
Mpingo Conservation & Development Initiative



REDD Project Scheme Outline

*Combining REDD, PFM and FSC
Certification in SE Tanzania*

Background

Great achievements have been made with Participatory Forest Management (PFM) in Tanzania. However, PFM faces two key challenges:

- a) For PFM to succeed in the long term, sufficient incentives need to be in place, and real benefits need to flow to participating communities, or else they will lose interest, and forest integrity will not be maintained.
- b) PFM is also constrained by relatively high transaction costs; despite PFM's successes large areas of forest in south-eastern Tanzania remain outside any formal management regime (i.e. are not part of either National Government, Local Authority or Village Land Forest Reserves), and significant investment will be required to rectify that.

Many REDD project designs are aimed at addressing (a) by supporting communities to sell carbon offsets, and thus provide a regular income to incentivise forest protection. Such schemes will work best in areas of 'high forest' with substantial carbon stocks, e.g. afro-montane rainforest. In contrast, the Miombo woodlands which cover much of southern Tanzania have much lower carbon values, and so annual realisable income from selling carbon offsets would be somewhat smaller. Such schemes will not, in any case, address challenge (b).

Since 2004 the Mpingo Conservation & Development Initiative (MCDI, previously known as the Mpingo Conservation Project) has been developing an approach to PFM which focuses specifically on sustainable management of high-value hardwood timbers, working in the miombo woodlands on communal village lands in Kilwa District, Lindi Region. MCDI focuses on sustainable utilization of a flagship species, East African Blackwood (*Dalbergia melanoxylon*, locally known as mpingo), which is used in Europe and North America to make musical instruments. MCDI has identified a niche market prepared to pay a significant premium for products that are made from timber which is demonstrably legal, sustainably produced and fairly traded. MCDI has pioneered a new method for inventorying timber stocks which is participatory, efficient, and scientifically robust, and MCDI is now recognised as one of the leading implementers of PFM in the country. In March 2009 MCDI was awarded the first certificate by the Forest Stewardship Council (FSC) for community-managed natural forest in the African continent, and carried out the first commercial timber harvest from a PFM forest in Tanzania in November 2009.

MCDI projects that community income per hectare of forest could reach \$14 per year, with some villages potentially earning annual sums in excess of \$100,000. However, as of beginning 2010, MCDI is only active in six villages in Kilwa District, with only 2,420 ha of forest thus far certified. In order to achieve the necessary economies of scale to reach financial self-sufficiency with its FSC certification scheme, MCDI needs to expand to 10+ villages and at least 100,000ha of forest under community management.

In December 2009 MCDI was given a grant of USD \$1.95M from the Royal Norwegian Embassy (RNE) in Tanzania to develop a project combining FSC certification with access to the carbon markets through REDD. MCDI proposed to leverage the carbon value of the forests it is helping put under community management to cover the transaction costs of expanding its FSC certificate scheme into new villages and new areas of forest thus addressing challenge (b). By covering the transaction costs of expanding PFM into new areas, REDD will be acting as an enabler or catalyst for more PFM, which, when complete, will in turn generate further REDD payments, leading to more PFM, and so on. The goal is a combined certification scheme which utilises REDD methodologies to catalyse expansion of PFM across the miombo woodlands of south-eastern Tanzania. This document outlines how the project will work.

Overview

Forest cover is gradually being degraded and lost across Tanzania, a phenomenon that is accelerating in the south-east of the country, spurred on by infrastructure improvements, international timber markets, and the high demand for charcoal from urban centres, especially Dar es Salaam. This is the baseline (zero intervention) scenario against which carbon savings may be generated. Carbon offsets will be sold based on the carbon stored in village forests over and above that which could be expected to be lost from the gradual forest degradation and deforestation that is the zero intervention scenario.

There are three primary causes of deforestation and forest degradation which MCDI will seek to combat, and therefore sell carbon offsets to the value of the validated estimates of carbon saved:

- Extended timber rotation periods from eliminating illegal logging in the community forests (technically classified as Improved Forest Management).
- Reduced forest degradation and deforestation as a result of banning charcoal burning in land set aside as forest.
- Reduced degradation / faster forest recovery from better fire control in community forests.

The revenue gained from selling these carbon offsets on the REDD markets will go towards the following:

- Carbon measurement and other associated costs with maintaining accreditation as an ethical seller of verified emissions reductions.
- Covering the cost of expanding MCDI's existing forest certification scheme.
- Providing an income to communities whose forests are already heavily logged, and require time to recover their timber stocks before communities can expect significant income from timber harvesting.
- Paying communities to implement improved fire regimes, which can be labour intensive.
- Any profits realised above and beyond this (including buffers released) will be paid to communities over the full 20 year carbon accounting period as an additional incentive not to reverse the emissions savings made.

