
Mpingo Conservation & Development Initiative



**Combining REDD, PFM and FSC
Certification in South-Eastern Tanzania**

REDD Policy Analysis

Updated January 2011

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Acronyms

AFOLU	Agriculture, Forestry and Other Land Use
A/R	Afforestation and Reforestation
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action
BAU	Business-as-usual
CAR	Climate Action Reserve
CBFM	Community-based Forest Management
CCBS	Climate, Community and Biodiversity Standards
CCX	Chicago Climate Exchange
CER	Certified Emission Reduction
CDM	Clean Development Mechanism
COP	Conference of Parties
DoE	Division of Environment, Vice President's Office
EUETS	European Union Emissions Trading Scheme
FBD	Forestry and Beekeeping Division
FSC	Forestry Stewardship Council
IPCC	Intergovernmental Panel on Climate Change
JFM	Joint Forest Management
LULUCF	Land Use, Land Use Change, and Forestry
MCDI	Mpingo Conservation and Development Initiative
MRV	Monitoring, Reporting and Verification
Mt	Mega-tonnes
NAMA	Nationally Appropriate Mitigation Action
NGO	Non-government organisation
NSWGGAS	New South Wales Greenhouse Gas Reduction Scheme
PDD	Project Development Document
PFM	Participatory Forest Management
REDD	Reduced Emissions from Deforestation and Forest Degradation
RGGI	Regional Greenhouse Gas Initiative
SBSTA	Subsidiary Body for Scientific and Technological Advice
tCO ₂ e	Tonnes of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary Carbon Market
VCS	Voluntary Carbon Standards
VCU	Voluntary Carbon Unit
VER	Verified Emission Reduction
VLFR	Village Land Forest Reserve

Introduction

The Mpingo Conservation and Development Initiative's (MCDI) project *Combining REDD, PFM, and FSC Certification in South-eastern Tanzania* is a four year project based in Kilwa District, Lindi Region, that aims to improve Tanzania's preparedness to implement REDD nationally and to generate a range of local economic and environmental benefits through the creation and sale of forest-based carbon offsets. The project operates at district and village level to use the voluntary carbon market to expand participatory forest management (PFM) to a further six villages in Kilwa District, using MCDI's established process of facilitating villages to set up Village Land Forest Reserves (VLFRs) and sustainably harvest timber using a group certificate approved by the Forestry Stewardship Council (FSC) which enables local communities to capture premium market rates for harvested and sold timber. By facilitating the expansion of sustainable forest management in currently unprotected forests on village lands in Kilwa District, the project aims to generate 50,000 tonnes of CO₂ equivalent (tCO₂e) in offsets, measured as Verified Emissions Reductions (VERs) which will be sold on the over-the-counter market for voluntary carbon offsets.

This document provides an updated synthesis of key market and policy contextual information and developments that make up the operating environment in which the project will take place. The first part of the document discusses the global and national policy context for REDD, and specifically for REDD in Tanzania, and how REDD will be integrated with PFM at the local level. The section describes the ongoing global negotiations around REDD, such as the debate between fund-based and market-based approaches and how to address questions of local land rights and participation, as well as the emerging policy framework for operationalizing REDD in Tanzania. This section also discusses the most salient aspects of the institutional context of REDD in Tanzania in terms of the central government actors and policies and laws relating to forest governance, land tenure, and local government.

Part II follows the discussion of policy context with a description of the market context for the project, focusing on market trends in the voluntary carbon market and in carbon forestry offsets. This section also discusses the role of third-party validation and verification standards, and in particular the requirements for such validation/verification by the two likely standards which this project will utilize, which are the Voluntary Carbon Standard (VCS) and the Climate, Community and Biodiversity Standards (CCBS).

Policy Context

Global Policy Context for REDD

Deforestation and Global Carbon Emission Trends

Since the start of the Industrial Revolution the stock of greenhouse gases (GHGs) in the atmosphere (including carbon dioxide, methane and nitrous oxides) has been increasing rapidly as a result of anthropogenic activity. The Intergovernmental Panel on Climate Change concludes that the atmosphere needs to be stabilised at a concentration of 445-490ppm CO₂ if we are to avoid dangerous climate change¹; more recent studies have suggested a 350ppm concentration². Although anthropogenic increases in emissions are due primarily to fossil fuel use, emissions from forestry and land-use change represent a significant contribution, accounting for roughly 17% of global emissions (Figure 1).

Forests – and terrestrial biomass and soils more widely – therefore play a complex and important role in the global carbon cycle, acting as both a carbon sink (through photosynthesis) and as a source (through deforestation, burning and decomposition). Although the drivers of deforestation are complex and overlapping, it is estimated that 13 million hectares of forest are lost each year to the expansion of agricultural land, infrastructure and the removal of wood for timber and fuel³. Forest degradation is also a major issue, especially in African dryland forests. Because deforestation in industrialized countries occurred early in the history of the Industrial Revolution, nearly all current emissions from deforestation and forest degradation are from developing countries, with about 50% of emissions occurring in two countries alone – Brazil and Indonesia⁴.

The inclusion of the forest sector and land-use change more broadly into any future climate change regime is therefore a necessary component of the global effort to achieve significant reductions in emissions by 2050⁵. Improved terrestrial management also has vital links to economic development, food security and adaptation. To tackle development challenges effectively in the context of climate change, it will be necessary to demonstrate the linkages among land use change (deforestation and conversion among forest, grasslands and croplands), land resources management (soil, water, vegetation and biodiversity), and the vulnerability or resilience of local livelihoods⁶.

¹ IPCC. (2007). Working Group I. Couplings between changes in the climate system and biogeochemistry. , *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. Cambridge: Cambridge University Press.

² Hansen, J., Sato, M., Kharecha, P., Beerling, D., Berner, R., Masson-Delmotte, V., Pagani, M., Raymo, M., Royer, D. L., & Zachos, J. C. (2008). Target atmospheric CO₂: where should humanity aim? *The Open Atmospheric Journal* **2**, 217-231.

³ FAO. (2006). *Global Forest Resources Assessment 2005: Progress towards sustainable forest management*. . Rome: Food and Agriculture Organization of the United Nations.

⁴ Houghton, R. A. (2003). *Emissions (and Sinks) of Carbon from Land-Use Change. Report to the World Resources Institute from the Woods Hole Research Center*. Washington, DC Woods Hole Research Center.

⁵ Eliasch, J. (2008). *Climate Change: Financing global forests. The Eliasch Review*. London: Earthscan.

⁶ FAO (2009). *Review of evidence on drylands pastoral systems and climate change. Implications and opportunities for mitigation and adaptation*. Land and Water Discussion Paper No 8. FAO, Rome.

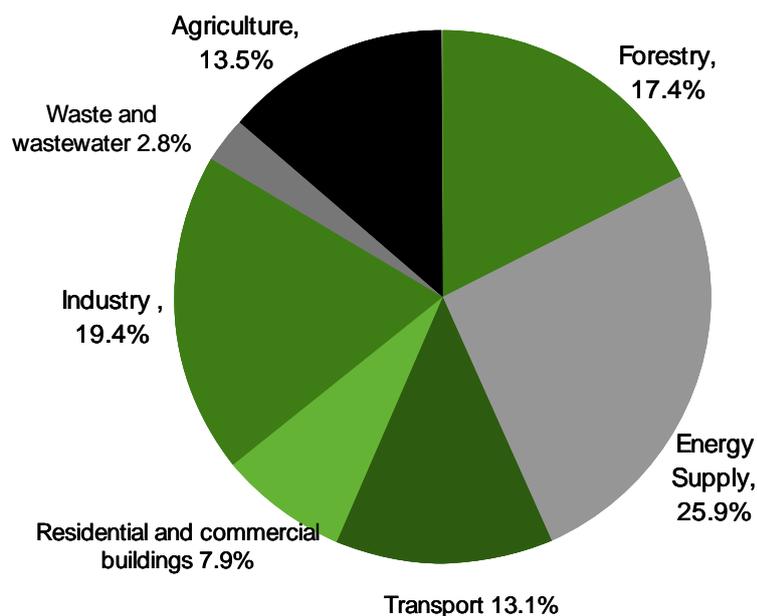


Figure 1: Global sources of CO₂ emissions in 2004. Source: Intergovernmental Panel on Climate Change, Fourth Assessment Report, 2004

Terrestrial Carbon Mitigation: Policy in the Climate Change Negotiations

The role of the natural biosphere in climate change mitigation is recognised in the United Nations Framework Convention on Climate Change (UNFCCC) through its provisions on Land Use, Land Use Change, and Forestry (LULUCF). Several Articles of the Kyoto Protocol make provisions for the inclusion of LULUCF activities by Parties of the Convention as part of their efforts to meet emission reduction targets:

1. Under Article 3.3, Annex I countries are required to account for emissions from direct human-induced activities of afforestation, reforestation and deforestation in forest areas since 1990;
2. Annex I countries are allowed to offset net emissions from afforestation, reforestation and deforestation within the first commitment period (2008-2012) through forest management up to a limit of 9 mega tonnes (Mt) of CO₂ per year;
3. Under Article 3.4, Annex I countries can voluntarily elect additional human-induced activities related to LULUCF; specifically, forest management, cropland management, grazing land management and revegetation, to be included in their accounting of anthropogenic GHG emissions and removals for the first commitment period;
4. Only afforestation and reforestation projects are eligible under the Clean Development Mechanism (CDM) which was established under the 1997 Kyoto Protocol. The use of GHG removals from such projects is limited to 1% of each Annex I country's baseline for each year of the commitment period.

