



EAS CONGRESS 2018

THE EAST ASIAN SEAS CONGRESS

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TRACK 2: MARINE POLLUTION AND CLEAN WATER

SESSION 2.2

Enhancing Ways to Reducing Impact of Marine Debris in the East Asian Seas Region

CONVENERS:



Korea Marine Environment
Management Corporation

COLLABORATORS:



Partnerships in Environmental
Management for the Seas of
East Asia



First Institute of
Oceanography of China



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INTRODUCTION

Marine Debris or Marine Litter is one of the top priorities in the current global agenda. The issue has been included in the Sustainable Development Goals (SDGs) under Goal 14 Life Below Water, UNGA as well as UNEA agenda and many other global initiatives. Marine Litter is believed to cause damages to marine life to the extent that some species may go extinct in few decades. Marine litter issue is particularly significant in the East Asian Seas region since the economy of the region is growing fast as the global growth hub. In this, ASEAN countries determined to address this global issue in concerted efforts. As the result, the 1st ASEAN Conference on Reducing Marine Debris in ASEAN Region was organized on 22-23 November 2017 in Phuket, Thailand and various action plans have formulated in the countries of the region.

As oceans are interconnected, marine debris issue should be addressed in a concerted effort around the globe. RO Korea is a leading country in addressing marine litter issue and wish to contribute in mitigating the impact of marine debris. Through this workshop, countries strategies on marine debris will be presented and possible establishment of a network of marine litter research and monitoring in the region will be discussed. Enhancing public awareness and education relating to marine litter around the EAS region will be also discussed.

Objectives:

- a. Sharing policy, programs and projects of marine litter response measures in the EAS region
- b. Discuss on enhancing publicity and education on marine litter issue
- c. Establishing a network of marine litter competent authorities in the EAS region

Convener:

- Korea Marine Environment Management Corporation (KOEM), RO Korea

Collaborators:

- PEMSEA
- First Institute of Oceanography (FIO), China

Desired Outcomes:

- Joint action on Marine Debris in EAS region through advocacy, education, research and monitoring

PROGRAM

Chair: Mr. Stephen Adrian Ross, Former Executive Director, PEMSEA

Time	Agenda
10:00-10:05	Opening Remarks <ul style="list-style-type: none"> - Dr. Park Seunggee, CEO, KOEM
10:05-10:20	Marine Litter in the ASEAN Region and Philippine Response as a Member State <ul style="list-style-type: none"> - Engr. Vizmindia A. Osorio, Assistant Director, EMB, DENR
10:20-10:35	The monitoring and management of marine litter in China <ul style="list-style-type: none"> - Dr. Cong Bailin, First Institute of Oceanography, China
10:35-10:50	Indonesia's response to marine litter <ul style="list-style-type: none"> - Dr. Andreas Hutahaean and Mr. Dida Migfar Ridha, the Director for Marine and Coastal Degradation Control, MOEF, Indonesia
10:50-11:05	National Marine Litter Program of RO Korea: Results of 10 years of practice <ul style="list-style-type: none"> - Dr. Sooyeon Cho, KOEM, RO Korea
11:05-11:20	PEMSEA's regional approach on Marine Litter <ul style="list-style-type: none"> - Ms. Aimee Gonzales, Executive Director, PEMSEA
11:20-11:55	Panel Discussion Topics: <ul style="list-style-type: none"> - Concerted efforts on marine litter monitoring - Enhancing public participation and awareness - Establishing a Marine Litter Network in EAS region Moderator: Dr. Won-Tae Shin, PEMSEA Panelist: <ul style="list-style-type: none"> - Ms. Ruth Mathews, Stockholm International Water Institute - Dr. Lev Neretin, Coordinator, NOWPAP - Ms. Nguyen Thanh Thao, Deputy, Director, VASI, Vietnam - Dr. Habib N. El-Habr, Coordinator, UNEP/GPA - Mr. Jerker Tamelander, Coordinator, COBSEA
11:55-12:00	Wrap-up and Closing <ul style="list-style-type: none"> - Mr. Stephen Adrian Ross, PEMSEA

OPENING REMARKS

Dr. Seunggee Park, President, Korea Marine Environment Management Corporation (KOEM)

Good morning, ladies and gentlemen! I am Seunggee Park, CEO of the Korea Marine Environment Management Corporation of the Republic of Korea.

