National Marine Litter Management Program of RO Korea

: Status Quo of ML and Challenges faced by ROK

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Status Quo of Marine Litter of ROK

176,000 tons of Marine Litter is generated every year in ROK

- Land based ML: 118,000 tons (67%), Sea-based ML: 58,000 tons (33%)
  * Inflow of fallen trees due to natural disasters: 86,000 tons (48%), Fishing gear: 44,000 tons (25%)
- Amount of existing Marine Litter: 152,000 tons
  * Shoreline 12,000 tons, sunken 137,000 tons, floating 2,000 tons

(* Data from 2nd National Marine Litter Management Plan / Ministry of Oceans and Fisheries of ROK*)
National Marine Litter Monitoring Program

- **Objectives**
  - Collecting nation-wide ML data from 40 different spots.

- **Implementation**
  - KOEM with NGOs
  - Include foreign-origin ML study
On the basis of number, Plastic and Styrofoam accounts for 77% of marine litter, followed by foreign sources marine litter(7%) and glass(6%).

(* Data from Marine Litter Information System / www.malic.or.kr)

Amount of Removed marine litter every year: about 78,022 ton;
Overall Cost: APPX US$ 46 million (including local governments)

- Type of ML: Shoreline litter 65.1%, Sunken waste 29.3%, Floating litter 5.6%

* Data from Marine Litter Information System / www.malic.or.kr
32,618 ton of marine litter was removed in Jeonnam Province in 2018

Total amount of Marine Litter removed in the Yellow Sea area 49,454 (ton)

(Data from Marine Litter Information System / www.malic.or.kr)
Marine Litter Management in ROK

1st Step
Removal Oriented Project
Local Government’s Removal Projects
at shoreline, ports (fishery, commercial)

2nd Step
Government-led Policy
- Expanding the removal project into sunken or floating debris
- Developing the disposal technology
- Introducing the monitoring system

3rd Step
Precautionary & Systematic Management
Management by National Plan
- Formulating the National plan to manage Marine debris (‘09,’13)
- Formulating the National plan to reduce trashes from rivers (‘08,’13)
Institutional and Legal Arrangements

**Institution**
- Ministry of Oceans and Fisheries (MOF)
- Korea Marine Environment Management Corporation (KOEM)
- Marine Litter Management Center
- Local governments, NGOs and Private Sectors

**Law & Policy**
- Marine Environment Management Act (2007)
- Comprehensive Marine Environment Management Plan
- Comprehensive Marine Litter Management Plan
- Implementation of Programs and Projects
**Establishing Comprehensive Marine Litter Management Plan**

**Legal Basis**
- Policy measures established every 5 years according to the Marine Environment Management Act 24
- **Inter-ministerial policy collaboration** between MOF-MOE-KCG

**Progress**
- **1st PLAN (2009-2013)** Appx. US$ 240 million
- **3rd PLAN (2019-2023)** Appx. US$ 883 million (TBC)

Minimizing litter inflowing into marine environment
- Set-up and operation of ML collecting barges
- Establishing fishing gear management system
- Promotion of eco-friendly fishing gear use
- Promotion of fishing boat waste/Bilge removal et al.

Increasing ML collection and disposal capacity
- Fishing port deposited waste removal
- Buying of the recovered waste during fishing
- Deposited fishing gear removal
- Distribution of Styrofoam volume reducer
- River and estuarine waste clean-up et al.

Supporting NGOs’ Marine Environment Conservation activities
- Development of Marine Environment Education Programmes
- Public outreach on Marine Litter
- National Marine Litter Monitoring Programme
- Regional and global cooperative projects

Enhancing ML management capacity
- Development of ML Statistics and Analysis Methods
- Conducting the ML Distribution Survey
- Establishment of ML Information System
- Establishment of Marine Litter Management Center

28 Tasks
US$ 240 million

1. Intensive Management of Marine Debris Sources
   - KRW 68.5 billion for five projects, including the reinforcement of the management of waste Styrofoam buoys and management of river and estuary debris sources

2. Expanding Marine Debris Removal Project
   - KRW 238.5 billion for six projects, including the Marine debris clean up project and collection project

3. Advancement of Management System
   - KRW 20 billion for six projects, including the adoption of a fishing gear management system and the vitalization of the Marine Litter Management Center

4. Education and Training
   - KRW 4.9 billion for four projects, including public awareness programme for reducing Marine debris and promoting participation of shoreline clean up activity

21 Tasks
US$ 330 million
Case 1: Set-up and operation of ML barges

**Objectives**

Place a barge-type marine collection site at ports or fishing ports to remove litter during fishing activities. It helps prevent the occurrence of abandoned, derelict and discarded fishing gear.

