

CLIMATE CHANGE MITIGATION ACTIVITIES IN COASTAL ECOSYSTEMS

Recommendations for the UNFCCC processes



Mangroves in Bali, Indonesia
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The management of coastal ecosystems such as mangroves, saltmarshes and seagrasses has been identified as an important missing piece in international and national climate change mitigation strategies. Mangroves, saltmarshes and seagrasses store significant amounts of carbon in the sediment, show ongoing sequestration, and release this carbon if degraded or converted to other land-use activities.

The United Nations Framework Convention on Climate Change (UNFCCC) promotes the reduction of greenhouse gases, conservation and enhancement of sinks and reservoirs of coastal ecosystems.¹ This brief outlines recommendations for how to further integrate land-use change and management activities leading to carbon sequestration in or reduced emissions from coastal ecosystems into existing policy and financing processes of the UNFCCC.²

Each recommendations highlight

- for which ecosystems they are relevant (Mangroves, Saltmarshes, Seagrasses)
- by when they should be executed/implemented (target date)
- by whom they should be implemented or for whom they are relevant

¹ UNFCCC Art 4(d)

² This brief builds on previous recommendations as outlined in the Blue Carbon Policy Frameworks. http://www.iucn.org/about/work/programmes/marine/marine_resources/marine_publications/78891/Blue-Carbon-Policy-Framework; <http://www.iucn.org/about/union/secretariat/offices/usa/?9336/Blue-Carbon-Policy---revisited>



1. Durban Platform

At the 2011 UNFCCC COP17 in Durban, Parties to the Convention agreed to “launch a process to develop a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties”³ through a new subsidiary body under the Convention called the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP). This new working group should finalize its work as early as possible but no later than 2015. The Durban Platform will address a variety of topics on mitigation, adaptation, finance, technology development and transfer, transparency of action, and support and capacity-building.

It is likely that the work of the ADP will result in additional rules, modalities and guidelines that need to be integrated in existing guidance and guidelines to account for GHG emissions and removals. To ensure GHG sources, sinks and reservoirs from coastal ecosystem management are fully integrated into a new global agreement, ongoing negotiations, such as on REDD+, NAMA and LULUCF, should also cover and address management of coastal carbon ecosystems appropriately (see further details on next pages).

In parallel, to ensure GHG sources, sinks and reservoirs in and from coastal ecosystem management are included appropriately in the outcomes of the Durban Platform, it will be of important for the discussions held under the Durban Platform to:

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves, Saltmarshes & Seagrasses	Ensure that the full scope of nature-based activities, including from coastal activities, are included into any new global climate regime as an outcome of the work of the ADP.	All Parties	2015
Mangroves, Saltmarshes & Seagrasses	Encourage agreements that provide developing countries with opportunities to participate in and benefit from financing mechanisms and contribute to global climate change mitigation through actions related to restoring and protecting coastal ecosystems	Developing Country Parties	2015

³ Draft decision -/CP.17 Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action. http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_durbanplatform.pdf

2. Reduced Emissions from Deforestation and Forest Degradation (REDD+)

REDD+ is being developed as a framework for financing activities that reduce emissions from deforestation and forest degradation as well the conservation of forest carbon stocks, the sustainable management of forest and enhancement of forest carbon stocks. REDD+ is relevant for mangroves, particularly if a country classifies them as “forests”.

Ongoing discussions under the Subsidiary Body on Scientific and Technological Advice (SBSTA) currently focus amongst other things on national monitoring systems; Measuring, Reporting and Verification (MRV); and on addressing drivers of deforestation and forest degradation.

To allow for the inclusion of relevant mangrove related activities, it will be important to:

