3RD
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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

Floating Debris   Shoreline Debris   Sunken Debris

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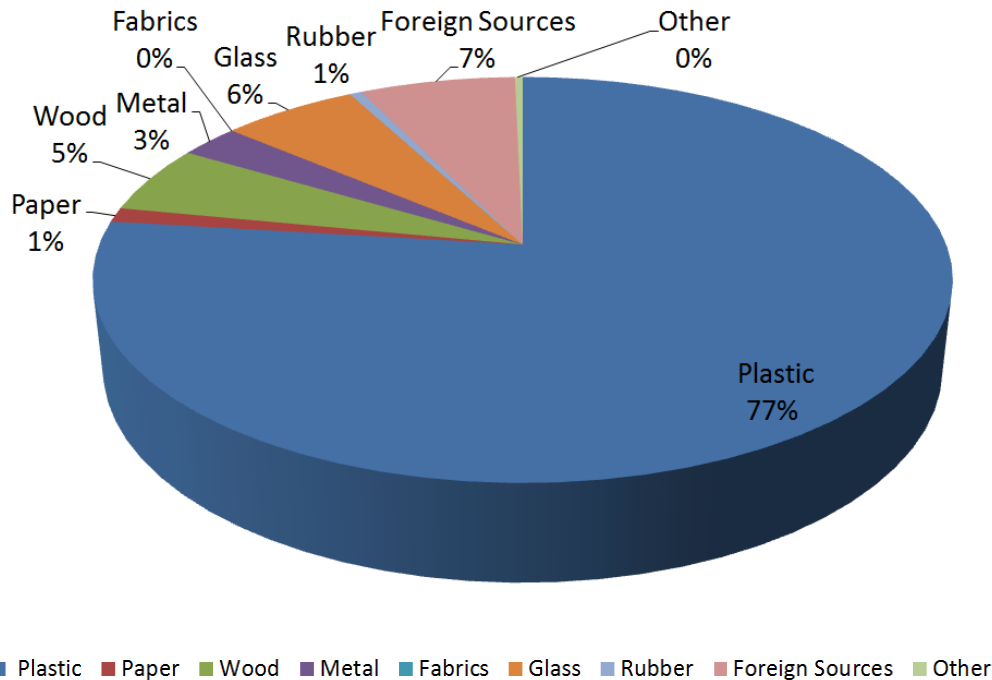
National Marine Litter Monitoring Program

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

- **Implementation**
  - **KOEM with NGOs**
  - **Include foreign-origin ML study**

National Marine Litter Monitoring Result in the Yellow Sea area(2018)

