Progress in Addressing Marine Litter in Korea

Recent Policies and Efforts to Protect the Marine Environment from Marine Litter

June 4th, 2018
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Chapter 1

3rd National Marine Litter Management Plan (2019~2023) and the Review of 2nd Plan

Scope of the Plan

  - Evaluate Action Programs on 2nd NMLM Plan
  - Problem Analysis

- Global and Domestic Trends in Marine Litter Management
  - Research on Global and Domestic Trends and Policies in Marine Litter
  - Business Demand Research

- Research and Estimation of Domestic Marine Litter Volume
  - Data collection and analysis, estimation of marine litter volume, establishment of systems for research and statistics

- Establishment of Objectives and Strategies for the 3rd National Marine Litter Management Plan
  - Establishment of directions for policies and management objectives, suggestion of execution strategies

- Establishment and Implementation of Execution Plans (Business/Project) for Each Objective, Management, Arrangement of Evaluation Methods
  - Suggestion and implementation of detailed tasks for each strategy and execution plans, arrangement of plans to acquire financial resources

1. Intensive Management of Marine Litter 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
KRW 331.9 billion

Ministry of Oceans and Fisheries

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Estimation of volume of marine litter generation

- Foreign factors are added to existing land-based sources and sea-based sources
- Discharge amount consists of the Removal Volume and Decomposition
- Standing amount consists of the Shoreline, Floating, and Sunken Marine Litter
- Scientific Accuracy and Usefulness of Policies are to be Considered

- Estimated Annual Amount of Marine Litter: 176,000 tons
  - Land-based: 118,000 tons (67%); Sea-based: 58,000 tons (33%)
    * Inflow of fallen trees due to natural disasters: 86,000 tons (48%); Fishing gear: 44,000 tons (25%)
- Estimated Standing Amount of Marine Litter: 152,000 tons
  - Amount of Marine Debris: 152,000 tons (shoreline, 12,000 tons; sunken, 137,000 tons; floating 2,000 tons)

![Removal Volume by Type (2013~2017)]

- 6.4% Floating 22,155
- 30.4% Natural Disaster 105,797
- 63.2% Shoreline 220,209

Average: 69,632

Establishment of Directions for the Management Plan (6 Steps)

1. Evaluation of the 2nd Management Plan
2. Evaluate and Forecast the Policy Conditions:
   - Domestic and foreign trend analysis, national awareness research, legal system analysis
3. Analyze the Volume of Marine Litter Generation
4. Make a Draft of Directions for Mid to Long-term Management Policy
5. Reviewed by Experts and Local Authorities:
   - Application of Expert Advisory Groups
6. Finalize the Directions for Mid to Long-term Management Policy:
   - Vision, objectives, management strategies

Method of Execution Task (Plan) Derivation

Existing Tasks
- Evaluation
  - (Discontinue, supplement and improve, continue)

New Tasks
- External Suggestions (Experts and local authorities)
- Internal Suggestions

Execution Plans

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Chapter 1

Execution Capability Reinforcement Plan


**Improvement of Execution System**
- Improvement of coordination and mediation functions of “Marine Litter Policy Consultation”
- Establishment of the Comprehensive Execution Evaluation System
  - Examination of inter-departmental Executions
  - Examination of Executions within Department
  - Examination of Executions in Local Authorities
- Legal Basis of Policy Coordination/Mediation
  - Improvement of the legal institutional foundation
  - Similar case: “MDCC” in the USA

**Expansion of Financial Resources**
  - Ministry of Maritime Affairs and Fisheries
    - Fisheries development funds, deposits based on the enactment of ‘Fishing Gear Management Act’, etc.
  - Ministry of Environment
    - Cost sharing of plastic marine litter management (EPR system, environmental charges, etc.)

**Reinforcement of Capabilities of Local Authorities**
- Capability of Local Authority ↑ = Execution Capability of the Management Plan ↑
  - Local authority is the execution body for the management business

**Needs of Local Area-Based Business Execution**
- Characteristics and management conditions vary in each area of the ocean, there are management issues confined to local areas

**Suggestion of Local Execution Capability Reinforcement Plans**
- NOAA, Local coordinators: Review of advanced cases including policies
- Looking for business (local authority consulting, public offering business), education and training sessions for personnel in local authorities
Recent Projects to Combat Marine Litter

Estimation of volume of marine litter generation

- Starting Marine Debris Monitoring at **20 sites** in 2008
- Expanded to **40 sites** in 2015
  - About 25 local NGOs participated in each region

