



SUMMARY REPORT FOR PARTICIPANTS
FROM THE REGIONAL POLICY DIALOGUE
HARNESSING THE SUSTAINABLE OCEAN ECONOMY IN SOUTH EAST ASIA

Executive Summary

‘Evidence – Governance – Co-ordination – Finance’

OECD held a Regional Policy Dialogue on “Harnessing the sustainable ocean economy in South East Asia” as part of its work to support partner countries in the region. The Dialogue was held on 3-4 December in Bali, Indonesia and co-hosted with the Coordinating Ministry (MENKO) of Maritime Affairs and Investments of Indonesia, in co-operation with the Coordinating Body on the Seas of East Asia (COBSEA), part of the United Nations’ Environment Programme (UNEP).

The Dialogue provided an opportunity to exchange on policy challenges and solutions to promote a sustainable ocean economy in South East Asia. It brought together officials from various Indonesian ministries and agencies, national governments from Cambodia, Malaysia, Thailand and Viet Nam, finance institutions, private sector, not-for-profit organisations and academia. The Dialogue forged new partnerships and showcased projects and initiatives that can feed into and scale up good practice in the region. A number of themes emerged from the Dialogue, and are summarised here.

The sustainable ocean economy in South East Asia has tremendous untapped potential. Globally, there is potential for ocean-based industries¹ to double from USD 1.5 trillion in 2010 to USD 3 trillion dollars in 2030.² The South East Asia region in particular has the highest global value-added growth. Furthermore, the value of ecosystem services in the South East Asia region is estimated to USD 684 billion, with the largest share in Indonesia (USD 412 billion)³.

The region has vast potential to develop the ocean economy in various maritime sectors. Though growing the ocean economy is an aspiration in the whole region, the challenge of how to value and protect marine resources remains. On one hand, governments must consider the direct ocean-industry dimension. On the other hand, governments must balance ocean industry development with the natural assets, goods and ecosystem services provided by marine and coastal habitat. These two dimensions are inextricably inter-linked and must be addressed together. This underscores the critical importance of ensuring policy alignment and coherence across the various policy domains involved in decision-making on the ocean. Capacity building to support such alignment is a necessary ingredient in future multilateral initiatives on the ocean.

¹ Fisheries & aquaculture, oil & gas, mining, energy, water desalination, manufacturing (seafood processing, marine biotechnology/pharmaceuticals, ship building & repair, marine transport equipment, marine construction and dredging, shipping and ports, marine tourism and recreation, submarine cables marine education & research, marine services (mapping, monitoring, consulting maritime insurance, maritime safety and surveillance (this list is not comprehensive)

² OECD (2016), *The Ocean Economy in 2030*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264251724-en>.

³ Ebarvia, *The Partnerships in Environment Management in South East Asia (PEMSEA)*, 2019, Policy Dialogue 2-3 December

Strong political leadership, good governance and effective coordination at both the national and regional level are essential to progress on the implementation of policies to lead towards a sustainable ocean economy. Indonesia provides a good example where political momentum for a comprehensive and cross-sectoral vision for the ocean economy at the national level can be harnessed to drive a more aligned policy environment on the ocean. Promoting the sustainable ocean economy is one of the main priorities of Indonesian President Jokowi, and Indonesia has created a Coordinating Ministry of Maritime Affairs & Investments to enhance sectoral co-ordination and foster cross-sectoral synergies. At the regional level, COBSEA has developed a regional ‘*Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian Seas Region*’, focusing on land-based pollution, ecosystem-based spatial planning and management and governance framework. In addition, ten countries in the region have joined ‘*The Partnerships in Environment Management in South East Asia*’, (PEMSEA) with a strong focus on the ocean economy.

To enhance the sustainable ocean economy, innovative financial instruments and capacity development are needed to leverage existing traditional measures. In 2013-17, USD 314 million on average a year was allocated for ocean based-industries and marine ecosystem, representing 11% of total ODA to Indonesia (i.e. a total of USD 15 billion over the period)⁴. The largest share of ODA being allocated to ODA for the ocean is in Africa (39%), South East Asia (38%) and Asia (13%). Private finance is an essential source to tap into, and in 2013-2017 ODA mobilized USD 600 million to the ocean economy.

There is a need for a pipeline of bankable and sustainable projects, to enable contribution of emerging finance. There is also need for capacity building throughout the investment cycle on what ocean-related investment could look like. The World Bank regional projects to improve the enabling environment for private investments in the Bank’s worldwide portfolio of USD 4.6 billion for *Blue Economy*. The Asian Development Bank (ADB) strategy for 2030 includes an *Action Plan for Healthy Oceans*, which involves expanding investments and technical assistance to USD 5 billion 2019-2024.

One of key challenges to the ocean environment – and therefore the ongoing sustainability of ocean-based industries – are the land-based activities that significantly contribute to pollution and degradation of the coastal and marine areas. Main contributions are from wastewater, increased nutrients and marine litter. Many initiatives are established to respond to this pressing challenge. Indonesia has established a *Regional Capacity Center for Clean Seas* that aims to create a framework to mitigate land-based sources to the seas. The Center will link the work to relevant platforms and international initiatives for effective delivery. Another initiative is the *Bali Partnership* that will focus on the need for a holistic waste system change in Bali.