Current Status of Global REDD Negotiations

Although the 2009 United Nations climate change conference in Copenhagen failed to reach a new legally binding agreement on post-2012 global emission reduction targets as had been hoped, significant progress was made as a result of the Copenhagen Accord⁷ in terms of formally recognizing the important role of forests in climate change mitigation, and the need to establish an immediate mechanism to provide positive incentives to encourage reduced emissions from deforestation.

⁷ UNFCCC. (2009a). Decision -/CP.15: Copenhagen Accord. Bonn: UNFCCC.

The Copenhagen Accord also pledges long-term financing for mitigation, including REDD, of US\$100 billion annually by 2020, although it is not clear what type of funding mechanisms will be used to achieve this. While international mechanisms for funding REDD in developing nations continue to be negotiated, some countries have made specific commitments to try and support the process, most notably Norway's commitment of more than \$1 billion towards developing REDD in Brazil, Tanzania, and Indonesia.

Another important implication for REDD is with regard to monitoring, reporting and verification (MRV) in the context of Nationally Appropriate Mitigation Actions (NAMAs)⁸. Although it is not yet clear whether REDD will be considered a NAMA, the Copenhagen Accord does distinguish between domestic and internationally supported NAMAs. Domestic NAMAs will only be subject to domestic MRV while internationally supported NAMAs will be subject to international MRV procedures. If REDD activities become eligible NAMAs, this could all have a significant impact on how REDD mechanisms are designed and incorporated into global markets in the future.

In addition to the Copenhagen Accord, REDD issues were also negotiated under two sub-groups: the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA), which was tasked with finding agreement on policies and incentives for REDD; and the Subsidiary Body for Scientific and Technological Advice (SBSTA) which sought agreement on methodological issues. Only methodological issues under SBSTA were agreed upon⁹ whilst the more substantive REDD issues under the AWG-LCA remained as bracketed text¹⁰. Nonetheless, this draft document does contain some important provisions on REDD and the inclusion of safeguards and principles for indigenous peoples, local communities, and biological diversity. The language identifies specific safeguards that must be promoted and/or supported including respect for the knowledge and rights of indigenous peoples; full and effective participation of all relevant stakeholders; and the avoided conversion of natural forests to plantations. It also supports private investment for both national and sub-national approaches to REDD.

Key Debates and Uncertainties

Despite the general agreement in the Copenhagen Accord on the need to incorporate provisions and financial support for REDD in any post-Kyoto global climate agreement, a range of uncertainties surrounding the entire UNFCCC process as well as the specific design of REDD mechanisms remain and will continue to influence carbon forestry initiatives in the near term.

Although REDD is now accepted at the level of international negotiations, in terms of the central importance of reducing deforestation as a part of reducing overall CO₂ atmospheric levels, there remain a range of debates about precisely how REDD should fit into a new global climate regulatory regime. One of the main overarching debates surrounding REDD is whether REDD should operate as a component of overall global carbon 'markets' or whether funding for REDD should operate as a separate financial or 'fund-based' mechanism. If REDD were incorporated into global carbon markets, this would mean that funding for REDD would come from countries or companies (mostly in developed countries) that wished to offset their carbon emission by purchasing credits produced from REDD in developing nations. Some national regulatory efforts, such as carbon regulatory legislation drafted in the US since 2009, contains provisions for companies needing to reduce their emission to

⁸ NAMAs are envisioned as a concrete and transparent way for developing countries to move away from a business-as-usual emissions pathway. Their precise nature has yet to be defined, however discussions circulate around three options: voluntary, supported and credited NAMAs. Voluntary NAMAs would be undertaken with no support from developed countries. Supported NAMAs would rely on overseas development aid or other means of financing such as the use of a percentage of revenues from the auctioning of allowance permits. Credited NAMAs would ostensibly rely on private financing through the carbon market and would generate carbon credits.

⁹ UNFCCC. (2009c). Draft Decision -/CP.15: Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Bonn: UNFCCC.

¹⁰ UNFCCC. (2009b). Draft decision -/CP.15 Addendum: Policy approaches and positive incentives on issues relating to reducing emission from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forest and enhancement of forest carbon stocks in developing countries. Bonn: UNFCCC.

buy a limited amount of offsets from REDD projects or countries. In general the developed nations have favoured integrating REDD into carbon markets because this might increase the availability of cheaper carbon offsetting options and reduce the costs of emission reductions in wealthier countries.

By contrast, forest-rich developing nations such as Brazil, as well as African nations such as Tanzania, have generally advocated for REDD funding to be separate from carbon markets. Under a fund-based arrangement for REDD, developed nations would make financial commitments to a global REDD fund, which would then disperse money to forest-rich countries according to certain conditions relating to forest cover, rates of deforestation, or performance in reducing deforestation and forest degradation.

An additional debate within REDD policy circles is how to balance the need to invest funding for REDD in reductions in deforestation with the need to reward countries that have maintained high levels of forest cover to date. Carbon markets are premised on the concept of ‘additionality’—meaning that to generate an offset which can be sold on a carbon market, an action must be additional to what would have happened without the financial incentive to reduce emissions through that action—and consequently the focus of REDD has been realizing reductions in deforestation in areas with high levels of forest loss and degradation and thus carbon emissions. However, some developing countries (Guyana is perhaps the most noted example) with high levels of forest cover, and low levels of emissions, run the risk of being penalized, effectively, for past good performance in terms of conserving forests if REDD funds purely follow the logic of additionality. It is likely that the final agreed framework for operationalizing REDD globally will strike some sort of balance to both invest resources in high-deforestation countries as well as in maintaining forest cover in low-deforestation countries which to date have borne the opportunity costs of maintaining their forests.

While there is widespread agreement on REDD, this is by no means uniform and many local groups and international networks continue to view REDD with great suspicion and concern. For example, a global gathering held in Bolivia in April 2010, under the title World People's Conference on Climate Change and the Rights of Mother Earth, was sharply critical of the Copenhagen Accord and much of the UNFCCC process including current plans for REDD.¹¹ Many local human rights and environmental justice groups, such as indigenous people's organizations from forested parts of Latin America, are strongly opposed to linking REDD with carbon markets and are concerned that REDD will lead to more government and private incursions into lands used or owned by local communities.

Finally, it should be noted that at present, although there is widespread global acceptance of REDD, the overall negotiation process over a post-Kyoto UNFCCC regulatory protocol has proceeded erratically and with considerable tension and setbacks. The 2009 Copenhagen conference was not able to bridge many of the key points of debate between developed countries in Europe and North America and emerging economies in Asia, Latin America, and Africa with regard to the distribution of costs and benefits for reducing aggregate global carbon emissions and highlighted many fundamental differences and a general reluctance to take discrete near-term actions on the part of many key parties. These divisions both reflect and have drawn from debates about climate policy within key developed nations such as the US. Failure by the US Congress to pass carbon regulatory legislation, after a bill passed the House of Representatives in mid-2009, made it virtually impossible for the US to agree to any concrete targets for emission reductions at Copenhagen, while in turn the perceived failure of the Copenhagen summit, combined with an array of domestic political factors, has weakened any push for passage of contentious climate legislation at home. In Australia, similarly, the government abandoned its pledge to enact an emission reduction scheme through new legislation, putting it off until the Kyoto Protocol expires at the end of 2012.¹² These developments and current unresolved debates around the global climate regime enhance uncertainties in carbon markets for both buyers and sellers as well as for national policy-makers and local forest-based communities.

