



Edition 2 | May 09

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AVOIDING TOXIC ASSETS

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Why Forests Matter

Forests provide a constant flow of goods and services: water, moderating the impacts of weather events, habitat, wood, fibre, food, carbon storage and cultural and social infrastructure. Forests support us living and working sustainably in our constructed and our natural environments. The goods and services they provide, come from the dynamic interaction of water, minerals and energy cycles.

Forests can become 'toxic assets' similar to financial instruments which lose market confidence. When impacted by fundamental changes in their ecological processes - such as through degradation and deforestation (clearing) activities - forests have reduced ability to contribute to provision of the wide range of environmental services. This can include them having reduced ability to contribute to global carbon emissions management. This is when such forests can become "toxic assets".

“Toxic assets” is a term widely used to describe financial assets whose value has fallen significantly, with no functioning market to facilitate their sale. Toxic assets can become frozen.

The value of financial assets is very sensitive to economic functions such as land and housing prices, default levels on loans and on-going confidence for revenue streams and market liquidity.

Likewise the value of forest assets is also sensitive to the levels of disturbance to natural processes and consequently their capacity to supply forest services sustainably.

To avoid financial assets becoming toxic it is important that the market has high levels of certainty that basic considerations such as valuations, revenue streams, liquidity, etc supporting the value of the asset have a high level of certainty and confidence within the market. It is the same with forests.

Reducing the likelihood of significant areas of the world’s forests becoming “toxic assets”, in the context of their contribution to management of global greenhouse gas emissions, requires a stronger alignment of economic and environmental outcomes sought by developed and developing countries in a new global climate treaty to follow the Kyoto Protocol post 2012.

It is essential to treat all aspects of forest activities (as opposed to “cherry picking” only parts of them) as contributing to global carbon emissions management. Sustainable forest management (SFM) can provide the comprehensive framework required.

Sustainable Forest Management (SFM) (See below)

Mainstreaming the technique of sustainable forest management (SFM) provides the vehicle for increasing the levels of certainty and community confidence that a forest will continue to produce a mix of environmental, social and economic goods and services to support our livelihoods and contribute to management of global carbon emissions.

The current levels of deforestation and degradation of forests, primarily in developing countries with tropical forests, could be considered a failure to implement SFM. Such scenarios are occurring with Australia’s near neighbours (Indonesia, PNG and Solomon Islands) where there are major challenges in effectively implementing SFM at both strategic and operational levels.

Role for REDD

A product which is receiving significant focus in managing the complex interactions between investment, innovation and implementation of productive forest regimes for global carbon management is REDD (Reduced Emissions from Deforestation and forest Degradation). REDD is a vehicle under the United Nations Framework Convention on Climate Change (UNFCCC).

REDD basically involves developing countries generating carbon credits for sale to developed countries by preserving forests which would otherwise have been degraded or deforested(cleared) under business as usual scenarios.

Sustainable Forest Management (SFM)

SFM is a system for the integrated management and ongoing use of land, water and living resources on forest lands within an appropriate biological, social and cultural landscape.

At a strategic level, SFM is a framework to ensure that all components of forest resources are managed in a manner that ensures they continue to produce the goods and services required to support sustainable livelihoods for people at global, national and local levels. At the operational level SFM is implemented through criteria (specific goals, practices and processes targeted for geographically defined forest areas) equivalent to loan to valuation ratios in financial areas - and with indicators (activity periodically measured to track success in achieving criteria) equivalent to monitoring levels of loan defaults in financial management. Australia’s forest management is consistent with SFM frameworks.



Within the toolbox available for managing greenhouse gas emissions, successful implementation of REDD is seen as a real and practical tool to significantly reduce the contribution to global greenhouse gas emissions - estimated at 20% of global emissions - from deforestation and forest degradation

REDD is part of the deliberations within the Land Use, Land Use Change and Forestry (LULUCF) component of UNFCCC's work on how forest management, reforestation, afforestation, degradation, deforestation and carbon stored in wood products could be recognised - consistent with Articles 3.3 and 3.4 of the Kyoto Protocol.