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves	Support the provision of information on all forest ecosystems – including mangroves - in the country for national forest monitoring systems in REDD+ , and allow for flexibility and improvements over time. In particular, support a phased approach for the development of monitoring systems that promotes inclusion of broader land use categories/pools over time – including soil carbon pool, including the application of the new IPCC supplementary guidelines for wetlands (as in current draft decision) ⁴ . A phased approach for the development of national forest monitoring system in REDD+ will allow Parties to improve their national monitoring systems over time by using new and better data, improved methodologies and information as they become available for mangrove forests, including on the soil carbon pool (as in current draft decision).	All parties	2015
Mangroves	Similar to the decision on reference levels ⁵ , support a stepwise approach to measuring, reporting and verifying data for REDD+ (as in current draft decision). Such an approach should enable countries to incorporate better data for relevant categories and pools and to improve methodologies over time, including for mangrove forests and, over time, possibly other additional land use categories.	All parties	SBSTA 37 – December 2012
Mangroves	Drivers of deforestation: Ensure the text on drivers does not exclude drivers of mangrove loss and/or degradation. The main drivers for mangrove deforestation include agriculture, aquaculture (e.g. shrimp farming), coastal development and changes in watershed.	All parties	SBSTA 37 – December 2012
Mangroves, Saltmarshes & Seagrasses	Inform policy and decision makers on the drivers of mangrove deforestation as well as on drivers for other coastal ecosystems conversion and degradation.	Academia, NGOs, UN	ASAP
Mangroves (non forest), Saltmarshes & Seagrasses	Include on a voluntary basis broader LULUCF activities as part of an integrated REDD+ approach. Currently only activities in the forest sector are included formally in REDD+. However, appropriate, countries may pursue a fuller landscape approach that integrates other LULUCF activities, such as those related to non-forested mangrove areas, saltmarshes and seagrasses, into their national REDD+ strategy, monitoring and MRV efforts.	All parties	Ongoing

4 FCCC/SBSTA/2012/2

5 Decision 12/CP.17

3. National Appropriate Mitigation Actions (NAMAs)

National Appropriate Mitigation Actions (NAMAs) have been identified as an opportunity for developing countries to include avoided land-use change, conservation and restoration activities in coastal ecosystems into their national mitigation efforts. Currently all activities designed to mitigate climate change may qualify as NAMAs.

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves, Saltmarshes & Seagrasses	Submit information on potential NAMA development containing climate change mitigation activities in coastal ecosystems to the UNFCCC, as called for by 2/CP.17	Developing Country Parties	ASAP
Mangroves, Saltmarshes & Seagrasses	Work towards a more comprehensive land-use approach within NAMAs.	Developing Country Parties	ASAP
Mangroves, Saltmarshes & Seagrasses	Ensure that any possible future discussion on NAMAs, (e.g. on the needs for support for the preparation and implementation of NAMAs, including technical, policy and institutional aspects), provide support and guidance for NAMAs containing climate change mitigation activities in coastal ecosystems.	All Parties	Ongoing

4. Green Climate Fund

The Green Climate Fund (GCF) is expected to be the central multilateral fund for supporting climate change activities in developing countries. In Durban, the COP approved the governing instrument for the GCF and called for rapid operationalization of the fund. The fund, however, has yet to become operational nor has it been capitalized with actual funds. An interim secretariat is being established jointly by the GEF and UNFCCC. The GCF will be governed by a Board of 12 developed and 12 developing country representatives.

Initially, the GCF will have two “windows” for funding: mitigation and adaptation, although “additional thematic windows and/or substructures to address specific activities, as appropriate” can be created by the Board. The GCF will support “developing countries in pursuing project-based and programmatic approaches in accordance with climate change strategies and plans, such as low-emission development strategies or plans, nationally appropriate mitigation actions (NAMAs), national adaptation plans of action (NAPAs), national adaptation plans (NAPs) and other related activities”.

It will be important to ensure long-term financing of land use and land-use change activities, including the possibility of creation of a REDD+ or other land use/land-use change funding window or substructure under the Green Climate Fund.

The UNFCCC, when providing “guidance to the Board of the GCF, including on matters related to policies, programme priorities and eligibility criteria”, and the Board, when taking decisions itself:

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves, Saltmarshes & Seagrasses	Allow for climate change mitigation activities in coastal ecosystems to be funded; If appropriate, explicitly mention climate change mitigation activities in coastal ecosystems as a funding priority; Create criteria that prioritize actions that benefit both GHG mitigation and adaptation.	UNFCCC & GCF Board	Ongoing

Developing countries can prepare for potential future funding through the GCF through:

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves, Saltmarshes & Seagrasses	Integrating climate change mitigation activities in coastal ecosystems into low emission development strategies; Proposing NAMAs which include or are specifically targeted to climate change mitigation activities in coastal ecosystems; Including mangrove restoration and protection into REDD+ strategies; Developing arguments of the combined adaptation and mitigation benefits of coastal climate change activities.	Developing Countries	Ongoing

5. Kyoto Protocol

As part of the Kyoto Protocol, two work programs under SBSTA are relevant to climate change mitigation activities in coastal ecosystems

- a work programme to explore more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from LULUCF; and
- a work programme to consider, develop and recommend modalities and procedures for possible additional LULUCF activities under the Clean Development Mechanism (CDM)