> **On the basis of number, Plastic and Styrofoam accounts for 77% of marine litter, followed by foreign sources marine litter(7%) and glass(6%).**
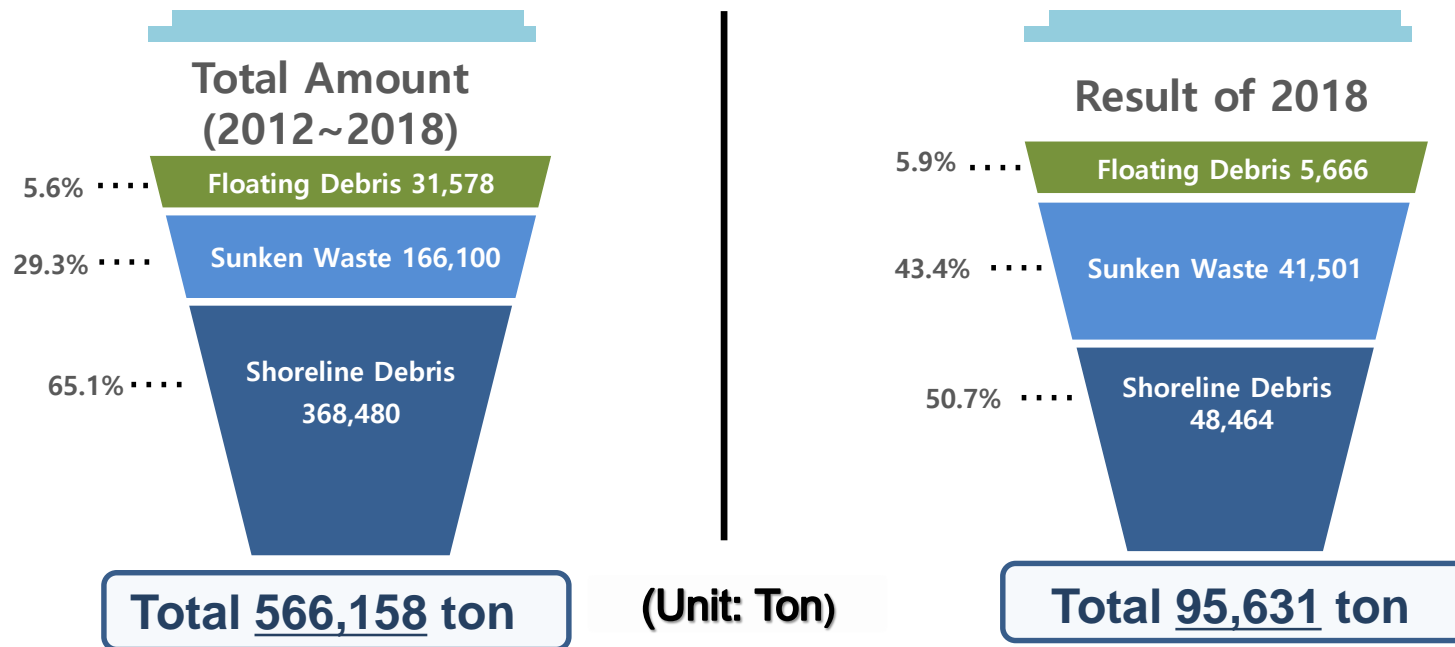
< ML composition of the Yellow sea area >

Fabrics 0%
Glass 6%
Rubber 1%
Foreign Sources 7%
Other 0%
Wood 5%
Metal 3%
Paper 1%
Plastic 77%

Plastic Paper Wood Metal Fabrics Glass Rubber Foreign Sources Other

속초 청초
인천 백령도
강릉 송정
강화 여차
인천 영종도
동해 노봉
인천 영흥도
안산 말부흥
태안 백리포
울진 후정
태안 안면도
영덕 고래불
보령 석대도
포항 칠포
서천 다사항
포항 대보
부안 대항리
고창 동호
울산 대왕암
영광 백바위
울산 나사
마산 봉암
부산 해양대
신안 임자도
사천 아두도
신안 자은도
여수 반월
거제 두모
해남 예락
남해 유구
통영 망일봉
해남 송평
여수 백야도
진도 하조도
고흥 신흥
고흥 염포
해남 물몬
완도 신지도
제주 김녕리
제주 사계리

동해안 9개소
서해안 19개소
남해안 12개소

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

Removal Performance of Marine Litter in ROK(2012 ~ 2018)

Amount of Removed marine litter every year: about 78,022 ton;

Overall Cost: APPX US$ 46 million (including local governments)

