

WORKSHOP
PROCEEDINGS REPORT

CORAL TRIANGLE INITIATIVE
CLIMATE CHANGE ADAPTATION WORKING GROUP

REGIONAL WORKSHOP ON BLUE CARBON

AUGUST 29-31, 2017 | TAAL VISTA HOTEL, TAGAYTAY CITY



Australian Government
Department of the Environment and Energy



IN PARTNERSHIP WITH



Acknowledgments

The Coral Triangle Initiative (CTI) Climate Change Adaptation (CCA) Working Group Regional Workshop on Blue Carbon in Taal Vista Hotel, Tagaytay City, Philippines was held from 28 to 31 August 2017. The workshop was organized by the CTI CCA Working Group and hosted by the Government of the Philippines through the Department of Environment and Natural Resources (DENR) and the Philippine Climate Change Commission (CCC) and was supported by the Australian Government, the International Partnership for Blue Carbon (IPBC) and the CTI Regional Secretariat in collaboration with Conservation International (CI) Philippines.

This workshop proceedings report was prepared by Rouenne Camille De Castro, with inputs from Maria Josella Pangilinan, Astrid Lim and Lucy Wallington, and photos from Patrie Cianne Gelvezon and Cheryl Ventura.

Special thanks go to the Coral Triangle countries (CT6): Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor Leste; and to all the development partners for their invaluable support.

WORKSHOP SUMMARY

This four-day workshop was held at Taal Vista Hotel, Tagaytay City, Philippines from 28 to 31 August 2017. The workshop was attended by representatives from CTI member countries (Indonesia, Malaysia, Papua New Guinea, Philippines and the Solomon Islands), representatives from the academic institutions, development partners, government agencies and financing institutions. The workshop was divided into five sessions comprised of presentations, discussions and break out groups, and a field visit to a mangrove area to demonstrate blue carbon sampling.

At the opening of the workshop, Captain Zaharuddin Mohd Maideen, Climate Change Adaptation-Technical Working Group (CCA TWG) Chair, explained the rationale, context and objectives of the workshop and encouraged everyone to “learn, unlearn and relearn blue carbon initiative, for the sound management of coastal ecosystems.”

The workshop was organized to strengthen understanding of blue carbon ecosystems and related issues in CTI countries through sharing knowledge and experiences and from experts and across countries. To set the stage, so to speak, presentations on basic concepts on blue carbon ecosystems were presented. An introduction on the International Partnership for Blue Carbon (IPBC) was also provided. The partnership aims to bring together governments, non-profit organizations, intergovernmental organizations, and academic institutions to accelerate action towards protecting and conserving coastal blue carbon ecosystems.

To further contextualize blue carbon in the Coral Triangle (CT), each member country presented an update on the current knowledge on blue carbon, existing activities, gaps and opportunities, and next steps in accelerating actions on blue carbon initiative. Lectures on policies and existing frameworks on blue carbon and available financial options were also given. A field trip to the Ang Pulo Mangrove Forest Conservation Park in Calatagan, Batangas was also conducted to provide a venue to orient and demonstrate the methodologies and protocols used for measuring carbon in seagrasses and mangroves to the participants.

The workshop also aimed to increase capacities, and identify pathways and next steps for protecting and restoring blue carbon ecosystems in the CT region. From all the knowledge and skills imparted to the participants in the first three days, ways forward and strategies were identified. Each country identified specific action points they will undertake when they go back home. The actions identified revolved around research, networking/coordination, community-based resource management (CBRM), development of policies, capacity building and raising awareness. There was also a common interest in coming up with opportunities to work bilaterally and as a region. These opportunities include strengthening networks/links and providing an avenue for networking with other partners and initiatives, conducting regional exchanges on blue carbon capacity building, coming up with a regional framework, pitch, statement and communication materials on blue carbon, university partnerships and Centers of Excellence to include blue carbon in its activities, including the summary of discussions in the CTI Senior Officials Meeting (SOM) agenda, and strengthening the role of the IPBC, Blue Carbon Initiative (BCI) and the CTI Regional Secretariat (CTI-RS).

Lastly, the role of partners in harnessing expertise and knowledge on blue carbon was acknowledged. Partner organizations provided specific actions and assistance they could provide to support the CT region. Next steps from the partners include developing regional statements, communication materials, providing technical capacity and continuous support through various programs and activities.

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Acronyms used

| | |
|---------|--|
| ADB | Asian Development Bank |
| ASEAN | Association of Southeast Asia Nations |
| AUU | Abandoned, Underutilized, Underdeveloped Fishponds |
| BIOFIN | Biodiversity Finance Initiative Philippines |
| CBRM | Community-based Resource Management |
| CCA | Climate Change Adaptation |
| CCC | Climate Change Commission (Philippines) |
| CCDA | Climate Change and Development Authority (PNG) |
| CEPA | Conservation and Environment Protection Authority (PNG) |
| CEPA | Communication, Education, Public Awareness |
| CI | Conservation International |
| CLUP | Comprehensive Land Use Plan |
| CMEMP | Coastal and Marine Ecosystems Management Program |
| COE | Centers of Excellence |
| COP | Conference of the Parties |
| CRMP | Coastal Resource Management Plan |
| CSIRO | Commonwealth Scientific and Industrial Research Organization |
| CSO | Civil Society Organizations |
| CSR | Corporate Social Responsibility |
| CT | Coral Triangle |
| CT6 | Coral Triangle countries (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands and Timor-Leste) |
| CTI-CFF | Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security |
| DA | Department of Agriculture |
| DENR | Department of Environment and Natural Resources |
| DILG | Department of the Interior and Local Government |
| FAO | Food and Agriculture Organization |
| FRIM | Forest Research Institute Malaysia |
| GCF | Green Climate Fund |

| | |
|---------------------------|--|
| GEF | Global Environment Facility |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit |
| ICM | Integrated Coastal Management |
| ID | Identification |
| IEC | Information, Education and Communication |
| INDCs | Intended Nationally Determined Contributions |
| IPBC | International Partnership for Blue Carbon |
| IUCN | International Union for Conservation of Nature |
| JICA | Japan International Cooperation Agency |
| LEAP | Local Early Action Plan |
| LGU | Local Government Unit |
| MACBIO | Marine and Coastal Biodiversity Management in Pacific Island Countries Project |
| MARSH | Mangrove Rehabilitation for Sustainably-Managed Healthy Forest Project (USAID) |
| MECDM | Ministry of Environment, Climate Change, Disaster Management and Meteorology |
| MESV | Marine Ecosystem Services Valuation |
| MPA | Marine Protected Area |
| MyNODC | National Oceanographic Data Center Malaysia |
| NCCC | National CTI Coordinating Committee |
| NCI | National Convergence Initiative |
| NDC | Nationally Determined Contributions |
| NGO | Non-government organization |
| NRE | Ministry of Natural Resources and Environment (Malaysia) |
| PALITAKAN | Pro-mangrove Alliance and Implementing Team and Arm as Kilitisans Advocates of Nature |
| PBSAP | Philippine Biodiversity Strategy and Action Plan |
| PEBACC | Pacific Ecosystem-based Adaptation to Climate Change Project |
| PEMSEA | Partnerships in Environmental Management of the Seas of East Asia |
| PO | People's Organization |
| PPP | Public-Private Partnership |
| PRIM ² E StAND | Philippines' Research Initiative on Mangrove Management and Enhancement Strategies Against Natural Disasters |
| RA | Regional Action |

| | |
|--------|---|
| REAP | Regional Early Action Plan |
| REDD+ | Countries efforts to reduce emissions from deforestation and forest degradation |
| RPOA | Regional Plan of Action |
| SOM | Senior Officials Meeting |
| SPREP | Secretariat of the Pacific Regional Environment Programme |
| SPC | Secretariat of the Pacific Community |
| TWG | Technical Working Group |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| USAID | United States Agency for International Development |
| VA | Vulnerability Assessment |
| WWF | World Wildlife Fund |

SESSION 1: WELCOME AND SCENE SETTING

OPENING MESSAGE



Noel Antonio V. Gaerlan
Commissioner
Climate Change Commission

In his opening message, Commissioner Noel Gaerlan of the Philippine Climate Change Commission (CCC) expressed his gratitude and appreciation to the distinguished guests, partners, participants, and the support staff who attended the event.

He discussed how the Philippines is blessed with rich marine and coastal ecosystems of mangroves, tidal marshes, and seagrass essential for climate change adaptation and mitigation, and other ecosystem services. Given the threats that these ecosystems are facing, there is a need for programs and policy initiatives, such as proper land use and action planning, that will ensure management and protection.

Commissioner Gaerlan emphasized the workshop's goal of unveiling different programs and initiatives, and articulating among scientists, experts and like-minded group the significance and importance of coastal resource management. Overall, the aim is to provide a multi-sectoral and inter-agency learning and exchange of ideas on how to attain the overall goal of integrating the CTI and Blue Carbon strategy in the local climate and disaster development action planning.

The CCC, as the primary lead agency in formulating climate change policies in the Philippines, is creating a Blue Carbon Steering Committee and Technical Working Group (TWG) composed of national government agencies, academic institutions and civil society organizations. This group will lead and steer discussions to promote research agenda on Blue Carbon and how this can be responsive to the climate adaptation and mitigation agenda.

In closing, Commissioner Gaerlan hopes that everyone will learn from this training workshop and that all should be keen on learning new concepts, tools, methods and strategies that will serve as science-based inputs to the formulation of regional and local plans and programs to ensure sustainable development and climate resilient communities.

CHAIR'S WELCOME



Captain Zaharuddin Mohd Maideen
Chair
CCA TWG

As the Chair of the CCA TWG, Captain Zaharuddin Mohd Maideen welcomed everyone to the workshop. He started off by reflecting on the current blue carbon situation, its relation to CCA and other ecosystem services.

Captain explained the rationale, context and objectives of the workshop and encouraged everyone to “learn, unlearn and relearn blue carbon initiative, for the sound management of coastal ecosystems.”

There should be a conscious effort to address threats and push for conservation efforts. There is also a need for prioritization of government funding towards blue carbon initiatives.