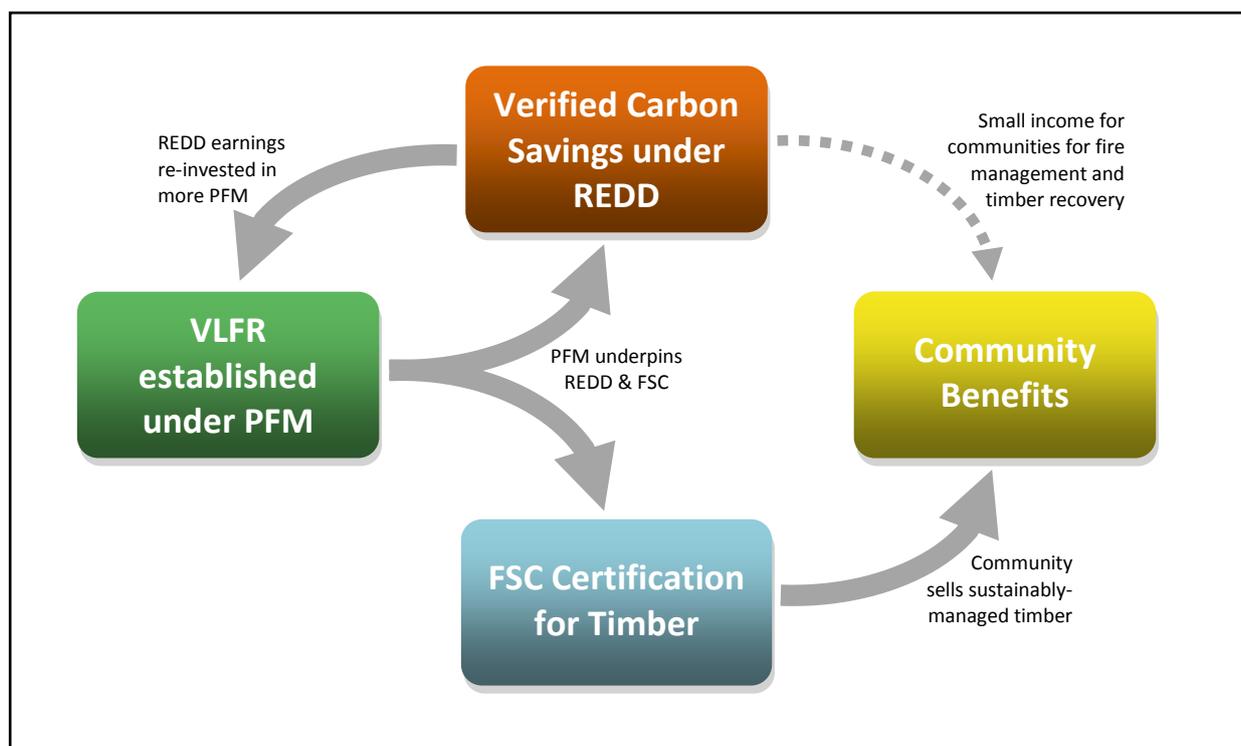


Figure 1. Links between PFM, REDD and FSC under proposed project, and revenue generation for communities.

Target Achievements

As the voluntary carbon market continues to grow, both in demand and expertise, quality becomes increasingly important. MCDI aims to generate the highest quality offsets that are available; offsets that not only reduce GHG emissions, but also offsets that provide ecological and social benefits. In order to demonstrate the quality of the project’s offsets, the project will achieve both CCBS and VCS¹ validation and verification. Both sets of standards require that offsets are real, additional, permanent, avoid leakage and can be verified. MCDI aims to meet all of those criteria within the four-year timeframe of funding from RNE.

In its proposal to RNE MCDI set out the following impact targets:

Indicator	Year 1	Year 2	Year 3	End of Project Target (Year 4)
CO ₂ e saved against baseline		8,000t	20,000t	50,000t
Forest area under PFM	25,000ha	25,000ha	30,000ha	50,000ha
% of PFM profits spent to the benefit of local people	35%	50%	65%	80%
Villages / rural people benefiting from PFM	4 villages / 6,000 people	4 villages / 6,000 people	6 villages / 9,000 people	12 villages / 18,000 people
% people in participating communities with positive view of PFM and REDD	40%	50%	60%	66%

In addition MCDI aimed to sell \$250,000 worth of offsets (pricing the CO₂e savings at \$5 per tonne) by the end of the project.

This was based upon including MCDI’s existing work in the REDD scheme, however, a more thorough analysis of this against *Additionality* requirements has ruled that out; the PFM work in these

¹ CCBS = Climate, Community & Biodiversity Standards, VCS = Voluntary Carbon Standard

forests has already been paid for with other donor money, hence the carbon markets have not changed behaviour, and the carbon saved is not additional. See below for more discussion on this point.

The above targets are all still achievable. The figures for Y1 are based on communities already inside MCDI's forest certification scheme (or about to join), with growth from there expected to be driven by REDD. This growth will be underwritten by the performance-based payments from RNE in years 3 and 4. It may be possible to accelerate some of this work by pre-selling some offsets before achieving VCS accreditation, see below. However, most offsets will not be sold until late Y3 or Y4.

REDD Standard Criteria

Real Offsets

Every offset sold represents a determined amount of greenhouse gas emissions (usually a single offset represents 1tCO₂e). The amount of offsets determined must be accurately quantified using a baseline scenario to measure 'with' versus 'without' project emission levels². MCDI has already planned for the University of Edinburgh to carry out carbon stock studies. 'With' and 'without' scenarios must be included in both CCBS and VCS applications, which means this information should be available within the early phases of the project (at least by year two).

Additionality

Since 2004, MCDI has assisted six communities in Kilwa District to establish VLFRs, a process that has cost approximately \$35,000 per village to complete. However, as an NGO, MCDI has relied on outside funding, such as grant and aid money, to carry out all programmatic activities. MCDI recognizes that without a sustainable form of income generation, expanding its work into new communities will not be possible due to the high costs of expansion as well as the costs of carrying out and continuing their existing programmes. Fortunately, the introduction of REDD has presented a great opportunity for MCDI as it offers a viable financial solution that will allow MCDI to expand its PFM activities into new villages. In technical REDD speak, this means there is a financial Barrier to the project's success which the carbon revenue stream would help overcome³.

In order to achieve its targets, MCDI must help 6 new communities with an average of just over 4,000ha forest each to set establish VLFRs. Currently, MCDI does not have the funding necessary to carry out such work. MCDI must undergo the following steps to achieve its aims while at the same time proving project additionality:

- a) Identify the locations of the six+ new VLFRs
- b) Enter into some kind of working agreement with the villages that will immediately halt all activities that might cause carbon emissions on the planned VLFR land.
- c) Receive project validation from CCBS (this will require identifying all project boundaries, which is why it is essential that the VLFRs be identified pre-formal establishment of the VLFR).
- d) Optionally sell pre-VCS certified/post-CCBS validated carbon offsets to combine with incentive payments from RNE to get sufficient capital to ...
- e) Assist the 6 villages in formally establishing their VLFRs

Upon completion of all of the above steps, MCDI will be able to submit a project description to VCS for validation and verification of actual emission removals.

