



THE EAST ASIAN SEAS CONGRESS



Charting a New Decade of Healthy Oceans, People and Economies

1-2 DECEMBER 2021 • Hosted by the Royal Government of Cambodia

Collab 6

Xiamen University-PEMSEA Joint Training Program

ICM and MSP: Moving Beyond Planning for Sustainable Development of Coastal and Marine Areas in the East Asian Region

14-17 September, 8:00 AM - 10:30 AM (GMT+7)
Online via Zoom

ORGANIZERS:



Fujian Institute for Sustainable Oceans
(Xiamen University), China



Partnerships in Environmental Management
for the Seas of East Asia

COLLAB 6
Xiamen University - PEMSEA Joint Training Program

“Integrated Coastal Management and Marine Spatial Planning: Moving Beyond Planning for Sustainable Development of Coastal and Marine Areas in the East Asian Seas Region”

14-17 September 2021, 8:00 AM - 10:30 AM (GMT+7)
Online via Zoom

PROCEEDINGS

1.0 Introduction to the Event

Coastal areas are home to over 50 percent of the world’s population, contribute to almost 50 percent of the world’s Gross Domestic Product, and provide invaluable ecosystem services for human society. However, increasing population and unregulated human activities have laid unprecedented pressures on these coastal areas. Unsustainable utilization of coastal resources have resulted in increased ecosystem degradation, biodiversity loss, and water pollution, among others—all of which have been aggravated by climate change. To address these challenges, a proven and tested governance and management approach backed by science such as the case with integrated coastal management (ICM) and marine spatial planning (MSP) is imperative.

ICM overcomes the limitations of conventional sectoral management by:

- Facilitating better understanding of the complexity of coastal ecosystems by considering the various impacts of multiple uses of the resources;
- Integrating ecological, social, and economic information to ensure that management strategies formulated under ICM are responsive to the multiple users and uses of coastal ecosystems; and
- Promoting interdisciplinary approaches and cooperation among users and beneficiaries to avoid duplication/conflicting efforts and therefore ensure a more effective and efficient management system.

MSP, on the other hand, is a political and scientific process that aims to analyze and designate the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives.

Linking ICM and MSP can help effectively resolve the conflicts between the land and sea interface and various ocean uses to maintain a healthy and resilient coastal environment.

For this reason, the Xiamen University - PEMSEA Joint Training Program was organized with the view to:

- Share experiences and lessons learned on ICM and MSP implementation at the local level in line with national policies and legislation on coastal management;
- Discuss possible courses of action to disseminate and scale up the good practices on ICM and MSP; and
- Address the identified constraints and challenges and how alignment with regional and global targets can be made to maintain the region's continuing relevance and leadership in ocean and coastal governance.

The event was convened as part of the East Asian Seas (EAS) Congress 2021 by the Fujian Institute for Sustainable Oceans (FISO) of Xiamen University (XMU), China, and Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) Resource Facility. The first day of the training was moderated by Ms. Phoebe Ye, Coordinator for International Affairs at FISO, whereas the remaining days were moderated by Ms. Shuyu Luo, Project Coordinator from the same institution. A total of 81 individuals from 10 countries (Cambodia, China, Indonesia, Japan, Malaysia, Papua New Guinea, Philippines, Thailand, Timor-Leste, and Viet Nam) were present in the event.

The following supporting information can be found in the Annexes of these proceedings:

- Annex 1 – Program;
- Annex 2 – Links to the recording, presentation materials, and group photos; and
- Annex 3 – List of participants.

2.0 OPENING CEREMONY

2.1 Welcome Remarks (Ms. Aimee Gonzales, Executive Director of PEMSEA Resource Facility [PRF])

On behalf of the organizers, Ms. Gonzales delivered the welcome remarks. She thanked everyone for joining the training and noted with appreciation how majority of the participants came from local governments and other stakeholders working on coastal and marine resource management on-the-ground.

The event is the first joint undertaking between FISO and PRF; it was organized to support the knowledge management and capacity building program of the 2018-2022 Implementation Plan of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) .

She then highlighted the importance of the event and hoped for more similar training in the future and that the results from the event will inform future programs and actions in the EAS region.

2.2 Agenda Setting (Ms. Ye)

As moderator, Ms. Ye presented the roster of guest speakers and participants and gave an overview of the various sessions under the four-day training. She also emphasized the objectives and outputs of the event and explained the program mechanics and Zoom etiquette protocols.

3.0 PRESENTATIONS AND DISCUSSIONS

DAY 1:

UNDERSTANDING THE VARIOUS COASTAL AND OCEAN MANAGEMENT PARADIGMS AND APPROACHES: WHERE DOES MSP FIT IN?

3.1 Convergence of Coastal Management Paradigms and Area-based Management Approaches: Implications for MSP and its Wider Application in the EAS Region (Ms. Nancy Bermas, Senior Programme Manager, PRF)

Ms. Bermas apprised the participants on the development of the ICM concept in the past 56 years, starting from its origin in the United States in 1965 to the eventual introduction, application, and refinement of the concept worldwide, including in East Asia where ICM has been scaled up, covering 40 percent of the region's coastline and contiguous watersheds. Likewise, she showed the development of MSP over the years since it was first introduced in 1980 as well as the status of MSP application in East Asia. She then shared the definitions, attributes, and processes concerning ICM and MSP; the principles that govern these two approaches; and real-life examples of the operational boundaries of ICM and MSP.