Lastly, he encouraged everyone to consider the concept of handholding among countries wherein assistance and encouragement must be provided by more developed countries without discouraging recipient countries.

To end his speech, he wished everyone a pleasant workshop experience.

BACKGROUND

Ms. Astrid Lim, TWG Coordinator of the CTI-CFF Regional Secretariat opened the first day of the workshop by introducing the partners and participants of the workshop. She then briefly explained the workshop objectives, expected outcomes and the activities lined up.

Workshop objectives

- Strengthen understanding of blue carbon ecosystems and related issues in CTI countries, by sharing knowledge and experiences across countries and from experts;
- Increase capacity and identify pathways and next steps for protecting and restoring blue carbon ecosystems in the CT region, possibly including establishing a knowledge network for the CTI; and
- Provide information and facilitate knowledge sharing to support establishment of the COEs on climate change being established under the RPOA.



Ms. Astrid Lim, TWG Coordinator (CTI Regional Secretariat)

Expected outcomes

- Deeper understanding of what blue carbon ecosystems are and their value;
- Insights gained on the potential value of protecting blue carbon sites;
- Gain information on the context and aims of the International Partnership for Blue Carbon and its current state of play in the CT Region;
- Knowledge and skills increased on practical applications of blue carbon methodologies, tools and approaches;
- Identified possible projects or opportunities for blue carbon work; and
- Strategies for further collaboration or information sharing on blue carbon identified.

Activities

This four-day workshop was held at Taal Vista Hotel, Tagaytay City, Philippines from 28 to 31 August 2017. The workshop was divided into five sessions comprised of presentations, discussions and break out groups, and a special session for the field visit at Ang Pulo, Calatagan.

Attendees



List of organizations represented:

- Indonesia
 - Indonesian Institute of Sciences
 - Institute of Marine Research & Observation, Ministry of Marine Affairs & Fisheries
- Malaysia
 - University Kebangsaan Malaysia
 - Ministry of Science, Technology and Innovation
 - University Malaysia Sabah
 - Department of Marine Parks Malaysia
- Papua New Guinea
 - Climate Change & Development Authority
 - University of Papua New Guinea
 - Conservation and Environment Protection Agency
- Philippines
 - Climate Change Commission
 - Conservation International – Philippines
 - Ateneo de Manila University
 - University of the Philippines Marine Science Institute
 - Department of Environment and Natural Resources
 - Ang Pulo People's Organization, Calatagan
- Solomon Islands
 - Ministry of Environment, Climate Change, Disaster Management & Meteorology (MECDM)
- Development Partners
 - The Nature Conservancy
 - World Wildlife Fund
 - Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)
 - CTI-CFF Regional Secretariat
 - GIZ
 - Asian Development Bank
 - United Nations Development Programme (UNDP)
 - Department of the Environment and Energy, Australia
 - Department of Foreign Affairs and Trade, Australia
 - Commonwealth Scientific and Industrial Organization (CSIRO), Australia

INTRODUCTION TO THE INTERNATIONAL PARTNERSHIP FOR BLUE CARBON (IPBC)



Lucy Wallington, Australian Government

To start off the discussions, Lucy Wallington, of the Department of Environment and Energy, Australia, provided an overview of the IPBC which was established at the Paris climate change conference, UNFCCC COP21 in 2015. The Partnership brought together governments, NGOs, research institutions and international organizations. She reiterated that the Partnership is not a funding body, but instead aims to better connect the efforts of governments, research organisations and non-government organisations.

Founding members agreed to work together to enhance the protection and restoration of coastal blue carbon ecosystems – mangroves, tidal marshes, and seagrasses – and with a focus on the opportunities these systems provide for climate change action.

The Partnership considers blue carbon's role in climate change from the perspectives of mitigation and adaptation and the importance of the wealth of co-benefits and other ecosystem services blue carbon provides. Major international climate change and environment agreements guide activities, such as the IPCC, REDD+, Ramsar Convention on Wetlands and the UN Sustainable Development Goals.

IPBC aims to enhance the protection and restoration of coastal blue carbon ecosystems; and to bridge science, policy and research action. It is built upon 3 pillars: building awareness, sharing knowledge, and accelerating practical action in priority regional hotspots.

The first Partnership meeting was held in Indonesia in August 2016 wherein the Partnership's objectives and priority actions were developed. The Partnership held a successful technical side event at COP22 - focused on 'Incorporating blue carbon into Nationally Determined Contributions under the Paris Agreement'. Partners convened another side event at SDG14 The Ocean Conference, with a focus on opportunities provided by blue carbon to deliver on countries' Sustainable Development Goals. These discussions supported the Partnership's objectives of raising awareness and sharing knowledge.

The Partnership also launched its website, bluecarbonpartnership.org, which hosts a factsheet and strategic documents, and allows blue carbon stakeholders from around the world to discover the Partnership and become involved. In addition to events and meetings, the Partnership has conducted two major activities to advance thinking in the policy space. The first was to conduct an international stocktake of blue carbon science, policy, and practical action. Three focal groups were formed among partners and experts to tackle key issues and identify solutions for blue carbon.

These recent events contributed to informing the development of the Partnership's roadmap for 2017-18 and the identification of priority activities. Some of these activities include the development of a blue carbon 'narrative', guidance for incorporating blue carbon into NDCs, access to blue carbon finance and investment, project case studies, and access to blue carbon resources.

Formal members and many other countries and organizations have been involved in events and workshops. Moving forward, the Partnership aims to expand and continue to diversify. Lastly, Ms. Wallington warmly welcomes CT countries to join the Partnership. There are no financial obligations involved in becoming a partner, just broadly identify what they can contribute – such as policies, project experiences, communication products and more.

BLUE CARBON SCIENCE DEEP-DIVE



Emily Pidgeon, Conservation International

Emily Pidgeon, Conservation International’s Senior Director for Marine Climate Change, provided an introduction to the science of blue carbon. Coastal ecosystems such as mangroves, salt marshes and seagrasses provide many critical ecosystem services, including carbon sequestration, storage and emission or what is known as blue carbon.

The ability of these coastal resources to store carbon is higher than terrestrial resources. They have richer carbon storage and have lesser net emissions compared to terrestrial resources. When sea levels rise, healthy coastal ecosystems can enhance carbon stocks. This is especially true under special conditions/factors such as sediment availability and waves/currents. Despite the proven importance of these resources and ecosystem services, threats such as aquaculture, agriculture, development and pollution exist, causing degradation and destruction. Therefore, conservation and restoration of coastal resources should be an important strategy among countries.

The International Blue Carbon Initiative is the first integrated program focused on mitigating climate change by conserving and restoring coastal marine ecosystems globally. The Initiative is led by CI, IUCN and the Intergovernmental Oceanographic Commission (IOC) of UNESCO, and works with partners from national governments, research institutions, nongovernmental organizations, coastal communities, intergovernmental and international bodies and other relevant stakeholders. It was formed with the aim of translating science into policy and actions useful on the ground. In addition, tools and guidelines were developed to aid in understanding blue carbon and assessing carbon stocks and emissions.

INTRODUCTION TO BLUE CARBON IN THE CORAL TRIANGLE



Ryan Whisnant, PEMSEA

Taking off from Emily’s discussion on the science of blue carbon, Ryan Whisnant, Director of PEMSEA’s Strategic Initiatives, focused on the discussion of the report on Understanding Strategic Coastal Blue Carbon Opportunities in the Seas of East Asia. This report tackles the status of blue carbon ecosystems in PEMSEA countries which is important in moving blue carbon forward. Some important findings in the report were discussed. It was mentioned that seagrass species are most diverse and abundant in CT countries and top mangrove ecosystem cover are in CT countries; but also, high in estimated losses. Threats such as aquaculture, agriculture and development causes further losses.

Blue carbon as a climate intervention concept recognizes that coastal ecosystems are very important in CCA and mitigation. This is reflected in the CT countries’ INDC/NDC commitments and their policies, measures and mechanisms on coastal ecosystems. There is an opportunity to heighten blue carbon adaptation and mitigation in the next round of NDCs. Also included in the report are country recommendations and general recommendations for coastal blue carbon interventions.

SESSION 2: BLUE CARBON IN THE CORAL TRIANGLE

INDIVIDUAL COUNTRY PRESENTATIONS

Aimed at demonstrating current state of knowledge, existing activities, gaps and challenges and future directions of each CT country.

INDONESIA



Novi Susetyo Adi, Indonesia

- Current state of knowledge
 - 3301847.54 ha or 22.6% of global mangrove; 43 species
 - 1150,392.06 ha of seagrass; 13 species identified
 - Carbon storage (seagrass+mangrove): 3.4 Pg. C

- Existing activities:
 - Mangroves rehabilitation
 - Coastal protection: hybrid engineering, geotextile, concrete breakwater
 - Gerakan Cinta Laut Campaign: Mangroves Gymboree, beach clean-up, Indonesia coastal education
 - Climate Resilience Village
 - Marine Protected Area
 - Mangrove Center for Rehabilitation and Education
 - Ocean and Coastal Carbon Project
 - RCO-LIPI priority research program on carbon sequestration for climate change mitigation
 - Dugong and Seagrass Conservation Project
 - 2011-2017 Carbon Stock Inventory

- Gaps and challenges:
 - Mainstreaming other ecosystem services
 - Capacity building and public awareness
 - Include marine and coastal sector into national policy (NDC) and local (RAD-GRK)

- Future directions:
 - Comprehensive Assessment and Conservation of Blue Carbon Ecosystems and Their Services in The Coral Triangle (BlueCares) (2017-2022)
 - GEF Blue Forest Project (2017-2018)

- Questions raised:
 - What is the approach used in hybrid restoration? Is it for open area only?

