PEMSEA

BC/WS/2024/001

Proceedings of the First Blue Carbon Technical Working Group Meeting

Online Via Zoom
25 February 2025

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25 February 2025, 10:00 AM – 12:00 PM (Philippine time) via Zoom

Introduction

I. The First Blue Carbon Technical Working Group meeting was held on February 25, 2025, online via video conference (Zoom). The meeting was chaired by the Technical Session Chair and Co-Chair of the East Asian Seas (EAS) Partnership Council (PC) and participated by PEMSEA country partner designated representatives from China and the Philippines; non-country partner representatives from the National Marine Hazard Mitigation Service (NMHMS), Ocean Policy Research Institute of the Sasakawa Peace Foundation (OPRI-SPF), Conservation International (CI), Korean Maritime Institute (KMI); PNLC members, Xiamen University, University of the Philippines Marine Science Institute (UP-MSI); and other collaborators, such as the China Green Carbon Foundation and OceanPixel. The PEMSEA Resource Facility (PRF) served as the Secretariat.

II. Supporting documents may be found in the Annexes:
   A. Annex 1 - Agenda of the Meeting
   B. Annex 2 - List of participants
   C. Annex 3 - presentation, reference documents and photos

1. Agenda 1.0. Introductions and Overview of the PEMSEA Blue Carbon Program

1.1. Dr. Keita Furukawa, Technical Session Chair of the EAS PC, opened the meeting, delivered the opening remarks, and thanked the BC TWG members for participating in the BC TWG meeting. He emphasized that the formal creation of the TWG was based on the recommendation from the 16th EAS PC meeting, although discussions and work on this topic within PEMSEA have been ongoing since 2017.

1.2. The TWG aims to develop a regional blue carbon certification system that goes beyond carbon credits. The initiative seeks to enhance sustainability strategies for blue carbon ecosystems, fostering inclusive and resilient societies. He highlighted the region's unique biodiversity, dense population, and complex social dynamics, calling for tailored solutions. He also mentioned that cost-benefit aspects of the credit system will also be discussed.

1.3. Dr. Furukawa noted that the TWG's formation is just the beginning, urging active participation and ownership from partners and collaborators. He expressed gratitude for the members' engagement and hoped for meaningful collaboration.

1.4. Ms. Abigail Cruzada, PRF Secretariat Coordinator, then proceeded to provide a brief overview of the Blue Carbon (BC) program to set the context for all participants. She shared that PEMSEA had opened the call for the Technical Working Group (TWG) on December 17, 2024, with applications closing in February 2025. A total of 19 applications were received from various partners, including Country Partners, Non-Country Partners, PNLC members, and other collaborators.

1.5. Ms. Cruzada explained that the PEMSEA Blue Carbon initiative is envisioned as a regional approach to blue carbon management. This initiative aims to support partners' Nationally Determined Contributions (NDCs) while enhancing the condition of blue carbon ecosystems, recognizing their diverse ecosystem services and role in increasing coastal community resilience. She then outlined the two objectives of the BC program:

1.5.1. Support the conservation and enhancement of coastal blue carbon ecosystems to optimize their contributions to greenhouse gas (GHG) emissions reduction and coastal resilience to climate change.

1.5.2. Improve local government and community access to financial mechanisms that support the scaling up of blue carbon ecosystem management.

1.6. Since 2017, the PEMSEA Resource Facility (PRF) has conducted studies on the significance of blue carbon ecosystems, highlighting their value in biodiversity conservation and climate change mitigation. Through successive discussions, PEMSEA has identified potential for developing a regional blue carbon certification system. This initiative is especially significant as the East Asian Seas region hosts some of the world's largest blue carbon ecosystems, and private sector interest in blue carbon projects continues to grow. There is increasing recognition that blue carbon conservation and restoration can directly support countries in meeting their national commitments under the Paris Agreement and the 30x30 framework. Specifically, the integration of blue carbon into Nationally Determined Contributions (NDCs) provides countries with a concrete pathway to implement nature-based solutions that not only help achieve their climate mitigation targets but also deliver substantial co-benefits for climate adaptation and ecosystem resilience.