² The 'without' scenario is often known as the 'Business As Usual' (BAU) scenario.

³ Greenox used a similar approach with their Madre de Dios project in Peru. This project recently achieved CCBS verification which gives added confidence that MCDI should be able to succeed with its proposed strategy.

It is important to note that the performance-based incentive payments from RNE will *not* be paying for PFM expansion, but to ‘prime the pump’ for an expansionary PFM programme, at each stage of which the proceeds will be re-invested to expand the project into new communities. Once catalysed in this way the project should long outlast the 4 years of funding provided by RNE.

Permanence

Demonstrating project permanence is a key criterion of both VCS and CCBS, and the MCDI REDD project would have little credibility without having adequately addressed the issue. MCDI has identified three main methods that will help ensure project permanence.

The first method has to do with making certain there will be long-lasting community support of the project. Once a VLFR has been established the community is essentially putting the forest into lasting conservation status. This will help ensure permanence of the carbon and biodiversity benefits generated from the project. The financial benefits from REDD will help incentivise community support at the start of the project, and then eventually sustainable timber harvesting activities will ensure steady, annual revenues.

MCDI’s experience in the African Blackwood high-end market has shown that with FSC certification timber sales can be extremely lucrative for a community practicing PFM. In fact, MCDI projects that in miombo woodlands, which tend to have lower than average carbon storage potential, annual revenue from FSC certified timber will be ultimately greater than annual revenue earned from carbon. Therefore, MCDI will prioritize the sustainable management of high-value timbers as the long-term means for incentivising forest conservation efforts and PFM. Ultimately, it will be the revenue from timber sales will serve as the method for ensuring permanent forest retention.

The second method is typical practice of most carbon offset providers, and in fact, is required by some standards. MCDI will put a portion of our generated carbon credits aside into a “buffer pool.” These offsets will not be sold and will serve as a backup if the circumstance were to arise that the integrity of our offsets may be damaged. The third and final method deals with MCDI’s management and monitoring of the overall project. With its partners, MCDI will develop a participatory carbon stock monitoring program that will track the project progress overtime. MCDI will also work with community members to train forest patrol officers and to implement fire management plans.

Avoiding Leakage

The issue of leakage is complicated and it is an issue that all forestry carbon offset projects must address individually as the issue is highly site specific, but it is also vital to address as without it there are no reduced emissions. Both CCBS and VCS require a project must demonstrate how it will address leakage. MCDI has already drafted an in-depth study on the drivers of deforestation in the project area (separate document). This will provide the essential information to formulate a business plan for mitigation of leakages to be implemented in years two to four of the RNE funding (budget is provided to capitalise this effort).

Carbon Assessment

Scientifically rigorous assessment of the carbon savings achieved by a project is critical to REDD. Most existing work has been carried out in rainforests (in South America and South-East Asia), hence accepted methodology has solidified around what is appropriate in these settings. Dryland forests cover much of Africa, and is where this project is focused⁴. MCDI’s partner, the School of GeoSciences at the University of Edinburgh (UoE) have experience of carbon assessment in these conditions from working in miombo in Mozambique⁵ and have come to the following conclusions:

⁴ Although the fragments of East African Coastal Forest

⁵ The N’hambita project. See http://xweb.geos.ed.ac.uk/~cryan/list/Thesis%20final_wo_master_all.pdf for further detail and analysis behind these conclusions.

- Areas of dryland forests such as miombo are not typically clear-felled in one single operation (as often happens in Amazonia), but gradually degraded through an extended process of selective logging, charcoal production, frequent and intense fire, and grazing, before perhaps (but not always) being cleared for agricultural purposes. Quantifying this is a very different challenge to measuring spatial shifts in the forest edge in Amazonia.
- At the local scale miombo is a highly heterogeneous vegetation type, with tree sizes varying considerably. UoE's work in Mozambique shows that something like 50% of the carbon is stored in just 3% of the trees. Hence a cost-efficient carbon assessment and monitoring method will focus primarily on these large trees.
- The 'many, small plot' paradigm that is currently standard in REDD is scientifically dubious in miombo, and at best wasteful of effort. To estimate carbon density in miombo sample plots need to be > 0.25 ha in order to obtain a biomass curve that approximates the Normal distribution. The approach of minimising the uncertainty on the mean for each carbon density estimate just by sampling many plots is a bit naive; it is pursuit of precision, not accuracy. This precision rapidly becomes redundant when compared to error margins in determination of other factors such as the BAU scenario.
- Soil carbon is the major store of carbon in miombo. Although not all soil carbon is lost when forest is cleared, UoE estimate that it accounts for roughly half the total carbon lost, i.e. the losses are equal in magnitude to above-ground biomass losses. Hence quantifying soil carbon, which appears highly variable, would significantly enhance the ability to account for carbon losses as a result of deforestation.

Taken together the above necessitate a new approach be taken to measuring carbon which is appropriate to African dryland forests. However, pursuing such an approach holds risks for the project. Current time frames for approval of new methods are extremely long⁶, although organisations such as VCS are trying to reduce this. UoE's experience in Mozambique also suggests there is an entrenched attitude to some of these issues by the current authorities in REDD, which could take considerable effort to overcome, and require MCDI to work with a wide range of partners in order to build up the necessary critical mass to achieve change. Nevertheless, a pilot project is the time to take risks, and MCDI believes it is justified in this case, with potential benefits that extend continent wide.

Verification

Quality offsets must be approved by a third-party auditor who validates the methodology and monitoring process used in quantifying "real" carbon offsets. MCDI already runs a group forest management certificate under FSC that shall be adapted to add carbon management as a goal, but FSC is not widely recognised in the carbon market, and so MCDI needs to get additional verification in order to get a good price for the carbon offsets it generates.