Recognizing the role of ICM as the integrating mechanism for marine areas and associated watersheds, she shared the points for convergence between ICM and MSP; the factors and challenges that may affect their successful harmonization; and a real-life example of the convergence between these two approaches.

To further contextualize the concepts of ICM and MSP within the realm of coastal and marine governance, their linkages in space and time with respect to other area-based management paradigms and approaches such as source-to-sea (S2S), integrated water resource management (IWRM)/integrated river basin management (IRBM), marine protected areas (MPAs), MPA networking, other effective area-based conservation measures (OECM), ecosystem approach to fisheries management (EAFM), and areas beyond national jurisdiction (ABNJ) were explained. These approaches cover watersheds, rivers, coastal areas, territorial waters, and the high seas in the form of small locally-managed marine areas and coastal planning undertaken by municipalities, large scale planning and management at the provincial and national levels, and

planning of ocean use in Exclusive Economic Zones (EEZs) and within regional seas and large marine ecosystems. Each have their own sets of priorities, objectives, policies, management plans, and institutions involved but oftentimes are guided by the same overarching goal of achieving sustainable development. Ms. Bermas then called the participants' attention to the recommendations from previous EAS Congresses and regional workshops on ICM and MSP and offered measures how mainstreaming of ICM and MSP can be facilitated in support of the Joint Roadmap for MSP and the SDS-SEA Roadmap to 2030.

3.2 Quiz and Open Forum on Ms. Bermas' Presentation

Prior to the open forum, a short Mentimeter quiz was carried out by Ms. Karen See, the Secretariat Coordinator of the PRF, to test the participants' knowledge on Ms. Bermas' presentation.

Highlights of the open forum are summarized below:

- In Viet Nam, coastal use zoning is being implemented in some sites at the local level where the process is mainly based on PEMSEA's guidelines and lessons learned from other sites in the EAS region. The national government, which is planning to develop a national coastal use zoning plan, can learn from the experience of China where MSP, otherwise known as marine functional zoning (MFZ) in the country, underwent three iterations and has been implemented at different scales, including national, provincial, and municipal/city levels in accordance with the 2007 Management Regulations of Marine Functional Zoning. Viet Nam can also consider a bottom-up and top-down approach where the experiences in coastal use zoning (CUZ) development in the central region, particularly in Da Nang, Thua Thien Hue, and Kien Giang can serve as a starting point for CUZ/MSP development at the national level. A national legislation mandating CUZ/MSP development at national and local levels and clarifying the institutional arrangements and approaches will facilitate the process.
- In Indonesia, MSP development, implementation and monitoring, followed an iterative process similar to ICM and considered as well all the necessary factors that would facilitate its implementation.
- Discussions on ICM and MSP complementation have been fairly covered in other fora in addition to the current collab where the points of convergence and differences between ICM and MSP based on local context have been established.
- CUZ and MSP are tools that can be utilized to translate the strategic plans of local governments to spatial context and can be developed when the need and opportunities may arise. Batangas Province, Philippines provides an example of an ICM site where ICM implementation has long started before the MSP process was introduced. The United States Agency for International Development (USAID) Ecofish Project provided technical assistance to develop an MSP for Balayan Bay, Batangas. The MSP took into consideration the existing

strategic environmental management plan and land use plans of the local governments to ensure its alignment with the development direction as well as potential impacts of land-based activities into the coastal and marine environment.

- ICM and MSP implementation require supporting legislation and institutional arrangements, capacity, financing, and monitoring, evaluation, and reporting system. The necessary institutional arrangements address the overlaps/conflicts in terms of powers and functions of various stakeholders.
- There are good sources of information on the various area-based management approaches that were introduced (i.e., ICM, MSP, IRBM, MPA and MPA networking, EAFM, and ABNJ) from the Internet. These sources of information include training manuals, guidelines, case studies, and peer-reviewed articles published in scientific journals.
- Recommendations were raised to utilize the discussion points in the XwMU-PEMSEA Joint Training Program to formulate future guidelines and training programs on ICM and MSP. These will be taken into consideration on Day 4 of the collab.

3.3 Closing of Day 1 of the Training (Ms. Ye)

On behalf of the organizers, Ms. Ye thanked Ms. Bermas for her presentation and responses to the questions during the open forum. She reminded the participants about the program and house rules for Day 2 of the training.

DAY 2: ICM AND MSP IMPLEMENTATION IN CHINA: LEARNING FROM MORE THAN TWO DECADES OF PRACTICE

3.4 Opening of Day 2 of the Training (Ms. Luo)

As moderator, Ms. Luo provided a recap of the highlights of Day 1 and an introduction to the activities of Day 2.

3.5 Practice and Perspective of MFZ in China (Dr. Yue Qi, Deputy Director, Division of Sea Area and Island Management Technology, National Ocean Technology Center [NOTC], China)

As context to his presentation, Dr. Yue explained the categories of marine resources and the level/intensity of development activities from the coast to the ocean. He provided a brief history of the application of and progress in MSP in China beginning from the 1980s to the present times as well as the various laws that governed MFZ application in the country.

