

BLUE CARBON INITIATIVES IN THE PHILIPPINES

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Mangroves, tidal marshes, and seagrass meadows provide many benefits and services that are vital for climate change adaptation along the coasts. These include protection from storms and sea level rise, prevention of shoreline erosion, regulation of coastal water quality, provision of habitat for commercially important fisheries and endangered marine species, and food security for many coastal communities. Moreover, these ecosystems sequester and store substantial amounts of coastal blue carbon from the atmosphere and ocean, and hence are now recognized for their role in mitigating climate change. It covers less than 2% of the total ocean area, but account for approximately half of the total carbon sequestered in oceanic sediments.

Even with the benefits and services being provided by these ecosystems, they are some of the most threatened ecosystems on Earth. Mangroves are being lost at a rate of 2% per year. Experts estimate that carbon emissions from mangrove deforestation account for up to 10% of global emissions from deforestation, despite comprising just 0.7% of land coverage. Tidal marshes, which cover roughly 140 million hectares of the Earth's surface, are being lost at a rate of 1–2% per year. Seagrasses, on the other hand, which stores about 10% carbon buried in the ocean each year, are being lost at a rate of 1.5% per year and have lost approximately 30% of its historical coverage. If these trends continue at current rates, a further 30–40% of tidal marshes and seagrasses and nearly all unprotected mangroves could be lost in the next 100 years. When degraded or lost, these ecosystems can become significant sources of the greenhouse gas carbon dioxide.

As a response to the growing concern on the emission of carbon dioxide from both natural processes and human activities, the global community established the International Blue Carbon Initiative. This initiative is a trans-disciplinary, global program focused on mitigating

climate change through the conservation and restoration of coastal and marine ecosystems. It coordinates the International Group of Experts on “blue carbon,” which has formulated an action agenda to “identify effective, efficient and politically acceptable approaches to reduce the atmospheric concentration of CO₂.” Together with the International Blue Carbon Policy Working Group, it provides guidance for needed research, project implementation and policy priorities.

Since 2005, so much advancement in blue carbon has happened (**Fig. 24**). The current realization about the importance of “blue carbon ecosystems” is the primary reason for the rapid progress in blue carbon science.

However, in the Philippines, from 2000–2013, only 18 publications on blue carbon from mangroves and directly related studies have been reported. This reflects the slow advancement in the topic locally, with more emphasis on forests in general and mangroves in particular. The establishment of the Blue Carbon Initiative gave a big boost in shifting interest and focus on the “blue carbon service” of seagrass beds, mangroves and salt marshes (the “blue carbon ecosystems”). Since the Philippines was first represented in the International Blue Carbon Group of Experts in 2011, several fora have been conducted on blue carbon. At least six major multi-country research proposals were submitted to international funding institutions (Fortes 2015).

To support the initiative on blue carbon, Conservation International–Philippines (CI–Philippines) initiated several informal discussions on Blue Carbon with conservation organizations, academic institutions and relevant government agencies. This has sparked the idea of establishing a National Blue Carbon Technical Working Group, which can help coordinate and provide recommendations for blue carbon work in the Philippines.

