

MJUMITA COMMUNITY FOREST PROJECT (LINDI) PROJECT DESCRIPTION



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The project has been designed by the citizens of the ten participating villages: Kinyope, Kiwawa, Likwaya, Makumba, Milola Magharibi, Mkanga 1, Mkombamosi, Muungano, Nandambi and Ruhoma. The Village Councils, Village Natural Resources Committees, Village Land Use management committees, REDD special committees, MJUMITA local networks, elders and ordinary citizens have invested their time, hard work and knowledge in designing this project.

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Roy Gereau and Moses Mwangoka on the botanical values of the project area;

The following VNRC members for their assistance with the botanical surveys:

Name	Title
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Ismail Mmonyomonyo	Kiwawa Village Natural Resource Committee member
Fadhili J Mtambule	Kiwawa Village Natural Resource Committee member
Said Issa Mawala	Mkanga Village Natural Resource Committee member
Bakari A.Lyiumu	Mkanga Village Natural Resource Committee member
Said Likwena	Mkomba Village Natural Resource Committee member
Mohamed Mandutta	Mkombamosi Village Natural Resource Committee member
Rajabu Mohamed Mtopella	Muongano Village Natural Resource Committee member
Said Mussa Ngapaliji	Muongano Village Natural Resource Committee member
Bakari Mfaume Nangonji	Ruhoma Village Natural Resource Committee member

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Elia Mulungu on the birds of the project area.

The National REDD Task Force have provided valuable oversight to the project development process.

ACRONYMS

AFOLU	Agriculture, Forestry and Other Land Use
AUDD	Avoided Unplanned Deforestation and Degradation
CCB	Climate, Community, and Biodiversity Standard
GHG	Greenhouse Gas
lat/lon	Latitude and Longitude
MCFPL	MJUMITA Community Forest Project (Lindi)
MJUMITA	Mtandao Wa Jamii Usimamizi Misit Tanzania (Tanzania Community Forest Network)
NGO	Non-Governmental Organization
PD	Project Description
PDD	Project Design Document
REDD	Reducing Emissions from Deforestation and Forest Degradation
tCO ₂ e	Metric ton of carbon dioxide equivalent
TFCG	Tanzania Forest Conservation Group
VCS	Verified Carbon Standard
VM	Verified Methodology
VNRC	Village Natural Resource Committee
WGS	World Geodetic System

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PROJECT DETAILS

1 Summary Description of the Project

This project seeks to reduce green house gas emissions caused by unplanned deforestation on 41,924 ha of communal village land, while simultaneously promoting rural economic development and biodiversity conservation in Lindi Rural District in Tanzania. Deforestation in villages in Lindi District is primarily the result of the expansion of small-holder cultivation of cash and subsistence crops, with unsustainable charcoal harvesting also contributing to deforestation in some areas. Prior to the project start, forest areas within the project area were open access without secure tenure for individuals or communities. Communal forest land could be converted to customary household ownership through clearing and cultivation. The annual gross deforestation rate in the region encompassing the project area was 1.99% from 2001 to 2012.

The primary project activities included land-use planning and establishing village forest reserves, which gives village governments secure tenure and regulatory authority over the forests within their boundaries. Communities have put 67% of their remaining forest areas under protection, including 75% of forest with higher carbon stocks. Additionally, the project has promoted new agricultural practices which will help them avoid pests, maintain fertility and increase their crop yields, and thereby reduce the need to clear more forests for agriculture. The project has also supported community members to develop new forest friendly livelihoods like bee-keeping, and improved credit accessibility for community members looking to establish small businesses. Finally, village earnings from the sale of verified GHG emissions reductions and royalties charged for sustainable forest use, will help to offset the opportunity costs of REDD. The project has helped villages develop an innovative benefit sharing mechanism that pays dividends to every village member and allows community members to contribute to and plan for their own village development projects such as schools, clinics, wells, etc.