1.7. Ms. Cruzada explained that current global carbon offset programs operate as either mandatory or voluntary schemes. The proposed PEMSEA Blue Carbon Certification System will be developed primarily as a voluntary offset mechanism, which will complement rather than replace the mandatory accounting required for NDCs. The regional certification system will facilitate carbon crediting while supporting the development of resilient pathways for conserving and protecting blue carbon ecosystems, strongly emphasizing collaboration with local and coastal communities.

1.8. Ms. Cruzada then outlined the proposed structure of the Blue Carbon Certification program, clarifying that it will involve various PEMSEA stakeholders in different capacities. One of the cornerstones of this program will be a regional standard focused specifically on blue carbon accounting methodologies, which will be developed with contributions from academic institutions specializing in the region. While the regional standard primarily addresses

accounting, the broader program will also support project development, capacity-building, and training for auditing processes. The program will offer comprehensive support to stakeholders interested in developing blue carbon projects that can be credited at both national and regional levels. This approach ensures alignment with NDC accounting requirements while providing additional voluntary mechanisms for blue carbon conservation. Ms. Cruzada emphasized that the current structure remains subject to refinement based on strategic recommendations from the Technical Working Group.

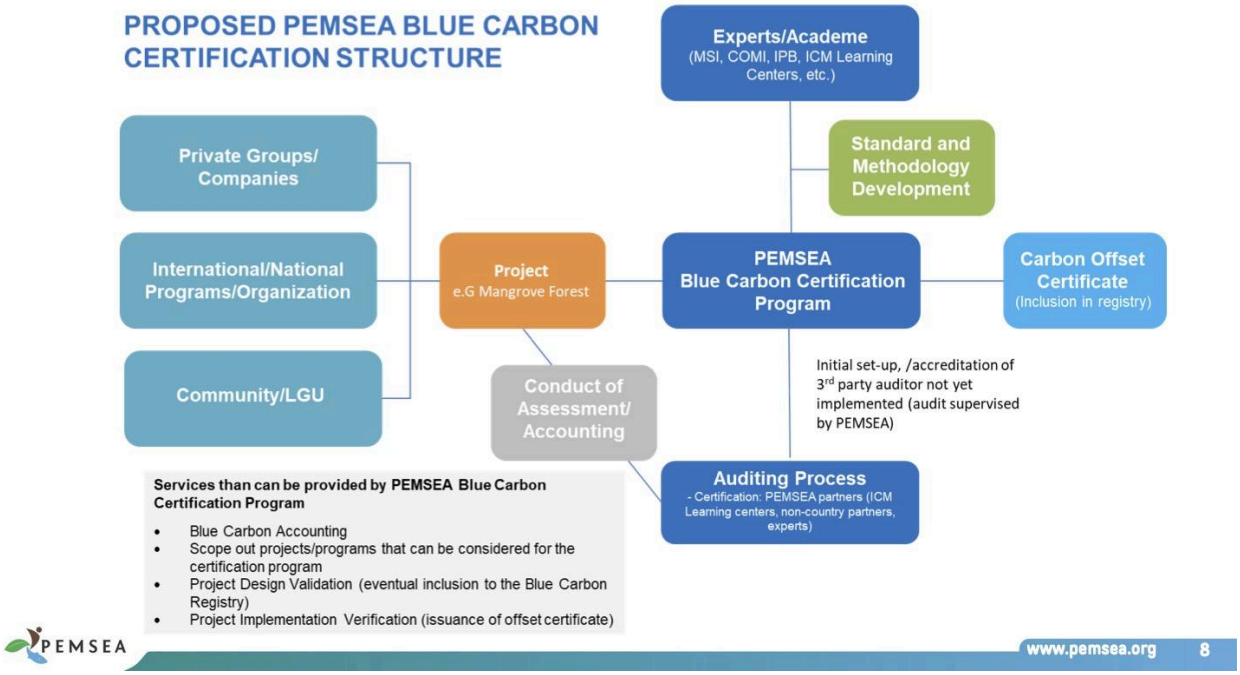

Figure 1.0 Proposed PEMSEA Blue Carbon Certification Structure

1.9. She then discussed the development of the Blue Carbon Program in PEMSEA and how it progressed to the creation of TWG.

