

BLUE CARBON POLICY FRAMEWORK 2.0

Executive Summary

Many natural environments contain large stores of carbon laid down by vegetation and other natural processes over centuries. If these ecosystems are degraded or damaged by human activities, their capacity as a carbon sink is lost and significant emissions of carbon dioxide (CO₂) result. In particular, the coastal ecosystems of tidal marshes, mangroves and seagrasses sequester and store large quantities of Blue Carbon in both the plants and in the sediment below them. These Blue Carbon ecosystems are being degraded and destroyed at a rapid pace along the world's coastlines, resulting in globally significant emissions of carbon dioxide into the atmosphere and ocean and contributing to climate change.¹

In addition to their role and value as sinks and stores of carbon, coastal ecosystems provide significant other benefits for climate change adaptation, local livelihoods, tourism and culture, such as protection from storms and prevention of shoreline erosion, regulation of coastal water quality, habitat for numerous fish species, and other commercial and endangered species.²

Scientific understanding of carbon sequestration and potential emissions from coastal ecosystems is now sufficient to develop effective policy, management, and conservation incentives for coastal Blue Carbon. With appropriate and timely action, increased recognition of the importance of coastal Blue Carbon systems will leverage improved management and regulation of coastal areas and provide a basis for incentives, including financial mechanisms, to conserve or restore these systems and reduce emissions as well as impacts, i.e. support mitigation and adaptation to climate change.

Conserving and restoring terrestrial forests, and more recently peatlands, has been recognized as an important component of climate change mitigation, including incorporating these activities within the United Nations Framework Convention on Climate Change (UNFCCC) and related mechanisms such as the Reducing Emissions from Deforestation and Forest Degradation (REDD+)³. These approaches should now be further broadened to manage other natural systems that contain rich carbon reservoirs — including coastal ecosystems — and reduce the potentially significant emissions from their conversion and degradation.

This summary highlights a framework for the main policy objectives and activities needed to improve management of coastal areas and to develop and implement coastal and climate policies and financial incentives that conserve or restore these systems and reduce emissions. Five policy objectives have been identified to support the conservation, restoration and sustainable use of coastal carbon-rich ecosystems. The framework is designed to detail how Blue Carbon activities can be integrated into existing international policy and financing processes whenever possible rather than develop or advocate for a new Blue Carbon mechanism. The detailed coordinated program of activities can be found in the full Blue Carbon Policy Framework 2.0 Report.



Seagrass beds in the
Mediterranean Sea.
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¹ Crooks, S. et al. 2011 Mitigating Climate Change through Restoration and Management of Coastal Wetlands and Near-shore marine Ecosystems. Challenges and Opportunities. Environment Department Paper 121, World Bank, Washington, DC, USA;

Donato, D.C. et al. 2011. Mangroves among the most carbon-rich forests in the tropics. *Nature Geoscience* vol. 4, pp. 293–297;

McLeod, E. et al. 2011. A blueprint for Blue Carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂. *The Ecological Society of America*. DOI:10.1890/110004.

² Barbier, E. B. et al. 2011. The value of estuarine and coastal ecosystem services. *Ecological Monographs*, 81(2) 169-193.

³ Reduced Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.



Red Mangroves in Exuma
Cays Land and Sea Park,
Bahamas.
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BLUE CARBON POLICY OBJECTIVES

Five policy objectives have been identified as priorities to supporting climate change mitigation through the conservation, restoration and sustainable use of coastal ecosystems:

1. Integrate Blue Carbon activities fully into the international policy and financing processes of the UNFCCC as part of mechanisms for climate change mitigation
2. Integrate Blue Carbon activities into other carbon finance mechanisms such as the voluntary carbon market as a mechanism for climate change mitigation
3. Develop a network of demonstration projects
4. Integrate Blue Carbon activities into other international, regional and national frameworks and policies, including coastal and marine frameworks and policies
5. Facilitate the inclusion of the carbon value of coastal ecosystems in the accounting of ecosystem services

In this document Blue Carbon is defined as the carbon stored, sequestered or released from coastal ecosystems of tidal marshes, mangroves and seagrass meadows and does not include carbon stored, sequestered or released by the open ocean and closely related ecosystems and organisms.