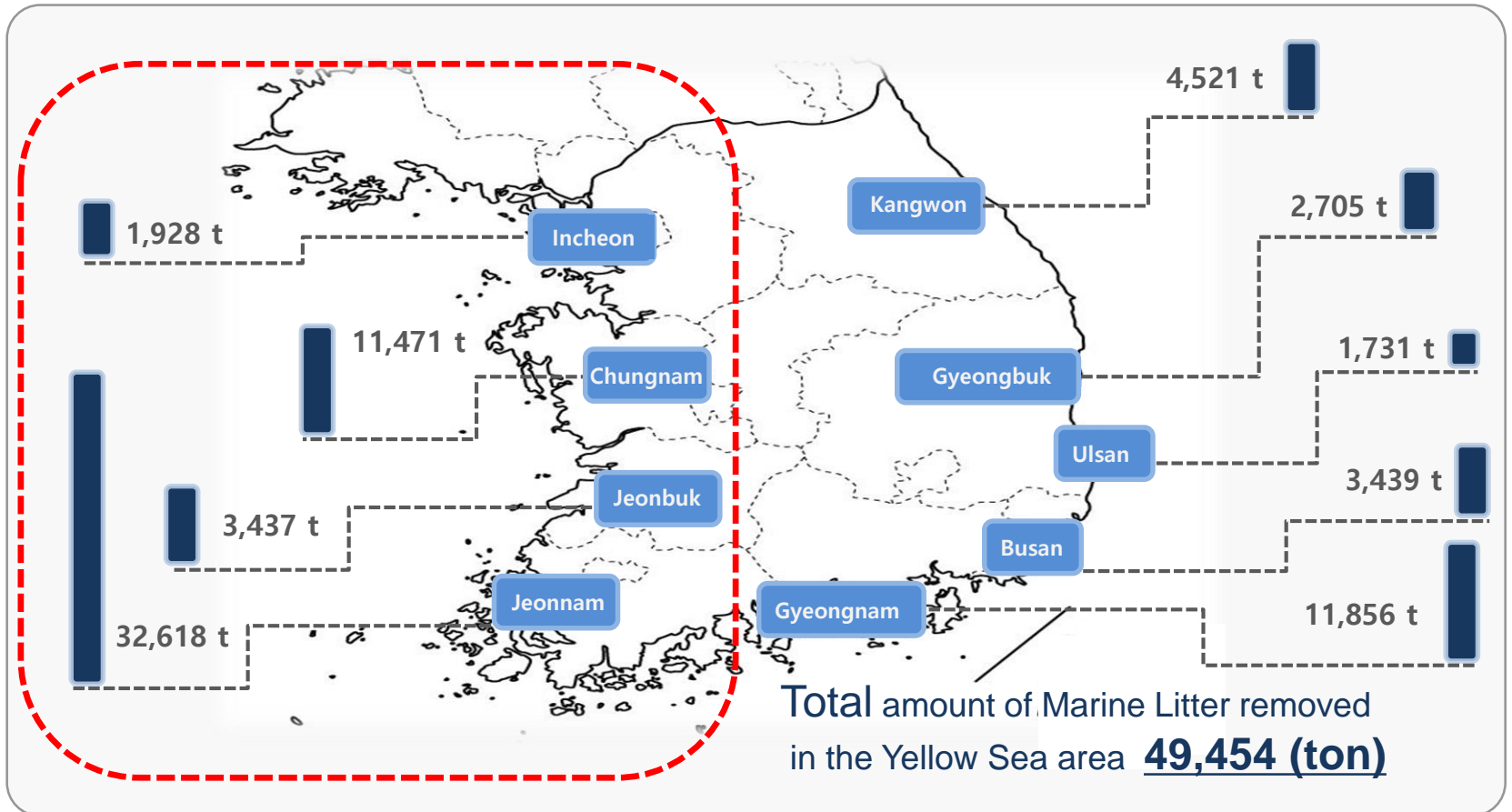- **Type of ML: Shoreline litter 65.1%, Sunken waste 29.3%, Floating litter 5.6%**

Total Amount (2012~2018)

5.6% · · · · Floating Debris 31,578

29.3% · · · · Sunken Waste 166,100

65.1% · · · · Shoreline Debris 368,480

Total 566,158 ton

Result of 2018

5.9% · · · · Floating Debris 5,666

43.4% · · · · Sunken Waste 41,501

50.7% · · · · Shoreline Debris 48,464

Total 95,631 ton

(Unit: Ton)