The project is located in Lindi District, Lindi Region approximately 30 km inland from the Indian Ocean in south-eastern Tanzania. The project area initially includes 10 villages: Kinyope, Kiwawa, Likwaya, Makumba, Milola Magharibi, Mkanga 1, Mkombamosi, Muungano, Nandambi and Ruhoma. The project area may be expanded to include other villages adjacent to the participating villages if startup funding becomes available.

The project area lies within the Eastern African Coastal Forest biodiversity hotspot and was one of the last unprotected fragments of coastal forest in Tanzania prior to the project start. This mosaic of forest, woodland and thicket is considered of exceptional importance due to the high concentrations of endemic species. The project area is home to one critically endangered primate, the Rondo Dwarf Galago and at least three plants categorized as endangered on the IUCN Redlist. Within the project area, 12 East African Coastal Forest endemic plant species have also been recorded (Doggart et al. 2013a).

The project is anticipated to reduce net GHG emissions from the initial 10 project villages by an average of about 45,000 tons of CO₂ per year or by 1,350,000 tons of CO₂ during the 30 year project life span. If startup funding becomes available, the project may also expand to include more villages within Lindi district.

2 Sectoral Scope and Project Type

The project's sectoral scope is Agriculture, Forestry and Other Land Use (AFOLU) and its project category is Reduced Emissions from Deforestation and Degradation (REDD). The primary project activity is avoiding unplanned deforestation and degradation (AUDD).

The project is a grouped project with each participating village being a project instance and each village government being a project proponent. New villages within the same reference region may be added in the future as project instances and proponents as per the requirements for grouped projects in the VCS standard and AFOLU requirements.

3 Project Proponent

As all of the project area is on communally owned village land, the project proponents are the participating project village councils who have overall control over the project area and responsibility for implementing the project's core activities (see section 12 of project details for more information). However, all of the project proponents have signed an MoU with MJUMITA empowering MJUMITA to undertake a variety of activities on their behalf (see next section).

No.	Name of Village	Name of Chairperson	Name of Village Executive Officer	Village Postal Address	Phone Numbers*	
					Chairperson	Village Executive Officer
1	Muungano	Juma M. Njangari	Rashid S. Rashid	P. O. Box 328 Lindi, Tanzania	0682 400547	0682593698
2	Mkombamosi	Rashid Mwishaweji	Chande A. Khalifa	P. O. Box 328 Lindi, Tanzania	-	0787370207
3	Makumba	Yusuph S. Pangani	Rashid B. Mpwili	P. O. Box 328 Lindi, Tanzania	-	0685296221
4	Likwaya	Mwalim K. Tanga	Hereswida Mathew	P. O. Box 328 Lindi, Tanzania	0783 270129	0782592267
5	Mkanga 1	Athumani Kimete	Anzigar Lilai	P. O. Box 328 Lindi, Tanzania	0689 618090	0787311753
6	Nandambi	Rashid S. Kibaba	Selemani Kitenge	P. O. Box 328 Lindi, Tanzania	0789 872884	0786048736
7	Kinyope	Musa Athumani Pilanga	Hamis A. Mwinyimad	P. O. Box 328 Lindi, Tanzania	0689 306008	0782591072
8	Ruhoma	Said H. Katambi	Curben A. Chitanda	P. O. Box 328 Lindi, Tanzania	-	0686167333
9	Milola Margharibi	Issa Abdallah Pilipili	Hamis J. Mzee	P. O. Box 328 Lindi, Tanzania	0788 951190	0688347913
10	Kiwawa	Said M Manyanya	Ally M. Akalola	P. O. Box 328 Lindi, Tanzania	0684 977834 neighbor	0787753990

* Dialling instructions: Outside of Tanzania - replace the zero at the beginning of the number with +255.
Inside Tanzania – dial as written.

At community level, the project is aligned with the Local Government (District Authorities) Act (1982). The governance structures and roles and responsibilities of the Village, Ward and District authorities are defined by this Act and are summarised below in terms of how they relate to the project. While the village councils are listed as the project proponents due to their executive powers, there are many other institutional bodies within the village that have responsibilities within the REDD project.