MCDI aims to have its offsets recognised by both CCBS and VCS.⁷

CCBS does not issue or register carbon credits, but instead validates a project's socio-economic and environmental co-benefits. As these co-benefits are central to MCDI's overall project goals, MCDI will seek project validation to prove the quality of the offsets produced. This should be relatively easy for MCDI because many of the CCBS requirements are similar to the criteria for FSC certification, which MCDI has already achieved. CCBS has a gold standard to recognise projects which deliver either:

- i. Additional climate change adaptation benefits, or
- ii. Exceptional community benefits, or

⁶ Terra Global Capital received 300 Corrective Action Requests on the methodology they submitted for use in forests in Cambodia.

⁷ See the accompanying policy analysis for an overview of all carbon accreditation/validation schemes and justification for our choice.

iii. Exceptional biodiversity benefits.

MCDI expects to qualify for the gold standard based on the second criterion.

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 by a third-party auditor of a project design document (PDD) as well as a site visit. Projects are expected to be verified every five years. Once MCDI receives CCBS validation, MCDI and its partners (Carbon Tanzania) can sell pre-VCS certified/post-CCBS certified credits to begin work on expanding PFM.

Unlike CCBS, VCS comes in the latter phases of project development as it only verifies emissions that have already been removed (i.e. *ex post*). VCS project validation and verification can occur at the same time. Projects 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. Upon verification MCDI will be issued certified voluntary carbon units (VCUs) to be sold on the voluntary carbon market.

Unfortunately current VCS approved methodologies focus on deforestation over degradation and follow the present received wisdom on REDD which, as discussed above, is not suitable for use in African dryland forests. MCDI will therefore work with UoE and other partners to lobby for approval of more appropriate methodologies. It will keep progress against this critical milestone under regular review, and assess the potential to qualify under existing guidelines without entirely compromising its basic approach. (The Improved Forest Management method already approved under VCS may offer a partial solution.) However, it is also possible that due to these constraints VCS validation may not be achievable within the 4 year timeframe of the RNE funding.

MCDI aims to use the same company of auditors for CCBS and VCS validation as it already does for FSC certification.⁸ This will have the advantage that the auditors will already be familiar with the basic structure and aims of MCDI, and thus the assessments should proceed more easily, although this will depend upon said company adding carbon validation as a line of business.⁹

Group Structure

MCDI has a group certificate from FSC. This allows more communities to join the scheme as and when they are ready (i.e. on completion of the PFM development process) without being explicitly approved by FSC-accredited auditors. Instead, MCDI had to propose and document a system to manage the group structure, including clear eligibility criteria, a process for joining (and leaving), rules that members must agree to follow, and procedures for monitoring compliance with this system by group members. The FSC inspectors then assess both the system design to ensure there are no gaps or weak points, and its implementation in the form of documentary evidence that procedures are being correctly followed. Each year they also make field visits to a sample of group members to verify that documented systems are being properly implemented in practice.

There is a clear benefit in terms of economies of scale to this group structure (the cost of expensive audits are spread between multiple villages). Similar concerns have been voiced over systems for REDD, especially when working with poor, rural communities and small-holders in developing countries. There is a clear need for some kind of system to aggregate management and sales of carbon offsets on behalf of the rural poor, so that each individual or community does not have to engage separately in the market, nor to have their carbon savings individually verified.

Neither CCBS nor VCS currently have a completely analogous construct to the FSC group certificate. Both appear to assume a static model of a project area which does not grow (or shrink) in time. Thus it

⁸ Soil Association WoodMark from the UK

⁹ Currently they do not do carbon validation, but are considering expanding to cover this side of forestry. If they do not adjust their business in this way MCDI shall collaborate with other NGOs piloting REDD in Tanzania in order to reduce costs on hiring auditors.

is possible to obtain CCBS validation and VCS verification for carbon offsets for a defined set of village forests, but not to add another set of village forests the following year without repeating the validation and verification exercise.

In the case of VCS verification this is of less concern since VCS verify offsets *ex post*. If a project is following an accepted methodology then repeat verification costs should be relatively low. A change in project area may increase the cost and workload to a degree, but not excessively so as long as the additional areas are similar to the previous project area.

CCBS validation is more complex since this must be done *ante* generation of offsets. Here there are two non-exclusive options:

- Negotiate with CCBA to allow a group-like structure within their systems. This may be feasible since FSC has already lead the way, and the many similarities between CCBS and FSC certification criteria suggest that it should be readily replicable.
- Rely on using the same auditing company for both FSC and CCBS. Under FSC the auditors have to visit the project once a year, so that would provide a regular opportunity to revise the CCBS certificate. (Contracts would need to be signed and other preparatory work would have to be complete in advance with each candidate community.)

For the time being, MCDI will pursue both options.

Timeline for Project Implementation

In order to achieve all project goals, MCDI must implement certain activities at specific times. The following timeline provides the order in which activities must be carried out so that MCDI can achieve all milestones while at the same time meeting VCS and CCBS requirements.

Year 1 (2010)

1. Socio-economic survey: will be designed to incorporate ‘with’ and ‘without’ and ‘before’ and ‘after’ analysis through generation of baseline that includes control villages.
2. Identifying Project Locations: identification of the six villages that will be a part of the MCDI-PFM-REDD expansion scheme. Each village must have approximately 4,000 hectares in which they can demarcate VLFRs (VLFRs will not be formally established until the first sale of carbon credits has been made, which will likely take place at the end of Y2).
3. Signs contracts (or establishes some kind of formal agreement) with each respective village. The contract, or agreement, states the community will halt all activities (legal or not legal) that impact the health or integrity of the VLFR-to-be. This is an important step because it symbolizes the project start date and it demonstrates the beginning of the storage and savings of CO₂.¹⁰
4. Leakage Study: carry out a study to determine threats of leakage, and design a strategy to mitigate these leakages.
5. Determination of the Business As Usual (BAU) scenario based on recent historical and current rates of deforestation and forest degradation.

¹⁰ A VCS Policy Announcement in September 2008, states, “The VCS 2007 definition for project start date has been changed from the ‘date on which the project reached financial closure’ to ‘the date the project activity began reducing or removing GHG emissions’.”