- Length: 100m
- Width: From current water level to the back of the beach
- Counting items Larger than 2.5cm Weighing/volume-estimating categorized debris

[Map of Korea with specific sites marked]
Recent Projects to Combat Marine Litter

National Marine Litter Monitoring Program

Composition of Marine Litter by Number ('17)

- Plastic: 58.1%
- Wood: 6.5%
- Styrofoam: 12.6%
- Metal: 4.0%
- Rubber: 0.7%
- Glass: 3.5%
- Fabric and Clothes: 2.2%
- Medical and Personal hygiene: 0.4%
- Smoking and Fire work: 4.5%
- Paper: 2.5%
- Foreign: 2.6%

On the basis of number, Plastic and Styrofoam occupied 58.1%, 12.6%, respectively. Plastic made up more than 70%. Marine Litter from foreign countries occupied 2.6%, which is lower than those of previous years (5%).

Top 10 Items of Marine Litter in KNMDMP ('17)

- Food packaging: 4.2%
- Glass Bottle and Glass fragments: 5.2%
- Other plastics: 3.1%
- Other styrofoam: 2.5%
- Plastic bags: 5.8%
- Plastic bottle: 8.0%
- Caps: 9.1%
- Lids/Caps: 0.7%
- String/Rope: 10.0%
- Other than Top 10 items: 20%

The most abundant items were String/Rope (10.0%), Caps (9.1%), Plastic bottles (8.0%), Styrofoam buoys (6.6%), Other plastics (5.9%), and Plastic bags (5.8%). String/Rope was the total of ≥ 50 cm and < 50 cm.
Recent Projects to Combat Marine Litter

Chapter 2

Raising Public Awareness

*Public Awareness Advertising*

To Prevent Tourists from Littering during Summer Vacation Season

Using the image of a glass bottle, the advertisement gives a message of “What goes around, Comes around”
Recent Projects to Combat Marine Litter

Raising Public Awareness

- Nationwide Idea Contest for “Litter Free Sea"
  - Open Contest for Ideas to Prevent Marine Litter
  - Submission Date: April 2nd ~ April 27th, 2018
  - Prize:
    1\textsuperscript{st} Prize: Awarded by MOF
    2\textsuperscript{nd} ~ 3\textsuperscript{rd} Prize: Awarded by KOEM
  - 91 team participated for the competition
Recent Projects to Combat Marine Litter

International Cooperation

International Coastal Clean-up (ICC)
Since 2001, Local NGOs have been holding ICC and from 2010, MOF is allocating subsidies to raise public awareness.

NOWPAP ICC – TEMM Workshop

2017 ICC (2017.9.22. / Donghae)

2017 Workshop (2017.9.18. / Toyama, Japan)

● NOWPAP ICC - TEMM Joint Workshop
● TEMM Marine Litter Focal Point Meeting
Recent Projects to Combat Marine Litter

Raising Public Awareness

- Marine Litter Cleanup Week for Ocean Day
  - Nationwide Marine Litter Cleanup Campaigns for the 23rd Ocean Day of Korea (May 31st, 2018)
  - Date: May 28th ~ June 5th, 2018
  - Participants: MOF, Local Governments, KOEM, other organizations, etc. (685 organizations, 24,289 participants)
  - Sites: 65 Local Government Areas
Chapter 3
Current Issues facing Marine Litter in Korea
Current Issues Regarding Marine Litter Faced in Korea

• Reinforcement of Management Foundation through Improvement of Marine Litter Related Policies
  • Improvement of management laws and subordinate statutes for marine litter and marine pollution deposits, improvement of recycling system for marine waste resources

• Establishment of Management Foundation for Marine Litter Led by Local Areas
  • Reinforcement of local capabilities for marine litter issues led by the central government in order to overcome the marine litter management limit
  • Establishment of local area-oriented management environments such as local public offering business and local specialization business

• Response to International Issues such as Plastic Marine Litter and Micro Plastic
  • Expansion of research investments for responses to safety issues of micro plastic in the marine ecosystem and seafood
  • Inter-departmental collaboration to reduce discharge of plastic wastes such as disposable plastic products to the ocean

• Expansion of Resource Recycling Policies Including Marine Waste Resource Recycling
  • Reinforcement of policies to increase recycling of marine waste resources generated from fisheries such as fishing nets
  • Development of eco-friendly materials such as buoys for aquaculture and fishing nets, policies to encourage changes in consumption patterns of fishermen
THANK YOU