The **Village Assembly** is the supreme authority on all matters of general policy-making in relation to the affairs of the village. A village assembly comprises all women and men ordinarily resident in the village and who has attained the apparent age of eighteen years. Meetings of the village assembly are supposed to be held at least every three months. In the context of the project, the village assembly have the power to accept or refuse the REDD project. The Village Assembly is also responsible for reviewing village by-laws including those pertaining to the village forest reserve, village land use plan and REDD revenue distribution. Although not required by law, the project has required the approval of the village assembly for the Village Forest Reserve, Village land use management and REDD by-laws. The village assembly elect and hold accountable the village council.

The **Village Council** is the organ in which is vested all executive power in respect of all the affairs and business of a village. This specifically includes power to 'plan and co-ordinate the activities of and render assistance and advice to the residents of the village engaged in forestry or other activity or industry of any kind'. Village councils are elected by the village assembly. Elections are held every three years. It is customary, although not stated in law, that the committee includes at least one representative from each sub-village. Where a village council proposes to make by-laws, they are required to convene a meeting of the village assembly to review the by-laws. The Village Council is then responsible for making amendments based on comments from the Village assembly; and to submit to the District Council. The Village Council is then responsible for enforcing the by-laws. In the context of the project, the Village Councils therefore play a key role in enforcing the village land use plan and by-laws; the village forest reserve management plan and by-laws; and the REDD by-laws. According to the MoUs with MJUMITA, the Village Councils are responsible for the implementation of the strategies intended to reduce emissions. The Village Councils also have the power to establish village committees and to delegate some of their power and responsibilities to those committees. In each of the project villages, the Village Councils have established three committees:

Village Natural Resources Committees: responsible for the management of all forests on village land including those inside the village forest reserves, implementing deforestation and carbon monitoring activities; and reporting to the village assembly on land use issues;

Village Land Use Management Committees: responsible for the implementation of the village land use plans and by-laws, and reporting to the village assembly on land use issues;

Village REDD Committees: responsible for maintaining a register of eligible recipients of REDD payments subject to public review; overseeing the REDD payment mechanism including facilitating a participatory decision making process on the use of the REDD payments; and reporting to the village assembly on issues related to the REDD payments.

4 Other Entities Involved in the Project

Organization name	Mtandao wa Jamii Usimamizi Misit Tanzania (MJUMITA) or The Tanzania Community Forest Network
Role in the project	Authorized representative for the project proponents, providing technical assistance to proponents regarding REDD activities, facilitating project validation and verification, and marketing VCU.
Contact person	Rahima Njaidi
Title	Director
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Telephone	+255 22 2669007
Email	mjumitaorg@mjumita.org

Organization name	Tanzania Forest Conservation Group
Role in the project	Providing technical assistance to proponents regarding REDD activities, social and biodiversity monitoring.
Contact person	Charles Meshack
Title	Executive Director
Address	Plot 323, Msasani Village, Old Bagamoyo Road PO Box 23410 Dar es Salaam, Tanzania
Telephone	+255 22 2669007
Email	tfcg@tfcg.or.tz

Mtandao wa Jamii Usimamizi wa Msitu Tanzania (MJUMITA or Tanzania Community Forest Network) in partnership with the Tanzania Forest Conservation Group (TFCG) and with financial support from the Royal Norwegian Embassy of Tanzania, provided technical expertise to the project proponents since the beginning of the project. MJUMITA and TFCG have helped participating villages establish land-use plans, village forest reserves, and implement strategies for reducing emissions from deforestation and degradation.