1.10. Ms. Cruzada concluded by emphasizing the importance of collective efforts in advancing the BC program, encouraging active engagement from all stakeholders to ensure its success.

1.11. ***Introductions and Expectations from TWG.***

1.12. Ms. Cruzada ended her short overview of the BC program and handed the floor over to Dr. Keita for the expectation-setting session of the meeting. Dr. Furukawa highlighted the importance of fostering an inclusive and open environment where all members feel comfortable sharing their perspectives. He emphasized that the diversity of viewpoints is a critical foundation for the group's discussions and decision-making.

1.13. To facilitate collaboration and build a strong working dynamic, Dr. Furukawa invited members to introduce themselves, share their affiliations, and express their expectations for the TWG. The members then took turns introducing themselves, providing insights into their backgrounds, and outlining their expectations for the meeting.

2. Agenda 2.0 Blue Carbon Roadmap and progress of implementation

2.1. Following the expectation setting, Ms. Cruzada continued her presentation by presenting the Blue Carbon Program Roadmap which was approved by the Executive Committee and also endorsed by the 15th and 16th EAS PC.

2.2. She explained that the roadmap outlines the short, medium, and long-term targets for the development of the Blue Carbon certification program. It is structured around four key components: standardized accounting methodology, supply, demand, and certification. She noted that PRF has made significant progress in achieving the immediate targets (2023-2024) outlined in the roadmap, and invited recommendations and feedback from the TWG on its further development.

2.3. Providing an update on the status of the program as of 2025, Ms. Cruzada shared that PRF has developed a working draft of a regional blue carbon accounting protocol, which builds upon the findings of an initial baseline study and a comparative review of different accounting methodologies used in China, Indonesia, Japan, Philippines and RO Korea, alongside voluntary standards from the Verified Carbon Standard (VERRA), identifying similarities, gaps, and recommendations for harmonization. The BC Accounting Protocol focuses initially on three ecosystems, including mangrove forests, seagrass meadows, and tidal marshes. The Secretariat Coordinator also informed the TWG that PRF is currently coordinating with Thailand to secure a copy of their accounting methodology, which will be incorporated in the regional protocol by March 2025. The initial draft has been circulated to the TWG for review, subject to further refinement.

2.4. Additionally, she shared that PRF has conducted a BC supply assessment across 29 ICM sites in the region, most of which are part of the PNLG network. A blue carbon market research study was also carried out in collaboration with OceanPixel, a summary of which will be circulated to the TWG once finalized. A concept note on the BC certification system has been developed for further review and discussion by the BCTWG.

3. Agenda 3.0 Blue Carbon TWG mandate and composition

3.1. She then continued to present the proposed responsibilities of the BC TWG outlined in the Terms of Reference, which include:

3.1.1. Establishing certification criteria and processes;

3.1.2. Providing guidance on implementation requirements;

3.1.3. Ensuring scientific rigor in BC assessment methodologies;
3.1.4. Providing recommendations on how to harmonize and standardize blue carbon accounting protocols for the EAS region;
3.1.5. Supporting the development of a regional blue carbon registry; and
3.1.6. Supporting the development of regional and national standards to assess blue carbon stocks and fluxes" [III.C. Climate Change Adaptation and Disaster Risk Reduction of SDS-SEA IP 2023-2027]