A top-down planning approach in terms of geographical/administrative hierarchy is followed in China. He also discussed the steps in the MFZ process, the classification system for marine functional zones and subzones according to purpose (intended use), the spatial extent of coastal and marine water areas per sea use type, and the benefits of and future plans/enhancements for MFZ application in China.

3.6 Quiz and Open Forum on Dr. Yue's Presentation

Prior to the open forum, a short Mentimeter quiz was carried out by Ms. Isabelle Acosta, intern at the PRF, to test the participants' knowledge on Dr. Yue's presentation.

Highlights of the open forum are summarized below:

- Stakeholders that should be involved in the public participation process of MFZ include the government, research sector, and the public, among others.
- There are challenges encountered in arriving at a consensus among the various stakeholders, particularly on matters concerning environmental protection where stakeholders can have varying opinions. The length of time to reach a consensus varies, depending on the situation.
- The preparation of MFZ should be publicized to the whole community concerned. The proposed MFZ will not be submitted to the approving authority in government until all legitimate concerns have been resolved.
- Measures that can help resolve/alleviate use conflicts include forming a unified goal that considers the three pillars of sustainable development; establishing rules on determining and arriving at a consensus; and providing supporting facts and evidences.
- The implementation timeframe of MFZ (i.e., 10 years) in China is considered as one of the biggest challenges in MFZ development in the country. The implementation period is long in view of the time required to monitor and evaluate the implementation progress and challenges. Collaboration with various sectors and stakeholders is key in each stage of the process.
- China's experience in MFZ points to the importance of having enabling laws at both national and local levels to help spur compliance with MFZ. Sea users have to pay for their respective development activities in accordance with the law. Pollution levels, for instance, cannot exceed the designated limit.
- Balancing economic development with environmental protection always serves as the guiding principle in MFZ development and implementation. Therefore, the biggest benefit

from MFZ implementation in China is being able to balance economic development with ocean management.

- While the three iterations of MFZ in China took into consideration the needs and changing situations at the local level, the overall regulations remain unchanged as adjustments were made in the size and scale of the zones and subzones. In China, the MFZ system at the local, provincial, and regional levels can be set-up differently but they should still comply with the overarching (national) law.
- The current generation of MFZ in China is more refined compared to previous versions such that it sets quantitative and stricter requirements for ecological protection.

3.7 Mutual Reinforcement Between ICM and MSP (Prof. Xue Xiongzhi, Coordinator General, FISO)

For his presentation, Prof. Xue focused on the overview of ICM and MSP application in China and the mutual reinforcement of these two approaches in Xiamen using the West Sea as an example. He shared the problems faced by the coastal and marine sector in this area, the adopted MFZ scheme and steps taken in response, and the benefits gained from these management measures.

He then concluded that Xiamen's MSP was implemented under the development of ICM. ICM can make regulations for MSP and help guarantee the implementation of MSP. Meanwhile, MSP is an important ICM component and tool that can provide a base for managing multiple-use prioritization and coordination and consequently lead to spatial integration. Resolving multiple-use conflicts through MFZ is one of the most effective means in the implementation of ICM in Xiamen.

3.8 Quiz and Open Forum Regarding Prof. Xue's Presentation

Prior to the open forum, a short Mentimeter quiz was carried out by Ms. Acosta to test the participants' knowledge on Prof. Xue's presentation.

Highlights of the open forum are summarized below:

- Operational guidelines are needed to guide local government efforts. Likewise, capacity-building is needed for local governments as not all have the necessary knowledge and skills to comply. In terms of budget, even a small budget can go a long way to support ICM.
- To ensure integration of the different uses and needs of the land and the sea, it is necessary to establish a multistakeholder platform that provides a venue for consultation of various government partners and stakeholders with varying mandates, jurisdictions, and interests under the purview of existing rules and regulations. Distribution of benefits should be part of the discussion in the stakeholder consultations.

- The removal of the aquaculture systems in the West Sea was met with objections from relevant stakeholders. The objections were addressed by establishing the necessary measures such as conducting dialogues with the affected individuals and providing them with alternative livelihood before proceeding to the removal.

3.9 Closing of Day 2 of the Training (Ms. Luo)

On behalf of the organizers, Ms. Luo thanked the speakers for their presentations and responses to the questions during the open forum. She reminded the participants about the program and house rules for Day 3 of the training.

DAY 3:

FACILITATING ICM AND MSP IMPLEMENTATION: INFORMING THE PLANNING PROCESS

3.10 Opening of Day 3 of the Training (Ms. Luo)

As moderator, Ms. Luo provided a recap of the highlights of Day 2 and an introduction to the activities of Day 3.

3.11 Integrated Coastal and Marine Spatial Use of Balayan Bay, Batangas, Philippines: Local Community and Stakeholders' Engagement (Mr. Luis Awitan, Head, Provincial Government – Environment and Natural Resources Office, Batangas Province, Philippines)

Mr. Awitan presented a brief profile of Batangas Province and the history of implementation and scaling up of ICM in the locality since 1994 before proceeding to discuss the application of ICM and MSP in Balayan Bay. In particular, he shared the socioeconomic and environmental importance of Balayan Bay; an overview of its coastal and marine sector, including the dominant sea uses for the bay and the challenges faced; and the importance, history, and process of ICM and MSP implementation in the area.