I would like to thank all of the delegates, experts, and officials from China, PEMSEA, UNEP, NOWPAP, and many others, for attending today's workshop on "Enhancing Ways to Reduce Impact of Marine Debris in East Asian Seas Region, organized by KOEM, despite your busy schedules. It is very meaningful that we have gathered here today to discuss the marine litter subject, which is a severe threat to the marine environment.

We are all aware that hundreds of marine species are being harmed or killed by the trash we toss into the ocean. Marine litter is causing substantial damage to the marine environment and posing a threat to biodiversity. Particularly, the inflow of plastic waste is having a major adverse impact on the fisheries industry, tourism and shipping in the East Asian region.

The government of RO Korea is well aware of the seriousness of marine litter increasing every year. KOEM, designated as the national marine litter management organization, is operating the Marine Litter Management Center, the MALI Center in short.

The MALI Center monitors the status of marine litter, operates the Marine Litter Integrated Information System, develops policies, raises public awareness, and provides education with a comprehensive and scientific methodology.

KOEM also monitors floating marine litter in 8 major trade ports by utilizing drones, and plans to expand to 12 major ports by next year. Drones will be utilized to patrol not only ports but also ferry routes, environment management sea areas, and remote islands. We will minimize the blind zones in marine litter management and continue our efforts for a prompt collection of marine litter.

KOEM is also strengthening cooperation with relevant ministries and organizations to systematically monitor microplastics in the coastal areas and come up with effective countermeasures. Beginning next year, we plan to conduct a pilot project on microplastic monitoring to assess the amount of microplastics in the coastal areas.

Given the fact that marine litter is drifting along with the ocean currents, it is essential for each country to establish an international cooperation system as well as to promote active management policies.

To this date, KOEM has been providing international education and training to countries in need of assistance. As marine litter is a cross-boundary issue that we all have to take responsibility for, we are making efforts to prevent the causes of marine litter in advance and conduct joint responses.

In this context, I hope today's workshop serves as an opportunity to enhance cooperation toward addressing the marine litter problem in the region and lay an important foundation for promoting the protection of marine environments around the world.

Once again, I would like to thank all of you for participating in this workshop.

Thank you.

SUMMARY OF THE SESSION

Chair : Mr. Stephen Adrian Ross

Moderator : Dr. Won-Tae Shin

I. PRESENTATIONS

Marine Litter in the ASEAN Region and Philippine Response as a Member State

Engr. Vizminda A. Osorio, Assistant Director, Environmental Management Bureau (EMB), Department of Environment and Natural Resources (DENR)

The gist of Engr. Vizminda A. Osorio's presentation are as follows:

- Marine litters are both from land-based and sea-based sources. Food wrappers is the no. 1 marine debris in the Philippines;
- Most of the marine debris are present even since 2014. Most of the bulk of marine debris in the Philippines are from land-based sources;
- The DENR and Department of Transport (DOTr) work together in order to address the marine plastic pollution in the Philippines. DENR serves as the legislative body while DOTr thru the Philippine Coast Guard acts as the enforcing agency;
- Laws are already formulated in order to address the issue particularly the Clean Water Act;
- The Philippines participates in the International Coastal Clean-up (ICC) since 1994. Eleven thousand one hundred six (1106) kilometers of coast lines were covered during the ICC last 2017. A number of participants came from the education sector as well as the national and local government sector. Two hundred fifteen thousand nine hundred sixty-four (215964) participants cleaned the coastal areas and the surrounding land are, one hundred fifty-seven (157) participants conducted underwater clean-up, the clean-up also utilized one hundred twenty-three (123) watercrafts;
- The 2017 ICC collected 227,101 kilograms of trash where 4,319,981 pieces of items were collected;
- Collaborative undertaking between DENR and key stakeholders (called Adopt-Estero program) was also implemented. The community participation since 2013 up to 2017 was increasing. At the course of the program, the adopted waterways (esteros) have shown significant improvements in terms of its Physical and Physico-chemical attributes;
- Legislation on the sale, recycling and disposal of plastic waste products was being proposed;