There is no silver bullet to combat marine plastics. Rather a broad and comprehensive strategy is preferable with a mix of regulations and voluntary action. Examples include bans and taxation of single-use plastics, waste management programs, incentive programs, public education and awareness and innovation and design in alternative materials. Private finance could be used to speed up action on the ground. *The Business Alliance to End Plastic Waste* is supporting the development of the circular economy in the region, with a commitment of USD 1.5 billion over 5 years. The Alliance is working, among others, with producers to scale up successful projects and establish good practice.

⁴ OECD (forthcoming), *Sustainable Ocean for All*

Dialogue Notes

Background of the Policy Dialogue

The OECD estimates that the global ocean economy will double in size between 2010 and 2030, growing at a faster pace than the rest of the global economy⁵. To tap into the potential of future economic growth any development of coastal and marine resources needs to be done sustainably, with due consideration for environmental, social and economic aspects. If economic growth will be able to maintain its respect for ecosystems and environmental concerns, the South East Asian region holds great potential to tap into new opportunities from the ocean economy.

South East Asia has some of the richest marine ecosystems in the world that has potential to lay the foundation for further economic wealth. At the same time, South East Asian coastal areas have been recognized as among the most vulnerable to climate change.

In 2019 the OECD launched the *Sustainable Ocean for All Initiative* to support low- and middle-income countries in harnessing the benefits of sustainable ocean economies through the sustainable development of existing and emerging ocean-based industries. As part of this work, the OECD is conducting a country diagnostic of the sustainable ocean economy of Indonesia. In this context, OECD took also the opportunity to organise a Regional Dialogue to engage with key actors and partners in the South East Asia region to exchange on current challenges and the lessons learnt as well as policy and financing solutions to promote the development of a sustainable ocean economy.

The voices noted in this summary is a selection of the wider discussion that took place during the intensive two days. The meeting started with a short introduction and overview as to put the *Dialogue* in a broader context. The Dialogue consisted of four substantive sessions:

- Session 1: Emerging findings from OECD's Sustainable Ocean Economy Country Diagnostics of Indonesia
- Session 2: Mapping ongoing initiatives and its implications for South East Asia
- Session 3: Enhancing financing for sustainable ocean economies in South East Asia
- Session 4: The plastic challenge: Financing and new solutions for reducing marine plastic pollution.

Introduction

The Dialogue started with an overall outlook by *Mr. Anthony Cox, Deputy Director OECD Environment Directorate*, of ongoing initiatives related to preservation and sustainable use of ocean. The Dialogue is held at very suitable time, just before the start of 2020 – the super year for ocean – that includes the UN Ocean Conference in Lisbon in June; IUCN World Conservation Congress in Marseille in June; Our Ocean in Palau in August; and the 15th Meeting of the Conference of the Parties to the Convention of Biological Diversity in Kunming, China, in October. Furthermore, the emerging findings from the *OECD Country Diagnostics of the Sustainable Ocean Economy of Indonesia* is feeding into the Policy Dialogue and the outcome will feed into the overall final report of the *OECD Sustainable Ocean for All Initiative*.

The key events in 2020 need to bring one core message and build on each event's outcome as to enrich the knowledge and impact. South East Asia is an important region for both showcasing how transition to sustainable ocean economy can be feasible, and addressing the urgent challenges that lie ahead.

⁵ OECD (2016), *The Ocean Economy in 2030*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264251724-en>

Mr. Cox clarified the role of OECD in co-hosting this dialogue: sharing experiences from OECD countries, learning from countries in South East Asia, comparing experiences and lessons learned in other parts of the world, and bringing facts and analysis. This dialogue aimed to share experiences on how to develop an ocean economy: what does it mean in practice, and how technology and innovation as well as financing can support this development. A particular focus was given to marine litter, given its impact in the region, as an example on how to spear action.

Dr. Ridha Yasser, Deputy Director for Development of Science & Technology for Maritime New & Renewable Energy Applications, Coordinating Ministry for Maritime Affairs and Investment, Indonesia, pointed out that with a new government in place, Indonesia will look even more towards ocean for the future – it will be a top priority. Furthermore, Indonesia is the world’s largest island country and contains more water than land. At the same time it has challenges for example with illegal fishing, environmental protection of corals and mangroves. To be able to tap into the new area of economic growth, balancing environmental concerns would be a necessity. The development of a sustainable ocean economy is Indonesia’s priority at the highest political level, with a new government in place there is a political momentum.

Mr. Jerker Tamelander, Executive Coordinator, COBSEA, presented on the Governance Approach to Ocean Economy. He noted that ocean plays an important part in the Agenda 2030, both as a stand-alone goal, but also addressing the interlinkages between all indicators and sub-goals in the 17 goals. Many ocean challenges can be harnessed into opportunities with support from lessons learned from other countries, regions and sectors. Careful planning is needed to ensure that investments provide genuine economic growth and social gains. Otherwise long-term gains can be undermined. Furthermore, it is important to acknowledge the need for data and science for developing an ocean economy. Action needs to be grounded in evidence. Furthermore, marine ecosystems are transboundary in character; hence the role of a regional perspective becomes important (further discussed in session two). In sum, three aspects are fundamental: intersectionality; good governance; and fostering partnerships.