**Cost of Disposal and Installation**

1 Barge: Appx US$ 31,025
Case 2: Compensation for the recovered waste during fishing

**Objectives**
- To prevent re-entering of the recovered waste during fishing into marine environment by buying the recovered waste
- This is ultimately cost-effective
- Enhancing fishers’ awareness on marine environment

**Cost sharing:** Central 50%, Local 50%
- Appx US$ 10M invested between 2015~2018 (Avg US$ 2M every year from the central gov)
- Collected 26,266 ton of ML between 2015~2018 (6,868 ton of marine litter in 2018)
Case 3: Marine Environment Education Program

- **Objectives**
  - Provision of marine environment protection education to all age groups and to raise awareness about Marine Litter
  - Including programs such as Lectures, Mobile Classroom
Establishment of MALI Center and Marine Litter Information System

- MALI Center established in 2011
- Marine Litter Information System is to provide various information to public which was established in 2011 within MALI Center in KOEM
Create clean and safe oceans free of Waste

Strengthen the management of marine debris at each stage

Switch to a scientific and prevention-oriented management plan

Vision and Goal

Objective

Create clean and safe oceans free of Waste

Goal

Strengthen the management of marine debris at each stage

Switch to a scientific and prevention-oriented management plan


Action

Intensive management of Marine Litter Sources

1. Enhance management of sea-based sources
2. Enhance management of land-based sources
3. Enhance management of foreign-based sources

Building of Marine Litter Collection Systems

1. Reduce blind Spots in management
2. Specialize waste collection programs by sea areas
3. Effective Collection System

Expansion of Marine Litter Disposal and Recycling

1. Expand collection platforms
2. Invigorate recycling infrastructure

Strengthen Marine Litter Management Capacity and Public Awareness

1. Strengthen the foundation of domestic management
2. Establish microplastic management infrastructure
3. Launch public campaigns participated by citizens
4. Strengthen customized education per subject
5. Strengthen response to international affairs and cooperation
**Master Plan on Marine Plastic Litter (2019)**

**Vision and Goal**

**Objective**
- Create clean and safe oceans free of waste

**Goal**
- Reduce 50% of Marine Plastic Litter by 2030

**Action**

- **Prevention of Marine Plastic Litter generation**
  1. Enhance management of sea-based sources
  2. Enhance management of land-based sources
  3. Enhance management of foreign-based sources

- **Expansion of Marine Plastic Litter Collection and transporting Systems**
  1. Reduce blind Spots in management
  2. Improve waste collection programs by sea areas
  3. Increase public and local participation

- **Expansion of Marine Plastic Litter Disposal and Recycling**
  1. Expand collection platforms
  2. Invigorate recycling

- **Strengthen Management Capacity and Public relations**
  1. Enact Marine Waste Management Act
  2. Strengthen research and monitoring on Micro plastics
  3. Strengthen customized education per subject
  4. Boost public relations
- **Processing New Law ‘Marine Waste Management Act’ (TBC)**

  ✓ Reinforce the responsibility of polluters, expand recycling of marine waste, and ensure marine litter is handled in eco-friendly way

  ✓ Enact legislation to prevent the inflow of marine litter into the ocean, conduct an investigation on the current state of the marine litter issue, etc.

- **Processing New Law ‘Fishing Gear Management Act’ (TBC)**

  ✓ (Before use) Manage production and distribution of fishing gear (register fishing gear, reporting distribution, etc.)

  ✓ (During use) Manage purchase and usage of fishing gear (report usage and derelict fishing gear, real-name fishing gear usage system)

  ✓ (After use) Collect and dispose of derelict fishing gear (assign responsibility for the collection of derelict fishing gear, etc.)
THANK YOU
FOR YOUR ATTENTION