INDIVIDUAL COUNTRY PRESENTATIONS

MALAYSIA



Aldrie Amir, Malaysia

- Current state of knowledge:
 - Total of 597,378 ha of mangrove forest reserves in 2015
 - Total of 103 sites of seagrass meadows in 2016
 - Has record of carbon stock assessments in Penang, Kuala Selangor, Langkawi, Matang mangrove, Johor
- Existing activities:
 - National Mangrove and Coastal Forest Replanting Program
 - Sustainable Forest Management
 - Dugong & Seagrass Conservation Project
 - Localized Mangrove Planting & Replanting
- Gaps and challenges:
 - Baseline data and basic information
 - Conversion to agriculture and aquaculture
 - Urban and port expansion, and industrial development
 - Exploitation for timber and other wood products;
 - Pollution
 - Climate change (rising sea level; temperature and rainfall; storm frequency)
 - Translating science into policies
- Future directions:
 - MyMangrove – The Malaysian Mangrove Research Alliance & Network

INDIVIDUAL COUNTRY PRESENTATIONS

PAPUA NEW GUINEA



Papua New Guinea

- Current state of knowledge:
 - Blue carbon focus is on mangroves
 - There are few surveys/assessments done on the extent of coastal blue carbon ecosystems
 - 40 known true mangrove species
 - Total mangrove area of > 550,000 ha
 - Total seagrass area of > 450,000 ha
- Existing activities:
 - Enhancing the adaptive capacity to climate change related floods in the north coast and islands region
 - Karama Mangrove Restoration and Reforestation
 - Building resilience to climate change
 - NGO's and CBO's implementing mangrove conservation and rehabilitation activities around PNG
 - University of Papua New Guinea (UPNG)- Capacity Building (Training of students- Biological Science and Environment Science Courses), research and assessments (MARSH- USAID)
- Gaps and challenges:
 - NDC does not specify Blue Carbon
 - More research and analysis on blue carbon ecosystems
 - More awareness raising to communities
 - Financing options on blue carbon
 - Technical guidance and assistance
 - Information sharing and partnerships between Governments and universities within the region
 - Trainings
- Future directions:
 - National Mangrove Policy
 - Further Research and Studies in Blue Carbon ecosystems
 - Financing options
 - Building the capacity of communities
 - Strengthen partnerships and networking

INDIVIDUAL COUNTRY PRESENTATIONS

PHILIPPINES



Carina Manlapaz, Philippines

- Current state of knowledge:
 - 208,020 ha of mangroves
 - 37,282 ha of seagrass beds
 - 482,400 ha of swamps & marshes
- Existing activities:
 - BlueCARES/ IAMBlueCECAM
 - Establishment of BCTWG & NBCSC
 - Coastal and Marine Ecosystems Management Program (CMEMP)
 - Expanded National Greening Program
 - PRIM²E StAND
 - Mangroves and Natural Disasters
- Gaps and challenges:
 - Accurate & comprehensive maps and data on blue carbon
 - Raising awareness of climate change outcomes
 - Policy development and implementation
 - Training and education
 - Development of 'one voice' to convince prioritization of blue carbon research and development
- Future directions:
 - Formulate roadmap to ensure the ecological sustainability of the blue carbon ecosystems
 - Research and data synthesis towards publication of IEC materials on blue carbon
 - Comprehensive nationwide baseline for coastal and marine ecosystems through CMEMP
 - Mainstreaming blue carbon into coastal ecosystems management and conservation portfolios
 - include in the Nationally Determined Contribution Report
- Questions/issues raised:
 - Do you think CTI countries' one voice can help convince national governments in pushing for blue carbon initiatives?
 - Each ecosystem is considered separately, there should be a connectivity, look at it as one entity

INDIVIDUAL COUNTRY PRESENTATIONS

SOLOMON ISLANDS



Agnetha Vave-Karamui, Solomon Islands

- Current state of knowledge:
 - Total mangrove area of 56,100 ha
 - Total seagrass area of 10,000 ha
 - Carbon sequestration for mangroves: 353,430 tCO₂/yr. = USD\$21,559,230/yr. (SI National MESV Report, 2015)
- Existing activities:
 - REDD+ Project
 - Dugong & seagrass conservation project
 - GEF/FAO Integrated Forestry Management Project
 - GIZ/SPREP PEBACC Project
 - GEF/SPS Pacific Ridges to Reefs Program
 - MACBIO
- Gaps and challenges:
 - Coastal developments
 - Overharvesting
 - Waste, pollution, and sanitation problems
 - Natural disasters
 - Destructive fishing practices
 - Blue carbon still a new concept
 - Limited technical expertise
 - Absent/poor data information
- Future directions:
 - Awareness building on Blue- Carbon concepts
 - Review existing policy recommendations e.g. WorldFish,2012; Blue carbon initiatives etc.
 - Include blue carbon into legislation and policy reviews and development plans
 - Build technical capacities – practice and demonstration
 - Seek financial and technical support – mapping, capacity-building, data needs etc.
- Questions/issues raised:
 - There should be a consistent formula to be adopted for the valuation of ecosystem services

SESSION 3: POLICIES AND INTERNATIONAL FRAMEWORKS, ACCESSING FINANCE

POLICY FRAMEWORKS



Zoe Sinclair, Australia

Zoe Sinclair of the Department of Environment and Energy, Australia, provided an overview of the policy frameworks relevant to blue carbon, at the national and international levels. International frameworks drive blue carbon awareness, knowledge and action. Some of the most prominent frameworks on climate change include the Kyoto Protocol, Cancun Agreements, Paris Agreement and REDD+. Aside from those, there are also commitments on environment and development that are relevant to blue carbon such as the Ramsar Convention, Convention on Biological Diversity and SDGs. Actions to protect and restore blue carbon ecosystems can also offer opportunities to meet commitments under these frameworks.

Each country's unique environmental and policy contexts will drive how they prioritize and implement activities. Many considerations for implementing blue carbon focused policies will be common to achieving broader outcomes, such as coastal resilience and sustainable livelihoods. It is important to identify synergies and harness existing opportunities.

BLUE CARBON FINANCING OPPORTUNITIES



Maya Villaluz, World Bank

Maya Villaluz of the World Bank provided an overview of relevant finance options available for blue carbon projects, and avenues to access these. World Bank's current carbon financing budget is at \$420 million which includes the Prototype Carbon Fund, Bio Carbon Fund, Community Development Carbon Fund, Dutch Carbon Fund, Italian Carbon Fund and the Netherlands JI Facility.

The BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is a new facility by the World Bank with a fund of \$380 million. It is aimed at supporting countries towards low carbon development through improved livelihoods, increased productivity and sustainable land use. This can be done by working at scale, leveraging partnerships, incentivizing results and building on experience.

Aside from those, PEMSEA is also developing the Seas of East Asia Knowledge Bank (SEAKB) to strengthen knowledge sharing across projects and stakeholders and the State of the Coasts (SOC) Reporting System to help governments and other organizations in ICM implementation.

New partnerships for oceans are in place such as Protection of MPAs (GEF, Wildlife Conservation Society, Waitt Foundation, Blue Moon Fund), Expansion of MPAs, Meloy Fund for Small-scale Fisheries (RARE and CI), Blue Abadi (CTI), Trash Free Seas Alliance (Ocean Conservancy, GEF and UNEP), and Address Excess nitrogen in lakes and oceans (UNEP). All these and more can be tapped by countries and organizations for blue carbon financing.

FINANCING THE PHILIPPINE BIODIVERSITY STRATEGY AND ACTION PLAN

Anabelle Plantilla of UNDP talked about the Biodiversity Finance Initiative Philippines (BIOFIN), which seeks to close the global financing gap in the implementation of national biodiversity action plans. This project is currently being implemented in 29 countries.

In the Philippines, BIOFIN supports the implementation of the Philippine Biodiversity Strategy and Action Plan (PBSAP) 2015-2028. The PBSAP was prepared by DENR and was adopted in fulfillment of the country's commitment to the Convention on Biological Diversity. The PBSAP targets are also in line with the SDGs, Aichi Biodiversity targets and the President's 10-point agenda. She elaborated on financing mechanisms such as mainstreaming in national plans and national budget, expenditure tagging, PPP, filing of legislations, private sector engagement, CSR/ Philanthropy, improved access to earmarked funds, localization of biodiversity plans, and payments for environmental services.



Anabelle Plantilla, UNDP

ADB MESSAGE ON FINANCIAL OPTIONS

Arun Abraham of the Asian Development Bank also provided a short message on financial options. He talked about available funding which directly and indirectly contributes to the CTI. Some of the projects that they fund are costing analysis of national plans of actions of various countries and establishment of business development capacities. They have also developed an index which looked at accounting codes across the CT countries. They will also launch a regional technical assistance in investing, conducting assessments, and knowledge management.

He encouraged countries to forward projects which can be funded by the ADB. Lastly, he discussed the upcoming GEF 7 which will be launched in July 2018. Such can be an opportunity for countries to advance blue carbon. This will cover international waters, climate change mitigation, and biodiversity.



Arun Abraham, ADB

SESSION 4: CCA PRIORITIES AND BLUE CARBON POLICIES



Discussions on the REAP-CCA and Updates on Centers of Excellence

REGION-WIDE EARLY ACTION PLAN FOR CCA

Jacqueline Thomas of the World Wildlife Fund provided a progress update on the actions contained in the Region-Wide Early Action Plan (REAP) for CCA. She emphasized the aims of the REAP-CCA which are to maintain marine and coastal ecosystem structure, function, and services and to support diversification strategies that build coastal community resilience.