- The implementing agency for marine plastic litter and control is not yet identified. At present, no systematic data gathering in terms of marine plastic litter is being done.

OPEN FORUM

- Is there any better situation on the marine litter in the Philippines?
 - Answer by the presenter: “There were significant improvements in the different areas of the Philippines, except in Manila.”

The Monitoring and Management of Marine Litter in China

Dr. Cong Bailin, First Institute of Oceanography, China

The gist of Dr. Cong Bailin’s presentation are as follows:

- There are already laws and regulations in China in terms of prevention of marine litter pollution. marine dumping and marine environmental pollution prevention and control;
- There are already technical standards for the monitoring and evaluation of marine plastics;
- Land-based marine litter and pollutants are highly regulated and monitored;
- All levels of the government play an important role for the management of different river basins in order to enhance the environmental conservation (River Chief Regulation and Bay Chief Regulation);
- This regulation clarifies the marine environmental quality objectives and implement different tasks on different government agencies and key players in the preservation of the bays;
- Importantly, it controls the marine litters which goes down into the bays and establishes a new mode of environmental management that combines land and sea administration;
- “Ecologically Protected Red Line” refers to the boundaries as important marine ecological functional areas, and marine ecological areas. It restores and measures to keep the original ecological functions of the environment;
- In the past 3 years, China implemented programs to suppressed the increase of marine litter (despite its high speed of development);
- Plastic wastes are still the main marine litter in China.

OPEN FORUM

- Do you feel that the current system is able to address the circular economy part of marine litter?

- Answer by the presenter: “In the land and sea, the debris are different. The responsibility was not determined so we implemented this system in order to clarify this gap in controlling our marine litter dumping and pollution.”

Indonesia’s Response to Marine Litter

Dr. Andreas Hutahaean and Mr. Dida Migfar Ridha

The gist of Dr. Andreas Hutahaean and Mr. Dida Migfar Ridha’s presentation are as follows:

- Marine plastic debris invades more tourism and coastal areas which significantly affects the industry;
- More than 1/3 of the fish catch samples have been found to consume plastics and microplastics in particular;
- A remote island in Indonesia which doesn’t have any inhabitant was swamped by many plastic bottles from different countries;
- Indonesia planned to decrease plastic use by 2025 to as much as 70% (and to reduce-reuse-recycle up to 30%);
- 5 programs include: a) behavioral change, b) reduce land-based leakage, c) sea-based leakage, d) enhanced law enforcement and e) research and development;
- In order to achieve the 2025 budget, constant annual monitoring will be implemented;
- Most of the plastic debris are from land-based sources which are brought to the ocean by the river;
- Educational campaigns in the schools and communities were conducted as well as the integration of environmental protection against marine plastic pollutants were implemented;
- Coastal clean-up in 2017 gathered nine thousand (9000) participants coming from fifteen (15) provinces in Indonesia;
- Law enforcement and research and development were also strengthened in order to achieve the target of reducing marine plastics in Indonesia by 2025;
- Plastic-tar roads are now being developed in order to utilize the plastic wastes as raw materials for roads;
- Increase the education and awareness as well as strengthen law enforcement and research and development in order to reduce marine plastic pollution.

OPEN FORUM

- The meeting commented: “The effort in Indonesia against plastic use and waste was fantastic and worth presenting.”