(* Data from Marine Litter Information System / www.malic.or.kr)
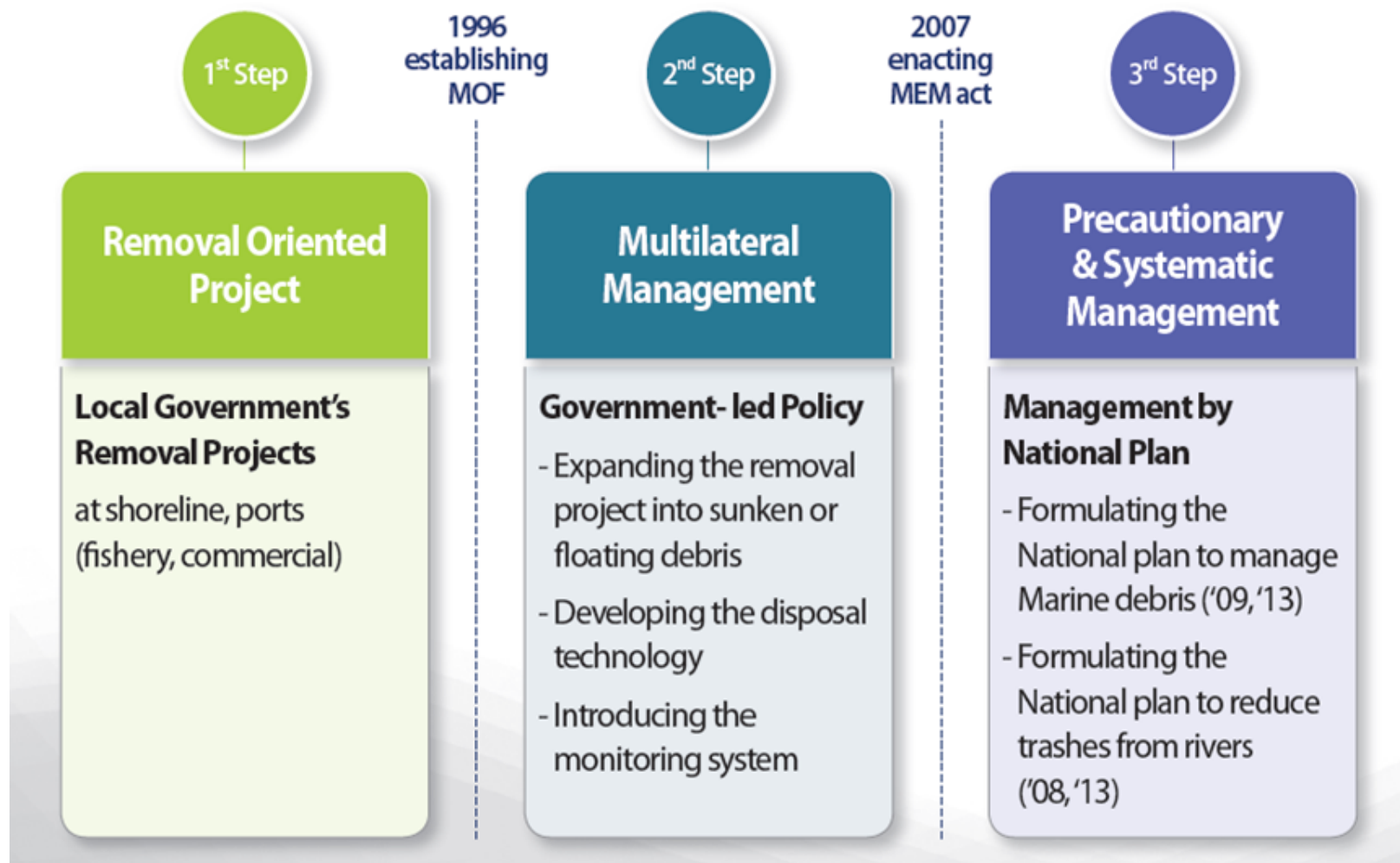
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Marine litter removal by local government in the Yellow Sea

32,618 ton of marine litter was removed in Jeonnam Province in 2018

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

4,521 t

Kangwon

2,705 t

1,928 t

Incheon

11,471 t

Chungnam

Gyeongbuk

1,731 t

Ulsan

3,439 t

Jeonbuk

3,437 t

Busan

Jeonnam

Gyeongnam

11,856 t

32,618 t

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

Marine Litter Management in ROK

1st Step	1996 establishing MOF	2nd Step	2007 enacting MEM act	3rd Step

Removal Oriented Project

Local Government's Removal Projects

at shoreline, ports (fishery, commercial)

Multilateral Management

Government- led Policy

- Expanding the removal project into sunken or floating debris

- Developing the disposal technology

- Introducing the monitoring system

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
- **2nd PLAN (2014-2018)** Appx. US$ 330 million
- **3rd PLAN (2019-2023)** Appx. US$ 883 million(TBC)

Review of 1st National Marine Litter Management Plan (2009-2013)

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.