Session 1: Emerging findings from OECD’s Sustainable Ocean Economy Country Diagnostics of Indonesia

OECD has stepped up its engagement in the marine space and developed a first-ever integrated approach to the sustainable ocean economy. The aim is to produce new research on i) the contribution of ocean-based industries to employment and value added across developing countries and possible trends; ii) effective domestic policy frameworks and economic instruments for sustainable ocean economies; iii) development finance and effective development co-operation approaches and instruments. Research on sustainable ocean economy with a country diagnostics approach has been carried out in selected countries: Kenya, Indonesia, Cabo Verde, and Antigua & Barbuda.

Dr. Piera Tortora, Policy Analyst, OECD Development Co-operation Directorate, clarified that East Asia Pacific has the highest global value-added growth, looking at ocean-based industries; such as marine fishing, marine aquaculture, marine fish processing, shipbuilding, maritime passenger transport and maritime freight transport. However, without appropriate stewardship we will not be able to harness inclusive and sustainable growth.

Indonesia accounts for the largest share (67% in 2015) of value-added for the six ocean-based industries across ASEAN countries⁶. Indonesia places a particular emphasis on the benefits to be gained from

⁶ OECD (forthcoming), *Sustainable Ocean for All*

expanding certain sectors – such as fisheries, aquaculture and tourism. Furthermore, Indonesia sees their development as an important pathway for correcting the historic imbalances in development between the western (well-developed) and eastern (under-developed) parts of the country. As a middle-income country moving towards upper-middle income status, Indonesia needs to find new ways to diversify its financing mix. This opens up to foster new alliances and collaborations able to mobilize a broader range of skills, resources and financing⁷. In 2016-2017 ODA contributed to only 1.5 percent of Indonesia government revenues.

Looking at the policy instruments to grow ocean economy in Indonesia, *Dr. Ridha Yasser, Deputy Director, Coordinating Ministry for Maritime Affairs and Investment*, pointed to the progress made since 2014. The top priority area is now to maintain the political momentum and to implement a comprehensive and cross-sectoral vision for the ocean economy.

Indonesia accounts for 67 percent of the value-added for ASEAN countries⁸. Fishing, aquaculture, fish processing, shipbuilding, passenger transport, freight transport, maritime transport is the largest share in terms of total value, but largest in terms of employment is aquaculture, representing nearly half of total value. To preserve the fisheries sector, Indonesia will also need to address the unintended impacts of fisheries policies.

However, since ocean is not *one* industry there is a need for taking into account a broader spectrum of industrial and private sector development. As the ocean economy expands over many sectors and departments, policy co-ordination and working across institutions becomes even more important.

One key aspect of the integrated management is the interlinkages between land and sea. Development of an ocean economy will have to take into consideration land development. Hence an integrated approach to management including both land and sea is important. To address the growing land-based pollution (further discussed in session four), Indonesia is also focusing on improving the waste management system.

Session 2: Mapping Ongoing Initiatives and its Implications for South East Asia

Regional Seas Programme – part of a global governance framework from Mr. Jerker Tamelander, Executive Coordinator, COBSEA

As a response to the governance challenges, the Regional Seas Programme was developed in 1974, forming a global patchwork of regional governance mechanisms (Multilateral Environment Agreements). Today the Regional Seas Programme consists of 18 regional seas action plans. UN Environment Programme administers seven of the action plans. Many of the Regional Seas Conventions and Action Plans are collaborating with regional fisheries organizations to address better fisheries management.

For the region of East Asia there is an Action Plan called the '*Action Plan for the Protection and Sustainable Development of the Marine and Coastal Areas of the East Asian Seas Region*' (COBSEA) developed in 1994. The following countries are signatories to the Action Plan: Cambodia, China, Indonesia, Republic of Korea, Malaysia, Philippines, Singapore, Thailand, Viet Nam. The secretariat is hosted by Thailand and administered by UN Environment.

⁷ *ibid*

⁸ *ibid*

COBSEA's newly-adopted strategic directions for 2018-2022 will focus on combating land-based pollution, ecosystem-based spatial planning and management and governance. An additional task for the Regional Conventions and Action Plans is to support the implementation of Agenda 2030, and more specifically the tracking and reporting on goals and targets in the Sustainable Development Goals, namely 14.1, 14.2 and 14.5 and, secondarily, 6.3, 11.6 and 13.2.

Many of the conventions have action plans and protocols for specific issues of crucial importance for the region. For South East Asia the issue of marine litter and plastic pollution is urgent to address. Hence, COBSEA has revised its '*Regional Action Plan on Marine Litter*', as to take action and track progress of sources, pathways, status and impact.

An additional initiative in the region is the '*Marine Litter - SEA circular*' (*Solving Plastic Pollution at its source*). This partnership between COBSEA and the Government of Sweden is built on the idea of fostering market-based solutions. It aims to solve plastic pollution at its source, through policy dialogues and constituency engagements and supporting regionally coherent national plans and policies. The initiative has two pillars: the science-based approach for decision-making and work with outreach campaigns for increasing consumer awareness.