3.2. The specific tasks of the BC TWG include:
3.2.1. To review, discuss, and endorse the regional blue carbon accounting methodology and implementation;
3.2.2. To provide comments and feedback on the supply side and market demand studies and recommend next steps;
3.2.3. To share good practice and research that could help enhance the blue carbon program implementation at the regional, national and local levels;
3.2.4. To identify and/or recommend available and potential technical and financial resources to help raise awareness, build capacity, conduct training, and implement specific projects related to climate adaptation, nature-based solutions, blue carbon ecosystem accounting and/or restoration efforts;
3.2.5. To recommend key areas in the Blue Carbon Roadmap that require funding or technical support from country and non-country partners; and
3.2.6. To recommend key national, regional, and global meetings where the blue carbon program results/outcomes can be presented/highlighted.

3.3. Ms. Cruzada also presented the proposed composition of the BC TWG. Explaining that the Technical Session Chair and Co-Chair of the PC will provide overall guidance to the BC TWG. She highlighted that PRF proposed this structure because the Blue Carbon Program covers multiple fields of interest, resulting in the creation of sub-groups where members can focus on their specific areas of expertise. She emphasized that the proposed composition serves as an initial framework and remains flexible, subject to revision based on discussions and feedback from the group.

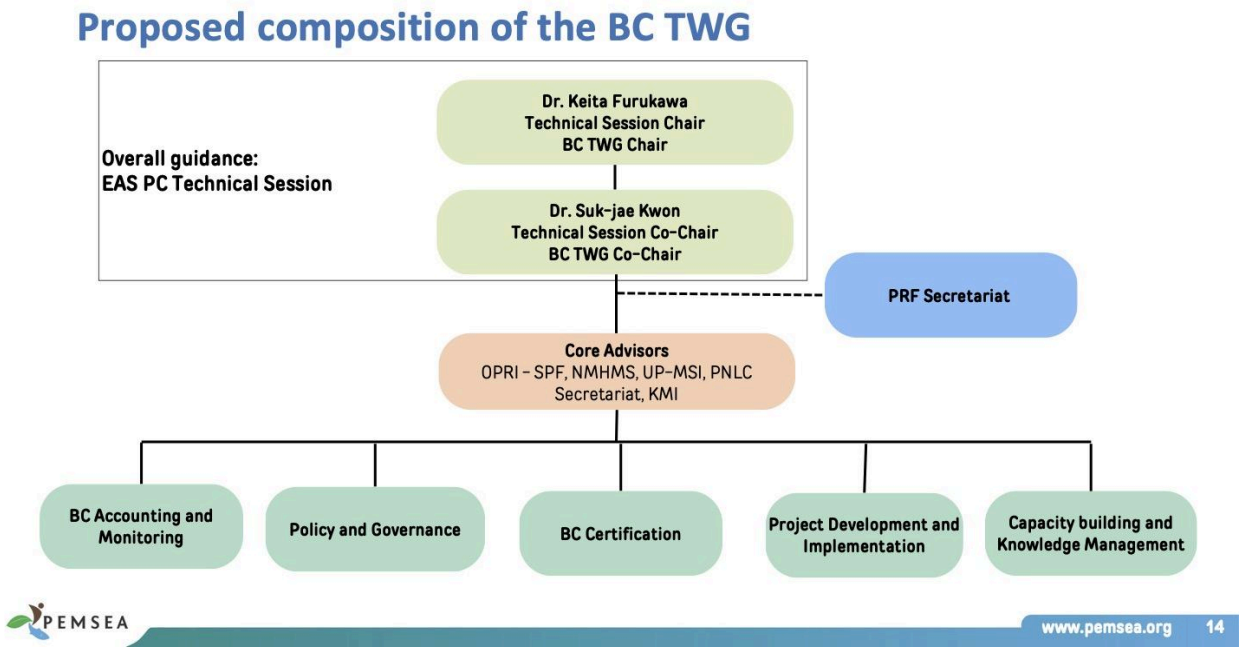

Figure 2.0 Proposed Composition of the BC TWG

4. Agenda 4.0 Development of a work plan and deliverables for 2025

4.1. As the roadmap for the PEMSEA Blue Carbon program is expected to be revised based on the recommendation of the TWG, the Secretariat presented expected goals and activities based on the current draft Roadmap's 2025 targets in lieu of a formal workplan. The target activities are outlined in the following items.