Mr. Awitan also discussed the role of economic valuation of ecosystem services as one of the bases for designating the zones in Balayan Bay. He then presented a map of the different coastal use zones adopted for Balayan Bay; and the Integrated Coastal and Marine Spatial Use (ICMSU) Plan for the area, specifically its purpose, alignment with other key development and zonal use plans, process for its adoption and implementation, and role of various stakeholders in its execution. He then informed the participants about the challenges and next steps for Balayan Bay in terms of ICM and MSP implementation.

3.12 Quiz and Open Forum Regarding Mr. Awitan's Presentation

Prior to the open forum, a short Mentimeter quiz was carried out by Ms. Acosta to test the participants' knowledge on Mr. Awitan's presentation.

Highlights of the open forum are summarized below:

- The ICMSU Plan for Balayan Bay complements the individual comprehensive land and water use plans and other spatial management plans of the concerned local governments.
- The net benefits gained by Balayan Bay through MSP was maximized with the assistance provided by the USAID Ecosystems Improved for Sustainable Fisheries (ECOFISH) Project in determining the economic values of the zones.
- The implementation of the ICMSU Plan, which is funded by local government budget, is monitored through the Provincial Land Use Committee.
- The different zones in the ICMSU Plan were designated following a set of criteria while the boundaries were estimated with the use of Global Positioning System (GPS).
- Vulnerable groups such as women and children were considered in the development of ICMSU. This includes the role of women in livelihood development.
- With nine municipalities encompassing Balayan Bay, each with their own priorities, the Provincial Government, through the Provincial Government – Environment and Natural Resources Office, led the stakeholder engagement process.

3.13 Evaluating the Trade-offs between Alternative Coastal Policies: Evidence from Xiamen's ICM Programme (Dr. Peng Benrong, Professor, College of the Environment and Ecology, XMU)

Dr. Peng presented the different ecosystem services provided by coastal and marine ecosystems and noted that management interventions have their corresponding trade-offs, which may or may not have implications/drawbacks on these ecosystem services. To illustrate, he provided examples of the negative ramifications of development activities on critical coastal habitats. He also shared the challenges of measuring trade-offs.

As a management approach, ICM can help relevant stakeholders determine and analyze trade-offs and consequently the net benefits of various policy scenarios. Dr. Peng then presented in detail an economic model to determine the net benefits of a proposed management scenario in relation to the baseline over a set time period; as well as a case study to determine the impacts

on socioeconomic performance of the coastal and marine sector, the spatial extent of sea area uses, and net benefits in Xiamen as a result of changes in MFZ.

Lastly, he discussed the importance of equity assessment in development planning as it will allow decision-makers to formulate an appropriate compensation scheme for individuals who are highly affected by the negative implications of a given development activity.

3.14 Quiz and Open Forum Regarding Dr. Peng's Presentation

Prior to the open forum, a short Mentimeter quiz was carried out by Ms. Acosta to test the participants' knowledge on Dr. Peng's presentation.

Highlights of the open forum are summarized below:

- Evaluating tradeoffs requires data. If the information required is available, a detailed assessment can be conducted, such as in the case of Xiamen. At the minimum, the following data is needed for the assessment:
 1. Marine economic development (this is the kind of information that most cities may already have);
 2. Economic value of ecosystem services (this is the most difficult and expensive to acquire; benefit transfer can be used to estimate the value in the absence of primary data);
 3. Damages or negative impacts on the ability of coastal and marine habitats to provide ecosystem services (these can be estimated if item 2 is not available); and Social costs such as unemployment (this information is easy to acquire).

3.15 Closing of Day 3 of the Training (Ms. Luo)

On behalf of the organizers, Ms. Luo thanked the speakers for their presentations and responses to the questions during the open forum. She reminded the participants about the program and house rules for Day 4 of the training.

DAY 4:
**LOCAL IMPLEMENTATION OF NATIONAL LEGISLATION AND
POLICIES ON COASTAL AND MARINE RESOURCE MANAGEMENT**

3.16 PREAH SIHANOUK, CAMBODIA - Beach Zoning Implementation for Sustainable Coastal Tourism and Management (Mr. Prak Visal, Chief Officer of the Division of Public Relations and International Cooperation and concurrent ICM Coordinator of the Provincial Administration of Preah Sihanouk)

Mr. Prak introduced the Province of Preah Sihanouk, its total tourist arrivals and their countries of origin in the past three years, the Preah Sihanouk Coastal Use Zoning Plan, the Land Use Plan for Preah Sihanouk, and the Master Plan for Sihanoukville. He then shared the various initiatives, accomplishments, roles of the local government and private sector, lessons learned, and way forward on beach management in the province.

3.17 BONTANG, INDONESIA - Integrated Land and Marine Spatial Plan: Its Impacts on Habitat and Biodiversity Conservation (Mr. Fakhrie Wahyudin, Sub-Division Head of Spatial and Land Affairs, Planning, Research and Development Agency of Bontang)

Mr. Wahyudin shared an overview of Bontang; a map showcasing the distribution of city's coastal activities; the purpose of the Integrated Spatial Plan adopted for the city in 2012; the timeline and process behind the plan's development; the effects on the locality as a result of the plan's implementation; and the change in local government authority that prompted the revision of the plan in 2016.