Blue Carbon activities refer to a suite of sustainable policy, management and planning activities in coastal ecosystems to reduce emissions from conversion and degradation and to conserve and sustainably manage coastal carbon sinks.

1. Integrate Blue Carbon activities fully into the international policy and financing processes of the UNFCCC as part of mechanisms for climate change mitigation

International Policy Development

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves, Saltmarshes & Seagrasses	Ensure that management of marine and coastal ecosystems is appropriately included into a possible new global agreement by 2015 as part of the outcomes of the <u>Durban Platform</u> , e.g., as part of NAMAs for developing countries	By 2015	Parties NGOs UN Agencies
Mangroves, Saltmarshes & Seagrasses	Build awareness of the strength of scientific evidence of Blue Carbon <ul style="list-style-type: none"> • Submit information to <u>SBSTA</u> on the technical and scientific aspects of emissions by sources, removals by sinks, and reservoirs of all GHGs from coastal and marine ecosystems • Request that emissions and removals of GHGs from coastal and marine ecosystems to be addressed as a specific theme at the <u>next SBSTA research dialogue</u> • Agree to establish a technical and scientific workshop under the auspices of SBSTA to include GHG emissions and removals from coastal and marine ecosystems. 	<ul style="list-style-type: none"> • Before SBSTA 36 – May 2012 • Submission by 5 March 2012 • SBSTA 36 – May 2012 	<ul style="list-style-type: none"> • Regional and international research programmes and organizations • Parties • Parties
Mangroves	Ensure input into SBSTA work on methodological guidance for mangrove activities related to <u>REDD+</u> , e.g. specific drivers of deforestation and forest degradation	28 February 2012 SBSTA 36	Parties and accredited observers
Mangroves, Saltmarshes & Seagrasses	Submit intent for Blue Carbon-based <u>NAMAs</u> to allow for possibility to assess GCF Provide additional information to NAMA workshops	ASAP Workshop SBSTA 36	Developing Countries
Mangroves, Saltmarshes & Seagrasses	Support <u>capacity-building</u> activities to implement Blue Carbon activities	Ongoing	Parties NGOs UN agencies
Mangroves, Saltmarshes	Include other additional LULUCF activities regarding Blue Carbon ecosystems into SBSTA work program on <u>LULUCF/CDM</u>	CMP KP 9	Parties
Mangroves, Saltmarshes	Ensure SBSTA work programme to explore more comprehensive accounting of LULUCF activities considers the inclusion of conservation in the framework of mitigation activities and its operationalization in a land-based approach	Ongoing	Parties NGOs
Mangroves, Saltmarshes & Seagrasses	Monitor discussion on <u>agriculture</u> and its relevance for Blue Carbon	Commence SBSTA 36	Parties NGOs UN agencies

National Policy Activities

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves	<p>Identify and work with champion developing countries on explicitly including mangrove forests as part of a country's national <u>REDD+</u> strategy</p> <ul style="list-style-type: none"> • Capacity-building • National data collection • Reference emissions levels • Assessing drivers of loss and degradation • MRV methodologies • Pilot policies and measures 	Explore opportunities as soon as possible	NGOs, UN agencies Research community National governments
Mangroves, Saltmarshes	<p>Demonstrate development and implementation of a coastal wetland <u>NAMA</u> or as part of a broader NAMA & submit proposal for funding. Priority components of NAMAs could include:</p> <ul style="list-style-type: none"> • Capacity-building • National data collection • Reference emissions levels • Assessing drivers of loss and degradation • MRV methodologies • Demonstration projects 	Explore opportunities as soon as possible	NGOs UN agencies Research community National governments
Seagrasses	Significantly increase scientific carbon data & observations in relevant developing countries to support possible <u>NAMA</u> development	ASAP	Scientific community
Mangroves	Ensure mangroves are included in Annex-I Party <u>Kyoto Protocol's</u> accounting of forest activities	Reporting deadlines for Annex-I	Relevant Annex-I Parties (e.g. France and Australia)

