

research for a sustainable future



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REDD+ and wetlands: wetland human interactions and the need for robust science

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REDD = Reducing Emissions from Deforestation and Forest Degradation

United Nations Framework Convention for
Climate Change
UNFCCC

**Alexander et al 2011. Restoration Ecology
19, 683-689.**

Forested wetlands



Forested wetlands



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Deforestation



Serious environmental problem in recent times - importance of tropical forests in greenhouse effect and conservation

1990-2005 forest area decreased by 13 million hectares per year (FAO 2006) with major consequences for climate and biodiversity

Now the second leading cause of greenhouse gas emissions (after industrialisation)

REDD

Introduced in 2005 at COP11 of UNFCCC to establish a funding mechanism for reducing carbon emissions and protecting forests

Fund-based or market-based approach to assist developing countries meet emissions obligations under the Clean Development Mechanism - contribution of conservation, afforestation, and reforestation

REDD Policy



2007: Bali Action Plan - REDD expanded to include sustainable management of forests and enhancement of forest carbon stocks = **REDD+**

2008: UN-REDD / World Bank Forest Carbon Partnership Facility established to help developing countries build capacity, broaden stakeholder engagement, and provide support for REDD+ readiness

2010 UNFCCC



almost unanimous agreement to crystallize the REDD+ language to embrace

- policy approaches and incentives on reducing emissions from deforestation and forest degradation

and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks



Dissent - opposition to using a market-based approach (carbon credits) to finance REDD+, delayed decision; continuing reliance on bilateral and multilateral funding – POLICY ISSUE

2008 & 2012 - Ramsar Convention – parties expect UNFCCC to take the lead on REDD even when affecting forested wetlands – ANOTHER POLICY ISSUE

2010 Cancun Agreements



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Creation of a Green Climate Fund and guidance/safeguards for potential REDD+ donors/recipients during the “fast-start finance” period post-2012 climate change agreements

Until financing & monitoring mechanisms have been agreed all potential REDD+ projects will continue to remain outside the UNFCCC

Goal

Primary goals of REDD+ are to reduce emissions and sequester carbon in forests, the 2010 Agreements include activities that also provide multiple co-benefits to biodiversity, ecosystem functions, and local and indigenous communities

Implications for Forested Wetlands



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Sustainable management and enhancement of carbon stocks in forested wetlands (such as mangrove, peatland, and bottomland forests) could make relatively large contributions to global emission reductions in the long-term.



Although only a small percentage of the world's forests, they are some of the most productive in terms of carbon storage as a result of high above-ground biomass and capacity to store carbon below-ground

- above-ground biomass in mangroves is 247.4t ha^{-1} (similar to tropical forests) while carbon burial averages $181.3\text{ gC m}^{-2}\text{ year}^{-1}$ or a total of $29.0\text{ TgC year}^{-1}$ (Alongi 2009).



Amount of long-term carbon storage suggests that REDD+ funding for conservation, management, and restoration activities in forested wetlands could reduce emissions and increase global carbon storage, perhaps even more than upland forests on a per hectare basis.



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Tangible co-benefits of revitalized mangrove forests extend to local and indigenous communities that depend on their goods and services (e.g. peat, timber, fisheries, water, storm/climate protection?)

Future Challenges

In practice, multiple objectives of REDD+ (carbon, biodiversity, ecosystems, and communities) may not always be synergistic or complementary, and there may be significant trade-offs.

Lack of good governance is probably single greatest factor inhibiting these seemingly natural synergies.



social preferences when translated into action on the ground often fail to recognize the connection between biodiversity, ecosystem services, and sustainability

marginalization and limited land tenure rights of local and indigenous communities can reduce stakeholder involvement and access to benefits

Measuring, Reporting & Verification



To be eligible for funding REDD+ activities need to be cost-effective, would be otherwise unfunded, and able to verify long-term carbon sequestration

Technical support needed for designing and implementing REDD+ projects; carbon, biodiversity, ecosystem, and socio-economic indicators.

Benefits to Local and Indigenous Communities



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How to safeguard the rights and land tenure of local and indigenous communities and acquire full participation as stakeholders in REDD+ activities.....

Clear land tenure could be a component of REDD+ strategies or action plans to reduce emissions and provide multiple co-benefits to biodiversity, ecosystems, communities.

The Convention on Biological Diversity



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Seeking information on safeguards for biodiversity, including indicators to assess the contribution of REDD+ to achieving objectives of the Convention, and to assess potential approaches to monitor impacts on biodiversity from REDD+ and other ecosystem-based activities for climate change mitigation.

Summary - policy

REDD+ has the potential to provide funding for forest restoration that contributes to climate change mitigation, sustainable management, and carbon stock enhancement.

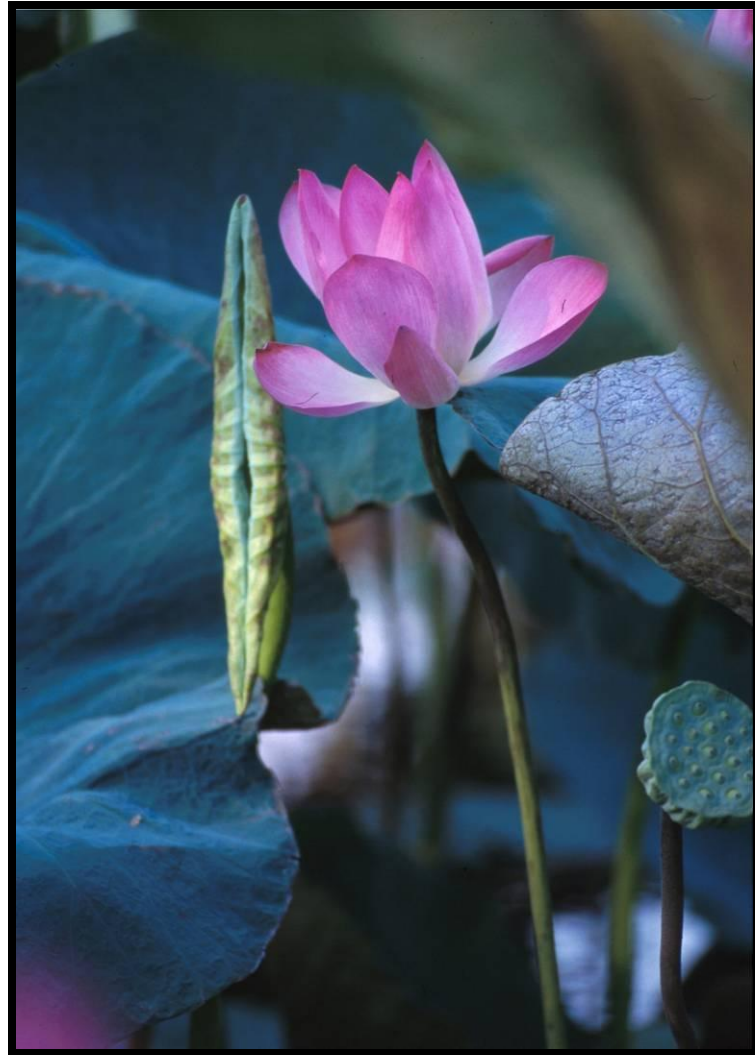
Has expanded beyond activities that affect carbon budgets to include those that enhance ecosystem services and deliver benefits to biodiversity and communities.

Summary - science



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Practical tools and guidance are required for implementing restoration that can sequester carbon and improve the integrity and resilience of forest ecosystems, and mechanisms are needed to ensure that funding by international donors reaches the communities and individual



Thank you