He then discussed the city's MPA, focusing on the steps taken to establish this site; the spatial extent for each of the designated use zones under the MPA; the current condition of its coral reefs and mangroves; the results of the risk and vulnerability assessment done for the site; and various initiatives that are currently being done to conserve biodiversity; and changes in management effectiveness.

Lastly, Mr. Wahyudin presented the lessons learned from implementing the Integrated Spatial Plan of Bontang and managing the city's MPA.

3.18 Quiz Regarding Mr. Wahyudin's Presentation

A short Mentimeter quiz was carried out by Ms. Acosta to test the participants' knowledge on Mr. Wahyudin's presentation.

3.19 SELANGOR, MALAYSIA – Water Resources Management Strategies Towards Sustainable River Basin and Coastal Development (Ms. Haslina Binti Amer, Principal Assistant Director, River Basin and Coastal Management Division, Selangor Water Management Authority [SWMA])

For her presentation, Ms. Amer discussed Selangor and its coastal areas; the organizational structure of key actors working on ICM and IRBM; and the challenges, laws, policies/strategies, initiatives, and way forward concerning ICM and IRBM.

3.20 Quiz Regarding Ms. Amer’s Presentation

A short Mentimeter quiz was carried out by Ms. Acosta to test the participants’ knowledge on Ms. Amer’s presentation.

3.21 CHONBURI PROVINCE, THAILAND – Coastal Erosion Risk Management (Ms. Nisakorn Wiwekwin, Public Health and Environment Department Officer and concurrent ICM Coordinator, Saensuk Municipality, Chonburi Province)

Ms. Wiwekwin shared an overview of Saensuk Municipality and Chonburi Province. She then proceeded to discuss coastal erosion, which is one of the priority issues in the province, and shared the process and results of their application of the Coastal Integrity Vulnerability Assessment Tool (CIVAT) in assessing the coastal vulnerability of Saensuk Municipality against natural hazards and climate change.

3.22 Quiz Regarding Ms. Wiwekwin’s Presentation

A short Mentimeter quiz was carried out by Ms. Acosta to test the participants’ knowledge on Ms. Wiwekwin’s presentation.

3.23 THUA THIEN HUE, VIET NAM – ICM and Coastal Use Zoning (Dr. Nguyen Minh Son, Former Deputy Director, Institute of Environmental Technology, Viet Nam Academy of Science and Technology, Ha Noi, Viet Nam)

Dr. Son introduced Thua Thien Hue and the development of ICM in the province, which began with the Viet Nam Netherlands Integrated Coastal Zone Management Project (VNICZMP) in 2000. He discussed the main activities and achievements of VNICZMP; the continuation of the ICM program with PEMSEA’s support; the development of the CUZ plan; and the challenges faced by the province post-project. The coastal use zoning plan for Thua Thien Hue approved in 2011. He explained the objectives, approach, map, and summary matrix of regulated activities per zone under the CUZ plan, which was later revised in 2020. He then discussed the priority actions concerning ICM and CUZ for 2021-2030.

3.24 Quiz Regarding Dr. Son's Presentation

A short Mentimeter quiz was carried out by Ms. Acosta to test the participants' knowledge on Dr. Son's presentation.

4.0 CLOSING CEREMONY

4.1 Open Forum, Synthesis, and Conclusion (Ms. Bermas)

Ms. Bermas gave a brief account of the topics covered in the presentations and thanked the resource speakers for sharing their experiences and insights. The presentations confirmed the complementarity between ICM and MSP and that both of these approaches support sustainable development and are guided by the principles of ecosystem-based management, integration, and adaptive management. The same framework used for ICM can also guide MSP. The presentations also showed that governance mechanisms/arrangements are key to achieving effective implementation of ICM and MSP. She then provided a recap of the other key insights learned as well as the next steps for the EAS region as gleaned from the presentations and open fora.

In response, Dr. Handoko Adi Susanto, Regional Project Manager of the UNDP/GEF/PEMSEA Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2), reaffirmed the need for governance mechanisms/arrangements in support of ICM and MSP. He also highlighted other lessons learned in the context of these management approaches: that there is no one-size-fits-all solution and that cost-efficiency is important. Ms. Bermas agreed and stated that PEMSEA has already established and demonstrated cost-efficiency in ICM; it has developed and standardized the ICM practice in such a way that it conforms to international standards for quality management and environmental management. The ICM scaling up process will facilitate the replication of best practices.

4.2 Awarding of Training Certificates to the Participants (Prof. Li Yangfan, Deputy Coordinator-General of FISO)

Prof. Li thanked the speakers for their excellent presentations, the moderators for facilitating the event proper, his fellow organizers and MoreMedia for conducting the event, and the participants for their participation, inputs, and ideas.