- Response by the presenters: “In Surabaya, they work with the local community as they clean the streets and plastic bags were minimized.”
- What incentives are given to entrepreneurs and investors that uses biodegradable materials?
 - Response by the presenters: “The government thru the ministry of environment gives incentives to the local government which has a coastal area in their territory and they put additional grant on top of their annual budget in order for them to control marine plastic debris in their areas.”
 - “Economically, some uses android technology and the internet to monitor and collect the plastic wastes in their houses in order for collectors to collect it.”
- China, Indonesia, Vietnam, and Philippines are countries with most marine debris, is this true?
 - Response by the presenters: “We don’t know how dirty it is but there was an assumption on the data collected that about 50 kilometers of our coastal area was covered by marine debris. Some publication also stated that about 90% of marine debris are coming from the river. These set of data increases the awareness in our country. The mismanagement of wastes in the land has high impact on the management of our plastic wastes in the rivers and the oceans.”
 - “Different data from research and development are used in order to strengthen our laws and regulations against marine plastic pollution.”

National Marine Litter Program of RO Korea: Results of 10 Years of Practice

Dr. Sooyeon Cho, Korea Marine Environment Management Corporation

The gist of Dr. Sooyeon Cho’s presentation are as follows:

- Institutional and legal arrangements in Korea were established in order to provide solid basis on laws and policies;
- Based on the laws and policies, marine litter management plans are developed. These serve as a foundation for the management of marine plastic wastes;
- In particular, the “National Marine Litter Management Plan” was developed in 2008 and 2014 in order to manage marine debris sources and removal projects:
 - Establishment of barge type marine litter collection system;
 - Waste/Bilge collection systems were introduced and established on fishing boats in order to prevent littering by small fishing boats as well as to raise awareness;
 - Compensation on collected wastes during fishing also reduced pollution of plastic debris on the sea. This program was proven to be cost-effective and raised the awareness of fishermen;
- Marine environment program for the youth was also established and significantly

increased the awareness of the youth regarding marine plastic wastes through lectures and summer camps;

- Establishment of MALI Center and marine litter information system which provides information to the public regarding the status of marine environments in terms of plastic marine pollutants;
- National marine litter monitoring program was also established;
- On 2019 to 2023, the National Marine Litter Management Plan will be implemented by different key stakeholders and players from the government and the private sector;
- Nationwide marine debris survey on ROK Coast started in 2008 from 20 sites and expanded its number of sampling and monitoring sites to 40 by 2018;
- From 2008 to 2016, there was a decrease on marine plastic litter
- Foreign litters from China (77%), Philippines (2%), Japan (9%), Vietnam, and others were also collected by the national marine debris survey;
- Education and awareness of the community was crucial in order to change the individual behavior towards single-use plastics and marine plastic litters.

PEMSEA's Regional Approach on Marine Litter

Ms. Aimee Gonzales, Executive Director, PEMSEA

The gist of Ms. Aimee Gonzales' discussion are as follows

- The East Asian Seas (EAS) Region responded to the reduction of marine pollution through:
 - Enhancement of compliance and agreements on conventions and reduction of marine pollution; and
 - Demonstration of good practices and experiences in integrated river basin and coastal management;
- PEMSEA is working on a regional plan in order to support a circular economy to reduce marine plastics in Asia;
- It aims to develop an enabling environment and to mobilize finance and investments to implement the circular economy. Also, it aims to implement innovative sustainable production and consumption and to share knowledge, experience and build capacity;
- Two-pronged approach: Major producers/users of plastic and the Local Government Units;
- Government funding alone could not fully invest the circular economy thus, we need the major producers and users of plastics;
- Data barriers are identified on lack of research and development on waste management and marine plastic debris and on the improvement of the economics

of waste management.

II. PANEL DISCUSSION/OPEN FORUM

Topics:

- a. Concerted efforts on marine litter monitoring;
- b. Enhancing public participation and awareness;
- c. Establishing a marine litter network in EAS region.

