

SEA of Solutions Back-to-Back Meeting

Building Synergy and Collaboration on Plastics in the ASEAN Member States: Towards Integrated Solutions to Marine Plastic Pollution

19 November 2021

16.00 – 17.30 Bangkok and Jakarta / 18:00 – 19:30 Tokyo

Initiated by:

Regional Knowledge Centre for Marine Plastic Debris (RKC-MPD)

MC: Chochoe Devaporihartakula, Programme Manager, Institute for Global Environmental Strategies (IGES)

Part 1: Capacity Building and Information Sharing on Plastics in the ASEAN Member States

Introduction of the Economic Research Institute for ASEAN and East Asia (ERIA)'s Experts Working Group on Marine Plastic Debris

Speaker: Dr Yasuhiko Hotta, Programme Director, Sustainable Consumption and Production, IGES on behalf of Mr. Michikazu Kojima, Research Fellow, Regional Knowledge Centre for Marine Plastic Debris, Economic Research Institute for ASEAN and East Asia (ERIA)

Summary:

Dr. Hotta delivered a presentation titled "Towards Integrated Solutions to Marine Plastic Pollution", which explained the background of the Regional Knowledge Centre for Marine Plastic Debris (RKC-MPD) and the overview of the centre's activity.

With the signing of an MoU in 2021, IGES has officially become a formal partner of ERIA to jointly propose regionally relevant policies through the activities of the Regional Knowledge Centre. One of such activities is the establishment of the Experts Working Group on Marine Plastic Debris. The working group, comprised of a network of experts, has its objective to advise the centre and enhance its knowledge creation and management. Currently, 12 experts from 10 countries make up the group, but the membership can grow further in the future. The working group encompasses several fields such as monitoring, impacts of marine plastics on the

ecosystem, material flow analysis, life cycle assessment, waste management, recycling, economics, and political sciences.

Dr. Hotta reminded the audience that Asian countries are the global hotspots for marine plastics, and ASEAN countries have prioritized this pressing issue in recent years by formulating action plans and roadmaps to reduce single-use plastics and promote plastic recycling. To evaluate the progress, data on total plastic leakage into the oceans is required to formulate appropriate policies. This applies to waste discharge, upstream waste leakage, single-use plastics substitution, negative side effects of waste management, biodegradable plastics, recycling, and waste management. Finally, Dr. Hotta emphasized that more knowledge from the government, industries, consumers, and citizens is needed to develop better policies.

Data on Plastics in the ASEAN Member States: Current Status and Future Directions

Speaker: Dr. Vivek Anand Asokan, Policy Researcher, Institute for Global Environmental Strategies (IGES)

Summary:

Dr. Asokan presented the draft report: "Building Data on Plastic Value Chain in the ASEAN Member States" to gain input from experts and discuss key issues to build capacities and relevant networks in the region. Despite that most plastic-related research is based on guess-estimates, and not empirical data, the report aims to identify data collection capacity and data availability across the plastic value chain in the ASEAN member states and further suggests some recommendations to improve the data on plastics. The data collection capacity was compiled from relevant reports and websites, while plastic data was collected from material flow analysis (MFA) in Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam.

Concerning general waste management data, developed countries like Japan, the Republic of Korea, and Singapore have both data collection capacity and data availability. Such capacity and data in the five target ASEAN countries are partially available, but when it comes to data on plastic leakage to the marine environment specifically, the data falls short even in developed countries. The scope of MFA is limited in these countries and is incomplete at best. MFA in Indonesia focuses more on the downstream stage (waste collection and treatment), while MFA in the other four ASEAN countries covers both the upstream (production) and downstream stage. MFA in all these countries does not cover the midstream stage (consumption) and end-of-life stage (leakage to the environment/ocean). The unavailability of complete data poses uncertainties to formulate effective policies.

Dr. Asokan proposed five-step recommendations to improve the data collection capacity: (1) build existing capacity and collect data on production and waste management, (2) build new capacity on consumption and waste recycling, (3) establish scientific knowledge and new capacity on leakage to environment and ocean, (4) determine relevant indicators for monitoring and assessment of policy objectives, through benchmarking with existing indicators in EU, Japan, and China, and (5) link with a relevant issue like urban flooding. Dr. Ashokan concluded that we need to build plastic value chains in a structured manner based on more field data across the region.

Q&A Session

(Question by Ms. Chindarat Taylor, Vice President, Solid Waste Management Association) What are your plans to monitor comparative data now and three years later to evaluate progress?

(Answer by Dr. Vivek Anand Asokan, IGES) We hope to check how data capacity will improve over a period of time.

(Question by Ms. Della Grace Bacaltos, International Relations Officer, Davao del Sur State College, the Philippines) Do you have capacity development programs to standardise plastic waste assessment research methods (e.g. material flow)? How can capacity development programs be accessed? Do you also collaborate with CSIRO in Australia for the plastic waste assessment?