REDD is not an approved activity under the Kyoto Protocol. Under the Kyoto Protocol, the generation of accredited forest based carbon credits for developing countries is restricted to specific reforestation and afforestation projects using Clean Development Mechanism (CDM) rules. To date only eight forestry, afforestation and reforestation projects have been approved under CDM rules.

REDD activities were not included in the Kyoto Protocol primarily because of two issues. First, was the failure of countries to agree on priority activities for reducing global emissions such as reductions in use of fossil fuels versus use of "cheap" offsets from forest-based credits. Second, were technical issues, in the context of forest carbon credits, associated with defining "business as usual", leakage, permanence and enforceability rules for forest degradation and deforestation.

McKinsey and Company, in their global mapping of opportunities to reduce the emissions of greenhouse gases across sectors, calculate that reforestation and reduced forest degradation, combined with soil carbon management, provide relatively low cost opportunities to reduce emissions.

Support for the broader implementation of REDD objectives is evidenced by the major funding commitments made by World Bank (US200M Forest Carbon Partnership Facility), Australia (US186M International Forest Carbon Initiative) and Norway (US1B Amazon Fund).

Legislative impetus is also increasing for formal adoption of REDD within SFM framework. The Indonesian Government is trialling a comprehensive set of regulations to support the introduction of REDD. In the USA, draft legislation ("The American Clean Energy and Security Act 2009" - Waxman-Markey Discussion Draft) provides for offset credits from reduced international deforestation generated in accordance with "environmentally sustainable forestry practices" "equivalent to 10% of US emissions in 2005". Australia is an enthusiastic supporter of including REDD within a broader forest carbon management scheme.

Impact of Market Structures on Carbon Pricing for Forests

Carbon is priced in two distinct market structures.

Regulated (compliance) markets are designed to meet a government requirement for managing greenhouse gas emissions with a legal requirement for nominated industries to participate. Examples of regulated markets for carbon management are the Kyoto Protocol, the European Union Emissions Trading Scheme (EUETS) and Australia's NSW Greenhouse Gas Abatement scheme.

Carbon is also priced in voluntary markets where participation is on a voluntary basis. Voluntary markets have divided into two distinct categories: the Chicago Climate Exchange (CCX), a legally binding and rule based cap and trade system; and over-the-counter (OTC) markets covering a wide variety of products (carbon offsets), generated from project specific activities. The carbon offsets generating projects are very diverse covering forestry, renewable energy, methane destruction projects and energy efficiency.

Prices received vary significantly between regulated (compliance) and voluntary markets. Prices received for forestry based credits traded on the European Union

Emissions Trading Scheme (the world's largest multinational greenhouse gas emissions trading scheme) average around US\$14 per tonne of CO₂ equivalent compared to voluntary market prices of around US\$6 per tonne CO₂.

Consequently, the extent of revenue streams from carbon credits available for forest related activities will be directly related to whether forestry based carbon credits are comprehensively included in compliance market arrangements post Kyoto Protocol.

Take-up of REDD

Why hasn't REDD had higher take-up?

Firstly, REDD is not an accredited mitigation activity under the Kyoto Protocol. REDD operates in a voluntary market with the allied levels of certainty for the supply (sellers) and demand (buyers) for carbon credits.

Secondly, related to the first issue, currently, "more money can be made cutting down the trees than leaving them be". Clearing of natural forests, often to plant other crops, creates local jobs, supports provision of social infrastructure and generates export income, albeit with the likelihood of negative environmental impacts. At this stage, in developing countries, preference is for regional improvements in economic welfare rather than for large scale forest preservation. The major benefits in terms of carbon impacts are primarily global.