¹¹ <http://pwccc.wordpress.com/>

¹² BBC News. ‘Australia shelves key emission trading scheme’, 27 April 2010, <http://news.bbc.co.uk/2/hi/asia-pacific/8645767.stm>

Against the backdrop of those setbacks, the 16th UNFCCC CoP held in Cancun, Mexico in December 2010 represented a significant advance in global REDD negotiations. One observer notes that Cancun represents “a historic achievement” due to, after five years of debate, the UNFCCC finally putting its official seal of approval on REDD+. ¹³ Cancun thus serves as formal affirmation that REDD will indeed become a central element of global efforts to reduce CO₂ emissions through a range of regulatory and financial mechanisms. The CoP produced general agreement around the need to invest in REDD as the mechanism for slowing, halting or reversing forest loss and requested developing countries to develop national strategies or action plans, reference levels for deforestation, and robust monitoring systems. ¹⁴

Concerns around providing adequate safeguards with regard to local communities’ land and resource rights and participation were also given attention in the negotiating text emerging from Cancun, with provisions agreed “to tie financing for REDD+ activities to these environmental and social safeguards, meaning countries will have to show they are protecting forests and indigenous peoples in order to receive financing for their REDD+ projects and giving indigenous peoples more control over the financing of their development pathway.” ¹⁵

Several important design issues relating to REDD were however not resolved but rather postponed to the next CoP in 2011, which will be held in Durban, South Africa. Two key issues which will return to the agenda in Durban is the question of whether the financing for REDD will be tied to global carbon markets, and the issue of national versus sub-national approaches. Cancun only agreed that sub-national approaches may be used as an ‘interim measure’ but whether this will continue to be the case over the long haul remains unclear.

Overall, despite failing to reach agreement on a range of key post-Kyoto issues, the Cancun CoP represented the recovery of some of the momentum of the global climate change negotiations which were lost after the disappointment of the Copenhagen CoP the previous year. In particular, the agreement around REDD at Cancun represents tangible progress on the most important land use issue related to climate change and provides some certainty to project developers, governments, and local communities that there is international will and financial commitment to invest in REDD+.

Forest Policy and Institutions in Tanzania

Tanzania has approximately 33 million hectares of forests and woodlands. About half of this total area lies in state protected areas including central and district forest reserves, and the other half is found on village or general lands which are managed by local communities or private landholders. Tanzania is estimated to presently be losing around 400,000 ha of forest ever year; much of this loss occurs on village lands where most local communities do not have formalized property rights over forests or robust local management institutions. This absence of local ownership enables ‘open access’ conditions of forest exploitation to prevail resulting in forest loss and degradation. Implementing REDD in Tanzania will necessarily place a considerable emphasis on changing these dynamics on poorly managed forests on village lands. As such, the policy and legislative framework for community participation in forest management (participatory forest management – PFM) in Tanzania, which includes forest management and governance institutions but also those for local government and land tenure, is a critical contextual factor for REDD and its integration with PFM.

Tanzania has a well-developed system of local governance and community-based land tenure, which facilitates the formalization of community-level property rights over forested lands. Tanzania’s rural areas are divided up administratively into over 10,000 villages. These villages are legally constituted

¹³ Haverkamp, J. The Cancun Agreements: what they mean, where issues now stand, and where they’re going (to Durban!). December 15, 2010. *Environmental Defense Fund*. [http://blogs.edf.org/climatetalks/2010/12/15/the-cancun-agreements-what-they-mean-where-issues-now-stand-and-where-they’re-going-to-durban/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+environmentaldefense+](http://blogs.edf.org/climatetalks/2010/12/15/the-cancun-agreements-what-they-mean-where-issues-now-stand-and-where-they-re-going-to-durban/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+environmentaldefense+)

¹⁴ REDD+ Progresses, LULUCF Regresses in Cancun Agreements. December 11th, 2010. *Ecosystem Marketplace*. http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=7896§ion=news_articles&eod=1

¹⁵ Haverkamp, op cit.

entities, first established in the mid-1970s and further strengthened by subsequent local government legislation. Villages are managed by Village Councils, which comprise 25 members elected every five years and headed by a Village Chairman. Village Councils are elected by and answerable to Village Assemblies, which include all the residents of the village above the age of 18 years. Village Assemblies are supposed to meet on a quarterly basis¹⁶ to receive reports from the Village Council and approve any pending matters, while Village Councils and their various sub-committees meet more frequently. Village Councils are, according to the Local Government Act of 1982, corporate bodies capable of owning property and entering into binding legal agreements that can serve to further village development, and also for producing their own village by-laws, subject to approval from the District Council, which are fully enforceable by courts of law.

Importantly, Village Councils are also the legally designated management authority for village lands according to the 1999 Land Act and Village Land Act. The Village Land Act gives Village Councils responsibility for managing village lands and for determining the boundaries of village lands in concert with other authorities at district and national levels (these lands falling under villages' authority are referred to as 'village lands'). The Village Land Act also instructs Village Councils and Village Assemblies to zone different areas of village land for individual (e.g. farms and homesteads) and communal uses (e.g. livestock pasture, water sources, forests). These land laws therefore enable villages to clarify the boundaries of communal property, formally maintaining areas for communal use through the collective governance organs of the village. The Local Government Act's provisions for villages to produce their own local by-laws also enables villages to craft their own formal and legally enforceable rules, which can strengthen controls over lands and natural resources within villages' physical boundaries.

PFM operates through two basic arrangements: community-based forest management (CBFM) which occurs on village lands and is primarily concerned with enabling villages to establish their own Village Land Forest Reserves (VLFRs); and Joint Forest Management (JFM) which occurs on either central or local government forest reserves but where neighbouring villages are brought into co-management agreements with the relevant authority so that the communities can participate in managing and utilizing the forest. Tanzania's framework for PFM according to the Forest Act of 2002 (and 1998 National Forestry Policy) explicitly builds on the country's land and local government legislation in making village governments the central actor in managing communal forests. For example, government guidelines first released in 2001 (revised in 2007) highlighted the importance of integrating CBFM with Tanzania's enabling local governance framework:

CBFM does not create new institutions but builds upon those that exist...CBFM works through the village framework wherever possible. This is so even where a forest extends into several Village Areas or where many villages border a Forest Reserve. Each village community is assisted to manage its own part of the forest. Local custodian-ship is enhanced. The need for accountability and efficiency become more real...Mechanisms for co-operation among villages also emerge as needed.¹⁷

PFM overall has spread rapidly in Tanzania since the late 1990s, with more than 4 million hectares and 2,300 villages across the country involved in either JFM or CBFM.¹⁸ This includes more than 1,400 villages which have set-aside approximately 2.34 million hectares as VLFRs (see Figure 2). Establishing VLFR's under the Forest Act requires villages to demarcate their forests' boundaries, to establish a forest or natural resource management sub-committee of the Village Council, and to adopt by-laws and a basic management plan for managing the forest. The VLFR is then 'declared' and can later be formally gazetted if desired. By establishing VLFR's, villages are empowered to make all

¹⁶ Although, in practice, in Kilwa District most village assemblies only meet 2-3 times per year.

¹⁷ Ministry of Natural Resources and Tourism. 2001. Community-based Forest Management Guidelines. Dar es Salaam, Forestry and Beekeeping Division.

¹⁸ Forestry and Beekeeping Division. (2008) *Participatory Forest Management in Tanzania: Facts and Figures*. Government Printer, Dar es Salaam.

management decisions pertaining to their forest and are also entitled to keep 100% of revenues from harvesting forest products in the VLFR according to the local management plan¹⁹.

Many local forests have recovered following the formalization of community management regimes as a result of improved local protection under PFM. This has led to increased biomass and vegetative cover and a range of environmental improvements (e.g. Blomley *et al.*, 2008). Mensuration data from a range of community-managed forests shows annual incremental increases in carbon storage ranging from 4.5 tCO₂e/ha in dry miombo woodlands, up to approximately 24 tCO₂e/ha in humid lowland forest.²⁰

Although some local communities have strengthened forest conservation measures during the past decade, many villages continue to replace forests with alternative land uses, such as agriculture, as a result of insufficient economic incentives for conserving forests. Despite great progress in expanding the area covered by PFM, there has been very limited progress in enabling villages to generate commercial revenues from these forests such as may be needed to create strong long-term incentives for maintaining forests and preventing degradation.²¹ High rates of illegal logging, including in areas with both high timber values and high levels of biodiversity, persist in many locales due to the weakness of local capacity for enforcement of laws governing forest use, or insufficient resources for establishing Village Land Forest Reserves.