(Answer by Dr. Vivek Anand Asokan, IGES) An expert from CSIRO is part of the Experts Working Group, and we hope to plan capacity building programs depending on the requirements of the ASEAN member states.

(Question by Mr. Peter King, Senior Policy Advisor, Institute for Global Environmental Strategies) As you pointed out, the data on plastic leakage is often based on guess estimates. How much can we trust when the UNEP claims that there will be more plastic in the ocean than fish? A quick check on fish biomass would suggest that we should avoid such slogans.

(Answer by Dr. Vivek Anand Asokan, IGES) It will be better to have more data based on field estimates and understand the scientific mechanism to ascertain if such claims are true, but of course, *prima facie* they are good points to make.

(Question by Ms. Aprilia Nadia, Research Associate, Geoinformatics Center, Asian Institute of Technology, Thailand) I wonder if there is any record on the policymaking related to capacity building using the community approach? For example, the involvement of the community to look after their environment to prevent plastic leakages.

(Answer by Dr. Vivek Anand Asokan, IGES) You could look at the citizen science-based approaches.

(Comments by Ms. Juita Ramli, Consultant, Sea Resources Management) The informal sector is involved in waste collection and separation. There are also many informal and social enterprises that recycle or upcycle plastics, especially single-use plastics. An example includes the collection of bread tags at home and schools that are then recycled into other consumer products by the informal sector. No doubt they are comparatively small in number, but if combined, might they be considered a significant effort to be included in the plastic value chain data? If acknowledged, the informal sector could be potentially involved in Plastic Credit schemes.

Reflection of the Presentations

Speaker: Dr. Vong Sok, Head of the Environment Division, Assistant Director of Sustainable Development Officer, ASEAN Secretariat

Summary:

Dr. Sok thanked ERIA for the active engagement of the RKC-MPD in addressing the issue of marine plastics in the region and for the establishment of the Experts Working Group. He also thanked IGES for bringing all relevant stakeholders to join the meeting on that day.

Dr. Sok expressed his appreciation for the presentation by Dr. Asokan and confirmed that the overview on plastic data was good enough to offer a snapshot of the ASEAN member states. He added that data is almost always insufficient, so finding a way to invite people to contribute to its collection will be needed. Additionally, we need more strategic thinking and vision to make the data information effective and efficient for monitoring planning and management. Very often, available data does not serve any useful purpose for the day-to-day operations of marine plastic management. For example, without a proper baseline, monitoring activities can end up being meaningless. Creating a bridge between the available data, despite its limitation, with practical applications on the ground is vital, and this will also serve to build capacity in the region.

The private sector is an important stakeholder which develops practical products and technologies to reduce plastic waste. For that, they need to be engaged as part of a solution across the value chain, concluded Dr. Sok. He expressed his appreciation for ERIA to have brought the private sector around the table to tackle marine plastics.

Finally, Dr. Sok highlighted the importance of focusing on solutions rather than problems. If we are solution-oriented, even with limited data, so long as stakeholders have the right mindset and capacity, they can develop meaningful policy recommendations.

Part 2: Panel Discussions and Engagement with Audience

Moderator: Dr. Vong Sok, Head of the Environment Division, Assistant Director of Sustainable Development Officer, ASEAN Secretariat

(Introduction and reflections on data regarding marine plastic debris from Ms. Kamala Ernest, Programme Management Officer, Coordinator of SEA Circular Project, United Nations Environment Programme) I consider that there are a lot of data out there, but what is lacking is coordination and collaboration. The SEA Circular put a lot of attention on data collection and monitoring as well as baseline setting. The key point is how to verify the data and harmonize it so it can be compared among countries.

(Introduction and reflections on data regarding marine plastic debris from Dr. Youna Lyons, Senior Research Fellow, National University of Singapore) My team has been working on plastic debris from the moment it reaches the sea. We have been documenting the research

on marine plastic debris that has been conducted in the region, and extracting the data from the publication and analyse it. Despite the papers being a source of a wealth of information, certain data cannot be used for a baseline setting. It is important to keep in mind that certain field research will be inevitable too.

(Introduction and reflections on data regarding marine plastic debris from Dr. Kavinda Gunasekara, Associate Director, Geoinformatics Center, Asian Institute of Technology, Thailand) I have been engaged with the UNEP CounterMEASURE project since 2019 with the purpose to bring the digital tools, which was a geospatial-based solution to the plastic monitoring. We are expanding the tools and mapping technologies into different domains withing the phase II project framework. I believed that the digital tools they use would remain open so that anybody can replicate it at a low cost.