Year 2 (2011)

6. Carbon Stock Assessment: survey carbon stocks in the forests to determine as accurately as reasonably possible the amount of carbon stored, and hence likely carbon savings as a result of the project's implementation above and beyond the BAU scenario.
7. VCS Methodology: begin process of obtaining approval for new methodology under VCS rules that is appropriate for African dryland forests.
8. Biodiversity Monitoring Programme: adapt MCDI's existing biodiversity monitoring programme under FSC to conform with CCBS project design standards B1.
9. Project Design Document: the CCBS PDD should ideally take place by the mid-point of year 2 because the validation process can take anywhere between 2-6 months upon PDD submission.
10. Design and implement an appropriate strategy for involving the community in the CCBS 30-day public comment period.
11. Pre-sell some Offsets (optional): put on to the market a proportion of pre-VCS/post-CCBS certified credits in order to earn revenue to fund the PFM expansion programme.
12. Leakage Mitigation: activities to avoid leakage should begin to be implemented in Y2.

Year 3 (2012)

13. Performance-related Incentive Payments: if the project proceeds according to original plan MCDI will at this point receive \$100k of pump priming funds from RNE to capitalise the PFM expansion work. If these payments are not made enough offsets will need to be pre-sold in order to generate the necessary payments.
14. PFM Expansion: using the funds from the carbon sales and incentive payments, MCDI helps the villages formally establish all five VLFRs.
15. Participatory Monitoring of carbon and biodiversity in the newly establish VLFRs begins and is documented.
16. Equitable Benefit Sharing mechanism is established and ready to begin in year 4.

Year 4 (2013)

17. MCDI submits project document to VCS for both validation and verification (process can be done at the same time) at or before the mid-year. It is important to note that completing verification at this stage means that there will only have been 2-3 years of actual "removals" that can be certified VCUs by the time of certification (2013). However, MCP can have the project re-verified at any time in the future at which point more VCUs will be certified.
18. CCBS verification must occur within five years of the project validation. Since MCDI will in any case undergo FSC certification surveillance each year, it should be possible to get the CCBS certificate verified in Y4.
19. The second half of the Socio-economic survey is carried out.
20. Participatory monitoring of carbon stocks and biodiversity continues.
21. Offsets sold: \$250,000+ of CCBS (gold standard) & VCS validated VCUs are sold to fund further PFM expansion in future years.

Marketing and Sale of Offsets

MCDI and its partners will be utilizing the voluntary carbon market, selling Verified (or Voluntary) Emissions Reductions (VERs), otherwise known as carbon offsets. Initially, all of the offsets created by MCDI will be sold through the voluntary carbon market, which trades and sells carbon offsets to individuals, governments, businesses and non-governmental organizations that want to purchase

carbon offsets but are not legally required to do so. The voluntary market only accounts for roughly 2.9% of the total global carbon market volume (offsets sold) and only 0.6% of the total value; however, the 2007/2008 growth rate of the voluntary market was more than twice the 40% growth rate of the compliance market during this same time period. The voluntary market grew 87% between 2007 and 2008, selling US\$705 million of carbon offsets, amounting to 123.4 million tCO₂e. In recent years VER's 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.

Sales Agent Relationship

MCDI expects to sell its voluntary carbon offsets through Carbon Tanzania (CT), who are already active in this market. MCDI and CT are still exploring the most appropriate arrangement to handle these sales. CT could act simply as a broker, receiving a fee from MCDI for arranging each sale. Alternatively CT could buy the offsets from MCDI at a reduced price and then sell them on at the market price. (No decision has yet been made as to the degree of exclusivity which may be attached to this relationship.) CT and MCDI will establish a carbon registry to keep track of offsets generated and sold.

Destination Markets

There are three basic options as to the markets into which the offsets could be sold.

Option 1: Domestic Carbon Market

Carbon Tanzania is currently selling ex-ante, pre-certified offsets to companies and individuals in the Tanzanian tourism industry. These sales and our marketing strategy have mostly capitalized on the attention being drawn to 'eco'-tourism and climate change, both from in-country tour operators and external agents. The CT team believes that an increase in communications and marketing can greatly increase the domestic sales. However, there are unpredictable constraints to this market, for example the recent global financial markets causing a 39% decrease in the numbers of tourists visiting northern Tanzania. These are serious considerations CT has to take into account when developing a sales strategy, and is why we have developed a variety of possible sales methods.

To avoid these unpredictable constraints, CT has sought to build relationships with East Africa corporate social responsibility (CSR) and public relationship (PR) companies. One such company is the Nairobi based, SIFA Capital/Ginadin communications. SIFA Capital / Ginadin operate as a marketing and PR company for a number of multinational companies based in East Africa. CT is in the process of building a relationship where SIFA will link CT's offsets to these major companies who which to offset their carbon emissions voluntarily. This could amount to more tonnage than CT can currently provide under an agreement with MCDI.

Option 2: International Purchase Agreements

Carbon Tanzania is investigating a one-off sales approach for MCDI's post-CCBS validated/pre-VCS verified credit To avoid market instabilities, and the importance of this first sale to the development and future credit creation from MCDI's expansion plan, CT prefers a one off sale approach. CT has begun negotiations with the GreenOXX Global Environmental Program (GGEP), Uruguay. GGEP integrates projects to the different markets such as the Clean Development Mechanism (CDM) of the Kyoto Protocol, regulated Voluntary Markets such as the Chicago Climate Exchange (CCX) and non regulated Voluntary Markets such as the CCB Standard and the VCS Standard. In consequence, through GGEP, Forestry Projects and Avoided Deforestation Projects would obtain important additional benefits as a result of their participation in Carbon Markets.

Option 3: Selling to a Broker

Carbon Tanzania has been communicating with a number of brokers in the UK. One of these, WCI, is a pollution control company which works with private land owners in creating environmentally sound water systems. Due to WCI's working practice, the company has a large client base, mainly large landowners who pride themselves on their global environmental awareness. This existing client network would be a very cost effective way for CT to work directly with private businesses in the UK and beyond.