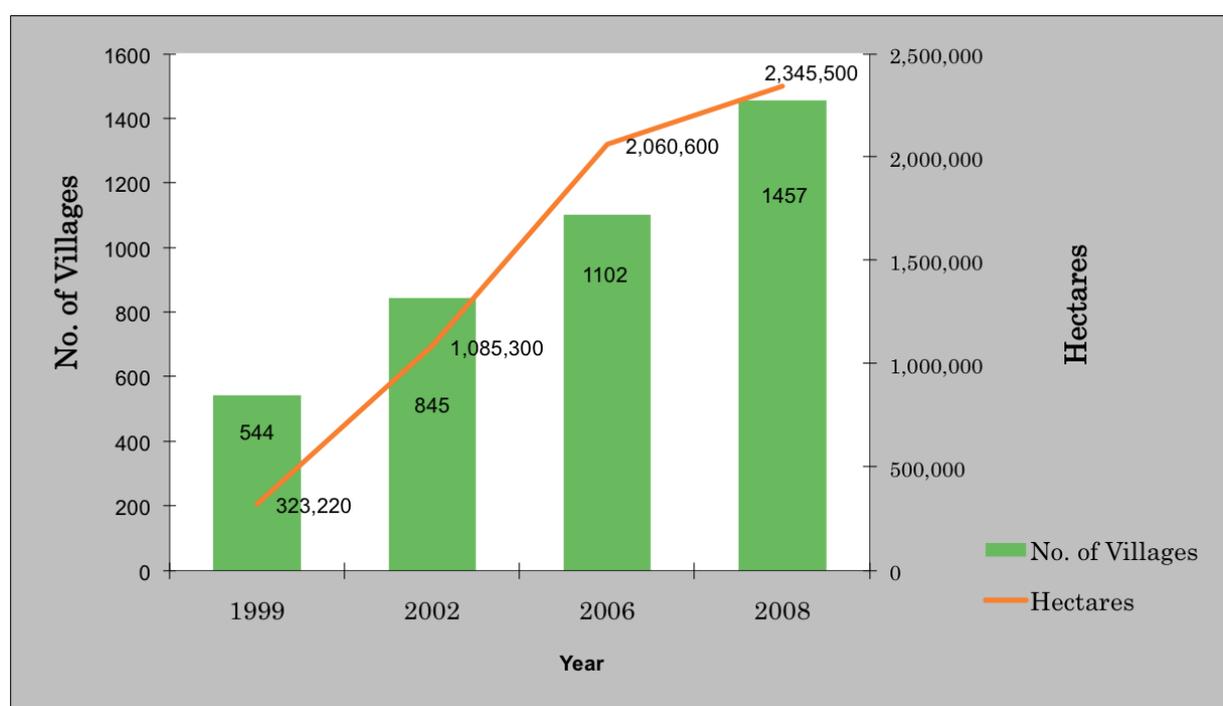


Figure 2: Growth of Village Land Forest Reserves in Tanzania, 1999-2008.²²

Emerging Forest Carbon Policy in Tanzania

The designated authority in Tanzania for all climate change matters and UNFCCC processes is the Division of Environment (DoE) in the Vice President's Office. There are no national policies on climate change, which is generally treated as a cross-cutting issue and only beginning to be integrated

¹⁹ Strictly speaking they are exempt from royalties normally payable to the national government on forest products.

²⁰ Zahabu, E. and G. Jambiya. (2007) Community-based forest management and carbon payments: Real possibilities for poverty reduction? *The Arc Journal* No. 21, pp. 25-27

²¹ TNRF (2009) Recommendations for the National Strategy on Reduced Emissions from Deforestation and Forest Degradation (REDD). TFWG Information Brief, Tanzania Natural Resources Forum. http://www.tnrf.org/files/E-INFO-TFWG-Brief_on_REDD_Strategy_Recommendations_Dec2009.pdf

²² Forestry and Beekeeping Division. (2008) Participatory Forest Management in Tanzania: Facts and Figures. Government Printer, Dar es Salaam.

into wider economic policy making. In 2009, in response to international processes relating to the UNFCCC and REDD in particular, the government formed the National REDD Task Force, which is comprised of three individuals from DoE and three individuals from the Forestry and Beekeeping Division (FBD) in the Ministry of Natural Resources and Tourism. FBD makes up half of the Task Force but is generally considered the lead in formulating the specifics of REDD policy and strategies for implementation. In August 2009 the Task Force released a Draft National REDD Framework as an initial document outlining some key REDD issues and policy directions, as an initial step in the process of producing a fuller National REDD Strategy in 2010.

The National Framework for REDD released in 2009, after a very moderate level of public consultation, was the first official policy document produced by the government on the design and implementation of REDD. The Framework provides a generally sound overall vision for REDD in terms of using funding under REDD to strengthen local level incentives for forest conservation, notably in the following passages:

Incentives need to be provided for the effective participation of the stakeholders in the REDD policy. A fair and transparent payment mechanism need[s] to be established in order to provide incentives to stakeholders within the country; in other words, to enable the state to account in a fair way for gains and losses and to reward stakeholders who are responsible for reductions in carbon losses.²³

A central objective of REDD is to provide sufficient incentives to motivate stakeholders to reverse the effect of threats facing forests.²⁴

The Framework also places a central emphasis on PFM as the leading government and forestry sector strategy for improving forest management across a wide range of ecological and socioeconomic settings, in ways that will address the objectives of REDD as well as other government policies such as those for poverty reduction. The Framework is quite clear that integrating PFM with REDD will be central to the effectiveness of REDD efforts in Tanzania and in ensuring that REDD is integrated with existing forestry and environmental policies and management efforts.

Beyond this, though, there is limited detail in the Framework, which devotes much of its text to technical questions related to forest monitoring and data collection and does not describe specifically how PFM and REDD are to be integrated. In particular, the Framework does not describe how local forest managers (e.g. villages) will be compensated for conserving forests through REDD funds, and if compensation will be results-based or effort-based. The Framework makes no mention at all of voluntary carbon markets or the possibility of ‘nesting’ local projects within a national system of REDD administration and accounting. The Framework rather suggests that all REDD will be managed through a National Carbon Fund that will receive international payments for REDD and disperse the funds to local managers, although no details or elaboration is provided. The Framework also makes no mention of the distribution of rights over forest carbon *per se*, nor of how property rights in relation to forest carbon will be reconciled with or adapted to existing tenure over trees and land where such carbon is situated.

In late 2010 the National REDD Task Force released the National REDD Strategy, which by early 2011 was formally available for public comment.²⁵ There was some expectation that the National REDD Strategy would provide a clearer elaboration of the institutional structures for how REDD will operate in Tanzania, including clarifying on key points such as local benefit-sharing and management issues, carbon rights or tenure, and the role or scope of sub-national projects in relation to a ‘national’ system for REDD. However, the current draft of the Strategy does not provide much guidance or clarity beyond the Framework. Instead it includes a thorough review of the issues and challenges to be addressed. The Strategy lists some activities to be pursued in addressing these issues along similar

²³ National REDD Task Force, Draft National REDD Framework, August 2009. (Section 2.0, p6)

²⁴ Draft National REDD Framework, (Section 2.2, p9)

²⁵ United Republic of Tanzania. 2010. National Strategy for Reduced Emissions from Deforestation and Forest Degradation.

lines as previously listed in the Framework, particularly focusing on human resources capacity and technical challenges relating to REDD such as MRV and analysing drivers of deforestation, but giving little detail on the governance arrangements to be used in structuring the national REDD programme. For example, the Strategy states that it provides “guidelines on how to effectively engage all relevant stakeholders and establish a fair and transparent benefit sharing mechanism that will enable appropriate incentives to be paid to deserving stakeholders within the country”, but it does not provide any detail on how this should be done.

The objectives stated for developing a “Governance mechanism for REDD” are the following:

1. To develop a national institutional framework for REDD governance to ensure effective implementation of REDD and equity in co-benefit sharing by 2012.
2. To review, develop and have the government endorse policy and legal frameworks for REDD implementation by 2013.
3. To review and develop a viable national land tenure system so as to ensure security in land ownership for REDD schemes by 2012.

The Strategy thus raises important issues in the design of REDD, but does not elaborate how REDD will actually be designed and function in Tanzania. All the key questions raised by the National REDD Framework effectively remain, particularly as relate to benefit sharing (distribution of revenues from offset/credit sales), local rights over carbon, and the scope for or role of local projects and private project developers in a national compliance programme.

Even while the country’s policy on REDD remains unclear or undetermined on most key points and structural details, a range of pilot REDD initiatives are moving forward as a result of support provided by both multi-lateral and bi-lateral development agencies. The most substantial of these is the support from the Norwegian government, which is supporting seven pilot projects managed by NGOs in different parts of the country, including the MCDI project in Kilwa District. The Norwegian government is also supporting the National REDD Task Force to develop the REDD Strategy. Total support from Norway is around US\$80 million over the next four years. In addition, the United Nations REDD programme selected Tanzania as one of nine countries to pilot a national REDD implementation and management process. The pilot programme is designed to assist developing countries in identifying methods to address drivers of deforestation, developing greenhouse gas baseline methodologies and monitoring tools, facilitating network-building amongst stakeholders, and gaining access to technical and financial support. Finally, Tanzania is a member of the World Bank’s Forest Carbon Partnership Facility, which “builds the capacity of developing countries in tropical and subtropical regions to reduce emissions from deforestation and forest degradation and to tap into any future system of positive incentives for REDD+.”²⁶

²⁶ <http://www.forestcarbonpartnership.org/fcp/>

Market Context

Carbon Markets: An Introduction

The carbon market has emerged as a mechanism for reducing net global carbon emissions. The purpose of the carbon market is to enable actions which reduce carbon emissions to be rewarded through financial transactions whereby ‘buyers’ - individuals or groups that want to reduce their carbon emissions - may purchase a given unit of CO₂ emission reductions from ‘sellers’ - individuals or groups that have reduced their emissions by a quantifiable amount. This market in carbon offsets thus helps firms or governments meet targets set by regulations or by voluntary goals or ethical standards, and creates incentives for groups and individuals to produce offsets for sale.