Status of REAP-CCA Regional Implementation for Target 1 as of 2015:

- RA1 & RA2: Identify most important and immediate adaptation measures across & in CT 6 (Completed)
- RA3: Complete and implement REAP for Climate Change Adaptation (Ongoing)
 - Develop regional guidelines, gather baseline data for damage/loss accounting (e.g. from coral bleaching, typhoons) of marine ecosystems (MPA & fisheries) to access recovery funds (Not Started)
- RA4: Conduct capacity needs assessments & develop capacity building programs on CCA measures
 - Share / develop regional capacity to conduct vulnerability assessments using a variety of methodologies and tools (Ongoing)
 - Acquire Global Mangrove Information System (GLOMIS) data from International Society for Mangrove Ecosystems (Ongoing)
 - Post VA methodologies & tools for CCA in CT on CTI website - use filtering system/description to tag how tools are used (Ongoing)
- RA5: Mobilize financial resources to implement REAP for Climate Change Adaptation
 - E.G. Access CCA Marketplace for project funding (Not started)

CCA Cross cutting themes and mechanisms (Regional), status as of November 2016:

- Organize periodic networking events to share CCA scientific advances and best practices (Started)
- Maintain regional information exchange and operation of CCA TWG with other thematic groups (Ongoing)
- Conduct regional workshop on blue carbon to understand terms and concepts and develop position statements on the CT region (Started)
- Develop an Executive Course on CCA based on the LEAP guide for local governments (Not started)

Two regional CCA training events were conducted to develop capacity on conducting vulnerability assessment and planning for adaption. The draft LEAP guide was used to develop the training. In addition, WWF has developed the Adaptation Marketplace to help link adaptation projects with funding.

She also presented the CCA TWG proposed work plan for 2017:

| Planned Activities | Time Frame |
|--|---|
| Finalize the Executive Course on CCA for local governments | TBD |
| Pilot test the Executive Course for relevance and effectivity | By December |
| TWG Orientation on CT Atlas | January - February |
| Continue discussions on COE to finalize criteria/benchmarks/TOR for COE | By October |
| Conduct regional workshop on COE Establishment (National or Regional) | By October |
| Initiate the compilation and review of existing guidelines, baseline assessment and rehabilitation methodologies | By Dec 2017 |
| Conduct 5th CCA TWG meeting | (Back to back with COE REX/ prior to SOM) |

Lastly, she also discussed the challenges for CCA regional progress which are:

- Participation of CT6 to conference call meetings
- Limited partners for CCA TWG
- Complexity of CCA linkage to national frameworks - need Focal Points to work with CC
- Methodology for accounting damage/loss is not yet available
- Political dynamics; availability of data and information sharing system
- More understanding needed on the type of COE that best fits respective CT6
- Discussion needed at the regional level to set criteria, benchmark and TOR for COE
- Coordination with local govts for CCA implementation & integration of CCA in other CTI goals
- Lack of support to conduct the regional workshops
- Communication technology for conference calls
- Timely submission of CCA Country Report to the CCATWG
- Updating of CCA data in CT Atlas

UPDATES ON CTI CENTERS OF EXCELLENCE ON CCA

Astrid Lim of the CTI-CFF Regional Secretariat provided updates on the CTI COE. As part of the REAP-CCA, the target is to establish a regional network of national COE on CCA for marine and coastal environments and that such are operational in each CT country. National COE aims to improve understanding of future climate change impacts and related issues and to support comprehensive application of effective adaptation measures to mitigate impacts. Its basic concept is to establish an effective focal point in each country for CCA measures to be able to facilitate data and information management, and to support coordinated action. This shall eventually generate projections of CC vulnerabilities and impacts, commission and support researches, provide practical training, tools, case studies, and communication tools.

As an update, the 4th CTI-CFF Regional Exchange on CCA was held last 26-27 September 2016 in Malaysia. This event aimed at orienting new members of the CCA working group, share knowledge and practices on the establishment of COE, develop regional initiatives and develop preliminary roadmap and strategies.

The COE shall serve as a convergence point among experts and for data sharing and aims to ensure standardized methodologies in research and improved technical capacity among stakeholders. It is also important to note that outputs of COE should be further translated into policies and actions.

BREAKOUT GROUP DISCUSSIONS AND PRESENTATIONS

After the presentations of update on the REAP-CCA and COE, participants were tasked to identify regional challenges and priority actions on coastal ecosystems, linkages with blue carbon and priority next steps. The breakout group discussion was done per country, thus having five groups. They were given two hours to discuss and after which, they presented their outputs. Presentation was done per country but as per suggestions by majority of the participants, outputs were collated and summarized to be able to see it on a regional perspective.

Before breaking out into groups, there were few issues and suggestions raised by the participants:

- There should be regional level suggestions which can be useful to other countries as well
- Research collaborations should also be discussed during the breakout group discussions
- Discussions should be focused on blue carbon, with CCA and mitigation in mind
- Points should be as specific as possible to be able to develop more concrete actions



Indonesia group, facilitated by Zoe Sinclair and Anissa Lawrence



Philippines group, facilitated by Mike Fortes and Jocel Pangilinan



Papua New Guinea group, facilitated by Laura Whitford, Ricky Nunez and Sev Salmo



Malaysia group, facilitated by Emily Pidgeon and Aldrie Amir



Solomon Islands group, facilitated by Lucy Wallington and Jackie Thomas

After the group discussions, each country representative presented their output. All the outputs are summarized below:

Science (data):

- Capacities
 - Some countries have available data and maps on blue carbon ecosystems distribution and cover, carbon storage and sequestration capacities, etc.
 - Abundance of coastal ecosystems and resources
- Gaps
 - Linking science to policy and actions
 - Limited data specific to carbon; or if data is available, there is a lack in capacity for analysis
 - Focus is on specific ecosystems, not holistic
 - Lack of knowledge on valuation of BC ecosystems
 - Inconsistent carbon measurement and valuation methodologies across countries
- Opportunities
 - Involvement of the academe and research and development institutions
 - Data sharing mechanisms across countries
 - Available manuals and guide books
 - Available trainings and capacity building
- How to address gaps and maximize opportunities
 - Initiate active and regular communication and coordination among countries
 - Establish and strengthen regional hub for data sharing and expert knowledge
 - Actively disseminate information and knowledge on BC
 - Utilize CTI university partnership
 - Conduct further studies/research on BC ecosystems valuation
- Indicators of success
 - Standardized methodology on the blue carbon assessment used within CTI countries
 - Baseline data gathered and accessible database to relevant agencies
 - Thematic maps developed
 - Relevant BC country-specific research conducted
 - Stakeholders such as communities, LGUs, etc. informed on the value and importance of such ecosystems
 - Increased number of CT countries nationals trained to carry out carbon assessments in the blue carbon ecosystems
- Existing pathways to pursue activities
 - Scientific publications
 - Current regional and country-specific projects

Policy and governance:

- Capacities
 - Existing National Climate Change action plans in some CTI countries
 - Existing Nationally Determined Contribution (NDC) in some CTI countries
 - Existing policy reviews on mangroves and seagrasses, guidelines and laws such as Climate Change Act (Philippines) and laws for the protection of specific resources (forests, coasts, etc.)
 - Involvement of government agencies, technical working groups and other agencies
 - REDD+ Readiness Roadmap which brought together relevant agencies
 - National Climate Change Working Group which coordinates donors, practitioners and experts

- Gaps
 - In case where policies, laws and guidelines are in place but implementation is weak
 - Blue Carbon inclusion in some CTI countries
 - Localization of plans on the conservation and management of blue carbon ecosystems
 - Support from the communities, local governments and the private sector in the management of blue carbon ecosystems
 - Harmonizing of policies relevant to BC protection and management
 - Developing policies targeting a specific area/ecosystem (sea grass, foreshore, etc.)
 - More active coordination and clearer delegation of responsibilities of relevant government agencies
 - Limited technical expertise and capacities for monitoring and reporting

- Opportunities
 - Bridging the communication within relevant departments and ministries on Blue carbon
 - Revised or harmonize policies relevant to BC protection and management
 - Existing coordinating bodies that can assist in policies, governance and activities on BC
 - Available capacity in information systems and research

- How to address gaps and maximize opportunities
 - Initiate active and regular communication and coordination among countries
 - Ensure and/or strengthen stakeholder participation
 - Evidence and science based implementation of programs and activities related to BC
 - Re-activate or strengthen existing partnerships

- Indicators of success
 - Relevant Policies established and existing ones are effectively implemented
 - Common understanding on BC established among stakeholders particularly governments and communities
 - Focal Point and/or Task Force established
 - Relevant BC policies are harmonized

- Existing pathways to pursue activities
 - Existing legal frameworks and policies
 - Focal Point and/or Task Force on blue carbon
 - Existing partnerships with development organizations and NGOs

Capacity and awareness-building:

- Capacities
 - Several existing campaigns and strategies such as the REDD+ communication strategy
 - Several researchers with interests on blue carbon ecosystems
 - Understanding of blue carbon in limited focal points
- Gaps
 - Communication and information dissemination on the local level
 - Lack of knowledge and understanding on the importance of blue carbon ecosystems, management and restoration among communities, local governments and stakeholders
 - Existing plans such as ICM plan, land use plans and CRMP not fully implemented
 - Translation of scientific findings into IEC materials
 - Capacity and responsibility mismatch among government and community officials
- Opportunities
 - Existing communication materials and activities which can be refocused on blue carbon
 - Varying levels of Community Based Resource Management (CBRM) programs in some countries
 - Current projects and available trainings on BC
 - Existing knowledge and capacity from academe/universities that can be translated into short courses
- How to address gaps and maximize opportunities
 - Initiate or strengthen active and regular communication and coordination among countries
 - Provide capacity building for researchers, policy makers, communities and other stakeholders
 - Establish a unified understanding of blue carbon and its value in climate change mitigation & adaptation among researchers, policy makers, communities and other stakeholders
 - Engage local communities on the protection and management of BC ecosystems and provide support to sustain initiatives on the ground
 - Establish IEC utilizing various platforms
 - Laymanize and popularize technical knowledge on blue carbon and its value in climate change adaptation and mitigation
 - Strengthen collaboration with the local government units
- Indicators of success
 - Active involvement of communities in the management and protection of BC ecosystems
 - More areas reached by information and education campaigns
 - Management and research strategies are in place and operational
 - Knowledge products produced and disseminated
 - Understanding and awareness of blue carbon across all stakeholders at different levels – national & provincial governments, and down
- Existing pathways to pursue activities
 - Regional level workshops on IEC strategies
 - Inter-agency coordination
 - International opportunities

Sustainable financing and incentive mechanisms

- Capacities (limited)
- Gaps
 - Limited budget/funding from government and international partners for blue carbon initiatives
 - No mechanism for incentive and sustainable financing in some countries
 - Lack of awareness among policy makers, communities and other stakeholders on the potential of carbon credits
 - Lack of knowledge and access to different funding sources and the processes involved
 - Lack of public-private partnerships
- Opportunities
 - Accessing Green Climate Fund (GCF) for BC work
 - Existing financial institutions that can be tapped for sustainable financing
- How to address gaps and maximize opportunities
 - Initiative active and regular communication and coordination among countries
 - Convince national policy makers to invest in BC work --- from research to management and protection
 - Increase awareness on different financial sources for climate change and biodiversity financing
 - Engage the private sector in projects
 - Increase local governments' capacity on accessing external grants to support BC work
- Indicators of success
 - Project collaboration within the government, research and development institution
 - Local governments can access sustainable financing mechanisms
 - Permanent allocation of fund for BC ecosystems
 - Private sector engaged in projects
 - Submission of project proposals on Blue Carbon to funding institutions and other possible sources of funds
- Strengthen Existing pathways to pursue activities
 - Maximize CTI-CFF capacity
 - Regional programs i.e. GCF Regional Dialogues
 - GEF Small Grants Program

FIELD TRIP

The night before the field trip, Dr. Severino Salmo III of Ateneo de Manila University and Dr. Mike Fortes of UP Marine Science Institute delivered a short lecture on what to expect. The site is located at Kilitisan, southern portion of the town of Calatagan, Batangas.