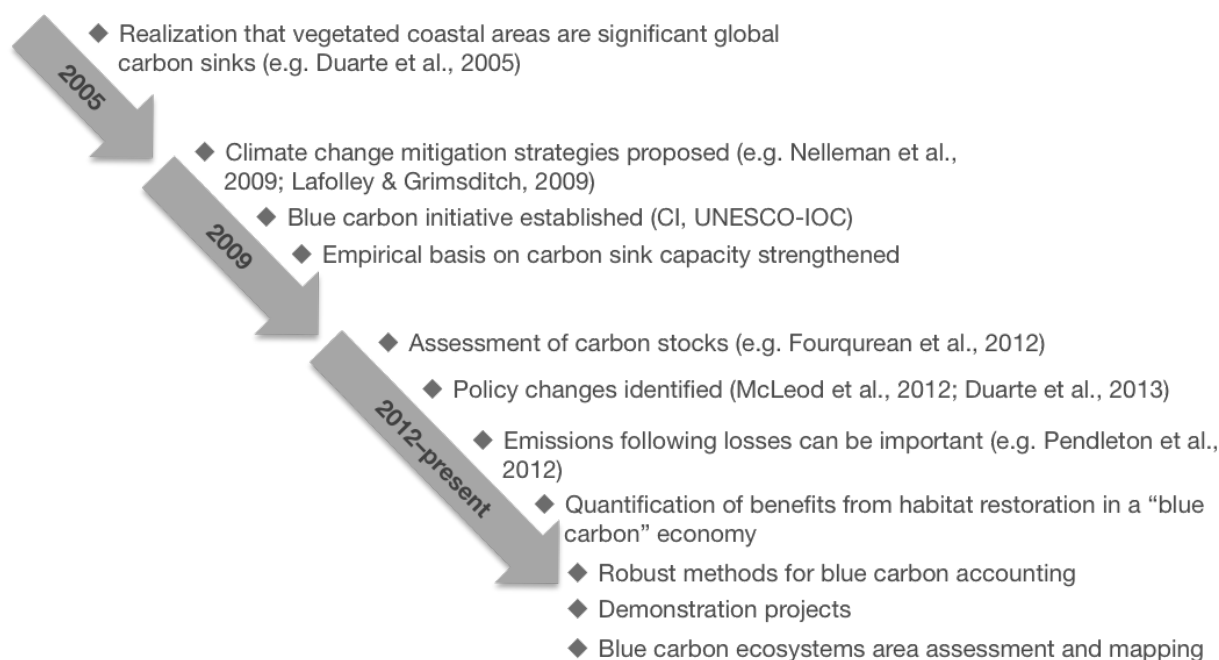


Figure 24. Developments in Blue Carbon Science

Since early 2015, a series of Blue Carbon Adhoc Working Group has been initiated by CI-Philippines. In July 2015, the Biodiversity Management Bureau (BMB) initially agreed to facilitate the Blue Carbon Technical Working Group meetings with CI-Philippines. There was an agreement that BMB will take the lead in the Blue Carbon Technical Working Group, if the National Government, through the Climate Change Commission, will give them the “go” signal to take on this task. To date, BMB is still waiting for advice from the Climate Change Commission regarding blue carbon work vis-à-vis climate change mitigation targets.

CI-Philippines has committed to continue facilitating Blue Carbon Technical Working Group for the meantime. As an initial target output of the series of Blue Carbon meetings, the group is consolidating information on research and implementation efforts related to blue carbon ecosystems. This is lodged in the Blue Carbon Google Group. The Blue Carbon Group has also agreed to start working on addressing the knowledge gaps on blue carbon as individual organizations. One of the key knowledge gaps that need to be addressed is the lack of awareness of the government and communities on blue carbon ecosystems and its potential for climate change mitigation. To address this knowledge gap, CI-Philippines will distribute copies of the International Blue Carbon Committee primer on coastal ecosystems to relevant government agencies. The group will also work on encouraging government and academic institutions to look for funding opportunities, and invest more in blue carbon research. This will support sustainable financing mechanisms for blue carbon ecosystems.

The Philippines needs a viable program on blue carbon. The program does not need to be entirely separated from existing biodiversity or climate change initiatives, but should actually complement these. An interagency collaboration, supported by active private enterprise is necessary to attain this objective. Interestingly, Indonesia has recently developed its blue carbon program, which is prioritized in the political agenda of the government.

Resources

Restore America’s Estuaries - www.estuaries.org
 Environment Science Associates - <http://www.esassoc.com/services/sustainability-and-climate-change>
 The Coastal Blue Carbon Initiative - <http://thebluecarboninitiative.org/>
 Blue Carbon Portal - <http://bluecarbonportal.org/>

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