Furthermore, the Global Environment Fund (GEF) is supporting the two initiatives: *Strategic Action Programme for the South China Sea* (USD 15M) and *System of Fisheries Refugia in the South China Sea and Gulf of Thailand* (USD 3M). Target sites include 26 mangroves, 82 coral, 21 seagrass, 19 coastal wetlands, 23 fishery refugia.

Promoting Ocean Economy through Integrated Management

Many efforts are underway to support a growing ocean economy. Ten countries in East Asian Seas (EAS) signed in 2012 the *Changwon Declaration* that enables the development of an ocean-based blue economy in the region to strengthen support for the implementation of the *Sustainable Development Strategy for South East Asia*. The Declaration was signed in 2012 by Cambodia, PR China, Indonesia, Japan, Lao PDR, the Philippines, RO Korea, Singapore, Timor-Leste, and Viet Nam. Whereas Thailand participated as an observer. Changwon Declaration 2012 states:

'We understand the Blue Economy to be a practical ocean based economic model using green infrastructure and technologies, innovative financing mechanism, and proactive institutional arrangements for meeting the twin goals of protecting our oceans and coasts and enhancing its potential contribution to sustainable development, including improving human well-being, and reducing environment risks and ecological scarcities'.

The implementation body of the strategy is '*The Partnerships in Environment Management in South East Asia*' (PEMSEA). Ms. Maricor Ebarvia, *Blue Economy Expert* at PEMSEA estimated that for the East Asia region, the total share of ocean economy is USD 1,4 US trillion. PEMSEA have had a long present in the region and carried out several studies on the blue economy growth in the East Asian Region. Specific studies on blue economy have been conducted in Cambodia, Korea, Singapore, Thailand, Timor Leste, Viet Nam, China, Philippines, Indonesia and Malaysia.

Though growing the ocean economy is an aspiration in the whole region, the challenge of how to value marine resources remains. On one hand you have the direct ocean-industry dimension, on the other hand you have the natural assets, goods and ecosystem services that the ocean, marine and coastal habitat provides. Governments must ensure sustainable stewardship of natural assets while enhancing their ocean industry.

Based on analyses from PEMSEA, the estimated value of the ecosystem services in the region is around 684 billion US dollars, with the largest share of USD 412 billion in Indonesia. As part of combating climate change, showcasing the value of blue carbon is becoming increasingly relevant. Blue carbon is the carbon captured by the world's coastal ocean ecosystems, mostly mangroves, salt marshes, seagrasses and potentially macro algae. For the region of South East Asia, the contribution to blue carbon from mangroves are USD 111 billion, and Seagrass USD 77-95 billion.

To be able to build the ocean economy to a sustainable growth, *Ms. Maricor Ebarvia*, emphasised the importance of including the role of ecosystem services, and integrating its value into planning and decision-making. Furthermore, ecosystem services would benefit being captured in GDP.

Management and Planning Requires a Systematic Approach

The importance of accurate data was mentioned by many speakers, as well as the need for measuring and comparing the growth of the ocean economy. Efforts to include the ocean economy in the overall discourse of national economic development would benefit from national accounts that include and specify data on ocean economy, as well as value of marine and ecosystem services. Dedicated ocean satellite accounts would be a useful tool for data disaggregation and for assessing backward and forward linkages of the ocean economy, tradeoffs and multiplier effects.

Challenges and Opportunities for Growing the Ocean Economy

Many issues are at stake, such as illegal unreported and unregulated fishing, declining fish stocks, pollution, red tide and harmful algal blooms, invasive and alien species, changing species composition, excessive use of feeds and antibiotics, and pollution in aquaculture farms, habitat loss, climate change effects and low income of fisherfolks and lack of access to markets.

Fisheries and aquaculture are under pressure, 41 percent of the world fisheries production and 76 percent of the global aquaculture production in in the region. This equals a total value of USD 117 billion 2015 (PEMSEA). To transform fishing to a sustainable, safe fisheries and aquaculture, requires certain actions. Among them are; regional national plans of action on IUU Fishing, local initiatives such as fish sanctuaries, habitat restoration and closed fishing seasons. Sustainable tuna fisheries both in WCPFC, Philippines, and Indonesia. Electronic catch documentation and traceability systems (USAID, SEAFDEC) both in Bitung Indonesia and Santos City in the Philippines). Furthermore, an integrated multi-trophic aquaculture as in China and climate-smart aquaculture as in Viet Nam and Philippines are other examples on how sustainable fishing practice can advance.

The region has a vast tourism sector, and the coastal and marine tourism is estimated worth around USD 210 billion in 2015 (PEMSEA). The challenges are, however many; mass tourism and unregulated development, cruise tourism impacts, and habitat destruction and biodiversity loss, inadequate infrastructure, impacts on marine and freshwater quality, such as waste water and solid waste. Additionally, natural hazards and the need for regional co-operation on responsible codes of conduct for travel providers.

Hence, there is a need for promoting a sustainable tourism and ecotourism. *Ms. Maricor Ebarvia*, from PEMSEA reported on several initiatives already underway, such as the 'Green Fins (UNEP, SE Asia), 'Dive Trails' (Singapore), ASEAN Green Hotel Award and Zero Carbon Resorts (in Philippines, Thailand), 'marine reserves/parks and ecotourism', and hotels and resorts. This has proven results in accumulated annual saving in both energy costs, water and fuel consumption and substantial carbon reduction.