The objectives of the trip are as follows:

- To enhance the awareness and understanding, on the part of the groups, of the responses of the ecosystems to local human perturbations and climate change;
- To focus attention on the observable major factors which alter the local ecosystem services especially as a blue carbon source;
- To relate the knowledge gained at the workshop with that in the field, including the experiences shared by and with the local stakeholders; and
- To share experiences among members of the group and promote mangrove and seagrass ecosystem services (particularly blue carbon) as a sustainable base of local tourism and livelihood.

They also explained what the coastal ecosystems are and the mangrove and seagrass species found in Calatagan, Batangas. Lastly, they discussed the methods that were to be used during the field proper.



The field site is known as Ang Pulo (The Island), a mangrove conservation park. It is managed by the PALITAKAN (Pro-mangrove Alliance and Implementing Team and Arm as Kilitisans Advocates of Nature), a people's organization composed of volunteers and community members. The PO is headed by Ms. Lucena Duman and vice chaired by barangay captain Danilo Quidem. The park is home to many species of mangroves, seagrass, birds and other marine life.

To formally start the activity, Calatagan Mayor Peter Palacio gave a welcome address. He recognized Conservation International as active partners since 2006 and welcomed everyone to Calatagan and Ang Pulo. Ms. Lucy of PALITAKAN also gave a welcome address, highlighting that Ang Pulo is a complete blue carbon ecosystem with mangroves, seagrasses and corals. She also explained the mangrove conservation initiative. Barangay Captain Danilo welcomed all the guests and reminded that everyone has a part in conservation.

After the welcome messages, Emily Pidgeon provided a brief background on blue carbon to the people's organization and stressed its importance to the community. Captain also gave a message that through the field visit, they would be able to learn more on the contribution of coastal ecosystems on climate change adaptation and mitigation and on blue carbon. As a token of appreciation to the community for the assistance they provided to the team during the ocular, Dr. Mike gave them printed pictures of previous site visits.



The participants were divided into three groups, each group got to experience the following activities:

- Tour around the mangrove area led by the locals wherein mangrove species were identified
- Carbon measurement demonstration and collection of samples for seagrass by Dr. Mike
- Carbon measurement demonstration and collection of samples for mangroves by Dr. Sev



SITE TOUR



SEAGRASS TOUR AND DEMO



MANGROVE TOUR AND DEMO

A demonstration of sampling data computation for carbon stock was given by Dr. Sev and Dr. Frida. Lastly, a lecture was given by Ms. Jocel Pangilinan which provided inputs on mangrove restoration based on the Philippines' experience and solicited inputs from other experts as well.



To start off the next day's activities, a debriefing on the field trip was led by Dr. Sev and Dr. Mike. The main questions asked were:

- 1. What is your impression about the field visit?**
- 2. From your experience yesterday, what insights, lessons, or significant points did you gain or learn?**

Each country and partners had a representative to share their insights.

Malaysia:

1. Great insights learned especially to those with zero background on carbon stock assessments. It takes years to master it but that was a good start. It was a good experience overall.
2. Each country should identify experts or general researchers to come together and contribute to the whole network of carbon research. Bottom up approach in management should really be applied.

Papua New Guinea:

1. The area is so clean. It made me realize that strong community support is needed. The skills demonstrated are basic, not much expertise required.
2. Mangroves are very site specific that if you change the species, it will not work. Strong community base is needed. There is also a need to understand the dynamics of the restoration site such as physical characteristics. Take home message is we still do not understand blue carbon well enough so we need to do more work. Overall experience was excellent.

Indonesia:

1. They have been doing this for the last 5 years, the experience was a great way to refresh lessons learned.
2. On restoration – live with nature, not just plant but study conditions beforehand to prevent failures and make sure that the natural condition supports the restoration.

Solomon Islands:

1. The experience re-emphasizes countries' framework in working with communities and understanding their involvement in conservation and protection activities
2. They were impressed with community involvement and will be taking the learnings back home and will work on policy.

Philippines:

1. The experience served as an add-on aspect where we can influence and convince community to conserve and protect ecosystems due to CCA usefulness
2. There should be more in-depth knowledge. Blue carbon should be mainstreamed as part of IEC and advocacies.

Partners:

1. What stood out above all is the strength of the community, their sense of ownership, trust, and commitment. Such ensures continuity
2. It is important to highlight ecotourism targeting researchers and experts. It is really amazing how proud they are of what they do.

SESSION 5: ACCESS TO FINANCE, WAYS FORWARD

WAYS FORWARD AND STRATEGY SESSION

After the debriefing and the recap of the past days' discussions and activities, Ms. Astrid Lim facilitated the next session. The first activity is a small group discussion on ways forward and strategies was conducted. The participants were again grouped per country. They were asked to answer the question:

- **From your insights and lessons learned from the field, what actions are you going to undertake when you go back home?**

Each country was tasked to specify three actions to be written and posted.



Common themes among the actions are research, networking/coordination, CBRM, development of policies, capacity building and raising awareness.

Indonesia:

- In-house training on blue carbon
- National networking among agencies and institutions working or promoting blue carbon
- Policy brief on blue carbon

Malaysia:

- CBRM
- Malaysian Blue Carbon Profiling
- Science for blue carbon (area distribution, carbon stock)
- Co-engagement of government/policy
- In-house training on coastal ecosystem and blue carbon

Papua New Guinea:

- Awareness (government, CBOs, agencies)
- Capacity building (training of communities, universities, government)

- Policy (Mangrove Management Plan)

Philippines:

- Raising awareness/CEPA to our local partners and stakeholders
- Research and development on blue carbon
- Inclusion of blue carbon in CCA and mitigation actions
- Mainstreaming blue carbon to national policies
- Science-based IEC with communities on benefits and impacts of blue carbon
- Capacity development on blue carbon

Solomon Islands:

- Initiate internal awareness/discussion re: blue carbon, targeting forestry, fisheries, CC, environment (NCC CTI)
- Inter-agency presentation and consultation (NCC WG through CC WG)
- Develop blue carbon profile, communication framework, policy needs/status and scientific needs/status



Opportunities to work bilaterally and across the region

As agreed upon after the breakout group presentations in Session 4, the Summarized Country Discussions Table was presented. Much attention was given to actions and opportunities as a CT region and not just per country. Given such clamor, the floor was then opened for the participants to cite possible opportunities to work bilaterally and across the region.

To summarize the discussions, these are the common points raised:

- Strengthen networks/links and provide an avenue for networking with other partners and initiatives
- Conduct regional exchanges on blue carbon capacity building
- Come up with a regional framework, pitch, statement and communication materials on blue carbon
- University partnerships and COE to include blue carbon in its activities
- Include the summary of discussions in the SOM agenda
- Strengthen the role of the Blue Carbon Initiative and the CTI Regional Secretariat



Detailed discussions are as follows:

Novi Susetyo Adi (Indonesia):

- For international partners, UNFCC has systematic organization for units that have specific functions – it is useful to adopt such structure. The more initiatives/units/organizations, the more effective it will be. There should be a specific unit to be contacted/tapped for specific concerns.
- Create a mechanism on how to connect to existing initiatives
- There should be a level/group per competency so that support can be prioritized, i.e. more assistance and focus should be given to low level groups, monitor progress and then level up/down accordingly.

Captain Maideen (Malaysia):

- Re: CCA COE, blue carbon and CCA should be streamlined and there should be collaboration so as not to be redundant; take off from what has been done
- Coming up with a unified statement is possible, not on a workshop level but on TWG level

Agnetha Vave-Karamui (Solomon Islands):

- There should be a regional focus, a need for the region to have a common platform for CT6 to converge
- There should be a regional pitch for blue carbon, regional profile and community products that can assist all countries
- Regional secretariat should take the lead on these activities, put it in the agenda of the SOM so as meaningful products will be developed on a regional level
- There should be a stronger involvement from the regional secretariat
- Regional pitch can be developed on the regional level like a one-pager situationer in CT

Carina Manlapaz (Philippines):

- Agrees with the Solomon Islands, we can do binding statements that can be forwarded and approved by SOM to ensure accountability
- Review summary then discuss/consult to higher officials for future actions then TWG should meet before pre-SOM to raise individual country statements

A'an Wahyudi (Indonesia):

- Agrees with coming up with a regional CT statement
- Establish and formalize regional network on blue carbon and standard framework on blue carbon
- BC statement/voice/framework as a region which can be presented to higher organization like IUCN

Aldrie Amir (Malaysia):

- University partnerships can include blue carbon as part of its activities

Papua New Guinea:

- This workshop is not the proper venue for coming up with statements
- Requests to please consider that the Solomon Islands and PNG is not part of ASEAN and PEMSEA

Dr. Mike Fortes (Philippines)

- There should be a compelling reason why CTI is focusing on blue carbon
- The workshop elicited good action point thus we should focus on that
- We can present what was agreed upon here to the upcoming ASEAN mangrove conference and World blue carbon conference

Emily Pidgeon (Partner):

- Partners can improve on connecting with other agencies
- Will work with CTI to develop the briefer or slide show that is much simpler that can be a common presentation for countries

Ways to harness the expertise and knowledge of CTI development partners and other forums/bodies

The last part of the discussion is aimed at the partners present. Each partner organization spoke and elaborated on what they can do to move blue carbon forward.