Carbon markets are a climate change mitigation tool whereby units of GHG emission reductions – known as Certified Emission Reductions (CERs) or Verified Emission Reductions (VERs), both of which represent one tonne of Carbon Dioxide equivalent (tCO₂e) – are sold. Carbon markets exist both as mechanisms for meeting emission reduction targets resulting from global and national laws (the ‘compliance’ market) and as voluntary transactions undertaken for ethical, personal, or marketing reasons. The World Bank estimates that the total value of the global carbon market as of 2009 is approximately US\$144 billion, and grew by 6% between 2008 and 2009 despite the global financial crisis.²⁷

Compliance markets are created and regulated by mandatory national, regional or international carbon reduction regimes. These can be broken down into two main market segments: (1) the Kyoto compliance market, which includes the Clean Development Mechanism (CDM), Joint Implementation (JI) and the European Union Emissions Trading Scheme (EU ETS); and (ii) other compliance or pre-compliance markets, such as those created by state-level legislation in Australia and the US. The voluntary markets in turn mainly involve business and consumers who want to offset their own private emissions. Compared to the compliance market, trading volumes in the voluntary market are much smaller because demand is created only by the voluntary wish to buy offsets whereas in a compliance market, demand is created by a regulatory instrument. Because there is much lower demand, and because they are not fungible in compliance markets, carbon offsets sold in the voluntary market also tend to be cheaper.

In the AFOLU sector, only emission reductions from afforestation and reforestation (A/R) activities are currently eligible for trading in the international compliance markets. The voluntary carbon markets have been much more receptive to the inclusion of other AFOLU activities, including REDD. They have also helped drive the development of ‘charismatic’ carbon assets which offer additional environmental and social co-benefits.

Compliance Markets

The CDM provides a trading platform under the Kyoto Protocol to help developed countries meet their emission reduction targets by buying offsets generated in developing countries. As already mentioned, under LULUCF only afforestation and reforestation (A/R) activities are eligible to generate credits in the first commitment period (2008-2012). Soil carbon pools are captured within the relevant A/R methodologies but soil carbon augmentation and conservation is not eligible as a standalone activity. With stringent protocols, lengthy project procedures, and temporary crediting, as of early 2010 only 14 of the 2041 registered projects in the CDM are A/R; representing an estimated 0.5% of the expected CDM emission reductions by 2012.

The EU ETS in turn, completely excludes all credits generated from land-use activities until 2020, largely because of the risk of impermanence and market flooding. However, there is strong support

²⁷ World Bank. 2010. State and Trends of the Carbon Market 2010. Washington, D.C.: The World Bank.

among some countries to allow for selected project crediting post 2012, and the European Parliament's Committee is currently reviewing its eligibility ruling.

Other compliance markets exist in Australia and the US at a state level, eg. the New South Wales Greenhouse Gas Reduction Scheme (NSW GGAS), and the Regional Greenhouse Gas Initiative (RGGI) in ten Northeast and Mid-Atlantic states in the US. In the AFOLU sector, only reforestation activities are currently eligible. Ongoing efforts to enact federal climate change legislation in the US are also of great importance and could open the door to a very large market for REDD offsets. In 2009 the Waxman-Markey bill was passed through the US House Energy Committee and the House of Representatives. The bill seeks to reduce US emissions economy-wide by 17% below 2005 levels by 2020, and involves a cap-and-trade programme that covers utilities starting in 2013. In May 2010, the American Power Act was subsequently unveiled to the Senate. With a favourable stance on REDD, it could allow for the import of up to 1 billion tonnes of international offsets a year, of which 500 million tonnes could come from REDD activities. However, countries would have to establish their eligibility to participate, including having adequate technical and institutional capacity, and national-level baselines would be given priority, with sub-national (state or province only) baselines being phased out over a period of five years. The exclusion of early action project based activities has raised concerns that this will only serve to stifle private sector investment, and will exclude many countries from participating which are still years away from having national baselines in place.

Voluntary Markets

The voluntary carbon markets (VCM) have been a key area for innovation in the carbon arena, particularly with regard to AFOLU activities which are not eligible under compliance market regimes. Over the last few years, the VCM has established itself as a significant market in its own right, and it is estimated that US \$705 million worth of transactions were made in 2008, up from US \$335 million in 2007, although this declined 47% to US\$387 million in 2009.²⁸ Land-based offsets (including A/R, improved forest management, avoided deforestation and agriculture) represent one of the most prominent components of the voluntary market, and made up an estimated 36% of transactions in 2006, although this has dropped down to 11% in 2008, largely due to the increasing market share of other project categories, such as energy efficiency and renewables. The VCM is the only platform through which emission reductions from REDD can currently be sold. Most of the interest stems from private companies and carbon funds, driven by expectations that these land-based carbon assets may fetch a premium price in the future. However, as long as such credits cannot be used within compliance markets, demand for REDD offsets will remain comparatively limited.

AFOLU projects in the voluntary market can be developed using a number of different standards. While certification to standards raises project costs, it also improves investor confidence in the quality of the emission reductions. The Voluntary Carbon Standard (VCS) is generally regarded as the leading provider of validation and verification standards for carbon accounting methods in land-use based voluntary market activities. The Climate, Community and Biodiversity Standard (CCBS) in turn sets the high-bar in terms of ensuring the transparency and credibility of additional environmental, biodiversity and social co-benefits. These standards are discussed further below.

In the US, the Chicago Climate Exchange (CCX) has a protocol to account for emission reductions from forestation and conservation activities. The CCX is North America's first voluntary, GHG emission registry, reduction and trading system. However, there is no rigorous additionality test, and this has attracted widespread criticism. Offset prices have dropped from US \$7.40/tCO₂e in June 2008 to current prices of US \$0.15/tCO₂e, and by late 2010 CCX discontinued its voluntary binding cap-and-trade exchange, partly due to the dropping value of offsets and the diminishing prospects for national cap-and-trade carbon legislation in the US in the near term.

The Climate Action Reserve (CAR) is another US offset programme created by the State of California in 2001 to address climate change through voluntary calculation and public reporting of emissions for

²⁸ Hamilton et al. 2010. Building Bridges: State of the Voluntary Carbon Markets 2010. Ecosystem Marketplace and New Carbon Finance.

organizations across different industry sectors. It has established regulatory-quality standards for the development, quantification and verification of ER projects in North America, including forestry management and conservation.

Table 1. Eligibility of AFOLU emission reductions by market segment.

Market	Standard	Reforestation	Avoided Deforestation	Forest Management	Grassland Management	Tillage practices
Compliance	CDM	Yes	No	No	No	No
Compliance	RGGI	Yes	No	No	No	No
Compliance	NSW	Yes	No	No	No	No
Voluntary	VCS	Yes	Yes	Yes	Yes	Yes
Voluntary	CCX	Yes	Yes	Yes	Yes	Yes
Voluntary	CAR	Yes	Yes	Yes	No	No

General Requirements for Generating Forest Carbon Offsets

This section presents some of the key technical, conceptual and institutional requirements for generating carbon assets from forests. Creating a carbon asset requires that land managers implement additional management or conservation practices that deliver real increases in carbon stocks or decrease carbon losses. This can be achieved by reducing land degradation through improved forest management practices or by reducing the conversion of lands to other uses.

Additionality

The concept of additionality is that financial rewards are only made for real emission reductions that are additional to what would have occurred under a business as usual (BAU) scenario. While there is no single method to prove additionality²⁹, it is usually demonstrated through project-based testing which includes:

- Legal and Regulatory Test: the project activity must not be mandated by any enforced law, statute or other regulatory framework;
- Investment Test: the project faces capital or investment return constraints that can only be overcome by the additional revenues from the sale of carbon credits;
- Barrier Analysis Test: the project faces financial, technological, infrastructure, institutional or social barriers that the carbon revenue stream would help overcome;
- Common Practice Test: the project type employs practices that are not already in common use in that sector/region;

In the context of land use emissions reductions, the investment and barriers additionality test is the approach usually employed. Documented evidence is required to support the additionality claim which can include; relevant legislation, sectoral studies, statistical data, market data, as well as expert judgment.

Permanence

Permanence is about the longevity of emission reductions over time. With terrestrial systems subject to both natural and anthropogenic disturbances, such as fires, pest or changes in land ownership and management practices, there is a risk that emission reductions can be short-lived. The risk of non-permanence is one of the main reasons why carbon buyers are often hesitant to buy emission reductions generated from AFOLU projects.