The value of shipping is estimated to around USD 130.3 billion with to the largest part in China. There are many challenges with the current shipping industry. Ocean dumping and marine debris, operational and accidental oil spills, introduction of alien and invasive species, greenhouse gas emissions and fuel efficiency. The logistics management needs to address its challenges such as; in port safety measures, navigational aid systems, and vessel traffic management. Additionally, the environment impacts in ports also needs to be tackled, such as; inadequate shore reception facilities, port construction and reclamation of land and its impact on habitats. There is a need for converting the shipping industry to clean energy and increased energy efficiency.

Through collaboration it is possible to transform the shipping sector to a sustainable economy. Many initiatives are currently under way. APEC Port Services Network; Green Port Award System, World Ports Climate initiative, Joint oil spill response (PEMSEA /Gulf of Thailand), PSHEMS, Port Safety, Health and Environmental Management System (PEMSEA/GIZ), and Clean ships and Eco-ships.

Furthermore, there are several emerging initiatives as part of the ocean economy. Renewable energy is increasing at speed, ocean energy (tidal, wave; tidal current; offshore and coastal wind power and floating solar farms are some examples). In marine biotechnology, Philippines are starting a project with sea snails and sponges for anti-infectives and pain-killers, Korea is looking at food, drugs and cosmetic products and in Singapore initiatives are underway for sustainable aquaculture.

Ms. Nor Azlina Baharum, Principal Assistant Secretary from the Ministry of Energy, Science Technology, Environment and Climate Change of Malaysia referred to the Bangkok Declaration and the Action Plan on Combating Marine Debris in ASEAN Region, which was adopted in June 2019 by the ASEAN leaders. The main objective of the Declaration is to protect the marine environment and strengthen regional implementation of sustainable national and regional actions. She noted that there is a plan to abolish the single-use plastic in Malaysia by 2030.

Ms. Baharum also highlighted the serious challenge of illegal trade of plastic waste in the South East Asia region. Malaysia and some other countries in the region do not have no real capacity to deal with these transboundary plastic waste shipments. More effective monitoring and control is needed to find out where the plastic waste is coming from. Recently Malaysia stopped issuing new permits for importing plastic waste.

Example of the Citarum River – an integrated management approach

Dr. Pius Suratman Kartasmita , Head of the Center for Human Development and Social Justice of the Parahyangan Catholic University introduced the findings and lessons learnt from the *Citarum Harum Project*. The Citarum River is the longest and largest river in West Java, Indonesia. Its supports agriculture, water supply, fishery, industry, sewerage and electricity. It is listed as one of the most polluted rivers in the world, with pollution from land, coasts and rivers.

About five million people live in its river basin. Textile factories in Bandung and Cimahi were major toxic waste contributors. Upstream the river landslides and erosion occur, flooding are frequently along the river and the poverty and inequality runs along the River Basin communities.

An initiative was formed '*The integrated Citarum Water Resource Management Investment Program (ICWRMIP)*', that started collaborative efforts for transforming the most polluted river in the world. The Directorate General of Water Resources (DGWR) is the Executing Agency for implementing the work of ICWRMIP. A loan agreement between Government of Indonesia (GOI) and the Asian Development Bank (ADB), was agreed with a fifteen-year plan. The project was planned to cover the entire Citarum River Basin that in total includes 10 regencies and 6 municipalities in the province of West Java.

In 2017, the Central Government declared the *Citarum Harum Program* through regulation concerning the acceleration of pollution and damage control in the Citarum River Basin. The program was a breakthrough to break the deadlock in changing the Citarum River condition as the most polluted river in the world. The key issues that changed the course of action was the applied integrated approach of management and planning; use of enforcement, upstream changes, local awareness, and anti-plastics campaigns. Lastly an increased corporate awareness of the problem and promotion of business responsibility.

Dr. Pius Suratman Kartasasmita, described that lessons learned was creating a framework to ensure transparency, accountability and sustainability programs with three strategic efforts. This was done by, first, focusing on citizenship by educating people through community empowerment and institutional development. Second, assisting corporations in developing impactful corporate social responsibility programs. Third, good governance, being a trustful partner in developing good and collaborative river management.

Reflections on the Sustainable Ocean Economy from Dr. Safri Burhanuddin, Deputy Minister for Human Resources, Science and Technology and Maritime Culture Affairs, MENKO Maritime and Investments.

Dr. Safri highlighted the importance of Indonesia's National Ocean Policy, which was issued in 2017 as a guideline for all maritime related policies and programmes across different ministries and agencies to realise Global Maritime Fulcrum by the President to become a strong maritime nation. Dr. Safri credited Indonesia's recent prioritization of the marine plastic pollution problem with political priorities and a strong co-ordination role to address the problem. He referenced the 2015 paper by Jenna Jambeck, which pointed to Indonesia having the second highest marine plastic pollution rates in the world. While Indonesia did not necessarily agree with the figures of that report, he noted that the national figures also show very high rates of plastic pollution and urgent action is needed. The Government target is to reduce ocean plastic waste by 70% by 2025. He also thanked Global Plastic Actions Partnership (GPAP), SYSTEMIQ and World Bank for their help in spurring action. Supporting behavioral changes (for example, by installing more waste collection bins along key waterways and through social media influence and school awareness raising programmes) should be complemented by strong regulations, which are monitored and enforced. Finally, Dr. Safri noted that Indonesia is willing to learn from successes and experiences in OECD and other countries, in order to reach pollution-reduction targets faster.