He then acknowledged the achievements of outstanding participants and conferred them with the following certificates:

- Certificates of Completion with Distinction to the following top scorers in the series of quizzes done:
 - Ms. Deti Triani, Marine Technical Assistant, ATSEA-2;
 - Mr. Kenneth Yhuanje, National Project Coordinator of Papua New Guinea, ATSEA-2; and

- Ms. Nirwana Sari, Environmental Impact Control Officer, Ministry of Environment and Forestry, Indonesia; and
- Certificates of Completion with Distinction to the most active participants;
 - Mr. Chhun Chanvanthou, Deputy Director, Provincial Administration of Preah Sihanouk, Cambodia;
 - Mr. Sarawut Siriwong, Lecturer, Faculty of Marine Technology, Burapha University, Thailand; and
 - Dr. Handoko Adi Susanto, Regional Project Manager, ATSEA-2.

FISO will host the outstanding participants in their first face-to-face training post-COVID to be held in Xiamen once travel restrictions have been lifted.

4.3 Closing Remarks (Prof. Li)

On behalf of the organizers, Prof. Li reminded the participants about the importance of the ocean in human life and well-being as well as the need for innovative and sustainable coastal and marine resource development. He shared that FISO and PEMSEA are one in supporting knowledge sharing and capacity and network building hence the organization of the joint training program. He hoped that everyone found the training beneficial to their work and that everyone will cross paths again soon.

ANNEX 1. PROGRAM.

14-17 September 2021

Online via Zoom

Time (in Cambodia)	Activity	Resource Speaker/Moderator
DAY 1		
Opening Ceremony		
08:00 AM – 08:10 AM	Welcoming remarks	Ms. Aimee Gonzales Executive Director, PEMSEA Resource Facility (PRF)
08:10 AM – 08:40 AM	Agenda setting <ul style="list-style-type: none"> • Objectives and expected outputs • Introduction of participants • Program mechanics • Group photo 	Ms. Phoebe Ye Coordinator for International Affairs, Fujian Institute for Sustainable Oceans (FISO), Xiamen University (XMU), China
Understanding the Various Coastal and Ocean Management Paradigms and Approaches: Where Does Marine Spatial Planning (MSP) Fit in?		
08:40 AM – 09:40 AM	Convergence of Coastal Management Paradigms and Area-Based Management Approaches: Implications for MSP and Its Wider Application in the East Asian Seas (EAS) Region	Ms. Nancy Bermas Senior Programme Manager, PRF
09:40 AM – 09:50 AM	Break	
09:50 AM – 10:30 AM	Quiz Open Forum	Ms. Karen See Secretariat Coordinator, PRF Ms. Phoebe Ye Coordinator for International Affairs, FISO
DAY 2		
ICM and MSP Implementation in China: Learning from More than Two Decades of Practice		
08:00 AM – 08:05 AM	Recap of Previous Day's Highlights and Introduction to Day 2 Activities	Ms. Shuyu Luo Project Coordinator, FISO
08:05 AM – 08:55 AM	Practice and Perspective of Marine Functional Zoning (MFZ) in China	Dr. Yue Qi Deputy Director, Division of Sea Area and Island Management

Time (in Cambodia)	Activity	Resource Speaker/Moderator
		Technology, National Ocean Technology Center (NOTC), China
08:55 AM – 09:10 AM	Quiz	Ms. Isabelle Acosta Intern, PRF
	Open Forum	Ms. Shuyu Luo Project Coordinator, FISO
09:10 AM – 09:25 AM	Break	
09:25 AM – 10:15 AM	Mutual Reinforcement Between ICM and MSP	Prof. Xue Xiongzhi Coordinator General, FISO
10:15 AM – 10:30 AM	Quiz	Ms. Isabelle Acosta Intern, PRF
	Open Forum	Ms. Shuyu Luo Project Coordinator, FISO
DAY 3		
Facilitating ICM and MSP Implementation: Informing the Planning Process		
08:00 AM – 08:05 AM	Recap of Previous Day's Highlights and Introduction to Day 3 Activities	Ms. Shuyu Luo Project Coordinator, FISO
08:05 AM – 08:55 AM	Integrated Coastal and Marine Spatial Use of Balayan Bay, Batangas, Philippines: Local Community and Stakeholders' Engagement	Mr. Luis Awitan Head, Provincial Government – Environment and Natural Resources Office (PG-ENRO), Batangas
08:55 AM – 09:10 AM	Quiz	Ms. Isabelle Acosta Intern, PRF
	Open Forum	Ms. Shuyu Luo Project Coordinator, FISO
09:10 AM – 09:25 AM	Break	
09:25 AM – 10:15 AM	Evaluating the Trade-offs between Alternative Coastal Policies: Evidence from Xiamen's ICM Programme	Dr. Peng Benrong Professor, College of the Environment and Ecology, XMU, China
10:15 AM – 10:30 AM	Quiz	Ms. Isabelle Acosta Intern, PRF
	Open Forum	Ms. Shuyu Luo Project Coordinator, FISO