Emily Pidgeon and Enrique Nunez (Conservation International):

- There are number of blue carbon events in the upcoming COP, that may be an avenue. Countries may approach her to discuss opportunities or country interests so they can be included in the event.
- Can provide network of experts in science and policy in blue carbon; role of partnership is to amplify and bring countries together to do it on government level
- Work with partners (of IPBC and BCI) and come up with communication materials
- Help countries move forward on blue carbon topics
- Provide technical capacity, build local knowledge and strengthen partnerships
- As member of the CTI NCC, provide secretariat support and blue carbon assessments in the Philippines
- Global mangrove alliance with TNC and WWF can be another venue for gaining resources and support

Laura Whitford (The Nature Conservancy):

- Supports PNG in developing national mangrove policy
- Integrating gender and community policies in Pacific countries
- Support communities (women in particular) in management of blue carbon ecosystems

Lucy Wallington (Australian Government/IPBC):

- Support CI's offer to develop communication materials
- Develop a key messages/FAQ document on blue carbon for the CTI
- Compile key resources list as an annex to the workshop report
- Create a register of key contacts in the CT6 that the IPBC can use to communicate about upcoming events including the COP23
- Coordinate with CT6 contacts to include them in possible future IPBC capacity-building activities such as on the IPCC Wetlands Supplement or integrating blue carbon in NDCs

Jackie Thomas (World Wildlife Fund):

- Membership in blue carbon partnership through engagements with CTI-CFF
- Share outcomes of the workshop with national offices within the CT
- Work with partners on where WWF can contribute

Matthew Vaderklift (CSIRO):

- Continue working with other science colleagues to address gaps and improve evidence-based studies
- Work with investing/financing sectors to improve financing and answer their concerns on the blue carbon science



CHAIR'S CLOSING REMARKS

To formally close the workshop, Captain Zaharuddin Mohd Maideen gave the closing remarks. He reiterated that everyone should reflect on the things they have learned throughout the workshop. He reminded everyone to focus on capacities and opportunities, and actualize the next steps that everyone provided.

It is also important to have sustainable livelihoods for communities and not take away ecosystems completely. Important take home message is to have a good CBRM project to educate communities and find a meeting point where the threshold is, how far do we want to progress. Lastly, communities should be educated so they can decide freely.

Captain thanked everyone for their active participation in the workshop and wished them a safe trip back home.



ANNEXES

Opening evening - Monday 28 August 2017

- 5.30pm** Registration, meet and greet
- 6.00pm** Host country welcome and opening
Introductory presentations on blue carbon and the CTI
Ryan Whisnant, PEMSEA
Lucy Wallington, Australia
- 7.30pm** Close
Welcome dinner at Taal Vista Buffet Restaurant (supported)

Workshop Day 1 - Tuesday 29 August 2017

- 8.15am** Registration and coffee
- 8.30am** Welcome and introductions
Blue carbon science deep dive
Emily Pidgeon, Conservation International
- 9.20am** Individual country presentations
Indonesia, Malaysia, Papua New Guinea
- 10.20am** Break
- 10.50am** Country presentations cont.
Philippines, Solomon Islands, Timor-Leste
Policy frameworks
Zoe Sinclair, Australia
Accessing finance
Maya Villaluz, World Bank
- 1.15pm** Lunch
- 2.00pm** Update on Region-wide Early Action Plan for Climate Change Adaptation (REAP-CCA) and Centres of Excellence
Astrid Lim, CTI RS
Jackie Thomas, WWF
Identifying gaps and opportunities in blue carbon: group discussions
- 3.40pm** Break
- 4.10pm** Presentations of group discussions
Wrap up and Q&A, logistics briefing for field trip
- 5.30pm** Close
Dinner is by own arrangements this evening

Workshop Day 2 – Field trip - Wednesday 30 August 2017

Participants are reminded to dress appropriately (practical, comfortable clothing) and bring water, a small towel, sun protection (hat, sunglasses, sun cream) and mosquito repellent.

Breakfast is available from 6am at Taal Vista

6.30am Bus departs Tagaytay

8.00am Bus arrives Ang Pulo, Calatagan

Welcome address and introductions by community

Presentations and carbon measurement demonstration

12.00pm Lunch

Demonstration of sampling data computation

Tour of mangrove area and demonstration of mangrove planting

5.00pm Bus departs for Tagaytay

Approx. 1 hour allowed to freshen up before dinner. Transport arranged for travel to restaurant (1 km from Taal Vista).

7.00pm Group dinner at Josephine's Restaurant (supported)

Workshop Day 3 - Thursday 31 August 2017

Participants are kindly requested to checkout of rooms at the earliest opportunity, to ensure return travel to the airport is not delayed.

7.45am Coffee and networking

8.00am Ways forward, strategy session – facilitated group discussions

9.45am Break

10.05am Presentation of group discussions

Closing remarks, wrap up and logistics briefing

12.00pm Lunch

1.00pm Buses depart for Manila



GUIDANCE FOR FACILITATORS

This guidance is intended to assist facilitators of the two (2) group breakout discussions scheduled during the workshop:

Day 1 – identifying gaps and opportunities

Day 3 – creating a plan of action

Facilitators need not be restricted to the prompting questions suggested, but should endeavor to focus on achieving the session objectives and populating the response templates.

Day 1 – Gaps and opportunities (Plan A – participants in mixed country groups)

Session objectives

- Identify gaps in blue carbon science, policy and practical action for CT6 countries, with a focus on regional challenges that are shared by more than one country and might be tackled collaboratively.
- Begin to identify priority actions to address gaps, considering opportunities provided by existing frameworks/mechanisms, including reviewing blue carbon-relevant actions in the REAP-CCA

Preparation - this table for facilitators to take their own notes during presentations

Note down ten (10) or more key issues/challenges identified in opening workshop presentations and discussions [blue carbon in the region, science deep-dive, country snapshots, policy frameworks, finance]:

| <i>Gap/ barrier identified</i> | <i>Is the gap regional /shared or country-specific?</i> | <i>Solutions/Pathways identified by the group (if mentioned – to revisit on Day 3)</i> |
|--------------------------------|---|--|
| Science | | |
| | | |
| | | |
| | | |
| | | |
| Policy | | |
| | | |
| | | |
| | | |
| | | |
| Practical action | | |
| | | |
| | | |
| | | |
| | | |

Organization of group

Participants will be allocated to group A, B, C or D upon registration. You should expect around 10 participants in your group – a delegate from each country plus observers, who are welcome to contribute.

Call for a volunteer (or two) to be ‘rapporteur’. This person will take notes and present the outcomes back to the larger group. Their notes will also be passed on to the workshop documenters.

Response template (full table at **Attachment A**) - this table for groups to fill out during breakout discussions

| Barrier | Is it shared/ regional or country - specific? | Options for addressing | Pathways / mechanisms (CTI, IPBC, PEMSEA, bilateral, etc.) | Contributions <i>May need to be addressed on Day 3 or post-workshop</i> |
|---------|--|---------------------------|---|--|
| | | | | |
| | | | | |

Discussion guidance

Part 1. 30 mins (tbc)

Focus on populating the barriers column first, starting with gaps identified from earlier sessions and inviting suggestions of gaps that have not already been raised. Group suggestions into either science/data, policy/governance or practical action/ tools and methods.

Draw out the perspectives of each country and identify which challenges are shared, and those that are common across several countries/the whole region.

Guiding questions

- If we think about science (data), policy/governance and practical action, which is the biggest hurdle? Why?
- So far in this workshop I’ve heard X, Y and Z are barriers to your work. Do these apply to all of us or only a few countries? What else is challenging?
- What are some challenges your country experienced in the past, how did you overcome these? Are other countries experiencing similar hurdles now?

Part 2. 30 mins (tbc)

Guide the group to suggest options for addressing the barriers. Time allowing, you can also discuss which existing pathways/mechanisms might be best suited to the activity identified. Note also if the group believes there is no existing mechanisms that provide the right pathway for the activity.

Guiding questions

- Since X is shared by all of us, let’s discuss that first. What do we need to overcome this? Which existing mechanism/framework/initiative is relevant?
- Y and Z are specific to one or two countries – how can we address these country-specific challenges?
- What opportunities are there for better collaboration and coordination in the region?
- What additional information do we need to formulate solutions?

Wrap up 10 mins

Ask the rapporteur to confirm notes with the breakout group, and agree on approach for reporting outcomes back to the larger workshop.

Day 1 – Gaps and opportunities (Plan B – countries working independently in country groups)

Participants break away into country groups to conduct a SWOT analysis for their country (with assistance from facilitators):

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? |
|--|------------|------|---------------|--|
| (1) Science (Data) | | | | |
| (2) Policy and Governance | | | | |
| (3) Capacity and awareness-raising | | | | |
| (4) Sustainable Financing and incentive mechanisms | | | | |
| (5) Others | | | | |

Guiding Questions:

Status and trends of blue carbon in your country

- Scientific & technical advancements: Blue Carbon Science
 - o What data is currently available and what can we do with it? Maps of blue carbon ecosystem locations and extensions? Where no maps exist, what are the priorities? Can we take the data available and estimate a carbon budget at the national or local level?
 - Is there a national coastal carbon assessment?
 - Studies on emissions and removals from human activities in coastal ecosystems?
 - Are mangrove ecosystems integrated into national forest inventories; are there national inventories for tidal marshes and seagrasses;
 - Assessments on types and rates of loss of blue carbon ecosystems
 - Assessments on threats and national drivers for deforestation, degradation and loss of coastal carbon ecosystems;
 - o What are the ongoing BC projects and the expected outcomes?
- What is the policy and governance situation on Blue Carbon ecosystems?
 - o What policy and governance systems are in place in support of Blue Carbon
 - o What specific policies needs to be put in place to support Blue Carbon work?
 - ✓ Identify existing national policies for coastal ecosystem conservation, restoration and management and assess how blue carbon activities can be integrated
 - o How is BC work being coordinated in country? (Institutional clarification and coordination)
 - o Is BC part of national climate change mitigation efforts of the country?
 - o What are the opportunities to increase outreach and encourage national level policy? Regional level policy?

