ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

Theme 2: Resilience for and by nature: Building knowledge and understanding to weave the protection and restoration of nature into decision making on mitigation and adaptation

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Local perception as a scientific evidence for managing blue carbon ecosystems for climate mitigation and adaptation

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BACKGROUND

The Coral Triangle region, which includes Philippines and Indonesia, has one of the largest blue carbon ecosystems (BCEs) in the world. Sustainable BCE management in the region can contribute to local mitigation and adaptation practices and global mitigation strategies as well as enhancing BCEs' multi functions including carbon stocks, disaster risk reduction, and local livelihood.

OBJECTIVE

Our main objective is development of a science-based policy framework and citizen science tool as means of locals' participatory monitoring and evaluation of BCEs. By doing so, we will contribute to blue carbon strategies in different spatial scales.

FRAMEWORK AND METHODOLOGY

1. Identification of key players (stakeholders, policymakers) in BCEs management
2. Participatory stakeholder workshops on BCE management and introduction of citizen science concept
3. Monitoring workshop using cellphone applications and visualization
4. Creation of localized guidelines for community's capacity development on BCE
5. Determination of site-specific factors (e.g. local customs and community mechanisms in addressing local environmental issues) influencing BCE management

INSIGHT 1

How can we build resilience for and by nature?

LOCAL COMMUNITIES have a critical role in supporting collective responses for the sustainable management of **BLUE CARBON ECOSYSTEMS** and engaging them helps define their role in the governance of ecosystems related to, for instance, land-use change and decision-making.

PARTICIPATORY MANAGEMENT has been adopted in many countries as a key strategy for natural resource conservation and management, however, its on-site implementation encounters various constraints yielding unsuccessful scenarios

In the Philippines, institutional capacities (mainly financial) and capabilities (e.g., technical skills), hinder the success of management strategies. There is, therefore, a **NEED TO CAPACITATE AND STRENGTHEN LOCALS' PARTICIPATION** to ensure the success the community-based management strategies.

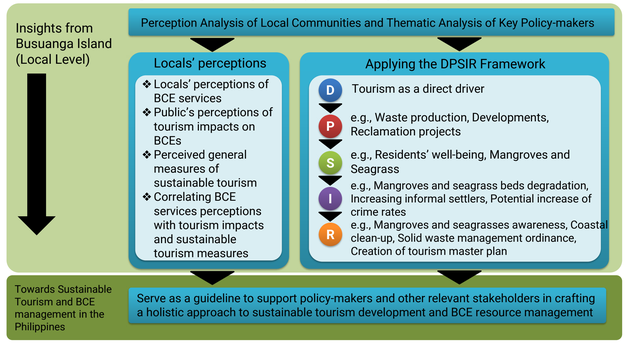
Using key findings from **PERCEPTIONS**, **THEMATIC**, and **CONTENT ANALYSES** as baseline on how to enhance and strengthen local stakeholders' capacity for **BCE Management**

INSIGHT 2

What are the ways to ensure that understanding of nature is integrated in building resilience and decision making?

KEY POLICY-MAKERS and other relevant stakeholders provide insights of how **BLUE CARBON ECOSYSTEMS** (BCEs) are managed at the Local Level

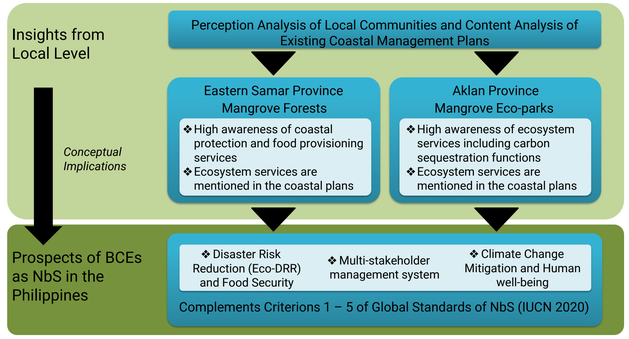
For instance, integrating BCE management in an established tourism site in the Philippines through household surveys (perceptions) and key informant interviews (thematic)



INSIGHT 3

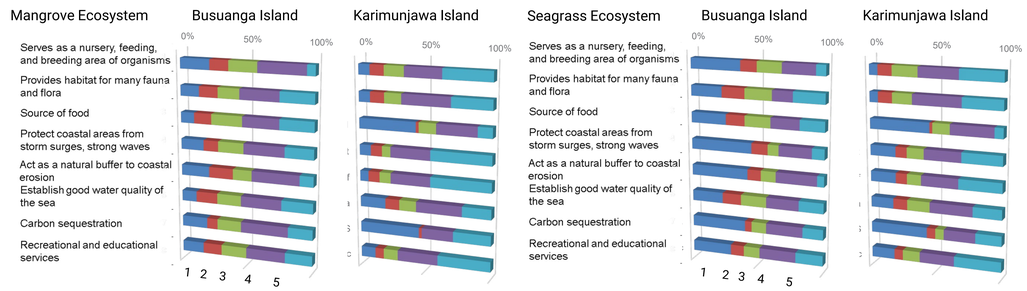
How does your project contribute to mainstreaming nature-based solutions into climate change mitigation and adaptation?

LOCAL COMMMUNITIES' PERCEPTIONS provide insights of the role of **BLUE CARBON ECOSYSTEMS** (BCEs) as Nature-based Solutions (NbS) in Disaster Risk Reduction and Climate Change Mitigation while enhancing People's Well-being



> "Understanding local perception and socio-ecological characteristics can serve a basis to enhance local community awareness and capacity. Applying bottom up 'citizen science approaches' for the management of BCEs is necessary to address specific local issues and to promote sustainability and community resiliency as well as apt climate change mitigation and adaptation practices."

KEY FINDING ON LOCAL PERCEPTION OF BCE SERVICES



Awareness on BCE services in Busuanga (n=98) in the Philippines and Karimunjawa (n=47) in Indonesia. The awareness level is based on a 5-point Likert scale (1=not aware, 2=slightly aware, 3=moderately aware, 4=very aware, 5=extremely aware).

Source: Quevedo, J. M. D., Uchiyama, Y., Lukman, K. M., & Kohsaka, R. (2021). How Blue Carbon Ecosystems Are Perceived by Local Communities in the Coral Triangle: Comparative and Empirical Examinations in the Philippines and Indonesia. *Sustainability, 13*(1), 127.

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