Minimizing litter inflowing into marine environment

28 Tasks
US$ 240milliom

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

Involving public and international collaboration

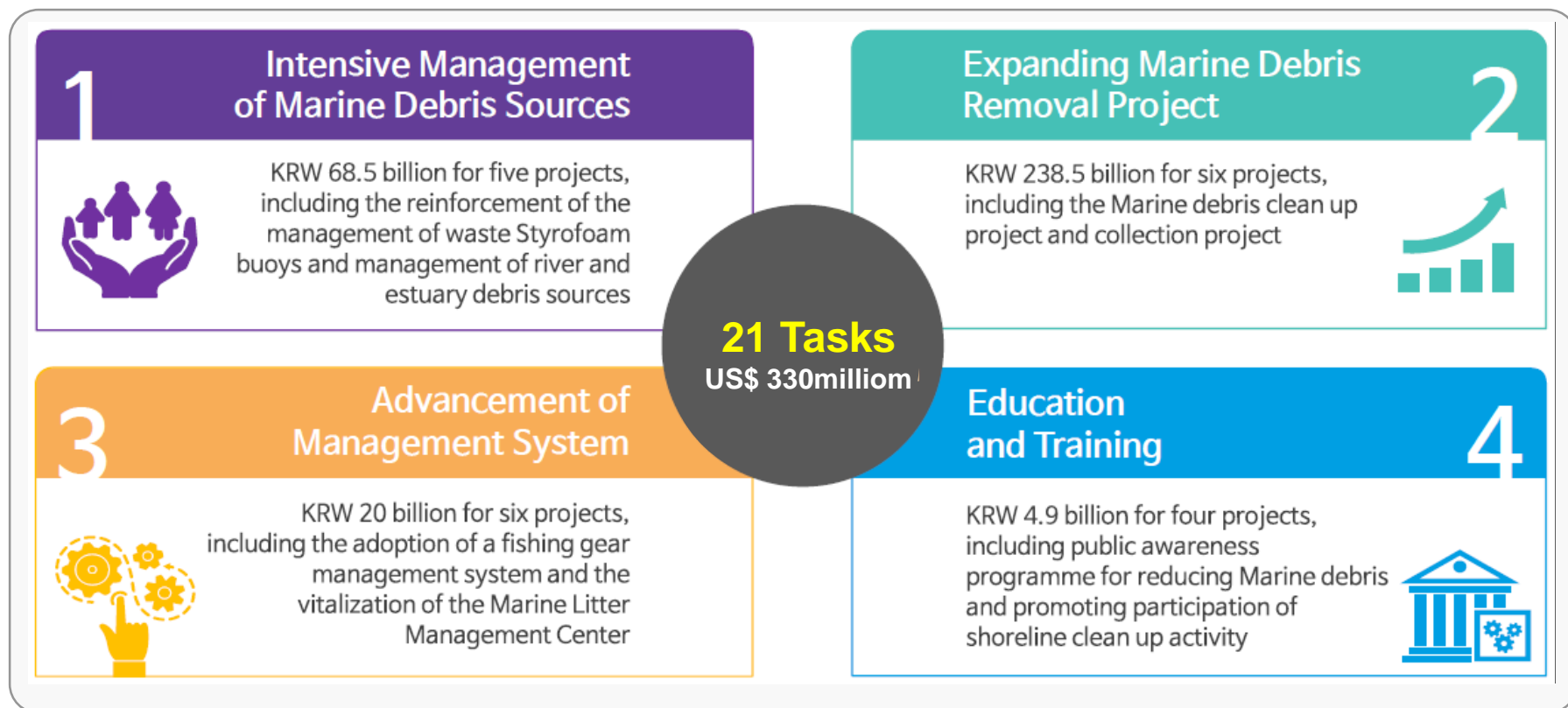**Increasing ML collection and disposal capacity**

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.