Session 3: Enhancing financing for sustainable ocean economies in South East Asia

The session aimed to share experiences on enhancing financing for sustainable ocean economies. *Dr. Piera Tortora*, *Policy Analyst* at OECD, presented the emerging findings from the *Country Diagnostics of Indonesia* and lessons to be learned for the region. Relatively low amount of financing goes towards ocean economy, and even smaller amount goes to the sustainable use and conservation.

In South East Asia the largest share of ocean ODA goes to Indonesia (41 percent), Viet Nam (31 percent), Philippines (15 percent) and Cambodia (8 percent). However, if you weight the recipient of Ocean ODA with coastal population size and size of the exclusive economic zone Cambodia is by far the highest recipients.

One area that could generate significant revenue is fees and charges for fisheries (Rp 448 billion in 2018)⁹. For example, better data and monitoring are required to ensure sustainable growth, and

⁹ OECD (forthcoming), *Sustainable Ocean for All*

increased support to national and regional fisheries management authorities. Potential for individual tradable quotas to control catch and raise revenue, especially for high value pelagic species

As highlighted in session two, blue carbon can be a key asset in adaptation and mitigation to climate change. Global carbon markets are also a potential source of revenue. Mangroves store as much carbon as tropical forest. Example of Indonesia, that has the world's largest extent of mangroves (~3 million ha), but 1% are lost per year. Projects using the voluntary markets already exist e.g. Yagasu in Northern Sumatra. As stated by *Piera Tortora*, the existing REDD+ systems could be used, as to include mangroves and scale-up revenue for mangroves. This could also be true for other blue carbon assets, e.g. seagrass.

In South East Asia, ODA mobilized a total of USD 23.9 millions of private finance in support of ocean-related project in 2013-2017, equivalent to USD 4.8 million on average a year. In case of South East Asia, development partners mainly employed direct investments in companies and Special Purpose Vehicles (SPVs) and simple co-financing schemes. In 2013-2017, ODA mobilized USD 600 millions of private finance for the ocean economy. Direct Investment and syndicated loans leveraged larger resources for ocean-based projects, while guarantees for land-based projects.

World Bank Stepping up its Engagements

World Bank gives concessional loans and grants to sovereign nations. *Mr. Andre Aquino, Senior Specialist, The World Bank*, explained that the Bank works with regional projects, to improve the enabling the environment for private investments. World Bank's current portfolio of USD 4.6 billion in blue economy include all continents, and there is additional pipeline of USD 1.8 billion. In 2018, World Bank *SDG Bond* (SDG6 clean water and sanitation & SDG14 life below water) raised USD 660 million.

Furthermore, *Andre Aquino* clarifies how the World Bank focuses its work around four pillars. *First*, capture fisheries resources are diminishing. Illegal, unregulated and unreported (IUU) fishing costs Pacific Island States an estimated USD 600 million per year. World Bank aims to improve science-based management and fisheries governance, particular in the Pacific though region wide institutions for fisheries co-operation. In the Solomon Islands, the Bank works with electronic monitoring for improved harvest controls.

Second, the coral triangle (Indonesia, Philippines, and the Western Pacific) contains 75 percent of the world's coral species. 85 percent of the triangle's reefs are under threat from overfishing, pollution, and unsustainable tourism, says Mr Aquino representing the World Bank. To protect the critical ecosystems, the Bank aims to improve coastal zone management, scientific monitoring, and marine protected areas' management. In Indonesia and Philippines, the Bank work with coral reef monitoring and management. The focus in Indonesia, China, Vietnam and Cambodia is to combating marine pollution.

Third, poverty rates in Indonesian fishing communities are close to twice the national average (11 versus 20 percent in 2016). Livelihoods in Pacific small island states are threatened by sea level rise. Hence, building coastal resilience and stronger communities is the aim as to improve livelihood opportunities and climate resilience. In Viet Nam, the Bank works with coastal resources management and with coastal resilience and rural development in the Philippines.

Fourth, fisheries can make a larger contribution to many East Asia and Pacific economies. In Indonesia, fisheries contribute 2.6 percent of GDP and employ over 7 million people. In Vietnam, fisheries contributes over USD 8 billion in export revenue annually and employ 4.5 million people. One focus is to secure fisheries and other ocean industries are growing the ocean economy. World Bank activities aim to inform new, sustainable blue economy opportunities and priority investments for growth. In

Vietnam and Myanmar the Bank works with realizing coastal resources potential, in Kiribati programmes on diversification and growth of the blue economy are underway, and in Palau, the Bank works with innovative finance for marine eco-tourism.

Expanding Investment and Technical Assistants – the Work of ADB

For the Asian Development Bank (ADB), ocean is an evolving and expanding program that enables regional cooperation and integration opportunities. ADB is increasing both regional and national ocean support. ADB supports the regional program, *Bay of Bengal Large Marine Eco-region Program*, and the *Coral Triangle Initiative on Coral Reefs, Food Security and Fisheries*.

