANCING FUNDING MECHANISMS, POLICY REFORM AND LAW ENFORCEMENT

Funding mechanisms for the National Plan of Action is expected mainly coming from regional and national budgets, and supported by other programs such as “polluters pay principle” and innovations through the use of environmentally friendly materials. Strategic Fundings from International organizations and partnering countries can be expected to finance the common efforts in controlling the marine plastic debris.

Collaborations amongst ministries for inclusion of non-government stakeholders and cross-sector collaborations nationwide would encourage a widespread support for this action plan towards its success. Standardization and establishing a standard procedure for Marine Waste Management is in order for further prevention of the waste overflow into the ocean.

It is projected that without waste management infrastructure improvements, the cumulative quantity of plastic waste available to enter the ocean from land is predicted to increase by an order of magnitude by 2025.

5. RESEARCH & DEVELOPMENT

Coastal-Marine ecosystems worldwide are affected by marine debris, much of which is plastic. The R& D its important key to prevent and solve the problems from various ways including handling marine plastic debris from its source till on the ocean as well as alternative material for plastic and develop an innovation scheme for circular economy.



STRATEGIES FOR NATIONAL PLAN OF ACTION

Government of Indonesia has adopted various National Laws regarding Waste Management, Coastal Areas and Small Island Management, Tourism, including those related to the Ocean itself as well as the Local Governments as the principal Authorities.

In order to cope with the problem, the Indonesian government has setup the National Plan of Action on Combating Marine Plastic Debris to minimize the impact of marine debris. The government regulates the action plan at the sub national level, national, international and even regional, as well as through the research and development community. Thus, reduction of inland plastic waste reaching the ocean should be within reach.

- a. The action plan at the **local governments level** falls within the river catchment authority to filter our solid waste including plastic, from the river water. The municipalities should take care of the waste management properly and reduce the amount of plastic waste downstreaming to the ocean. Indonesia is an archipelagic country with many small islands. Inter island waste management needs to be improved with better waste pick up and floating waste disposal management. Several action programs at this level includes: (i) Strengthening human and financial resources, infrastructure management and change of behavior; (ii) Developing an integrated coastal waste management projects
- b. At the **national level**, Indonesian government is trying to promote paradigm change within the society towards solid waste and to respect the coastal areas. Most of our beautiful coasts are intended for tourism destination. Therefore the cleanliness of shore lines is a must. Rearranging agencies who take care of upstream landfill related to plastic waste also becomes the focus of the plan at this level. Pilot projects are to be set up as example cases on how to properly manage plastic waste from industrial and household landfills up to the waste management facilities. In order to implement action plans

at national level, the following strategies are to be pursued: (i) Enhancement of stakeholder awareness through education curriculum and campaign; (ii) Conversion of waste into energy; (iii) Implementation of paid plastic bag policy; (iv) Utilization of plastic debris as asphalt mix for “plastic tar road”; (v) Strengthen regulation on plastic debris management in seaport, shipping and fishing lines.

- c. At the **international level**, there are three plan of actions related to the transboundary marine debris over the sea, marine debris from sea transportation and international financial pledge or fund raising. The fund will be used to setup pilot projects among chosen municipalities and for new and better waste management in others. This action plan can be executed through bilateral and regional cooperations.
- d. Manufacturers of plastics and related products have not all been involving themselves actively in the efforts of managing plastic wastes. The plan of action for **industrial sector** is designed to encourage these manufacturers to use recycled plastics as input materials as much as possible, while at the same time producing more biodegradable plastics. Implementation of this plan can be done through: (i) The use of bio-degradable plastics; (ii) Foreign investment for biodegradable plastics industry; (iii) Introduction of circular economy into the mix, with its reduce, reuse, recycle principles, would complete the plastic waste management circle.
- e. Indonesia is aiming for new and efficient technologies to cope with the problem. Putting solutions such as recycling technologies, plastic waste in asphalt mix for the road and waste for energy and so on into practice. All of the above mentioned would advance even more with involvement of **academics and community service organization (CSO)**. These plan of action takes into account are : (i) Research and Development; (ii) Campaign; (iii) Waste Bank.



EXPECTED OUTCOMES

The major principles for controlling marine debris are improving the awareness of all stakeholders, waste managements from land to the coastal area, marine debris management and enhance institutional strength and funding supports. By adopting 5 main pillars and applying 5 strategy programs, the final goal for reducing marine debris, in particular plastic debris by 70 % in 2025 is achievable.



Coordinating Ministry for Maritime Affairs
Republic of Indonesia



Ministry of Environment and Forestry



Ministry of Marine Affairs and Fisheries



Ministry of Transportation



Ministry of Public Works and Public Housing



Ministry of Home Affairs



Ministry of Education and Culture



Ministry of Research, Technology and Higher Education



Ministry of Tourism



Ministry of Foreign Affairs



Ministry of National Development Planning



Ministry of Industry



State Minister for Chairperson of the National Development Planning Agency



Ministry of Finance



Cabinet Secretariat



Ministry of Health



Indonesian Maritime Security Agency

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