2. Integrate Blue Carbon fully into other carbon finance mechanisms such as the voluntary carbon market as a mechanism for climate change mitigation

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves, Saltmarshes	Continue to develop <u>methodologies</u> for mangrove and saltmarsh carbon management activities, including conservation	Ongoing	NGOs Scientific
Seagrasses	Develop first methodology for seagrass carbon management activities, including conservation	ASAP	NGOs Scientific

3. Develop a network of demonstration projects

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves, Saltmarshes &	Develop field based <u>demonstration projects</u> , including projects consistent with VCS and other relevant methodologies.	ASAP	NGOs Private sector



4. Integrate Blue Carbon into other international, regional and national frameworks and policies, including coastal and marine frameworks and policies

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves, Saltmarshes & Seagrasses	Enhance implementation and inform financing processes of relevant Multilateral Environmental Agreements (MEAs), e.g. CBD, Ramsar, that provide policy frameworks relevant for coastal and marine habitats management	Ongoing	Governments NGOs UN agencies
Mangroves, Saltmarshes & Seagrasses	Use existing international frameworks to advance and <u>disseminate technical knowledge</u> on coastal ecosystems management for climate change mitigation <ul style="list-style-type: none"> • CBD, Ramsar • UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA-Marine). • Global Marine Assessment (GMA) • Intergovernmental science-policy platform on biodiversity and ecosystem services (IPBES) • UN Oceans Atlas 	ASAP	Governments NGOs UN agencies
Mangroves, Saltmarshes & Seagrasses	Integrate coastal ecosystem conservation, sustainable use and restoration activities as a mechanism for climate change mitigation into relevant <u>regional policy frameworks</u> E.g. Ensure the Blue Carbon value is included in the implementation of relevant EU strategies, e.g. EU Biodiversity Strategy to 2020 and the	Ongoing	EU NGOs
Mangroves, Saltmarshes & Seagrasses	Include Blue Carbon activities into <u>national and regional governance schemes</u> <ul style="list-style-type: none"> • Include the Blue Carbon value of coastal ecosystems into national and regional coastal and marine planning processes (ICZM, MPS, MPAs) • Include Blue Carbon ecosystems into watershed relevant policies, e.g. agricultural policies, flood control 	Ongoing	Governments Local authorities NGOs
Mangroves, Saltmarshes & Seagrasses	Encourage <u>private sector engagement</u> <ul style="list-style-type: none"> • Identify and implement opportunities to build Blue Carbon awareness and strategies into insurance industry operations • Factor in the true carbon cost of Blue Carbon associated fisheries and aquaculture identifying sustainable operations and taking action on carbon-unfriendly activities 	Commerce 2012	Private sector Governments NGOs



Salt marshes in Massachusetts, United States
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5. Facilitate the inclusion of the carbon value of coastal ecosystems in the accounting of ecosystem services

Ecosystem	Recommended Activities	Target Date	Stakeholders
Mangroves, Saltmarshes & Seagrasses	Further explore how to best include the carbon value of coastal ecosystems in the accounting and payment of other ecosystem services, e.g. stacking of payments for ecosystem services.	Ongoing	Governments NGOs UN agencies



Mangroves in Grand Cayman Island
© CI/photo by Russell A. Mittermeier



Scientist measures the health of mangroves in Bali, Indonesia.
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THE BLUE CARBON POLICY WORKING GROUP

The Blue Carbon Policy Framework has been developed based on the discussion of the International Blue Carbon Policy Working Group, convened by Conservation International (CI) and the International Union for Conservation of Nature (IUCN). The group consists of experts in coastal science, environmental policy and economics, and project implementation from within the climate change and marine communities.

THE BLUE CARBON INITIATIVE

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 International Blue Carbon Policy Working Group and the International Blue Carbon Scientific Working Group are coordinated through the Blue Carbon Initiative.

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