PDD Requirements by CCBS

CCBS provides a very detailed structure for completing a Project Design Document (PDD) to demonstrate compliance with CCBA project design standards. This section outlines that structure with notes in italics as to what are likely to be the challenges in completing the PDD.

Executive Summary

- Background on MCDI's work in Kilwa District – missions, achievements, goals.
- Main objectives of project – Climate, Community & Biodiversity
- Explanation of MCDI's pilot project within national context

I. General Section

G1. Original Conditions in the Project Area

The original conditions at the project area and the surrounding project zone before the project commences must be described.

G1.1 Project Location

Location of the Project and basic physical parameters (soil, geology, climate). Include maps, charts and references where possible.

G1.2 Types and Conditions of Vegetation within the project area

This section can include:

- List of vegetation species names broken down by forest type
- Estimated carbon stock per vegetation type per hectare
- Maps illustrating the "mosaic" forest cover

G1.3 Project Boundaries

CCBS defines the **project area** as "the land within the carbon project boundary and under the control of the project proponent." Therefore, this must include:

- The Village Land Forest Reserves (VLFR) (or pre-established VLFRs), and the villages where they are located.
- The names of villages
- Population size
- Maps showing village boundaries and VLFRs

Due to issues of additionality, MCDI cannot have already established VLFRs at the point of this PDD because the revenue generated from the sale of carbon credits must provide the funding for MCDI to expand their PFM work into new villages. However, this PDD requires the project boundaries to be clearly identified. Therefore, MCDI must know the specific communities it is going to work with and

where these VLFRs will be established. Prior to the writing of the PDD, MCDI should have signed contracts (or have some established formal agreement) with each respective village.

CCBS also wants information about the **project zone**, which is defined as “the project area and the land within the boundaries of the adjacent communities potentially affected by the project.” This should include:

- Project district – villages and populations
- Communities where MCDI already works
- Communities where MCDI hopes to expand

G1.4 Climate Information

Current carbon stocks within the project area(s), using stratification by land-use or vegetation type and methods of carbon calculation (such as biomass plots, formulae, default values) from the IPCC’s 2006 Guidelines for National GHG Inventories for Agriculture, Forestry and Other Land Use (IPCC 2006 GL for AFOLU), or a more robust and detailed methodology.

Things to Include:

- Explanation of the methodology selected for determining carbon stocks for this project – what is the methodology, steps required, who carried it out, number of plots etc.
- Results of research: estimated carbon stocks in project area (aboveground biomass, belowground biomass, soil carbon, etc.), results tables, charts, maps, equations, etc.
- Other (if available) relevant references and data for comparison (eg. Zahabu’s work)

G1.5 Community Information

A description of communities located in the project zone, including basic socio-economic and cultural information that describes the social economic and cultural diversity within communities (wealth, gender, age, ethnicity, et.), identifies specific sub-groups such as Indigenous Peoples and describes any community characteristics.

MCDI’s partner UEA will be responsible for providing much of the information for this section as well as section CM1.

Include:

- Overview of survey (not survey results in this section as that, the baseline, can come in later section, CM1) – point of survey, timeline, etc.
- Include survey results and/or actual survey as an annex
- Details on health care provision and education

G1.6 Land Use and Customary and Legal Property Rights

This should include community property in the project zone, identifying any ongoing or unresolved conflicts or disputes and identifying and describing any disputed over land tenure that were resolved during the last ten years. Include the conclusions of the investigation into drivers of deforestation in Kilwa District. Explain tenure rights in VLFRs and the legal provisions for resolving land ownership disputes.

G1.7 Biodiversity Information

Description of current biodiversity within the project zone (diversity of species and ecosystems) and threats to that biodiversity, using appropriate methodologies, substantiated where possible with appropriate reference material. This can be based upon the existing data and approaches used for FSC (e.g. MCDI’s community avifauna monitoring system), *but may need to be supplemented – early analysis of additional requirements should be prioritised.* This section should include maps, pictures

and references. Case studies are helpful in this section because they illustrate an organisation's commitment to tracking and conserving biodiversity.

G1.8 High Conservation Values

An evaluation of whether the project zone includes any of the following High Conservation Values (HVCs) and a description of the qualifying attributes.

1. Globally, regionally or nationally significant concentrations of biodiversity values; controlled areas; threatened species; endemic species; areas that support significant concentrations of a species during any time in their lifecycle (e.g. migration, feeding grounds, breeding areas).
2. Globally, regionally or nationally significant large landscape-level areas where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.
3. Threatened or rare ecosystems.
4. Areas that provide critical ecosystem services: hydrological services, erosion control, fire control.
5. Areas that are fundamental for meeting the basic needs of local communities: for essential food, fuel, fodder, medicines, building materials without readily accessible alternatives.
6. Areas that are critical for the traditional cultural identity of communities: areas of cultural, ecological economic or religious significance.

This requirement is very similar to the FSC criteria in this regard, and therefore should be simple for MCDI to complete. MCDI considers most natural forest in Tanzania to be of High Conservation Value. This is especially true of the forests of SE Tanzania, south of the Rufiji River. The East African Coastal Forests are considered to be of global importance with significant populations of rare and endemic species (criteria 1, 2, 3). The more widespread miombo woodlands harbour significant populations of endangered large mammals such as African Wild Dog, African Elephant and Lion (criterion 1).

Sections G1.7 and G1.8 can be combined.

G2. Baseline Projections

CCBS definition for baseline projection: "description of expected conditions in the project zone in the absence of project activities. The project impacts will be measured against the 'without project' reference scenario."

G2.1 Land use scenario

Describe the most likely land-use scenario in the absence of the project following the IPCC 2006 GL for AFOLU or a more robust and detailed methodology, describing the range of potential land-use scenarios and the associated drivers of GHG emissions and justifying why the land-use scenario selected is most likely. The analysis of drivers of deforestation should help provide information for this section.