Time (in Cambodia)	Activity	Resource Speaker/Moderator
DAY 4		
Local Implementation of National Legislation and Policies on Coastal and Marine Resource Management		
08:00 AM – 08:10 AM	Recap of Previous Day's Highlights and Introduction to Day 4 Activities	Ms. Shuyu Luo Project Coordinator, FISO
08:10 AM – 08:25 AM	PREAH SIHANOUK, CAMBODIA - Beach Zoning Implementation for Sustainable Coastal Tourism and Management	Mr. Prak Visal Chief Officer of the Division of Public Relations and International Cooperation and concurrent ICM Coordinator of the Provincial Administration of Preah Sihanouk
08:25 AM – 08:40 AM	BONTANG, INDONESIA - Integrated Land and Marine Spatial Plan: Its Impacts on Habitat and Biodiversity Conservation Quiz Regarding Mr. Wahyudin's Presentation	Mr. Fakhrie Wahyudin Sub-Division Head of Spatial and Land Affairs, Planning, Research and Development Agency of Bontang Ms. Isabelle Acosta Intern, PRF
08:40 AM – 08:55 AM	SELANGOR, MALAYSIA - Water Resources Management Strategies Towards Sustainable River Basin and Coastal Development Quiz Regarding Ms. Amer's Presentation	Ms. Haslina Binti Amer Principal Assistant Director, River Basin and Coastal Management Division, Selangor Water Management Authority (SWMA) Ms. Isabelle Acosta Intern, PRF
08:55 AM – 09:10 AM	CHONBURI PROVINCE, THAILAND - Coastal Erosion Risk Management Quiz Regarding Ms. Wiwekwin's Presentation	Ms. Nisakorn Wiwekwin Public Health and Environment Department Officer and concurrent ICM Coordinator, Saensuk Municipality, Chonburi Province Ms. Isabelle Acosta Intern, PRF
09:10 AM – 09:25 AM	THUA THIEN HUE, VIET NAM - ICM and Coastal Use Zoning	Dr. Nguyen Minh Son Former Deputy Director, Institute of Environmental Technology, Viet Nam Academy of Science and Technology, Hanoi, Viet Nam

Time (in Cambodia)	Activity	Resource Speaker/Moderator
	Quiz Regarding Dr. Son's Presentation	Ms. Isabelle Acosta Intern, PRF
09:25 AM – 10:10 AM	Open Forum	Ms. Nancy Bermas Senior Programme Manager, PRF
Closing Ceremony		
10:10 AM – 10:30 AM	Synthesis and Conclusion	Ms. Nancy Bermas Senior Programme Manager, PRF
	Awarding of Training Certificates to the Participants	Prof. Li Yangfan Deputy Coordinator-General, FISO
	Closing Remarks	Prof. Li Yangfan Deputy Coordinator-General, FISO

ANNEX 2. LINKS TO THE RECORDING, PRESENTATION MATERIALS, AND GROUP PHOTOS.

Recording - https://youtu.be/G4O_yqaXY50

Presentation Materials - <https://tinyurl.com/XMU-PEMSEA-Training-PPTs>

Group Photos - <https://tinyurl.com/XMU-PEMSEA-Training-Pics>

ANNEX 3. LIST OF PARTICIPANTS.

Country	Organization	Name	Position and Unit/Department
Cambodia	Ministry of Environment	Phalla Sou	Deputy Chief Officer, Department of Water Quality Management, General Directorate of Environmental Protection
		Thong Sokvongsa	Head, Marine Pollution Control Office, Department of Water Quality Management, General Directorate of Environmental Protection
		Rathana Nai	Officer, Department of Water Quality Management, General Directorate of Environmental Protection
	Provincial Administration of Kampot	Ven Serei Sophorn	Chief, Local Support Office
	Provincial Administration of Kep	Som Piseth	Governor
		Ney Kong	Deputy Governor
		Chhun Chanvanthou	Deputy Director
		Khen Sopheak	PMO Staff
	Provincial Administration of Koh Kong	Seng Dara	Director, Human Resources Management Division
	Royal University of Phnom Penh	Phat Chandara	Lecturer
	China	Ministry of Natural Resources	Guan Song
Liu Wei			Program Officer, First Institute of Oceanography
Indonesia	Department of Marine Affairs and Fisheries of West Papua Province	Wahyu Asparani Ramandey	Head, Coastal Utilization and Marine Spatial Planning Section
	IPB University	Fery Kurniawan	Lecturer and Researcher
		Isdahartati	Lecturer
	Ministry of Environment and Forestry	Ardhian Indra	Staff
		Mila Baarik Imansari	Environmental Impact Control Officer
		Nirwana Sari	Environmental Impact Control Officer

