

# GUIDANCE FOR NATIONAL BLUE CARBON ACTIVITIES

Fast-tracking national implementation in developing countries



Coastal ecosystems – in particular mangroves, tidal marshes and seagrasses – are globally important natural carbon sinks with rich carbon reservoirs. However, when these ecosystems are converted or degraded, they release this stored carbon into the atmosphere and oceans and become sources of greenhouse gas (GHG) emissions. The conservation, restoration and sustainable use of these systems can support climate change mitigation, as well as conserve many other benefits these ecosystems provide, such as fisheries support and coastal protection important for climate adaptation.

A number of developing countries have started to address the conversion and degradation of coastal 'blue carbon' ecosystems through national policy, management and planning. Through these actions countries are reducing their net GHG emissions and contributing to climate change mitigation.

This brief provides updates on policy and management recommendations first described by the Blue Carbon Initiative's Policy Working Group in 2012, and while there has been much progress to date many of the recommendations remain relevant today. Here we offer guidance on how to efficiently include blue carbon activities and priorities into national climate change mitigation efforts. It is intended to support national government representatives, NGOs, research institutions and other stakeholders engaged in national climate change policy development and implementation.

Many countries will likely need to focus on readiness activities that increase national understanding and capacity on the technical, policy and institutional aspects of emissions and removals from blue carbon sinks and reservoirs. Below is an indicative list of activities that should be conducted on a national level to ensure blue carbon is comprehensively included into national level mitigation activities.

## High Priority activities for national policy and management:

- Conduct a scientific assessment of blue carbon ecosystem health, potential threats, carbon content, ecological importance and socio-economic dependence of local communities on these coastal marine ecosystems;
- Undertake an analysis of existing legal and policy frameworks to determine how blue carbon may be included in sustainable development, climate change, forestry, biodiversity and marine resource management regulations;
- Conduct a cost-benefit analysis investigating the value of including blue carbon activities into national climate change mitigation strategies, together with a description of the short and long-term benefits of carbon-related finance and activities in coastal areas;
- Develop a blue carbon action plan, addressing specific national circumstances, opportunities, needs and capacities.





### Scientific & technical assessments:

- Develop a comprehensive national coastal carbon assessment. The assessment should include estimates of existing coastal carbon stocks (plants and soil carbon), rate of change to those stocks over at least the last 10 years and estimates of emissions from specific conversion activities (i.e. aquaculture, coastal development, drainage) that can support the development of default emission factors for a range of conversion types;
- Identify, if relevant, carbon emissions and removals from human activities in coastal ecosystems that are key source categories for climate change mitigation .
- Integrate mangrove ecosystems, including mangrove soil carbon, into national forest inventories;
- Conduct, or revise as appropriate, national wetland inventories for tidal marshes and seagrasses;
- Assess blue carbon ecosystem extent as well as rate and causes of ecosystem loss using satellite and remote sensing, in-situ data and local community data;
- Assess threats and national drivers for deforestation, degradation and loss of coastal carbon ecosystems;
- Explore the carbon mitigation potential of mangrove conservation, restoration, silvofisheries , and mariculture projects.

### Institutional clarification and coordination:

- Clarify the responsibilities and roles of relevant agencies or ministries; specifically those related to climate change and blue carbon activities (i.e., ministries of environment, forestry, marine affairs). Coordination strategies will be key given that government agencies responsible for coastal management and policy may not be the same agencies responsible for climate change planning and policy, REDD+ implementation and/or national climate mitigation strategy development.
- Provide a coordinated institutional framework that includes cross-sector involvement to ensure efficient and comprehensive implementation of activities. Include all relevant agencies and institutions in charge of coastal and marine issues into design and implementation of the overall climate change efforts.

### Legal set-up and strategic planning steps:

- Provide a legal framework that allows for integrated coastal carbon mitigation efforts to be pursued as part of national climate change mitigation efforts, and are in synergy with other existing policies and incentive schemes (biodiversity, climate change adaptation, fisheries, etc.);
- Integrate guidance provided in the “2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands” into national GHG accounting to show commitment and determination to address this issue on a national level;
- Identify existing national policies for coastal ecosystem conservation, restoration and management (national development, forestry & biodiversity as well as marine and coastal resource use policies) and assess how blue carbon activities can be integrated;