Regional Blue Carbon Accounting Protocol (RBCAP)	Incorporation of Thailand BC protocols in RBCAP	Status: currently ongoing
	Review/Enhancement of RBCAP	March - June
	Approval of RBCAP at the 17th EAS PC Meeting	July
Pilot-testing of RBCAP	Secure funding for pilot-testing (including proposal development)	2nd - 3rd Quarter
	Identification of and application of RBCAP in pilot sites	3rd-4th Quarter

	partnership development with LGs, private sector, other stakeholders	
Blue Carbon Certification	Development of business plan for BC certification	2nd- 3rd quarter
	Capacity building on RBCAP	3rd - 4th quarter
Capacity Building and Knowledge Management	PNLC Blue Carbon Training c/o University of Hawaii and Burapha University, Chonburi, Thailand	March 25-27
	BC Workshop c/o NMHMS, Fuzhou China	TBC
	UNOC side event on BC c/o NMHMS and PRF	TBC

5. Actions requested from the BC TWG:

5.1. **On Blue Carbon Roadmap:**

- Provide recommendations on feasibility of targets and consideration on indicators
- Provide suggestions on how to optimize the BC program
- For preparation of Roadmap, a core group will be established, for endorsement of the TWG

5.2. **On BC TWG Mandate and Composition**

- Provide feedback on TWG tasks and proposed composition
- Identify thematic areas of interest

5.3. **On 2025 Targets/Activities**

- Review and provide recommendations on feasibility of 2025 target deliverables and ways forward to meet deliverables
- Identify/Provide information on respective BC capacity building activities

5.4. **On BC TWG Meeting schedule**

- Agree on a schedule and frequency of BC TWG meetings

6. Next Steps & Discussion

6.1. In the interest of time, Dr. Keita informed the participants that the feedback during the meeting will focus mainly on general comments on the PEMSEA BC program and suggestions to enhance the BC program roadmap. He requested the TWG to send

feedback on other items for action through email. Items 5.3-5.4 will also be further discussed by the Core Advisors group on March 26, 2025.

6.2. Recommendations and feedback from TWG members are outlined in Table 2.

Table 2. Recommendations for the PEMSEA Blue Carbon Program

Elements	Recommendations
On governance	1. The Blue Carbon program should go beyond carbon credit certification to include the restoration and rehabilitation of ecosystems. Beyond the co-benefits of BC Ecosystems (BCE) to climate change mitigation and adaptation, the program should also consider local societies, communities and economic benefits to coastal communities in the project sites. 2. Setting up a regional blue carbon certification program requires developing a governance framework to establish a voluntary blue carbon market. Consider also developing the certification system through a non-market approach that can be certified in the region, in line with the stipulations in Article 6 of the Paris Agreement. 3. Considering developing the BC Program as a nonprofit effort, rather than focused on credit trading, considering that blue carbon projects generate less carbon credits compared to green carbon projects, and may not be as marketable. 4. Integrate blue carbon into National Biodiversity Strategic Action Plans (NBSAP) and Nationally Determined Contributions (NDCs) at the national level, setting national standards to assess blue carbon, and implementing incentive policies to enhance financing. At the regional level, harmonization and coordination of policies of participating countries need to be considered.
On alignment	1. Ensure that the BC program addresses the biodiversity and climate change targets outlined in the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) Implementation Plan 2023-2027, which outlines the establishment of “national platforms for blue carbon assessment utilizing standardized protocols for sampling and analyzing blue carbon stocks and fluxes”. 2. Establish baselines for historical data on BC