²⁹ As an example, see the CDM tool which provides a step-wise approach to demonstrate additionality in A/R projects - <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-01-v2.pdf>

Mechanisms to deal with permanence-related risk include having projects run in perpetuity; periodic, performance-based payments; temporary crediting, insurance, and most commonly, a buffer. A buffer is a non-tradable reserve of emission reductions, usually in the range of 5-30%, and acts like an insurance to cover any unforeseen losses in carbon stock (e.g. as a result of a forest fire). The number of credits that a given project must deposit into the buffer pool is determined through a risk assessment based on major risk factors associated with specific project activities. Project risks include, for example, financial or management failure, economic risks, rising opportunity costs, political and social instability, and natural disturbances (fires, pests, disease and extreme climatic events). The VCS and the Climate Action Reserve both utilise a buffer as part of their AFOLU project validation/verification process.

On the ground, risks of non-permanence need to be addressed by having good practice management systems in place, appropriately incentivised land-use activities, adequate risk mitigation, involvement of local stakeholders, as well as action plans for monitoring and enforcement³⁰.

Leakage

Leakage occurs when “a carbon sequestration activity on one piece of land directly, or indirectly, triggers an activity which counteracts the carbon effects of the initial activity” (IPCC, 2001). Leakage can be sub-divided into a number of categories which include slippage, activity shifting, outsourcing, and market effects. Activity shifting leakage occurs when activities that would occur within project boundaries under business as usual (BAU) are displaced beyond the project boundaries. Estimating leakage is challenging as it is difficult to identify how changes in one area will affect the management of neighbouring areas. This is one of the key arguments for advocating a REDD approach which utilizes national baselines.

Methods to deal with leakage include the establishment of leakage zones which go beyond the boundaries of the core project area. This will allow any localised shifting of activity in response to the project to be covered in the project accounting system. Leakage implications can be far reaching and the limits to leakage assessments for land-use carbon projects are not yet clearly defined. An international AFOLU mechanism will most likely have to address leakage at a national and possibly trans-boundary level.

Institutional requirements

Markets sit within institutional landscapes so political stability, the quality and transparency of the legal system, and monitoring and enforcement standards and capabilities will have a direct impact on the success of any land-use based mitigation activity. Property rights also play a critical role as the ownership of carbon emission reductions must be clearly defined before credits can be transacted. Those that may be excluded from the market due to tenure issues include local communities that lack official tenure, the holders of informal or customary rights, or those that have formal tenure but lack documentation.

It is ethically desirable that customary rights are recognised in REDD projects so that local people are not deprived of their livelihoods, are able to participate fully in policy-making decisions affecting their access to natural resources, and are equitably included in any benefit-sharing mechanisms. Indeed given the failure hitherto of solely governmental measures to protect forest resources, such engagement with local communities is likely to be vital to success in many projects.

Clear rights must also be complemented by good governance. Confidence in contract enforcement and the rule of law is necessary to ensure the long-term sustainability and permanence of the emission reduction activities. With numerous stakeholders holding diverse interests, reform to address the drivers of land conversion will be complex and prone to elite capture; control of corruption is therefore also crucial (Watson, 2009).

³⁰ Watson, C. (2010) Rapid Guide to REDD. FARM-Africa/SOS-Sahel BERSMP. Addis Ababa, Ethiopia.

The Voluntary Carbon Market

Initially, all offsets from the MCDI project will be marketed and sold on the over-the-counter voluntary carbon market, as described in the approved project proposal. As and when the international compliance market should open up to REDD projects, and the Government of Tanzania becomes 'REDD ready', then this market access route may alter. This section provides additional information relevant to the project's short term goals in relation to sale and marketing of carbon forestry offsets in the voluntary markets, particularly those with high levels of social and environmental 'co-benefits'.

Prices, Standards and Market Preferences

In 2009 the voluntary market reported an average price of US\$7.34 for one tonne of CO₂e.³¹ This average is slightly skewed because it is taking into account both macro and micro offset projects of varying type, location, and standard. The Stockholm Environmental Institute notes that:

*It is nearly impossible to give a precise overview of current offset market prices, as the market is considerably fragmented due to the variety of available standards, project types and locations, delivery guarantees, contract terms and conditions, the range in quality of offsets, etc.*³²

Generally speaking, there are four main aspects that determine the price of a carbon offset: the type of project, project location, the third-party validation/verification standard employed, and the degree of co-benefits.

Type of Project

Forestry projects have been less popular in the carbon offset market in the past, in large part because of the complexities involved in measurement, permanence, and leakage control. However, the 2009 EcoForestry Survey found that respondents (buyers and sellers of offsets) ranked avoided deforestation and ecological restoration projects very high; in fact, 90% of respondents were positive about these kinds of projects.³³ One study found that in 2008, although avoided deforestation projects declined in transaction volume, the transactions that were done increased in price by 31% – this is representative of the growing value of forestry-generated offsets.³⁴ Furthermore, land-use change generates roughly 20% of global greenhouse emissions, and as a result land-based conservation offsets have gained more attention. A recent guide to responsible carbon purchasing, reports that in 2008 the average price for one tonne of CO₂e from a land use project ranged from US \$6.50-\$7.50, with the lowest prices being sold at US \$2.00/mtCO₂e and the highest at US \$50 per tonne.³⁵

Location

Recent market surveys have found that survey participants generally do not put a great deal of emphasis on location; however, most respondents do say that offsets from tropical developing countries are highly attractive.³⁶ In recent years, offsets generated in Africa have decreased from 5.2% in 2006 to 1.2% (0.6 million tCO₂e) of the market in 2008, but offsets from Africa tend to appeal to most voluntary buyers as "charismatic," because they typically are relatively small-scale projects that provide additional economic benefits for the continent as well as potentially high biodiversity conservation benefits.³⁷ Lisa Ashford from EcoSecurities commented, "We'd love to have more

³¹ *ibid.*

³² Carbon Offset Research & Education (2009) "Offset Pricing: how much do offsets cost?" Stockholm Environment Institute. <http://www.co2offsetresearch.org/consumer/OffsetPrice.html>

³³ Neef *et al.* (2009) *The Forest Carbon Offsetting Survey*. EcoSecurities.

³⁴ Hamilton *et al.* (2009)

³⁵ Morreti, C. & Burman, P. (2009) *The Responsible Purchasing Guide: Carbon Offsets*. Responsible Purchasing Network & CarbonFund.org.

³⁶ Neef *et al.* (2009)

³⁷ Hamilton *et al.* (2009)

*African VERs, but currently the scale, reliability and infrastructure have limited this number.*³⁸ African forestry-generated offsets have, on average, sold for US\$10.38, well above both the voluntary market average price and the average forestry offset price.³⁹

Standards

There are many different standards in the voluntary carbon offset market. The following excerpt provides a useful overview of VCM standards:

*Over a dozen voluntary offset standards have been developed in the last few years. Each standard has a slightly different focus and none has so far managed to establish itself as the industry standard. Some closely mirror compliance market standards, while others take a more lenient approach in order to lessen the administrative burden and enable as many credits as possible to enter the market. Certain standards are limited to particular project types (e.g. forestry) while others **exclude some project types** in order to focus on the social benefits of carbon projects.*⁴⁰

In 2008, 96% of all voluntary offsets sold were verified by an independent third-party organization, almost half of which (48%) were verified by the Voluntary Carbon Standard (VCS).⁴¹ One survey reports that 80% of their survey participants said that CDM or VCS were the best known carbon standards, but most respondents simply said they didn't know or understand enough about any of the standards.⁴² Another survey estimates that VCS AFOLU offsets will sell for in the range of US\$12-18 in 2009.⁴³ The verification and validation costs for VCS range are quite broad and depend on the project type, size, location and other factors.

The VCS standard is not necessarily considered to be the most rigorous standard in comparison to some of the others in the field; however, its popularity continues to grow.⁴⁴ A report from the World Wildlife Fund projects that VCS will “likely become one of the more important standards in the voluntary offset market [that] might very well establish itself as the main standard for voluntary offsets.”⁴⁵ It is for this reason that the MCDI project aims to adopt the VCS standard for verification of its VERs.

Co-benefits

Co-benefits are benefits that go above and beyond the emission reductions achieved by a carbon offset. These co-benefits can include improvements to local ecosystems through biodiversity conservation and improved water catchment systems. They can also include benefits for individuals and communities, such as improved livelihoods, annual revenue, and employment. In one survey respondents expressed a strong interest in co-benefits, with almost all (89%) saying they would be willing to pay a premium of at least US\$1 per tonne, and some even willing to pay premiums greater than US\$3 per tonne.⁴⁶

³⁸ Ibid., pg. 39

³⁹ Hamilton et al. (2010)

⁴⁰ Merger, Edward (2008). *A Comparison of the leading Standards in the Voluntary Carbon Market...and the State of Climate Forestation Projects*. Carbon Positive.