G2.2 Project Benefits

Document that the project benefits would not have occurred in the absence of the project, explaining how existing laws or regulations would likely affect land use and justifying that the benefits being claimed by the project are truly 'additional' and would be unlikely to occur without the project.

This section will benefit from the BAU scenarios, which are to be described in sections

Project financing: A VLFR gives a community the formal rights to manage and own the natural resources on their forest land. MCDI has already helped six villages establish VLFRs and would like

to continue to expand their work into new villages. However, the process is costly and financially unsustainable. Without the additional funding from carbon credits MCDI would not be able to expand its PFM work, and the following benefits will not be achieved. Include information about government programs, such as KilKmo Kwanaza initiative, that promote agricultural expansion or other similar activities over forest conservation

Community Benefits (this can be combined with G2.4): Include information from the socio-economic study – average annual incomes, educational resources, etc. What are projected financial benefits for the community (both interim from carbon credits and long-term from timber?) ‘Without’ the project what is the likely scenario for community livelihoods and development?

Climate and Biodiversity (this can be combined with G2.3 & G2.5): Brief summary of the climate and biodiversity benefits of project. Include information about the drivers of deforestation and how ‘without’ the project those drivers would continue to cause rapid deforestation, in turn reducing forest potential to store carbon and threatening the health of biodiversity.

G2.3 Carbon Stock

Calculate the estimated carbon stock changes associated with the ‘without project’ reference scenario. This requires estimation of carbon stocks for each of the land-use classes of concern and a definition of the carbon pools included, among the classes defined in the IPCC 2006 GL for AFOLU. The timeline can either be the project lifetime or the project GHG accounting period, whichever is more appropriate.

G2.4 Communities

Describe how the ‘without project’ reference scenario would affect communities in the project zone, including the impact of likely changes in water, soil and other locally important ecosystem services.

G2.5 Biodiversity

Describe how the ‘without project’ reference scenario would affect biodiversity in the project zone (e.g. habitat availability, landscape connectivity and threatened species.)

G3 Project Design and Goals

The MCDI REDD project’s ultimate goal is to facilitate the expansion of MCDI’s PFM work, which will in turn increase the substantial socio-economic, climate and environmental benefits that PFM can bring to Kilwa District. Give a detailed background on this.

G3.1 Project Objectives

Summary of the project’s major climate, community and biodiversity objectives. Include a reference to BAU scenario that will be outlined in G2 as well as B1-3.

G3.2 Project Activities

Describe each project activity with expected climate, community and biodiversity impacts and its relevance to achieving the project’s objectives. Include details on the following:

- 1) Climate Objectives
 - a) Carbon Monitoring (UoE)
 - Summary of method for monitoring of carbon stocks. What will the monitoring process entail? Who will carry out the monitoring? How often will measurements be taken?
 - Explain how carbon accounting will take timber harvesting into consideration down the line.
 - b) VCS Certification
 - c) Mitigating risks from leakage

- Include some brief background information provided from the study on leakage
- Include specific details about the “programme of action” that will be put into place to address the drivers of leakage (e.g. creation of a timber plantation for fuel wood? charcoal production? cooking stoves? etc.)
- d) Employing forest patrol
 - Include information about how forests will be patrolled (number of employees, salaries, schedules, etc.) to ensure that deforestation and degradation are truly being stopped.
- 2) Biodiversity Objectives
 - a) Biodiversity Monitoring Plan
 - Outline of biodiversity monitoring plan (similar to carbon stock monitoring plan above)
 - b) 2) Additional activities involving biodiversity that might arise over time
 - Example: ecotourism project or research centre
- 3) Community Objectives
 - a) Socio-Economic study (UEA)
 - Purpose and background of study
 - Before and after study involving a baseline survey in year one and follow up surveys in year 4
 - Include (possibly as annex) brief summary about baseline survey
 - Qualitative data collection to explore the institutional dynamics during the project initiation and operation.
 - Survey and data analysis and recommendations for improvement (if possible)
 - b) Establish community rights over land and natural resources
 - MCDI will help communities establish VLFRs
 - Detail steps required for establishing VLFRs (NOTE: VLFRs will only be formally established after the first sale of carbon credits)
 - c) Develop equitable benefit sharing system
- 4) Long-term Objectives
 - a) Fire Management
 - Long-term plan for fire management (including details of management programs already put into place)
 - b) Sustainable Timber Harvesting Activities and FSC Certification
 - c) Policy recommendations for national and international audiences

G3.3 Map

Provide a map identifying the project location and boundaries of the project area(s), where the project activities will occur, of the project zone and of additional surrounding locations that are predicted to be impacted by the project activities (e.g. through leakage).

G3.4 Project lifetime

Define the project lifetime (minimum 20 years for VCS) and GHG accounting period and explain and justify any differences between them. Define an implementation schedule, indicating key dates and milestones in the project’s developments.

The project start date should be the time when MCDI has signed carbon contracts with participating communities. Within this agreement there must be a plan to immediately stop all activities that cause deforestation and forest degradation within the impending VLFR boundaries.

G3.5 Risks

Identify likely natural and human-induced risks to the expected climate, community and biodiversity benefits during the project lifetime and outline measures adopted to mitigate these risks.