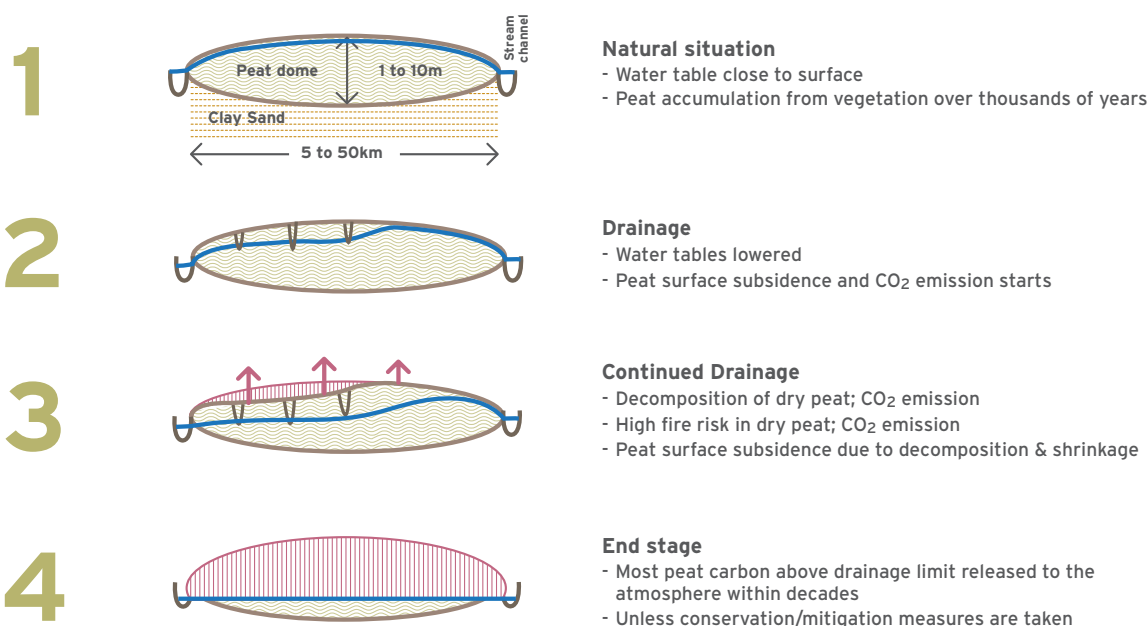
Opportunity in Indonesia

A suitable country for implementation of REDD is Indonesia. Indonesia is estimated to contribute 35% of global emissions from deforestation and degradation activities (representing 6% of global greenhouse gas emissions), primarily from deforestation and degradation of forested peat lands.

Peat lands built up over thousands of years and typically containing 60% carbon - compared to Australian agricultural soil with 2%-4% carbon - are preserved under natural conditions by the peat remaining wet, acidity of water and lack of oxygen. When peat lands are drained, perhaps for industrial forest or palm oil plantations, the peat begins to dry. Consequently, the peat starts to decompose through oxidation, releasing carbon dioxide into the air. The rates of carbon emissions can be significantly accelerated if fire is introduced into decomposing peat land. (Refer to diagram below for description of processes generating carbon emissions from peat lands).

Peat land forests, when drained, can continue to emit carbon dioxide in excess of 120 t/ha/year for over 20 years from a combination of deforestation, forest degradation, peat decomposition and fire. In comparison the average Australian forest stores around 600 t/ha of carbon dioxide.

Schematic illustration of CO₂ emission from drained peat lands (Source: Wetlands International)



Perhaps forest peat lands degraded to this extent could be placed in a TARP - troubled asset relief program - similar to the US Government's approach of taking back "bad" mortgages in order to strengthen balance sheets of banks and generate more confidence in markets. (In this case, forests).

The significance of deforestation and degradation of peat lands in Indonesia is apparent when you consider Indonesia has a very low per capita emission of 3 tonnes per person - excluding deforestation and degradation. This rises to 14 tonne per person if emissions generated by deforestation and degradation are included, a rate equivalent to Australia and the USA.

REDD and Economic Development Issues

The main driver of forest peat land drainage is establishment of industrial forest plantations and palm oil plantations to support economic development.

In the debate on curbing greenhouse emissions from forests, the focus of the approach from developed countries often is to pay developing countries to "lock up" forest areas under REDD. Developing countries, while having some empathy with REDD approaches, place greater emphasis on economic development activities which offer increased likelihood of economic and social development as opposed to perceived "green welfare" outcomes delivered by REDD.

As recently stated by Ms Rulita Wijayaningdah (Federation of All Indonesian Wood, Forestry and General Workers Union), "Developing nations do not want rich forests, poor people. Unions understand that incentive packages as a trade-off for locking up forests are not sustainable and will not, on their own, be successful. We know that these approaches lead to hidden deforestation activities. Sustainable reserving systems only arise in conjunction with other environmental measures, sustainable and local industry development and comprehensive social policy and program development that promote proper livelihoods, decent work and poverty reduction."