⁴¹ Hamilton et al (2009)

⁴² Neef et al (2009)

⁴³ Merger (2008)

⁴⁴ Hamilton et al (2009)

⁴⁵ Kollmuss, A., Zink, H., and Polycarp, C. (2008) *Making Sense of the Voluntary Market: A Comparison of Carbon Offset Standards*. World Wildlife Fund: Germany, p. 63

⁴⁶ Neef et al (2009), p. 26

Carbon Forestry Projects

In line with global thinking about the links between forests and climate change, forestry offset projects are gaining renewed market attention and credibility. In fact, 66% of all forest offsets sold on the voluntary market were sold between 2007 and the first half of 2009.⁴⁷ Between 2002 and 2006 an estimated 4.2 million tCO₂e of forestry offsets were sold, which amounted to less than to the 5.1 million tCO₂e sold in 2007 alone (see Figure 1). According to recent forecasts, the global forest carbon offset market is projected to grow at 9.2% annually over the next five years, from US\$42 million in 2010 to US\$65 million in 2015.⁴⁸

The forestry offset market is experiencing growth, particularly in the voluntary sector where added social and environmental benefits to forestry offset projects are both marketable and in high demand by consumers. A recent survey found that “*companies believe that forestry truly achieves co-benefits and that it genuinely tackles an environmental problem of a global scale.*”⁴⁹ In other words, forestry offsets offer more than solely a reduction of carbon emissions, but social and biodiversity conservation benefits as well (so-called ‘co-benefits’) and buyers of offsets are interested in that added value.

This increased interest, both in the voluntary and compliance markets, could lead to significant investment in sustainable forest management globally if driven by attractive financial incentives. Historically, avoided deforestation (REDD) offsets have sold for an average of US\$13.33 per tonne while offsets from afforestation/reforestation (‘A/R’) projects have sold on average for US\$6.72 per tonne.⁵⁰ Additionally, the average price for forestry carbon offsets generated in Africa is US\$10.38, which is the second highest regional average. However, it is important to note that this figure has fluctuated greatly over the years due to instability of prices in this emerging market. Forestry offsets appear to be in demand and growing at an equivalent or above-average market offset prices.

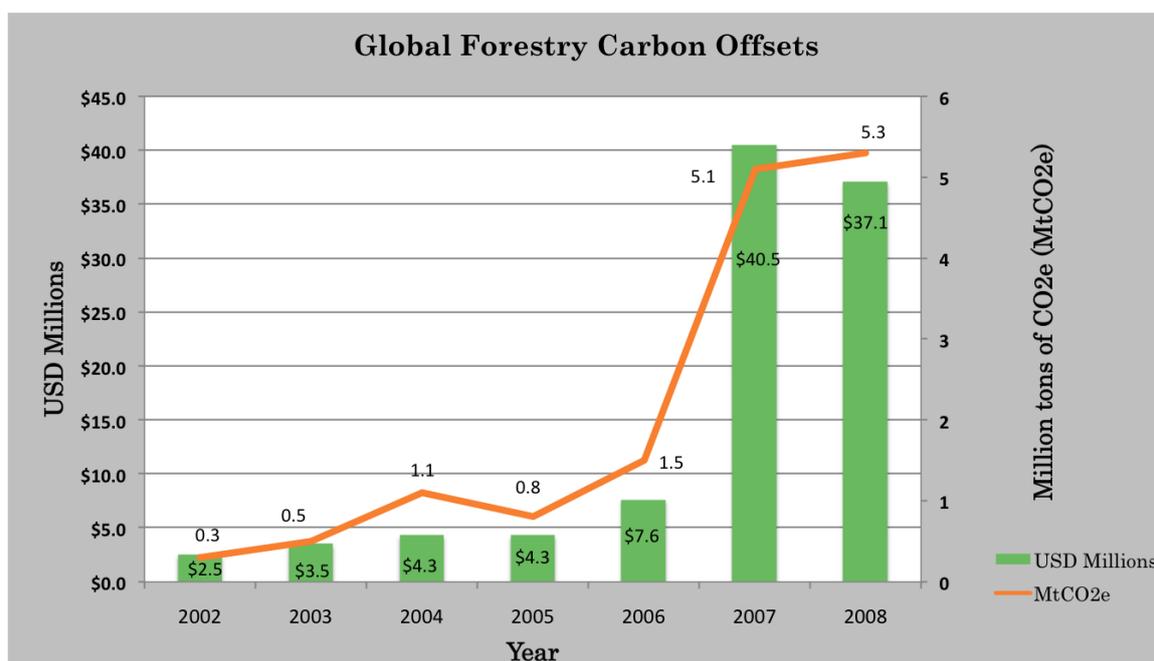


Figure 3: Volume and value of forestry carbon offsets, 2002 to 2008.⁵¹

⁴⁷ Hamilton, K., Chokkalingam, U., and Bendana, M. (2010) State of the Forest Carbon Markets 2009: Taking Root and Branching Out. Ecosystem Marketplace: Washington, D.C.

⁴⁸ Projected Global OTC Market for Forest Carbon Offsets to Hit \$65 Million by 2015. (January 5th, 2011) *Environmental Leader*. <http://www.environmentalleader.com/2011/01/05/projected-global-otc-market-for-forest-carbon-offsets-to-hit-65-million-by-2015/>

⁴⁹ Neef *et al.* (2009) The Forest Carbon Offsetting Survey. EcoSecurities, p.16.

⁵⁰ Hamilton *et al.* (2010)

⁵¹ *ibid.*

Third Party Verification Standards

Overview of Validation Schemes

The table below describes the main third party validation and verification standards operating in the voluntary carbon markets.

Table 2. Summary of different voluntary carbon market validation and verification schemes, their advantages and disadvantages.

Standard	Description	Advantages	Disadvantages
Voluntary Offset Standard (VOS)	A voluntary standard which is closely aligned with CDM procedures.	Rigorous voluntary offset standard.	Closely follows CDM methodology.
VER+	A voluntary standard which is closely aligned with CDM procedures.	Aligned with UNFCCC methodologies (CDM) and thus likely to be compatible with future compliance markets.	Relatively low market share compared to VCS and other standards.
Voluntary Carbon Standard (VCS)	A standard aiming to cover a range of different types of offsetting projects and drawing heavily on UNFCCC AFOLU guidelines.	Has become the most widely used offset verification standard, including for AFOLU projects where it is often used in combination with CCBS (which validates co-benefits); likely to be integrated with relative ease to the UNFCCC compliance market.	Rigorous and time-consuming process and projects involving improved forest management in dry tropical forests are limited by the lack of existing methodologies which can be used for generating baselines and carbon accounting.
Plan Vivo	A project-based standard for AFOLU projects with high levels of co-benefits, issues Plan Vivo Certificates and sells them.	Targets local development projects and designed to handle small-scale projects; no third-party verification process.	A project-based standard, it does not issue VERs/CERs and is not as strong a carbon accounting standard for offsets, and less likely to be compatible with future UNFCCC compliance markets.
Gold Standard	A standard for carbon offsets developed by WWF primarily to promote high standards and independent verification for clean and renewable energy projects.	n/a	Only used for renewable energy projects, not for AFOLU initiatives.
Chicago Climate Exchange (CCX)	US-based exchange for voluntary carbon offsets.	Large and well-established voluntary market exchange.	Limited to US market; relatively few AFOLU projects and requirements similar to CDM.

Of the above standards VCS has become the most mainstream carbon accounting standard for the voluntary market, and with increasing market pressures resulting from the global recession in 2008-

2009, there is an further concentration of the offset market in the most reliable accounting standard, which is widely acknowledged to be the VCS. While it has many of the same problems with time-consuming and costly procedural and methodological requirements as CDM, it is tailored to UNFCCC LULUCF guidelines and thus is most likely to be compatible with a post-Kyoto regulatory regime or accepted global standards for REDD, allowing such projects to rapidly and easily shift to the more lucrative compliance market when it should open up to them. Other voluntary market standards which have a generally rigorous carbon accounting methodology, which draw heavily on CDM requirements, such as VOS and VER+, lack the market share of VCS, which has become the most widely used unit for offsets on the voluntary market.

The Forest Carbon Offsetting Report 2010, a report summarizing a survey of more than 200 participants, found, “the Voluntary Carbon Standard (VCS) and Climate, Community & Biodiversity (CCB) Standards were the two most popular carbon standards (73% and 64% respectively) and CCB Standards were the most ‘highly desirable’.”⁵²

Plan Vivo presents the main alternative to CCBS/VCS. Plan Vivo has been specifically tailored for AFOLU projects in developing countries that work at the village level and which reduce some of the barriers for entry for smaller site-based projects with high levels of co-benefits. As part of reducing these market barriers, Plan Vivo produces its own standards but does not use third-party verifiers, rather validating and approving Project Development Documents itself. Plan Vivo is thus not considered as rigorous a carbon accounting standard, is not as aligned to existing compliance market (CDM) carbon accounting standards, and is thus more outside of the mainstream in terms of being integrated with future compliance markets which may arise.

Hence we conclude that the best option for MCDI to pursue is a combination of CCBS verification and VCS validation.