Country	Organization	Name	Position and Unit/Department
	Planning and Development Agency of Tangerang Regency	Erwin Mawandy	Head of Regional Infrastructure Planning
	Regional Project Management Unit, UNDP/GEF/PEMSEA Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2)	Handoko Adi Susanto	Regional Project Manager
		Deti Triani	Marine Technical Assistant
		Erma Normasari	Field Facilitator
	South Bangka Regency	Muhammad Bachtiyar	Civil Servant
Japan	Institute for Global Environmental Strategies	Nagisa Shiiba	Policy Researcher, Adaptation and Water Area
Malaysia	Kuala Selangor City Council	Umi Zuhirah Binti Ramlan	Assistant Town Planner
	Selangor Water Management Authority	Mazhazuan bin Harun	Engineer
Papua New Guinea	Regional Project Management Unit, UNDP/GEF/PEMSEA Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2)	Kenneth Yhuanje	National Project Coordinator of Papua New Guinea
Philippines	Provincial Government of Cavite	Anabelle Cayabyab	Head, Provincial Government – Environment and Natural Resources Office
		Ronalyn Pangilinan	Environmental Management Specialist I, Provincial Government – Environment and Natural Resources Office
		Aaron Joseph M. Macaspac	Administrative Aide I, Provincial Government – Environment and Natural Resources Office
	Provincial Government of Guimaras	Rose Jane Sablon	Aquaculturist II
	Provincial Government of Oriental Mindoro	Marivic Guntan	MPA/FS Coordinator, Provincial Agriculturist's Office
		Nerissa Cuna	Agricultural Technologist, Provincial Agriculturist's Office
Thailand	Burapha University	Sarawut Siriwong	Lecturer, Faculty of Marine Technology
	Kung Krabaen Bay Royal Development Study Center	Thakorn Kakhaitthawat	Marine Fisheries Resources Management

Country	Organization	Name	Position and Unit/Department
	Ministry of Natural Resources and Environment	Chalatip Junchompoo	Fishery Biologist (Senior Professional Level), Department of Marine and Coastal Resources
	Sustainable Development Foundation	Ravadee Prasertcharoensuk	Director
		Kesineee Kwaenjaroen	Researcher
		Varuntorn Kaewtankam	Researcher
Timor-Leste	Regional Project Management Unit, UNDP/GEF/PEMSEA Arafura and Timor Seas Ecosystem Action Phase II (ATSEA-2)	Almerindo Oliveira da Silva	National Project Coordinator of Timor-Leste
		Bernardo de Jesus Pereira Belo	Site Mobilizer
		Vitalina Dos Santos	Site Mobilizer
	Universidade Nacional Timor Lorosa'e	Jaimito Gonsalves	Lecturer
		Lúcio Belo	Lecturer
		Romaldo da Costa Ximenes	Lecturer
Viet Nam	Da Nang Department of Natural Resources and Environment	Thang Manh Do	Official, Da Nang Agency of Sea and Islands
		Trang Vu Hoang Le	Official, Da Nang Agency of Sea and Islands
		Chin Thi Pham	Da Nang Agency of Sea and Islands
		Lam Dinh Nguyen	Da Nang Agency of Sea and Islands
	Hai Phong's Sea and Island Management Agency	Mai Duc Long	Deputy Director
		Phạm Hữu Hiếu	Official
	Management of Basic Surveys Of Sea And Islands	Trịnh Thanh Trung	Official
	Ministry of Natural Resources and Environment	Le Thi Hoa	Official, Department of Sea and Islands Resources Control and Environmental Protection, Viet Nam Administration of Seas and Islands
		Do Thi Nhu Ngoc	Department of Sea and Islands Resources Control and Environmental Protection, Viet Nam Administration of Seas and Islands
		Nguyen Ngoc Hoan	Senior Officer, Viet Nam Administration of Seas and Islands

Country	Organization	Name	Position and Unit/Department
		Lê Thị Hoàng Mai	Researcher, Viet Nam Administration of Seas and Islands
	Quangninh's Sea and Island Management Agency	Tran Van Thuan	Official
	Viet Nam Institute of Seas and Islands	Nguyen Cong Minh	Researcher
		Vu Hong Ha	Researcher

Organizers and Resource Speakers

Country	Organization	Name	Position and Unit/Department
Cambodia	Provincial Administration of Preah Sihanouk	Prak Visal	Director, Public Relations and International Cooperation Division; and Coordinator, Integrated Coastal Management Program
China	National Ocean Technology Center Xiamen University	Yue Qi	Deputy Director, Division of Sea Area and Island Management Technology
		Xue Xiongzhi	Coordinator General, Fujian Institute for Sustainable Oceans
		Peng Benrong	Professor, College of the Environment and Ecology
		Ye Phoebe	Coordinator for International Affairs
		Lin Xiaoyan	Programme Manager
		Luo Shuyu	Project Coordinator
		Chen Ming	Project Coordinator
Indonesia	Planning, Research and Development Agency of Bontang City	Fakhrie Wahyudin	Sub-Division Head of Spatial and Land Affairs
Malaysia	Selangor Water Management Authority	Haslina Amer	Principal Assistant Director, River Basin and Coastal Management Division
Philippines	PEMSEA Resource Facility	Aimee Gonzales	Executive Director
		Nancy Bermas	Senior Programme Manager
		Daisy Padayao	Country Programme Manager
		Karen See	Secretariat Coordinator
		Elsie Merina	Programme and Admin Associate
		Rodante Corpuz	IT Specialist
		Isabelle Acosta	Intern
		Jan Angelo Valdez	Intern
Antonia Maceda	Intern		

Country	Organization	Name	Position and Unit/Department
	Provincial Government of Batangas	Luis Awitan	Head, Provincial Government - Environment and Natural Resources Office
Thailand	Saensuk Municipal Government	Nisakorn Wiwekwin	Public Health and Environment Department Officer and ICM Coordinator
Viet Nam	Viet Nam Academy of Science and Technology	Nguyen Minh Son	Advisor on Environment, Institute of Environmental Technology