ADB's 'Strategy 2030' includes seven operations as presented by *Dr Brad Hiller, Senior Climate Change specialist*. One of them being tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability. Out of this pillar of work a specific program for ocean has been committed – the ADB's *Action Plan for Healthy Oceans*. The Plan commits to expanding investments and technical assistance in ocean health and the blue economy to USD 5 billion between 2019–2024. The focus areas will be blue economy, ecosystem management, pollution control and sustainable infrastructure.

ADB has two flagship 'Blue Economy Projects'. One is in *Cambodia*: USD 50+ million project to enhance sustainable fisheries production, increase coastal tourism via ecosystem restoration / management, and promote blue economy & sustainable finance mechanisms. The second one is in *Philippines*: representing USD 115 million project with government to transform Coron & El Nido (Palawan) into sustainable & resilient tourism centers.

For financing mechanism. ADB contributed to the *ASEAN Catalytic Green Finance Facility*, that aimed to develop innovative blue finance instruments and preparing "bankable" projects (meaning less technically and financially risky and more attractive to the private sector), with support from Republic of Korea and WWF and OECD as an intelligence partner.

Furthermore, ADB is accelerating investment in projects by mobilizing finance and using innovative instruments to attract financing and partnerships with the private sector. Such as the '*Marine and Fisheries Financing Initiative*' (Partners: BAPPENAS Indonesia, RARE, ICCTF, PT SMI), and the '*Public Private Partnerships for Coral Reef Insurance in Asia and the Pacific*' (Partners: Governments of Indonesia, Philippines, Solomon Islands and Fiji, TNC, UNDP, private sector, GEF and ACLIFF).

The Asian Development Bank also have a program '*Tackling marine plastic pollution*', with a regional focus on South East Asia (USD 5.7 million). The link between land and sea is addressed in '*Source to sea*' action planning, circular economy policy support, investment preparation, pilots and regional knowledge-sharing.

The next step is to engage partners on how to move forward. In this context it is clear to build on relationships with national and municipal governments, as well sub- regional programs to mainstream ocean issues and build new generation of investments, explains *Brad Hiller*.

From Indonesia much of the finance is currently being discussed under the mitigation and adaptation to climate change and conservation of biodiversity. *Dr. Joko Tri Haryanto, Researcher at the Ministry of Finance*, informed that the Indonesian Ministry of Finance has developed a number of financial instruments addressing environmental management, including a budget tagging mechanism to

mainstream the national budget that correlates with climate change impacts (first on climate change mitigation and from 2018 also on climate change adaptation). Budget tagging is a system that has been developed based on the existing performance-based budgeting system. It is also embedded into the national budgeting system. Budget tagging was first implemented on State Budget in FY 2016 and 2017 for six ministries. He suggested that budget tagging could be also used for the ocean economy policies to enhance the coordination. Furthermore, an environment trust fund is being established in Indonesia. It is expected to start its operation on 1 January 2020.

Indonesia ranks the second biggest producer of marine plastic waste in the world (Jambeck, et al (2015)¹⁰. About 9.85 billion pieces of plastic bags waste produced annually (from approximately 90 thousand modern retailers all over Indonesia). According to MEF, the proportion of plastic waste in the composition of total waste produced nationally has increased from 14% to 16% in 2016. Plastic waste need some 20 to 500 years to degrade.

Land-based activities give significant contributions to pollution and degradation of coastal and marine. Main contributions are from wastewater, increased nutrient, and marine litter. In East Asia 80% of wastewater is discharged without treatment. Bali is struggling with a waste problem with over 2,200 tons waste end up in the environment daily – 33,000 tons of ocean plastic annual.

Mr. Luu Anh_Duc, Deputy Director of the Department of Science, Technology and International Co-operation, Viet Nam Administration of Seas and Islands of the Ministry of Natural Resources and Environment of Viet Nam informed about Viet Nam's Strategy for Sustainable Ocean Economy up to 2030. Blue economy related investments and capacity building efforts are needed to implement the Strategy. Development of new financial mechanisms beyond the traditional development co-operation funding are also important as Vietnam's ODA has been decreasing since 2010 when it became a low-middle income country.

Session 4: The plastic challenge: Financing and new solutions for reducing marine plastic pollution

One of the latest initiatives in the region to tackle the plastic challenge, is the *Business Alliance to End Plastic Waste*. It was launched in January 2019 a not-for profit organization, registered in U.S., with headquarters in Singapore. *Mr. Thomas Chhoa, Project Manager for the Alliance*, explained that it will focus on eliminate the plastic waste and accelerate engagement with partners (finance community, government and civil society) to develop and deploy solutions, to catalyse public and private investments and engagement with communities to help ending the plastic getting into the environment and oceans. Many of the biggest producers in Europe and U.S., as well as the largest oil and gas companies in China are members of the Alliance. The Alliance's expertise will be on technical solutions, innovations and has a budget of USD 1.5 billion dollars for 5 years.