Table 3. Overview of CCBS and VCS Standards and Processes. Adapted from Merger, 2008⁵³

Standard	CCBS	VCS
Background		
Goals	Net positive climate, community and biodiversity benefits	Creation of credible ex-post carbon credits
Types of credits	N/A	Ex-post
Eligibility		
Project start date	No restrictions	No restrictions
Location	International	International
Methodologies		
Baseline, leakage, CO ₂ -fixation, monitoring, additionality	A/R CDM / CCBA approved methodologies	A/R CDM / VCS approved methodologies
Permanence		
Buffer pools	NA	10-60%
Certification intervals		
Verification intervals	5 years*	5 years with yearly financial incentives
Accredited 3 rd parties	Yes	yes
Certification time period	2-6 months	2-4 months

⁵² Ecoscurities (2010) “Positive attitudes towards forest carbon offsets have significantly increased in the past year, especially in Europe.” Ecoscurities. Dublin.

⁵³ Merger, Edward (2008) A Comparison of the leading Standards in the Voluntary Carbon Market...and the State of Climate Forestation Projects. Carbon Positive.

Standard	CCBS	VCS
Costs and certification fees		
Validation	US \$5,000-40,000*	US \$15-30,000
Verification		US \$15-30,000
CO ₂ certificate fee	NA	\$.04 per issued VER

Climate, Community and Biodiversity Standard (CCBS)

The CCBS is a project design standard that provides guidance and a host of regulatory steps for projects to demonstrate the multiple benefits of their land-based carbon projects. CCBS does not issue or register carbon credits, but instead validates a project's socio-economic and environmental co-benefits. The achievement of CCBS is typically used in conjunction with another standard (most commonly VCS) to certify a project's carbon credits.

Methodologies

Although CCBS does not verify carbon offsets (VERs), it does require that projects demonstrate a net reduction in carbon. CCBS has not developed its own set of methodologies. Instead it relies on methods and tools developed by other organizations and standards for their baseline calculations. For example, projects can either use IPCC's 2006 Guidelines for National GHG Inventories for Agriculture, Forestry and Other Land Use (IPCC 2006 GL for AFOLU) or a project can use a more robust and detailed methodology approved by CCBA (any A/R CDM methodology or VCS approved methodology).

Validation, Verification, Registries

Because CCBS is evaluating the strength of project design in relation to biodiversity and community benefits, it tends to be validated early on in the project development process. The validation process requires an evaluation of a project design document (PDD) done by a third-party auditor as well as a site visit. CCBS also requires a 30-day public comment period in which not only field experts have the opportunity to comment on projects, but also key stakeholders and potential beneficiaries. Additionally, CCB Alliance has a question and answer period with the third party auditor. In order for a project to remain validated it must undergo a verification process every five years. However, because CCBS is still in its infancy, no projects have been verified to date.

CCBS offers projects the opportunity to achieve gold level status by meeting any of the following optional criteria: demonstration of climate change adaptation benefits, exceptional community benefits for the global poor or exceptional biodiversity benefits.

Voluntary Carbon Standard (VCS)

The Voluntary Carbon Standard (VCS) is a widely recognized and utilized carbon offset standard on the voluntary carbon market. VCS certifies the greenhouse gas reduction of a carbon project. Upon verification VCS issues Voluntary Carbon Units (VCUs), which represents emission reductions of 1 metric tonne of CO₂, and has a carbon registry where carbon credits can be bought, sold and retired.

Methodologies

The VCS accepts methodologies that have either been approved under the VCS Program (it evaluates and approves new methodologies) or approved by another credible GHG Program, such as the Climate Action Reserve. Currently, all CDM baselines and monitoring methodologies had been approved under the VCS. All VCS methodologies go through a double-approval process prior to being formally endorsed by VCS.

As recently as last year (2010), there were no REDD methodologies approved under VCS and project developers had to develop their own methodologies and submit these for double-approval. This was

perceived as a substantial deterrent to developing REDD offset projects under VCS and a considerable barrier to entry into the voluntary offset market for REDD projects. The past six months however have seen a flurry of REDD methodologies emerging from the pipeline with VCS approval, partly due to the efforts of some organizations and networks investing explicitly in developing flexible and functional methodologies that can be more widely used by project developers working in different parts of the world.⁵⁴

There are several recently approved REDD methodologies, including a number focusing on heterogeneous landscape settings characterized by mosaic deforestation or forest degradation, and at least a half dozen additional methodologies currently undergoing double-review. Some methodologies have been approved in as little as four months, suggesting a new emphasis within VCS on speeding up the review and approval process in order to cater for market demand for REDD projects and the widely acknowledged need to facilitate REDD project development through high-quality offset standards.

One new REDD methodology designed in a flexible and multi-functional way for application on a wide range of different types of projects is the Avoided Deforestation Partners REDD methodology which passed VCS double-review in December 2010. This methodology is based around 18 different 'modules' which can be used or applied based on suitability and relevant to a particular project, and has been specifically designed for wider applicability in mosaic deforestation contexts. These modules comprise:

1. Framework Module
2. Baseline Modules
 - Planned deforestation
 - Unplanned deforestation
 - Forest degradation due to fuelwood consumption
3. Leakage Modules
 - Planned deforestation
 - Unplanned deforestation
 - Forest degradation due to fuelwood consumption
 - Market effects leakage
4. Carbon Pool Modules
 - Live biomass
 - Dead wood
 - Litter
 - Soil
 - Wood Products
5. Monitoring Module
6. Emissions Modules
 - Fossil fuel use
 - Biomass burning
7. Miscellaneous Modules
 - Project area stratification

Two other potentially useful recently approved methodologies are the following:

- Terra Global Capital LLC: *Baseline and Monitoring Methodology for Project Activities that Reduce Emissions from Deforestation on Degrading Land*. This methodology is applicable to

⁵⁴ Voluntary Carbon Standard. Press release December 8, 2010. VCS to lead development of new jurisdictional accounting frameworks for Reducing Emissions from Deforestation. <http://www.v-c-s.org/docs/VCS%20Statement%20Jurisdictional%20REDD%20Frameworks%201208.pdf>

projects which work to reduce unplanned anthropogenic deforestation and forest degradation, in mosaic deforestation landscapes.

- Wildlife Works Carbon LLC: *Methodology for Avoided Mosaic Deforestation of Tropical Semi-Arid Forests*. This methodology applies to projects seeking to avoid mosaic deforestation of semi-arid tropical forests and is potentially broadly applicable to avoided deforestation projects throughout the tropics. The methodology notes that:

“External deforestation drivers are allowed to inform the predicted deforestation rate, rather than simple reliance on historical observations. Projects that suffer from cloud contamination and lack of imagery will find this methodology particularly attractive, as it attempts to address these problems with a novel deforestation model that does not require a full historical series of complex Land Use Land Cover (LULC) classifications of full-coverage satellite imagery.”

Validation, Verification, Registries

VCS project validation and verification can occur at the same time. The project must be validated by an approved third party auditor who evaluates the project using a VCS validation requirement template. Upon validation a third party auditor then verifies the emission reductions, again using a VCS verification template to carry out the evaluation. VCS only issues ex-post carbon credits, which means that verification can only occur once a demonstrated emissions reduction has taken place. Projects are expected to be verified every five years, and VCS offers financial incentives for encouragement.

Once a project has been verified, VCS issues VCUs to be registered, sold and retired. VCS has its own registry system and a project database that tracks all VCUs. It also allows transfers to other VCS approved registries. VCS charges US \$0.04 for each issued certificate (each VCU), and the cost is incurred when projects are being registered.

Implications for MCDI Project Design

The MCDI REDD project aims to achieve both CCBS and VCS approval. MCDI can begin the process of seeking CCBS approval early on in the project development process, but must wait on VCS verification because for VCS, MCDI must demonstrate that emissions reductions have already taken place.

Pre-verified offsets

Finding sufficient capital funding for carbon projects is an ongoing challenge throughout the industry. Carbon projects, especially forest-based carbon projects, require significant amounts of funding upfront. However, revenue from project activities typically will not be seen for some years due to validation and verification standards and a demonstration of carbon reductions (e.g. VCS only issues ex-post credits). Fortunately, project developers have the option of selling pre-verified carbon offsets, which are offsets sold with the understanding that they *will be* verified according to a specific standard.

One relevant example of this approach is Grennox’s Madre de Dios Amazon REDD Project. Upon receiving CCBS validation, Grennox sold 40,000 tonnes of pre-verified VCS carbon offsets to China Flooring Holdings. A public document posted on the Markit Registry describes the contractual agreement between the two:

“The Madre de Dios Amazon REDD Project, already validated under the CCB Standard with Gold qualification, has the intention of pursuing validation and verification under the VCS Standard.”

Although selling pre-verified offsets helps to cover upfront project costs, it may reduce overall financial gains because pre-verified offsets typically do not sell for as much as verified offsets.

Achieving one level of validation or verification, such as CCBS validation which can (and must) be done early on in the project development process, will add a premium to offsets sold, making the pre-verified (VCS) sale more robust and providing a sense of confidence to the buyer.