The ten participating villages have signed MoUs with MJUMITA, witnessed by the District Government, which empower MJUMITA to provide the proponent villages with the following services to facilitate access to the voluntary carbon market:

- Remote monitoring of forest cover and carbon stocks
- Coordinating ground monitoring of carbon stocks by participating villages
- Identifying and contracting a VCS and CCBA approved project validator
- Identifying and contracting VCS and CCBA approved project verifiers as needed

- e) Preparing and submitting the project design document for validation
- f) Preparing and submitting project monitoring reports for verification
- g) Marketing and selling verified emissions reductions to buyers in the voluntary carbon market
- h) Receiving payment from buyers in the voluntary carbon market on behalf of the village and other proponent villages
- i) Retiring sold emissions reductions according to the VCS and CCBA requirements
- j) Forwarding revenue from the sale of verified emissions reductions to the village subject to the stipulations specified in this agreement.
- k) To avail information about carbon credit emissions and fulfil any other requirements by VCS and CCBA registries.
- l) Provide capacity building to communities on any matter emerging related to REDD+, good governance, and carbon trading for improvement of their performance.
- m) Facilitate village government to have operational plans in the format required by the project and any other need that may arise.
- n) To facilitate participatory social and ecological assessment and monitoring and submit the results to any different stakeholders as the need may be.
- o) To facilitate the Community Carbon Enterprise on any other technical requirement needed to meet conditions for REDD+.

Signed copies of each villages MoU have been provided to the Auditors.

The participating villages will collectively retain rights to the GHG reductions achieved by the project, but MJUMITA will be entitled to compensation from the project proponents to cover the costs of implementing its responsibilities. MJUMITA is responsible for dividing up the benefits derived from the sale of GHG reductions between the project proponents based on the agreed system of tracking each project proponents relative contribution to the overall GHG reductions achieved by the project.

The system for dividing GHG reductions between the proponent villages is based on the stock-flow REDD mechanism¹ proposed by the Woods Hole Research Center (WHRC) and Amazon Institute for Environmental Research (IPAM) to the UNFCCC, which places weight on both reductions in emissions compared to baseline emissions and forest carbon stock conservation. Under the system used by the project, 70% of the GHG emissions reductions generated by the project are divided between villages based on each villages performance relative to their individual portion of the project baseline emissions. The remaining 30% is divided amongst villages based on the relative proportion of total carbon stocks in the project area falling within each village. However, if any village exceeds their baseline emissions then the excess emissions above the baseline are subtracted from their portion of the carbon stock based credits and redistributed as carbon stock payments to actors who did not exceed their baselines. The intent of the system is to provide villages with lower than average baselines and a significant portion of the project areas carbon stocks an increased incentive to participate in REDD activities which may be necessary to prevent leakage from villages with higher historical baselines.

1 http://www.whrc.org/policy/pdf/cop14/Stock_Flow_Mechanism.pdf

In interactions with MJUMITA, communities will be represented by their village chairperson and two other representatives chosen in village assembly meetings, of whom one will be a woman. These three representatives from each village will form the core of the *Project Executive Committee* in charge of overseeing the implementation of the MOU between MJUMITA and the participating villages. The village members of the committee will review, change, and approve budgets proposed by MJUMITA to cover costs associated with MRV and marketing. The committee will also review the monitoring reports compiled by MJUMITA and the village level performance reports and portions of REDD revenue awarded to each village. In the event that a significant amount of leakage is detected outside of the project area, as per the MOU, the committee will identify the responsible village so that the leakage can be included in estimates of their performance. The village representatives on the executive committee will also be responsible for presenting this information to their village assemblies.

The executive committee will also include members with an advisory role, including representatives from the districts chosen by the district executive director, the executive director from TFCG, a representative from the Forestry and Nature Conservation department of Sokoine University of Agriculture, and a representative from the Vice President's Office dealing with national level REDD issues. To enable the committee to be able to make informed decisions, all of the executive committee members will receive training on REDD MRV, including basics of remote sensing and GIS that will be used by MJUMITA to monitor performance and report to VCS and CCB. The committee will also receive copies of MJUMITA's annual financial audit and carbon sales information to confirm that MJUMITA is accurately reporting income and using it as instructed.