	ecosystems to prioritize rehabilitation efforts in line with Kunming-Montreal Global Biodiversity Framework (KMGBF). Baseline studies conducted should be further enhanced to identify viable supply sites that meet the standards outlined in international commitments. (builds on governance recommendation #3) 3. Develop a baseline on the status of BC Ecosystems in the region. These can, for example, be included and highlighted in national and regional State of the Coasts reports to ensure an integrated approach and create a sound foundational database
On coherence	1. Engage both supply and demand side in designing and rolling out the program, with carbon credits generated from conservation and restoration of priority sites, for example, ICM sites/ PNLG members with global biodiversity significance.
On accounting methodology and certification	1. Consider a tiered approach in implementing accounting metrics cognizant of the varying levels of BC policy development, accounting capacity and methodologies, and resources among countries. 2. Consider identifying the relationship or added value of the proposed regional accounting framework compared to existing accounting mechanisms such as nationally developed standards or international mechanisms such as Verified Carbon Standard (VCS). 3. Ensure that accounting methodologies are not utilized as corporate “green/blue-washing”. Consider developing alternative instruments besides carbon credit in the certification system, such as nature credits, which are more outcome-based (focused on rehabilitation and restoration) than offset-based, since the viability of some BC sites in the region might not meet the international/regional market standards. 4. Establish a regional BC ecosystem monitoring network, composed of local, national and regional stakeholders, that can help to create a unified and accurate parameter database for BC ecosystems through continuous monitoring and analysis of typical carbon parameters. The benefits of this are threefold: first, by systematically accumulating and analyzing data, we can identify carbon parameter characteristics in different regions and facilitate legitimate results; second, it will provide data for estimating carbon stock and sink capacity in

	BC ecosystems and carbon credit trading which can guide implementation of monitoring and investigation activities in pilot areas; finally, these initiatives will lay the stage for implementing sustainable management and utilization of BC resources to address climate change. 5. The data and reports that the proposed regional hub will generate would be beneficial to EAS countries' efforts in identifying investment areas to sustainably protect and restore BC ecosystems. 6. The proposed network, which may include local institutions, and other interested stakeholders, can be institutionalized under a regional mechanism (e.g. PEMSEA) that could sustain the activities of the network. PEMSEA may opt to maximize on its existing systems (i.e., EAS Partnership Council, PNLG and PNLC) to integrate the institutionalization of the proposed regional monitoring network. 7. Data collection must be guaranteed within the regional accounting framework to ensure its accuracy and comparability. 8. Establish a comprehensive database on BCE status and efforts on BC initiatives. The database should include robust data on carbon stock and sink of BC ecosystems, which may provide a sound basis in identifying potential pilot areas for testing the regional methodology.
On capacity building and knowledge management	1. Recognizing the different status of countries in terms of developing and/or applying Blue Carbon Accounting Methodologies, the TWG/PEMSEA may conduct a seminar to share the various methodologies in the region outlined to further optimize the regional methodology for accounting, and promote methods that can be replicated in other EAS countries. 2. Consider identifying the capacity-building activities needed for specific stakeholders, including but not limited to, entities interested in entering into the BC market, local communities, national governments, and policymakers. Furthermore, the academe or scientific research institutions may play a significant role in supporting these capacity-building initiatives. 3. Knowledge-sharing activities, which can feature country

	experiences in the region on how to promote social collaboration and institutional arrangements to support BC conservation and restoration, provide incentives, and integrate activities in local economies, could be developed and included in the roadmap. 4. Include stakeholders from both the supply and demand side in capacity development activities to enhance their understanding and appreciation of how BC accounting, conservation and restoration can benefit them.
On promotion of the BC program	1. Develop a communication strategy for the BC program as one of the medium-term targets in the PEMSEA BC Program Roadmap. The communication strategy should identify potential knowledge materials that can provide awareness and appreciation of BC program efforts to various stakeholders (i.e., policymakers, local governments, private sector, academe, etc.) 2. Engage private sector, philanthropy organizations, local government (PNLG), academia (PNLC), and other interested organizations in rolling out and implementing the BC Certification Program.