- Identify and provide clarification on land tenure issues and property rights in coastal and marine areas. Equitable and secure distribution of incentives based on carbon in coastal systems requires that the tenure regimes and rights in coastal areas be assessed and addressed, including within such carbon mechanisms as REDD+ or voluntary carbon offsets;
- Develop, or revise as appropriate, national climate change plans or strategies. For example:
  - A comprehensive national strategy that accounts for the different drivers causing emissions (e.g. deforestation, agriculture, aquaculture, coastal development) throughout different land and seascapes;
  - National REDD+ strategy or program that includes mangroves (plants and soil);
  - Nationally Appropriate Mitigation Action (NAMA) strategy/plan/framework for coastal marine ecosystems;
  - Integrated Coastal Zone Management (ICZM), Marine Spatial Planning (MSP) and Marine Protected Areas (MPA) policies and measures designed to protect vulnerable coastal ecosystems that consider carbon sequestration and storage potential. Until now the different approaches to coastal conservation have not explicitly addressed the carbon mitigation potential of blue carbon ecosystems. There is a significant opportunity to integrate carbon sink management into coastal zone planning.
- Ensure transparency of financial carbon flows and implementation of environmental and social safeguards. The implementation of environmental, social and governance safeguards is integral for equitable, effective, transparent and accountable climate change mitigation efforts.

#### Capacity development & awareness-raising:

- Support and foster technical capacity development (i.e. remote sensing mapping, carbon measuring and monitoring, socioeconomic surveys, etc.).
- Develop capacity at all government and implementation levels, including to ensure participation and reporting to the UNFCCC;
- Ensure increased national public attention and societal perception toward coastalmarine ecosystems to ensure broader support, understanding and thus easier implementation of activities in those areas.

#### Stakeholder engagement:

- Engage relevant coastal stakeholders and community to allow for multi-stakeholder engagement. Successful policy implementation and management of coastal carbon ecosystems for climate change mitigation requires that all stakeholders engaged in both coastal and climate mitigation activities and be involved in the planning and implementation processes;
- Identify opportunities and risks for coastal stakeholders, including coastal communities and local fishermen. For example, the distribution of benefits and resources resulting climate change mitigation activities and finance should be clearly and appropriately reflected in the design and implementation of any climate mitigation incentive mechanisms;
- Provide for coordination between government activities and other blue carbon activities (e.g. with NGOs) so to ensure engagement, broader awareness of different efforts and identification of complementary benefits.

#### Recommendations for NAMA processes:

- Develop coastal wetland NAMA(s) or include blue carbon ecosystems in broader ecosystem based NAMAs and prepare for implementation (including technical, policy and institutional aspects);
- Provide cost estimate (incremental costs) for developing and implementing national blue carbon NAMA
- For countries with an obligation for self-financed NAMAs, explore opportunities to include blue carbon as part of adaptation activities.