Panelist:

- 1) Ms. Ruth Mathews;
- 2) Dr. Lev Neretin;
- 3) Ms. Nguyen Thanh Thao;
- 4) Dr. Habib N. El-Habr

Ms. Nguyen Thanh Thao, Deputy Director, VASI, Viet Nam commented:

- Vietnam is on crisis on backing-up on natural resources;
- Take priorities on the management of marine plastic debris;
- We invite international corporations in order to solve marine plastic debris;
- Asian countries are serious on marine plastic litter issue.

Dr. Habib N. El-Habr, Coordinator, UNEP/GPA commented:

- We are talking about marine litter. The problem is already several years old and we are not pushing the issue since the year 2000;
- The issue of marine litter is upstream. Cleaning the coast and beaches are good but not enough;
- The solution is to change our behavior, consumption and production. Alternative solution for plastics should be formulated. Countries are now more and more aware;
- The key is cooperation and partnerships. Work together in order to solve the problem in the global and regional level;
- We have to talk on what we are doing in our region and also, what we are doing in the upstream (source of marine litter).

Ms. Ruth Mathews, Stockholm International Water Institute added:

- Different developed frameworks should be integrated. The government should look into the circular model in the management of marine litter;
- We have to look at the design and production as well as production and consumer behavior. "How do we bring the resource back to the system?" We

need to have government mechanisms such as policies and regulations in order to address the circular model;

- We have to enforce the recyclability of the products that are being made. We need to have governments at the stage of minimizing the products that are difficult to recycle;
- We need product transparency: “What are in the products? Are they recyclable or not?”;
- Bans on single-use plastics. “How are the packaging done? What is the durability of the products?”;
- Each one of these in the circular model needs the government mechanisms.

Dr. Lev Neretin, Coordinator, NOWPAP added:

- One of the key lessons for other countries was the comprehensiveness of national action particularly the government;
- The role of the government for environmental protection was crucial;
- Korea and Japan established a long-term plan in dealing with marine plastic debris in their regions;
- Comprehensive and government driven national strategy;
- Support the monitoring and measurements;
- Mobilize action and collect data most especially on the sources of these marine plastic debris;
- PEMSEA created a solid partnership in the region most especially in the local governments which are not covered by the national and regional frameworks;
- It was on the local government units where interventions and developments are effective.

Mr. Jerker Tamelander, Coordinator, COBSEA commented:

- Collaboration and coordination are very important in order for us to effectively deal with the problem in marine plastic debris;
- In tackling the issue, actions should be national;
- Adopt an ambitious target;
- There should also be a mechanism for the formulation of policies against marine plastic litters and the government should do the actions;
- Regulatory and scientific incentives should be given to those who initiates the work;
- The action of one country is not enough, thus we need the action of each country in the East Asia Region.

III. WRAP UP/CLOSING

- Everyone in the region is taking the issue in marine plastic litter seriously;
- We became focused on the directions that are on us as a partnership hub;
- “How do we reduce the amount of plastics enter our oceans from the upstream environment? How to avoid the discharge?”;
- We need to deal with the problem using integrated waste management;
- Need for comprehensiveness and partnerships as well as cooperation should be established;
- Existing networks should be strengthened;
- No single country or organization can handle this problem and we also need to deal with the private sector most especially on the funding and financial needs;
- Social responsibility should also be strengthened on each individual and key stakeholders such as the government and the private sector and non-government organizations (NGOs).

IV. Summary/Recommendations

Conclusions

1. The participants acknowledged the importance of combating Marine Litter in the Region as a global agenda;
2. EAS countries and regional organizations have established and are implementing their marine litter response programs;
3. Circular economy with solid 3R (reduce, re-use, recycle) programs should be implemented in order to prevent marine debris from entering the marine environment;
4. Programs for public awareness and education should be implemented.

Recommendations

1. All countries in the EAS region should establish a national program against marine litter;
2. Establishing a marine litter action network is necessary to collaborate and create synergy between EAS countries.