These work programs could

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves & Saltmarshes	Explore more comprehensive, land-based accounting that includes climate change mitigation activities in coastal ecosystems and use new IPCC supplementary guidance on wetlands once available.	All Parties	CMP 9 – December 2013
Mangroves & Saltmarshes	Support the inclusion of avoided land-use change activities in coastal ecosystems, in particular avoided conversion from mangroves and salt marshes, as additional CDM activities.	All Parties	CMP 9 – December 2013
Mangroves & Saltmarshes	Consider in the deliberation of the future design and operations of the CDM the opportunities of CDM activities in coastal ecosystems for sustainable development impact.	CDM Policy Dialogue	Until September 2012

“Rewetting and drainage of wetlands” has been accepted as a new voluntary activity that may be included in national accounting of LULUCF activities under the second commitment period. Emissions arising from the drainage of tidal saltmarshes for example, would be a qualified activity.

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves & Saltmarshes	Elect “revegetation and rewetting and drainage” in the KP second commitment period.	Relevant Annex-I Parties	Until End of Second Commitment Period



6. Agriculture

Agriculture and aquaculture are some of the major drivers of emissions resulting from degradation of coastal ecosystems. The negotiations on agriculture have only started at SBSTA 36 (May 2012). In Doha, no substantial outcome is expected.

Little is known at the moment on the actual emissions and removals from ongoing aquaculture activities (as a land use activity rather than a land-use change activity). In this regard, bringing a particular issue such as aquaculture into the agriculture negotiations is therefore premature. Additional scientific information is needed in order to quantify the role of continuous aquaculture on GHG removals and emissions. New practices such as silvofisheries which practices integrated mangrove forest aquaculture may provide a more positive GHG balance and make the ponds more sustainable over the long term. Measures like this could also reduce the pressure on converting existing coastal ecosystems into new aquaculture activities and thus reduce carbon emissions from such land-use change activities.

Informal initiatives – such as the Global Research Alliance – dedicated to sharing technical information on how to measure and monitor emissions and removals from agriculture, may be a better place to begin discussion on the possible inclusion of aquaculture into the UNFCCC agriculture discussions.

7. SBSTA Research & Observation

Policy development should be based on ongoing scientific and technical information and guidance. At SBSTA 36 the Research Dialogue focused on information provided by Parties and international and national research organizations on scientific research activities and results on emissions and removals from coastal and marine ecosystems.

Since SBSTA 35 (December 2011) Parties have been discussing under the SBSTA agenda item on research and observation the possibility to hold a technical workshop. This workshop should describe and discuss progress and developments in research activities relevant to the technical and scientific aspects of GHGs by sources, removals by sinks, and reservoirs of coastal and marine ecosystems (mangroves, tidal salt marshes, and seagrass meadows). It should also identify and quantify the impact of human activities. So far no agreement has been reached.

A technical workshop on GHG emissions and removals from coastal marine ecosystems is however still seen as a necessary means to broaden the understanding of this topic to a wider range of UNFCCC Parties and provide confidence in the growing scientific results in this area. Such a workshop could

- Consider the scientific progress on Coastal Marine Ecosystems to date relative to the adaptation to and mitigation of climate change;
- Consider the IPCC state of work about the supplementary report to IPCC Guidelines for national GHG inventories in wetlands;
- Assess peer reviewed documents and data collection/availability with the view to inform the IPCC process;
- Identify relevant default values for carbon stocks and emissions of Coastal Marine Ecosystems Tier 1;
- Investigate research needs that would allow IPCC Tier 2 to 3 levels of carbon accounting in coastal ecosystems;
- Estimate costs and describe the approaches to the measurement and monitoring of Coastal Marine Ecosystems.

In order to provide additional scientific and technical advice to all UNFCCC Parties:

Ecosystem	Recommended Activities	Stakeholders	Target Date
Mangroves, Saltmarshes & Seagrasses	Agree to a SBSTA workshop on coastal marine ecosystems.	All Parties	SBSTA 37 December 2012
Mangroves, Saltmarshes & Seagrasses	Submit to the SBSTA Research Dialogue new information on emissions and removals from coastal and marine ecosystems to continue the information exchange between the scientific community and Parties on this topic.	Parties and International and Regional Research Organizations	SBSTA 38 May/June 2013



Thornham creek, Norfolk
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BLUE CARBON POLICY WORKING GROUP

This brief has been developed based on the discussion held at the third workshop of the International Blue Carbon Policy Working Group (July 2012). The group consists 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 or CI.

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 lead 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.

For further information on other activities of the Blue Carbon Initiative as well as for specific recommendations for national and project-level Blue Carbon activities, please contact IUCN or CI or see www.iucn.org/marine - Climate Change

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