Regional Capacity Center for Clean Seas

As a response to the overwhelming challenge of pollution, Indonesia has established a *Regional Capacity Center for Clean Seas (RC3S)* in Bali. *Ms Wahyu Indraningsih*, presented the purpose of RC3S; to contribute to the reduction and mitigation of land-based sources of marine pollution, with particular focus on nutrient, waste water, marine litter and microplastics. An important task for effective delivery is to link the work of RC3S to the Regional Seas and other relevant platforms as well as international

¹⁰ Jambeck Jenna R., et al (2015) Plastic waste input from land into the ocean. Science 13 Feb, Vol. 347, issue 6223, pp. 768-771

initiatives. The Center will identify and replicate best practice initiatives and innovation, and raise stakeholder awareness, to enhance technical capacity for pollution and degradation prevention.

The Bali Partnership

Bali's ocean plastic is estimated to around 33,000 tons per year, according to *Mr. Lincoln Rajali Sihotang Program Manager, Systemiq*. *The Bali Partnership* is a joint initiative, initiated by Systemiq – led by the Bali government with religious and cultural leaders, NGOs, waste organizations and the private sector. The Partnership is an experiment in building an island-wide circular economy, for faster, sustainable waste system scale-up. Initially the work started with measurement and data collection. Once the waste flows and population density are understood, areas of mismanaged waste could be mapped. The aim is to permanently reduce Bali's ocean plastic by 70% by 2025.

There are many actors in Bali to support various initiatives currently underway. Approximately, 30 NGOs, 43 eco-focus companies, 297 recycling businesses. This can provide a challenge to streamline the work and focus on the critical hot spots. *Bali partnership* has secured funding from *the Alliance to End Plastic Waste* for the first Bali city partnership in Jembrana regency to implement a full circular waste system.

Example from Indonesia on Control Measures

To reduce consumption of plastic bags, Indonesia has applied an excise duty. *Mr. Mochamad Bara Ampera, Senior Policy Analyst at the Fiscal Policy Agency*, explains that 62% of plastic waste in Indonesia is coming from plastic shopping bags, therefore plastic shopping bags need to be controlled. Control measures for plastic bags includes both working on regulation and introducing excise duty.

The most frequently used measures, and possibly the most simple and straightforward to target marine litter is to prohibit plastic bags or introduce a fee to pay for plastic bags. Less common measures include *Pegadaian (SOE Pawnshop)*, which introduced a '*Clean and Gold Program*' where plastic waste can be traded for gold. Duty can be imposed if consumption needs to be controlled, the product's circulation needs to be controlled, its use can cause negative impacts for the society or environment, or its use needs to be burdened by a state fee collection for fairness and balance.

Control using excise duty mechanism is more appropriate for products that can apply a tariff can be adjusted to the commodity characteristics, or its effectiveness to control for having an authority to physically control commodities. As of today, many countries in the world have conducted some control measures of plastic shopping bags in the forms of prohibition, restriction, or duty imposition.

Perspectives and priorities from Thailand and Cambodia

Plastic waste imported into Thailand over doubled from 2017 to 2018, from 152,244 to 481,381 tonnes. The goal for Thailand is to reduce its plastic consumption and pollution by 50 percent to 2027. *Mr. Suthep Jualong, Department of Marine and Coastal Resource Ministry of Natural Resources and Environment* explained how Thailand works with new solutions for reducing marine plastic pollution.

One major issue is the plastic accumulation of garbage in urban area. To address the problem Thailand has started to work on public awareness about the importance to recycle, and by changing behaviors people can contribute to a healthy environment. However, it can be expensive and the recycling industry can cause ecological damage. Key will be to use less material and finding ways to create less waste.

A priority must be to avoid use of plastic bags and foam products, reduce use of paper and reuse materials if possible, says *Mr. Suthep Jualong*. Knowing that the benefit of recycling is the reduce consumption of energy and water by manufactures. Thailand has a sustainable plastic waste management in place that aims to reduce waste by 75 percent by 2021. Furthermore, Thailand applies new technology for developing a ‘waste to energy’ plan.

Mr. Thay Chantha, Deputy Secretary General from the Ministry of Environment of Cambodia noted that the main challenges to address marine plastic pollution in Cambodia are related to poor waste management at the local levels, where technological and human resource capacities are limited. There is no specific policy on sustainable ocean economy in Cambodia, however many other policies contribute to it. This includes, for instance actions related to climate change adaptation, marine spatial planning and infrastructure development.

Strategy	Countries	Pros	Cons
Bans and Taxation of Single-use plastics	Rwanda, USA (San Francisco)	Direct reduction Reduced the negative environmental impacts Economic benefit for tax collector	Inconvenient (radical) Increased crime rate
Waste Management Programs	Taiwan	Reduced net waste Increased recycling Build habits	Does not reduce use of plastics Little recycling of plastic
Incentive Programs	India, Thailand	Increased participation (motivates) Reduced use of plastic bags Could apply to other single-use plastics	Not a long-term solution Limited audience (those who shop)
Education Awareness	Cambodia, Thailand	Could translate to all single-use plastics Active participation (collaboration)	Limited audience (little outreach)
Alternative Materials	USA, Thailand	Alternatives for plastic Create jobs and new industry	Expensive Not entirely environment friendly

Source: S. Jualaong, Department of Marine and Coastal Resource Ministry of Natural Resources and Environment Thailand