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
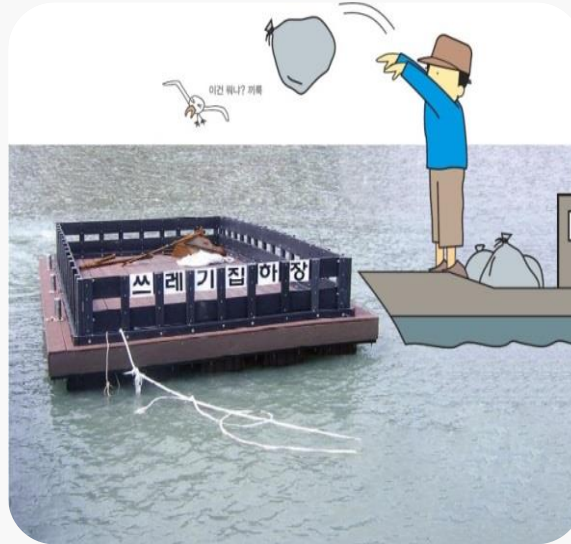
Review of 2nd National Marine Litter Management Plan (2014-2018)

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

21 Tasks
US$ 330milliom

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

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**

Case 4:

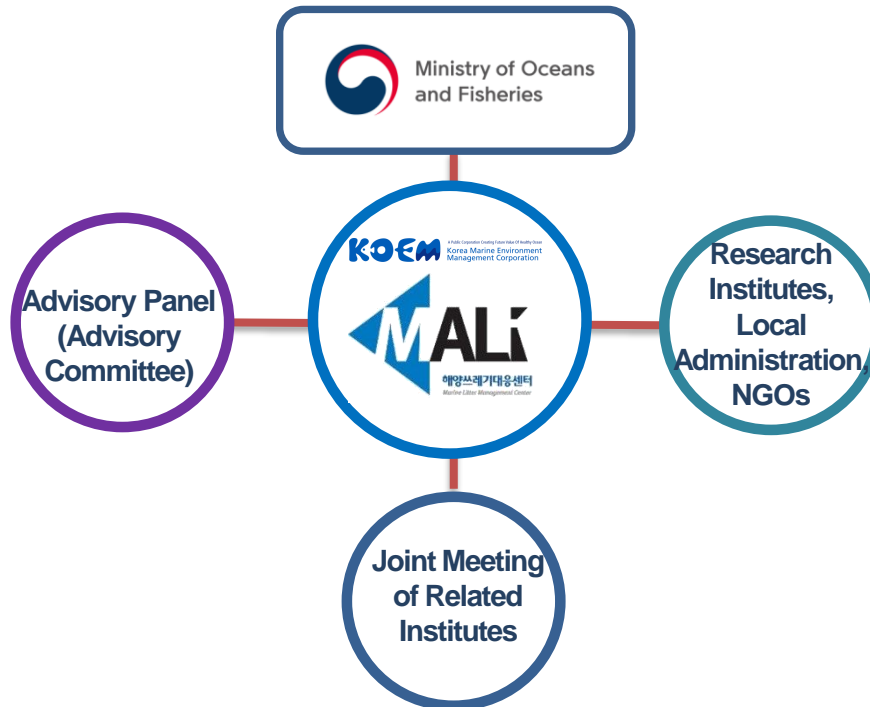## Establishment of MALI Center and Marine Litter Information System

- **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**

Monitoring

Info. management

Ministry of Oceans and Fisheries

KOEM Korea Marine Environment Management Corporation

Advisory Panel (Advisory Committee)

Research Institutes, Local Administration, NGOs

Policy support

Joint Meeting of Related Institutes

International Collabor.

Scope of 3rd National Marine Litter Management Plan (2019-2023)

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 od 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 od 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) Collet and dispose of derelict fishing gear (assign responsibility for the collection of derelict fishing gear, etc.)

THANK YOU
FOR YOUR ATTENTION