It is interesting to note that many of the forests of developed countries, including Australia, are currently net absorbers of carbon dioxide due to natural and planted forest regrowth following earlier clearing to support agriculture, industry and infrastructure for increasing populations. During their development phase, these countries would have been significant emitters of carbon dioxide. Much of the deforestation in developing countries

is the result of activity to support livelihoods (eg agriculture, housing and industry) in addition to supplying products such as paper for developed countries.

Capturing the Potential of REDD

For forests to capture their full potential in contributing simultaneously to economic development in developing countries and global greenhouse gas reductions, a number of signature and mutually reinforcing issues need to be satisfactorily resolved between developing and developed countries. These include:

- 1. International agreement** that carbon will be accounted for within the SFM framework, with REDD being a component, albeit significant, within this framework. This approach is consistent with accounting for all interventions in forests' carbon cycles as detailed in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2007) and will assist in rectifying current inconsistencies with Kyoto Protocol in relation to treatment of forestry activities.
- 2. Mainstreaming global financial arrangements** for management of carbon emissions within the SFM framework. Current financial structures for implementing SFM and reducing degradation and deforestation in developing countries are project-based and often supported by government grants and NGO funding. It is doubtful if public financing and NGO funding has the on-going capacity and certainty to alter fundamentally current deforestation and forest degradation trends.

In addition, developing countries often perceive these projects as diverting international funds from their aspirations for social development and economic growth.

Financial instruments, including leveraging private sector investments to concurrently benefit the sustainable livelihoods of forest owners and communities and investors, need to be developed and implemented.
- 3. Establishment of regulatory institutions,** internationally supported to manage:
 - Efficient and effective accounting systems to give a high level of certainty that emission reductions are delivered from forestry activities at national and sub-national levels.

- Delivery of property rights. In practice, property rights is a division of profits from marketing of carbon credits between governments, individuals, communities, businesses and investors.
- Governance structures: which deliver high levels of certainty of payments of property rights (refer above), market certainty and lower investment risks; which incorporate value of broader environmental services provided by forest ecosystems; and which specify the rules of exchange between buyers and sellers of carbon credits and liability for permanence.

4. Generation of credits for early action to provide incentive to change business as usual outcomes and hence reduce emissions from forest degradation and deforestation and gain carbon benefits of SFM.

Providing opportunities for the conversion of voluntary credits (or pre-compliance credits) from the full range of forestry activities into compliance carbon markets, perhaps post 2012, would provide financial incentives for more private sector investments.


In addition generation of carbon credits for early action would reduce incentives for perverse outcomes associated with degrading forests to be ahead of a perceived regulatory deadline.

5. Implementation. Success in capturing the potential of forests to productively and effectively contribute to reductions in global carbon emissions will be directly related to adequate resourcing of management and the effectiveness, efficiency and appropriateness of compliance systems to manage and track the flow of carbon stocks from forestry activities at national and sub-national levels through time.

The importance of implementation issues is reinforced by recent reported comments (April 2009) by Minister M.S. Kaban, Indonesian Forests Minister, expressing frustration at the difficulties in meeting the developing global carbon management arrangements for forests. Minister Kaban said that while Indonesia supports the REDD concept, as evidenced by the release of draft regulatory framework, "We must find a simpler, less expensive scheme that can save our forests while still benefiting the people".

Generally, an indication of the level of resources required for global carbon management can be gauged from the level of resources committed by countries to manage financial activities.

Mainstreaming SFM, incorporating REDD, within global carbon management arrangements is an ambitious agenda. Detailed work is being undertaken by various working groups in the lead-up to the Copenhagen meeting of UNFCCC in December 2009. There is also evolving broader country support for incorporation of forestry in global carbon management arrangements. Together, they provide a pathway for the matching of the needs of developed and developing countries for comprehensive inclusion of forests within compliance markets, as opposed to voluntary, post Kyoto Protocol arrangements in 2013.

But, it is worth remembering that while science and economics can provide options for managing the contribution of forests in global greenhouse gas emissions, politics will deliver the "adopted" solution. 



Further Reading

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