Capacity building and awareness raising

- What are current technical capacities in terms of BC (mapping, measuring, monitoring);
- What capacities are lacking or limited?
- What is the current national public attention and societal perception toward /coastal marine ecosystems to ensure broader support, understanding and thus easier implementation of BC activities?
- How are other stakeholders (NGOs, academe, etc.) involved in BC work?

Sustainable financing and incentive mechanisms

- What are the existing financing and incentive mechanisms to support Blue Carbon ecosystems management and protection in country? Is it a separate financing and incentive mechanism from REDD+?
- What are current BC opportunities that can be maximized?

After groups session, the facilitators/documenters can work on and consolidate the results of the discussions. We can identify key areas for collaboration. This can be used as reference during the action planning session.

The second breakout discussion can either be in mixed country groups or again countries working independently, followed by short presentations. This can follow with mixed country group discussions to discuss CTI level collaboration.

Day 2 – Plan of action

Session objectives

- Identify all possible activities to address gaps raised in Day1 discussions and subsequent workshop sessions.
- Prioritize activities based on needs that apply to the region. Identify key steps, resources required. Seek early indications of possible contributions.

Preparation

Following the discussion on Day 1, the organizers will share a list of activities proposed by the group. Transpose these into the Day 3 response template.

You may have heard some additional barriers/opportunities identified during the field trip on Day 2. These can be added to the mix, noting the focus of today should be on identifying solutions, not additional barriers.

Organization of group

Participants will again be allocated to a group. As per Day 1, identify a rapporteur to take notes and report back.

Response template (full table at **Attachment B**) - **this table for groups to fill out to formulate work plan**

| Activity | Information gaps / additional requirements | Key action steps | Timeline | Resources needed | Source / Contributions |
|---|--|------------------|----------|------------------|------------------------|
| - note where an appropriate mechanism exists | | | | | |
| - note if activity is region-wide or country specific | | | | | |

Discussion guidance

Part 1. 40 mins

- What are the opportunities to increase outreach and encourage national level policy? Regional level policy? What specific policies are needed to support work on blue carbon?
- How can we enhance national public attention and societal engagement toward coastal blue carbon ecosystems to increase support, understanding and thus accelerate implementation?
- In the case of science or practical action gaps/activities – is there an opportunity to share resources/knowledge? Can we achieve efficiencies for addressing this in multiple areas?

Part 2. 40 mins

- What is the timeline for these projects/activities and who is responsible?
- Is this an opportunity for CT6 collaboration? Who can contribute? What kinds of contributions can you make?
- Which other stakeholders might be available to input?

Wrap up. 10 mins

Attachment A – Day 1 Response Template

| Barrier | Is it shared/regional or country-specific? | Options for addressing | Pathways / mechanisms (CTI, IPBC, PEMSEA, bilateral, etc.) | Contributions May need to be addressed on Day 3 or post-workshop |
|---------|--|------------------------|--|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Attachment B – Day 2 Response Template

| Activity - note where an appropriate mechanism exists - note if activity is region-wide or country specific | Information gaps / additional requirements | Key action steps | Timeline | Resources needed | Source / Contributions |
|---|--|------------------|----------|------------------|------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

BREAKOUT GROUP OUTPUT PER COUNTRY

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/ mechanisms to pursue this activity |
|---------------------------|--|---|--|---|--|---|
| (1) Science (Data) | | | | | | |
| Indonesia | There is available data at national level | Need more effort to deliver the scientific data into policy maker (government and community) | Source data from number of Ministries as well as Research and Development Institution | Communication Coordination Method of collecting data | List of research implemented Standardized methodology on the blue carbon assessment | Having the scientific publication Formulating scientific results for the policy makers |
| Malaysia | Integrated database (MyNODC, MyMangrove) Government agency involved (NRE-climate change; Forest Research Institute Malaysia (FRIM); National Hydraulic research institute Malaysia (NAHRIM)-coastal research) | Lack of synchronization of research institute/Universities Baseline data and basic information Carbon data | Mechanism for data sharing and avoid redundancy in gathering data. Hence, it acts as cost saving measure for government | Establish pool of expert across government agencies and universities e.g. training of post graduates, and technical agencies Identify good lab partner | Information is readily available for national reporting/review policy and guidelines | |
| Papua New Guinea | Minimal | University of PNG has data however there is no capabilities for analysis. Distribution of BC ecosystems - little bit of knowledge in seagrasses only management and protection, however not the science, impacts of human activities on systems. | Need consistent tools and methodologies across CT countries. Would enable us to compare data with other countries. This would assist in being able to analyze trends, etc. Training associated with analyzing data, the high staff turnover has effects on knowledge exchange | Regional hub to provide data and knowledge transfer for an opportunity for the future collaboration and commitment. Cost sharing arrangement for the hub to make it easier for governments to justify/pay for | Updated number datasets that contain information on blue carbon ecosystems in PNG including information on seagrass and salt marshes Increased number of Papua New Guinea nationals trained to carry out carbon assessments in the blue carbon ecosystems | Linking to other projects such as the national forest plan and the CTI atlas |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/mechanisms to pursue this activity |
|--------------------|--------------|--|---|--|--|--|
| | | <p>Access to satellite data</p> <p>Capacity issues for on ground work, locals to be able to work in the BC space.</p> <p>Human capacity for validation/ground-truthing of maps and data.</p> | <p>and transfer. Need to assist in capacity building of skills including assessing levels of blue carbon.</p> <p>Consolidation of existing resources e.g. finalizing mangroves ID guide book; bringing together other guidance/guidebooks on mangroves</p> <p>Expansion of JICA project which currently only includes terrestrial forests</p> | <p>Use of CTI university partnership, stronger integration of PNG universities</p> <p>Regional exchanges with country reps and experts</p> | | |
| Philippines | Low capacity | <p>Comprehensive baseline data on Blue carbon ecosystems (mangroves, seagrass beds, mudflats/tidal flats, marshes)</p> <p>Geo-spatial mapping (time series)</p> <p>Data on stocks and flux</p> <p>GHG Inventory</p> <p>Basic knowledge on different blue carbon ecosystems</p> | <p>Assistance coming from the academe, NGOs, and other international funding institutions</p> <p>Funding from the national government thru CMEMP</p> | <p>Conduct a baseline data assessment of such ecosystems</p> <p>Massive information dissemination</p> <p>Further studies/research on valuation</p> | <p>Baseline data gathered and accessible database</p> <p>Thematic maps developed</p> <p>Research conducted</p> <p>Stakeholders are informed on the value and importance of such ecosystems</p> | Road mapping |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/mechanisms to pursue this activity |
|----------------------------------|---|--|---|---|--|---|
| | | Valuation of BC ecosystems and its services | | | | |
| Solomon Islands | 2 site studies of carbon storage; default estimations for national level quantities Mapping of mangroves and seagrasses (2004) | Verification of default estimations Recent imagery/mapping Nationally-specific methodology for carbon measurement (is this important?) | Update mapping data | | | |
| (2) Policy and Governance | | | | | | |
| Indonesia | There is national action plan for reducing greenhouse gas emission Indonesia Nationally Determined Contribution (NDC) | The Blue Carbon issues doesn't include yet in the action plan and NDC Lack of time to convert the National Action Plan to Local Action Plan Willingness from the local level | Bridging the communication within ministries on Blue carbon | Communication Coordination Commitment of the stakeholder | List of policies established Share the same perception List of Focal Point and/or Task Force | Establishing legal framework of the policy Having the Focal Point and/or Task Force on blue carbon |
| Malaysia | A total of 42 related policy/guidelines/ Acts | No specific target to support implementation of policy | Revised policy by taking into consideration of gaps identified | Prioritize research area (top down) | Measurable achievement | |
| Papua New Guinea | minimal | | Interdepartmental (e.g. CEPA, CCDA etc.) coordinating body to assist in the coordinating of policies and regional policies and governance | Use existing national CTI technical working group to be the coordination body with CEPA and CCDA to co-chair. | No. of meetings held in a year. Reports published No. of attendees in a single meeting | Development of a Strategic Roadmap for the PNG CTI Technical Working Group Frequent bilateral |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/mechanisms to pursue this activity |
|------------------------|--|--|---|---|--|---|
| | | | around BC. Could also include private sector Need standalone mangrove policy at national level | The membership of the technical working group can include National Govt, NGO and Private Sector as partners. | Mangrove Policy approved by the Government | Partnerships with development partners and NGO's. Provide technical assistance to develop the Mangrove Policy in consultation with all stakeholders |
| Philippines | Policy is in place but implementation is weak | Strict Implementation of the policies, laws and regulations (e.g. AUU) Harmonizing of policies Developing specific policies targeting a specific area/ecosystem (sea grass, foreshore and the likes) Policy regarding optimization of environmental fees in protecting blue carbon ecosystems | Protection and management of blue carbon will also support eco-tourism | Avoid target driven activities. Implementation of programs should be evidence and science based Re-activate or strengthen the existing National Convergence initiative (NCI) of the DA-DENR-DILG | Existing policies being implemented Inter-agencies' policies are harmonized | Road mapping |
| Solomon Islands | REDD+ Readiness Roadmap brought together relevant agencies National Climate Change Working Group – coordinates donors, practitioners, experts | Co-ordination for BC ecosystems, and relevant monitoring and reporting responsibilities Technical expertise for monitoring and reporting Mangrove management plan | Targeted blue carbon activities within existing coordinated bodies Build capacity in information systems and science to meet reporting requirements. | | | |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/mechanisms to pursue this activity |
|---|---|--|---|--|--|--|
| | CC Division in MECDN; CTI NCC Existing policy reviews – mangroves (complete); seagrass (late 2017) Reviews on CC and Forestry Bills NDC Review | Specific bills/policy on mangroves/seagrasses BC in NDC | | | | |
| (3) Capacity and awareness-raising | | | | | | |
| Indonesia | There are several campaigns within national level through local level | Less of communication in the local level Different understanding within the policy maker | There is national policy which need to be implemented | Communication | Number of the community involved Number of mangrove area covered | Workshop in regional level on the Social Media Campaign (e.g. involvement of the youth) Need to formulize the diction due to command understanding in communities |
| Malaysia | Small group of researchers | Lack of understanding of importance of blue carbon ecosystem area Lack of knowledge to restore and management mangrove habitat Lack of technical knowledge in local government | To promote Community Based Resource Management (CBRM) | Organize festival to involved youth and women Engage community with local authority Propaganda, short video clip in TV, social media | Translating scientific information into policy and implementation at local level | |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/ mechanisms to pursue this activity |
|-------------------------|------------|--|---|--|--|--|
| | | To translate scientific findings into awareness raising material | | | | |
| Papua New Guinea | minimal | Engaging contractors to undertake research and then they leave without providing training for the host government/ counterparts | Utilizing the current projects and incorporating side by side training involving the scientist that is undertaking the work and government counterparts. Other pathways aside from university to build knowledge/ capacity in blue carbon e.g. short courses | A Blue Carbon pilot project in PNG that could have international and local counterparts working hand in hand to implement that project Involvement of national universities, national entities in the process of blue carbon project design Involvement of local communities in participating in the blue carbon project | No. of people trained No. of workshops/training carried out No. of communities involved Project Outputs achieved within given timeframe | Working hand in hand with other agencies and international opportunities and skills. |
| Philippines | Weak | Limited capacity and understanding of particularly on LGU, community, CSO, business sector and students There are several plans (CLUP, ICM, CRMP etc.). However, these plans are not fully implemented Capacity and responsibility mismatch on the local level | Capacity building on personnel who can implement the trainings and can re-echo such | Laymanizing the technical knowledge on blue carbon and its importance in climate change adaptation and mitigation Social mobilization Strengthen collaboration with the local government units | | Road mapping |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/mechanisms to pursue this activity |
|---|--|--|--|---|---|--|
| | | Communities are not aware of the value of the blue carbon ecosystems | | | | |
| Solomon Islands | <p>REDD+ communication strategy</p> <p>Ad-hoc climate change communications activities</p> <p>High level understanding of blue carbon in limited focal points</p> <p>Rich community communication capacity</p> | <p>An overarching communication strategy for climate change mitigation & adaptation with blue carbon included</p> <p>How to translate to communities</p> <p>Products with consistent messaging to enable conversations</p> | <p>Capture existing communications activities, refocus/repurpose for blue carbon, Have a clear national understanding of blue carbon value for mitigation & adaptation</p> <p>Resources to enable conversations at community level</p> | <p>Incorporate all the latest, emerging climate change concepts</p> <p>Activate community specialists and provide support</p> <p>Explain message in a clear and convincing way that is relevant to the everyday, experience of communities, e.g. carbon value for investment, tourism, fisheries, water quality</p> | <p>Strategy in place and operational</p> <p>Products produced and disseminated</p> <p>Broad, base-level understanding and awareness of blue carbon across all stakeholders at different levels – national & provincial governments, and down</p> <p>Communities identify and initiate opportunities for more work, e.g. establish new (mangrove, seagrass) MPAs</p> | |
| (4) Sustainable Financing and incentive mechanisms | | | | | | |
| Indonesia | <p>Every ministry which related to the CCA (Blue Carbon) has different budget support</p> | <p>Not all the local level has the budget due to their willingness (<i>see point 2</i>) which embedded in project related to ecosystem</p> <p>Unsustainable funding which depend to implementation project</p> | <p>Financing support from mutual resources</p> | <p>Communication</p> <p>Coordination</p> <p>Cooperation</p> | <p>List of project collaboration within the government, research and development institution</p> | <p>Elaborate the project collaboration (e.g. BlueCares)</p> <p>Use CTI-CFF as the sustainable engagement along with CTI-CFF member countries</p> |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/ mechanisms to pursue this activity |
|-------------------------|--|---|--|---|---|--|
| Malaysia | Funding from government and international partners | No mechanism for incentive and sustainable financing | To come out specific financial plan | To convince policy makers at ministry level Policy analysis e.g. blue carbon opportunity in Malaysia Strategize NDC | | |
| Papua New Guinea | minimal | Lack of knowledge on different funding sources and the processes Lack of Public Private partnerships Access to finance | Incentive - regional hub of experts for assistance - science social sciences and creative finance options. Green Climate Fund Bilateral opportunities – e.g. Australian government | Awareness of different financial sources of climate finance and biodiversity financing Engaging a private sector stakeholder at the initial stages of a project. Have a GCF representative communicate with the CTI Secretariat on the processes on GCF | No. of national agencies submitting proposals on Blue Carbon Private sector engaged Project Proposal on Blue Carbon submitted to GCF or other funding sources | Regional programs such as the GCF Regional Dialogues GEF Small Grants Program |
| Philippines | weak | Government institutions are not fully aware of the potential for carbon credits Capacitate local government on how to write project proposals to be submitted to financial organizations for funding | There are several financial institutions that can be tapped | CSR should be focused on blue carbon Development of policy allocating permanent financial resources in the local budget | Local governments can access sustainable financing mechanisms Permanent allocation of fund for BC ecosystems | Road mapping |
| Solomon Islands | | | | | | |