6.3. Mr. Guo of NMHMS shared their plans to conduct a face-to-face meeting on blue carbon in Fuzhou, China, possibly in late May or early June. This would allow the group to refine components of the regional BC program further and provide an opportune time for a second BC TWG meeting. He will discuss the program further with Dr. Furukawa and PRF online and agree on details during the meeting with core BC advisors at the Blue Carbon capacity-building workshop organized by the University of Hawaii, University of Burapha, PNLC secretariat, and PRF on March 25-27, 2025, in Chonburi, Thailand.

6.4. The meeting adjourned at 11:53 AM.

Annex 1 - Agenda of the Meeting

Agenda	BC TWG Members
Introductions and overview of the PEMSEA Blue Carbon Program	Ms. Abigail Cruzada PRF Secretariat Coordinator
Expectation Setting	Dr. Keita Furukawa EAS Technical Session Chair
Blue Carbon Roadmap and progress of implementation	Ms. Abigail Cruzada PRF Secretariat Coordinator
Blue Carbon TWG mandate and composition	Ms. Abigail Cruzada PRF Secretariat Coordinator
Development of a work plan and deliverables for 2025	Ms. Abigail Cruzada PRF Secretariat Coordinator
Discussion and Next Steps	Dr. Keita Furukawa EAS Technical Session Chair

Annex 2 - List of participants

NAME	DESIGNATION/ORGANIZATION	COUNTRY
Country Partner		
Prof. Guangcheng Chen	Director Key Laboratory of Marine Ecological Conservation and Restoration, Third Institute of Oceanography, Ministry of Natural Resources	China
Dr. Jose Allan A. Castillo	Scientist I and Supervising Science Research Specialist Ecosystems Research and Development Bureau Department of Environment and Natural Resources (DENR-ERDB)	Philippines
Mr. John Erick B. Avelino	Chief, Integrated Coastal and Marine Partnership Section Biodiversity Management Bureau Department of Environment and Natural Resources (DENR-BMB)	Philippines
Non-Country Partner		
Mr. Yinfeng Guo	Chief Expert, International Cooperation, National Marine Hazard Mitigation Services -Ministry of Natural Resources (NMHMS-MNR)	China
Dr. Yuxing Wang	National Marine Hazard Mitigation Services -Ministry of Natural Resources (NMHMS-MNR)	China
Dr. Atsushi Watanabe	Senior Research Fellow Sasakawa Peace Foundation / Japan Blue Economy Association	Japan
Mr. John Colin Yokingco	Senior Policy Manager Conservation International-Philippines	Philippines
Dr. Yeajin Jung	Senior Researcher,	ROK

NAME	DESIGNATION/ORGANIZATION	COUNTRY
	Korea Maritime Institute (KMI)	
PEMSEA Network of Learning Centers		
Dr. Luzhen Chen	Professor, Xiamen University	China
Dr. Malou McGlone	Professor Emeritus, University of the Philippines - Marine Science Institute (UP-MSI)	Philippines
Other collaborators		
Dr. Yuanging Hou	China Green Carbon Foundation	China
Dr. Michael Abundo	OceanPixel	Philippines/ Singapore
PRF Staff		
Ms. Aimee Gonzales	Executive Director	Philippines
Ms. Abigail Cruzada	Secretariat Coordinator	Philippines
Ms. Maida Aguinaldo	Training and Capacity Development Officer	Philippines
Ms. Shinji Kim	Head of Planning and Partnership Development	ROK
Ms. Jeanne Francesca Cortez	Secretariat and Training and Capacity Development Assistant	Philippines

Annex 3 - Presentation, Reference Documents and Photos

1. **BC TWG Meeting Presentation**

2. **Reference Documents**

Attachment 4. EASC2024 Blue Carbon Market Demand Assessment in Asia Report 20241…

Technical Working Group on Blue Carbon 9 December 2024.docx

3. **Photos**