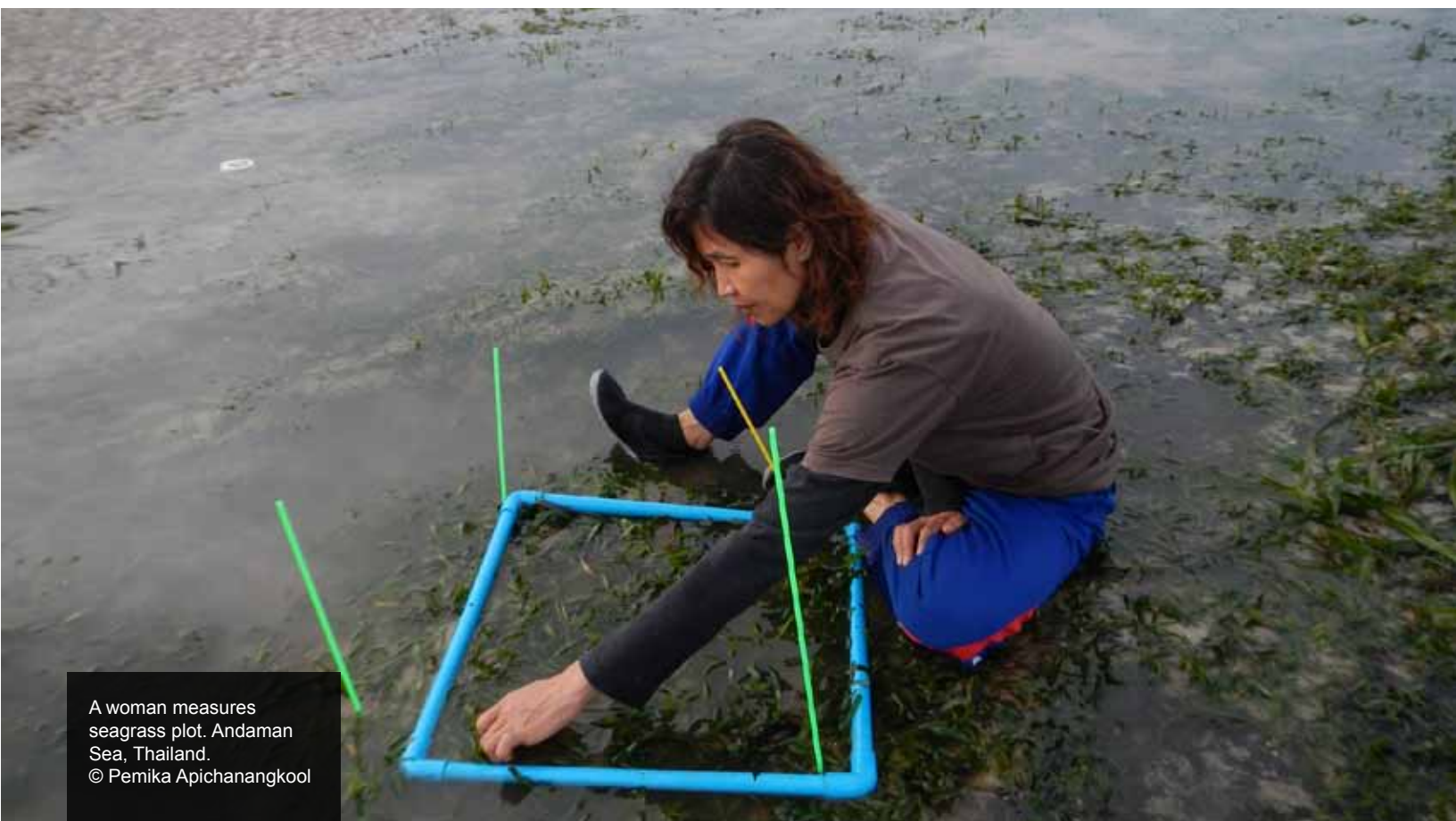
## National REDD+ recommendations:

### Phase I - Readiness

- Develop, or revise as appropriate, the national legal framework for REDD+ activities to include mangroves, broader coastal stakeholder engagement etc;
- Include mangroves into national forest inventories (spatial mapping, classification);
- Include mangrove data into national deforestation baseline;
- Include mangrove data (including soil carbon) in Reference Emissions Levels and GHG monitoring systems as much as possible:
  - Parse out and apply specific requirements for mangrove forest monitoring (for example on soil data collection) which might not be needed for all forest areas;
  - Develop technical papers on how to integrate mangroves with national forest monitoring activities (e.g. which techniques to use);
- Develop MRV Forestry Information Systems that includes mangrove data;
- Assess and reduce the threats and national drivers for deforestation/degradation;
- Allow for nesting of project-based REDD+ activities into national-based activities;
- Use existing avenues and funding mechanism such as the UN-REDD program or the Forest Carbon Partnership Facility (FCPF) to advance those activities.

### Phase II - Policy and Measures

- Provide for harmonization of regulations between central and district authorities;
- Develop policies to reduce threats/national drivers for deforestation, degradation and loss of coastal carbon ecosystems.



A woman measures seagrass plot. Andaman Sea, Thailand.  
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This brief has been updated based on the discussion held at the Blue Carbon Policy workshop (June 2015) in Guayaquil, Ecuador, a part of the Blue Carbon Initiative and the GEF Blue Forest project. The 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 Conservation International (CI), the International Union for Conservation of Nature (IUCN), and the Intergovernmental Oceanic Commission (IOC) of UNESCO, and works with partners from national governments, research institutions, NGOs, coastal communities, intergovernmental and international bodies and other relevant stakeholders.

The GEF Blue Forest project is a four-year project, combining research, policy development, technical advice and practical tools coupled with small-scale interventions to demonstrate how the incorporation of carbon and other ecosystem services values into local and national financial markets and coastal management plans can ensure the long-term protection of “Blue Forest” (coastal) ecosystems.

The workshop consisted of experts in coastal science, environmental policy and economics, and project implementation from within the climate change and marine communities. These recommendations do not necessarily represent the views of IUCN, IOC-UNESCO or CI.

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