| Areas | Capacities | Gaps | Opportunities | How do we address the gaps and maximize opportunities? | Indicators of success | Existing pathways/ mechanisms to pursue this activity |
|------------------------|----------------------------------|--|---|--|-----------------------|---|
| <i>(5) Others</i> | | | | | | |
| Solomon Islands | Site trials of innovative stoves | Mangroves being used for firewood at unsustainable rates | Explore opportunities for innovative alternatives / options with longevity & affordable | | | |

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KEY BLUE CARBON RESOURCES FOR CORAL TRIANGLE COUNTRIES

This list is not intended to be exhaustive, but aims to suggest key resources of use to policy makers who are new to blue carbon, particularly resources that were referred to or closely relate to discussions held at the CTI Blue Carbon workshop, August 2017

Joint blue carbon initiatives

- **The Blue Carbon Initiative:** a global program working to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems, coordinated by Conservation International (CI), the International Union for Conservation of Nature (IUCN), and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific, and Cultural Organization (IOC-UNESCO).

www.TheBlueCarbonInitiative.org

- **International Partnership for Blue Carbon:** launched by Australia with the support of the Blue Carbon Initiative and others, the Partnership aims to protect and restore coastal blue carbon ecosystems for climate change mitigation and adaptation, by raising awareness, sharing knowledge, and accelerating practical action. The Partnership has strong government involvement, and focuses especially on policy-based solutions for blue carbon, including by playing an important facilitative role in connecting experts with government policy makers.

www.BlueCarbonPartnership.org

Regional knowledge and context

- ***Understanding Strategic Coastal Blue Carbon Opportunities (in East Asia) – PEMSEA, 2017:*** This study by Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Conservation International and The Nature Conservancy examines the science and policy of “blue carbon” in East Asia and the opportunities for countries to advance their commitments to addressing climate change through the conservation and restoration of coastal wetlands.

<http://www.pemsea.org/publications/reports/coastal-blue-carbon-east-asia>

- ***Report: Blue Carbon - A new concept for reducing the impacts of climate change by conserving coastal ecosystems in the Coral Triangle – WWF, 2012:*** This paper aims to stimulate discussion and debate on how to promote and utilize healthy coastal ecosystems and the valuable benefits they provide to support a sustainable and more climate resilient future for communities within the Coral Triangle.

<http://wwf.panda.org/?206952%2FBlue-Carbon---A-new-concept-for-reducing-the-impacts-of-climate-change-by-conserving-coastal-ecosystems-in-the-Coral-Triangle>

Technical guidance

- **Coastal blue carbon: methods for assessing carbon stocks and emissions factors – the Blue Carbon Initiative, 2014:** The International Blue Carbon Initiative’s team of 34 experts in the fields of coastal carbon measurement, remote sensing, and climate policy produced this manual with the goal standardizing protocols for sampling methods, laboratory measurements, and analysis of blue carbon stocks and fluxes. The manual will provide scientists and coastal managers with a practical tool to produce robust blue carbon data.

<http://thebluecarboninitiative.org/new-manual-for-measuring-assessing-and-analyzing-coastal-blue-carbon/>

- **2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands:** the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (2006 IPCC Guidelines) provide methodologies for estimating national inventories of anthropogenic emissions by sources and removals by sinks of greenhouse gases. The 2013 Supplement (the Wetlands Supplement) extends the content of the 2006 IPCC Guidelines by filling gaps in the coverage and providing updated information reflecting scientific advances, including updating of emission factors. It covers inland organic soils and wetlands on mineral soils, coastal wetlands including mangrove forests, tidal marshes and seagrass meadows and constructed wetlands for wastewater treatment.

<http://www.ipcc-nggip.iges.or.jp/public/wetlands/>

Policy guidance

- **National blue carbon policy assessment framework – IUCN, 2016:** This National Blue Carbon Policy Assessment Framework is helping countries to prepare for and implement targeted climate and carbon policies for coastal carbon ecosystems alongside other coastal priorities, challenges and demands. Using a detailed Assessment Tool, coupled with field-testing in five countries, the National Blue Carbon Policy Assessment Framework provides countries with a straightforward, structured and easy-to-apply five-step assessment framework.

<http://thebluecarboninitiative.org/new-manual-for-measuring-assessing-and-analyzing-coastal-blue-carbon/>



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