(Introduction and reflections on data regarding marine plastic debris from Dr. Muhammad Reza Cordova, Researcher, Research Center for Oceanography, Indonesian Institutes of Sciences) I would like to emphasize the importance of data harmonization, considering that so many researchers use different methods without any quality control and quality assurance. I agree with Ms. Ernest that the data needs more scientific evidence to ascertain debris hotspots, prediction of plastic volume, their movements, etc. In Indonesia alone, there are many monitoring methods. If all the researchers used the same methodology, it would be possible to formulate more effective policies.

Q & A Session

(Question by Dr. Vong Sok, ASEAN Secretariat) What information on marine litter and plastic pollution will be useful for the RKC-MPD' as a clearinghouse to host and manage? How should the information be used?

(Answer by Dr. Youna Lyons, Senior Research Fellow, National University of Singapore) Dr. Lyons, who has been collecting a vast number of data related to marine plastic research said that she thinks one way to use this enormous quantity of data is to analyze it of extract useful messages out of it and inform the upstream policy-level decision-making. And once the upstream policy has useful input to the research, this should also feed into the way researchers conduct their work. For example, screening through the data to examine the validity of the claim by the decision-makers that certain plastic polymers are the most harmful to the marine ecosystem would be an interesting one. In marine plastic fields, various research groups are working on different parts of this overall picture. But if we can use the existing data set and tighten the gaps to better inform each other, policy recommendations forwarded to the governments' side will be better coordinated.

(Answer by Ms. Kamala Ernest, Programme Management Officer, Coordinator of SEA Circular Project, UNEP) My hope for the Regional Knowledge Centre is to enhance knowledge on extended producer responsibility (EPR) and plastic value chains. Another interesting topic is Producer Responsible Organizations (PRO), as they possess a wealth

of useful data for setting up baselines. The SEA Circular project is looking into exploring this data.

(Question by Dr. Vong Sok, ASEAN Secretariat) Please suggest key priority areas that the ERIA's Expert Working Group should focus, to support the ASEAN Member States?

(Answer by Dr. Youna Lyons, Senior Research Fellow, National University of Singapore) Marine plastic debris researchers face various difficulties and constraints that are not acknowledged by policymakers but are hampering to keep conducting their work. One of the roles of the Experts Working Group can be to collect in a systematic way such information and communicate it to the policymakers so they can better address such barriers.

(Answer by Dr. Muhammad Reza Cordova, Researcher, Research Center for Oceanography, Indonesian Institutes of Sciences) Stand-alone research papers and researchers' voice is hard to reach the stakeholders. I would like to see the Experts Working Group forming a united front and channel marine plastic-related scientific findings and assessment so as to communicate them in a more impactful way to the policymakers.

(Question by Dr. Vong Sok, ASEAN Secretariat) How do innovative digital tools and citizen science help local governments and people to identify and monitor plastic waste generation and marine litter? Could you share some views on that?

(Answer by Dr. Kavinda Gunasekara, Associate Director, Geoinformatics Center, Asian Institute of Technology, Thailand) Building a robust model to address this complex issue is very challenging. Under the UNEP's CounterMEASURE project, our team is developing a machine learning model to monitor plastic waste in streets and other hotspots. The model is translated into a low-cost citizen science tool named *pLitter* (<https://plitter.org/>), which is open for anyone to replicate and scale up. By using the tool, a 1-minute video from 1-week monitoring will be created, showing the enormous accumulation of waste in a specified location.

(Question by Dr. Vong Sok, ASEAN Secretariat) What are the potential capacity building programmes that can address the needs of the ASEAN Member States in managing and monitoring marine litter and plastic pollution?

(Answer by Dr. Yasuhiko Hotta, IGES) Capacity-building on policymaking through the collaborative approach is increasingly becoming important. The collaborative approach means the collaboration among industries, citizens, consumers, and governments, and without this particular kind of approach, initiatives such as EPR will be very difficult to implement.

(Answer by Dr. Kavinda Gunasekara, Asian Institute of Technology, Thailand) Scaling up the citizen science tool through the establishment of university working groups could be one of the capacity-building activities to explore.

(Answer by Ms. Kamala Ernest, UNEP) (Responding to Dr. Cordova's earlier point on the difficulties in communicating with the policymakers) I recommends researchers feed into UNEP's network such as the COBSEA (intergovernmental initiative where focal points from the member states' Ministry of Environment gather), COBSEA Working Group on Marine Litter and Expert Working Group on Marine Litter Monitoring. As for capacity building, UNEP is working with CSIRO on marine litter monitoring, preparing harmonised guidance documents and conducting training and data collection activities.

(Wrap-up by Dr. Vong Sok, ASEAN Secretariat) Sincere thanks to all speakers for their great insights to the Regional Knowledge Centre as well as the Experts Working Group.