- 1) Leakage
 - a) Inability to stop encroaching land use changes and illegal logging
 - b) Risk Mitigation Strategies: Summary results of leakage report recommendations for avoiding leakage
 - c) Patrol strategy
- 2) Fire and other threats to forest health
 - a) Fires pose a threat to the success of the project as a fire would destroy all carbon storage activities
 - b) Risk mitigation strategies: fire management plan (as already put into place for timber harvesting projects – MCDI already has experience in this field)
 - c) Buffer pool – MCDI will set aside a portion of all credits generated to serve as a buffer pool in case any unforeseen changes to the forests will take place.
 - d) Pests and other diseases
 - e) Risk mitigation strategies: similar to those outlined above
- 3) Inability to secure required funds
 - a) Instability of carbon market could lead to funding issues
 - b) Risk Mitigation Strategies: MCDI's partners have experience in marketing and selling carbon credits
- 4) National and international policy issues
 - a) Tanzania REDD National Policy Framework developments – policy is still in nascent phase and it is unclear what direction Tanzania will go
 - b) A National Carbon Trust Fund to create a unified national system could create problems for benefit sharing and carbon “ownership.”
 - c) Risk Mitigation Strategy: MCDI aims to remain engaged in the policy development process of a TZ REDD national strategy. MCDI has already carved out the funding, timeframe and key partners to be engaged in national policy activities.
 - d) International developments – REDD is not approved under UNFCCC.
 - e) Risk Mitigation Strategy: MCDI is exploring possibilities of using both regulatory and voluntary markets to lessen the risks posed by international negotiations.

G3.6 HCV and Precautionary Principle

Demonstrate that the project design includes specific measures to ensure the maintenance or enhancement of the high conservation value attributes identified in G1 consistent with the precautionary principle.

G3.7 Beyond Project lifetime

Describe the measures that will be taken to maintain and enhance the climate, community and biodiversity benefits beyond the project lifetime.

G3.8 Community Involvement

Document and defend how communities and other stakeholders potentially affected by the project activities have been identified and have been involved in the project design through effective consultation. Provide key documents, such as meeting minutes or contracts, that demonstrate fair community involvement (documents could be included in annex and noted in a brief summary). Describe MCDI's relationship and work with local government authorities (Kilwa District officials, village councils, etc.)

G3.9 CCBA Public Comment Period

Describe what specific steps have been taken, and communications methods used, to publicize the CCBA public comment period to communities and other stakeholders and to facilitate their submission of comments to CCBA

G3.10 Conflict Resolution

Formalize a clear process for handling unresolved conflicts and grievances that arise during the project planning and implementation. The project design must include a process for hearing, responding to and resolving community and other stakeholder grievances within a reasonable time period. Include a summary on conflict resolution strategy and provide one or two examples of how MCDI already has experience in this type of situation.

G3.11 Project Financing

Demonstrate that financial mechanisms adopted, including projected revenues from emissions reductions and other sources, are likely to provide an adequate flow of funds for project implementation and to achieve the anticipated climate, community and biodiversity benefits.

G4. Management Capacity and Best Practices

G4.1 Project Proponents

Identify who is involved in project development and implementation, the roles of each and the governance structure of organizations or individuals involved.

G4.2 Technical Skills

Document key technical skills required for carrying out the project, including: community engagement, biodiversity assessment and carbon measurement and monitoring skills. Provide any additional information about MCDI project staff team and community employees

G4.3 Training Plan

Include a plan to provide orientation and training for the project's employees and relevant people from the communities with an objective of building locally useful skills and knowledge to increase local participation.

G4.4 Community Involvement

Demonstrate that community members are given an equal opportunity for employment (including management positions). Who are local staff members and what do they do? What positions will be filled by local staff and how will they be informed of these positions e.g. patrol positions, monitoring staff, etc.

G4.5 Laws and regulations regarding workers rights

Include a list of national laws and regulations covering worker's rights in the host country and how the project will inform workers of their rights. This is already covered under MCDI's FSC certificate documentation.

G4.6 Occupational Risks

Describe situations and occupations that pose a risk to worker's safety and plans in place to minimize such risks. This is already covered under MCDI's FSC certificate documentation.

G4.7 Finances

Document the financial health of the implementing organization(s) to demonstrate that financial resources budgeted will be adequate to implement the project. Provide the most recent project budget

at time of PDD: Include information about grant money from Norwegian Ministry of Foreign Affairs and overall breakdown of expenditures.

G5. Legal Status and Property Rights

G5.1 National and local laws

Submit a list of all relevant national and local laws and regulations in the host country and international treaties and agreements where applicable. Provide assurance that the project will comply with all necessary regulations. This is mostly already covered under MCDI's FSC certificate documentation.

G5.2 Project approval

Document that the project has approval from the appropriate authorities. In this case this information should only be pre-VLFR agreements with Kilwa District Council's seal.

G5.3 Informed consent for project

Demonstrate that the project will not encroach uninvited on private property, community property or government property and has obtained the free, prior and informed consent of those whose rights will be affected by the project. Outline how did MCDI become involved with community (notes from meeting minutes). What local government officials have or will be involved? What kind of agreements does MCDI have with the participating communities?

G5.4 Relocation

Demonstrate that the project does not require the involuntary relocation of people or of the activities important for the livelihoods and culture of the communities.

G5.5 Illegal activities in project zone

Identify any illegal activities that could affect the project's climate, community or biodiversity impacts (e.g. logging) taking place in the project zone and describe how the project will help to reduce these activities. Information from the study on drivers of deforestation should help provide information for this section.

G5.6 Carbon rights

Demonstrate that the project proponents have clear, uncontested title to the carbon rights, or provide legal documentation demonstrating that the project is undertaken on behalf of the carbon owners with their full consent. Where local or national conditions preclude clear title to the carbon rights at the time of validation against the Standards, the project proponents must provide evidence that their ownership of carbon rights is likely to be established before they enter into any transactions concerning the project's carbon assets. Include updated information from Tanzania National REDD Strategy, which should be completed by the time of writing this PDD. Point to information about VLFRs and management plan (G1.6.2).

CL1. Net Positive Climate Impacts

CL2. Offsite Climate Impacts ('Leakage')

CL3. Climate Impact Monitoring

CM1. Net Positive Community Impacts

CM2. Offsite Stakeholder Impacts

CM3. Community Impact Monitoring

B1. Net Positive Biodiversity Impacts

B2. Offsite Biodiversity Impacts

B3. Biodiversity Impact Monitoring

Gold Level Standard – at least one of the following must be met to receive Gold Level Standard

GL1. Climate Change Adaptation Benefits

GL2. Exceptional Community Benefits

GL3. Exceptional Biodiversity Benefits