Additional stakeholders

Organization name	Lindi District Council
Role in the project	Providing skilled staff members for land-use and forest management planning, agricultural extension services and overseeing community development projects. Districts must approve all village land-use and forest management plans.
Contact person	Charles Mwaipopo
Title	District Forest Officer
Address	P. O. Box 328 Lindi, Tanzania
Telephone	
Email	charlesmwaipopo@gmail.com

Organization name	Lindi Municipal Council
Role in the project	Providing skilled staff for land-use and forest management planning, agricultural extension services and overseeing community development projects in villages in Lindi Municipality. Districts must approve all village land-use and forest management plans.
Contact person	Apiyo Ezra

Title	Municiple Forest Officer
Address	P. O. Box 328 Lindi, Tanzania
Telephone	+255655482050
Email	ezraapi@yahoo.co.uk

Village Councils report to the Ward Development committees and to the District Council.

The Ward Development Committee is responsible for ensuring the implementation of the decisions and policies of the district council, and of development schemes. The Ward Development Committee reports to the District Council.

The District Council is responsible for the implementation and monitoring of development projects throughout the District; and therefore plays a key role in supporting the villages in the implementation of the project's activities.

The project has worked closely since its beginning with the Lindi District Council. The district provided man power to facilitate the implementation of many key project activities including land-use and village forest reserve planning, and agricultural extension services to promote sustainable agricultural practices. Additionally, the land-use and forest management plans of the participating villages have been reviewed and approved by the Lindi District Council. The district will continue to provide support for ongoing project activities including agricultural extension activities and assistance with enforcing land-use and village forest reserve by-laws when needed. In exchange for these services, the participating villages will pay a cess of 5% of their revenue from REDD to the district council.

5 Project Start Date

The project start date is April 21st, 2012.

6 Project Crediting Period

The project crediting period will be for 30 years from April 21st, 2012 to April 20th, 2042. Although some project activities such as awareness raising and FPIC (free prior informed consent) began in 2010, the new land-use and village forest reserve bylaws passed by participating villages did not come into force until 2012. Furthermore, the first trial payment rewarding a community for having completed the REDD readiness activities was in November, 2011, while the rest were made in 2012. Therefore it was not expected that the project would have a significant effect on emissions prior to 2012.

7 Project Scale and Estimated GHG Emission Reductions or Removals

The project is expected to generate less than 300,000 tons of CO₂ in emissions reductions per year and is thus not considered a large project as per VCS Standard 3.4.

Project Scale	
Project	X

Large project	
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The estimated project GHG emission reductions shown in the following table were estimated using the selected methodology. They represent expected reductions after accounting for unavoidable deforestation in the project area and leakage, but not withholding for the risk buffer. Only the emissions reductions for the first fixed baseline period (10 years) are shown. See VM Table 36 in Part 2, Section 9.3 of the methodological annex for details.

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
2012-2013	33,980
2013-2014	35,699
2014-2015	40,328
2015-2016	45,532
2016-2017	48,263
2017-2018	51,270
2018-2019	53,188
2019-2020	53,939
2020-2021	52,256
2021-2022	51,196
Total estimated ERs	465,651
Total number of crediting years	10
Average annual ERs	46,565

8 Description of the Project Activity

The following activities were developed through a consultative process involving meetings in all project villages and at landscape level with a wide range of stakeholders as part of the Social Impact Assessment. The activities reflect the priorities outlined by the communities. The activities were developed using a theory of change approach (Richards and Panfil 2010 a and b). Details of this process are provided in Mwampamba *et al.* 2011 at www.tfcg.org/MakingREDDwork.html. None of the activities are within an area covered by a jurisdictional REDD+ program.

Activity description	Expected outcomes	Relevance to project's objectives
Activity 1. Improve governance at village level. Based on training and awareness raising supported by the project, village councils and their Natural Resources, Land Use Management and REDD committees will be	More effective and equitable implementation of forest management and sustainable land management by-laws and plans thereby resulting in emission reductions; a more permanent basis for maintaining forest cover; and carbon sequestration through natural	Ensures that local councils and civil society participate fully in providing the local conditions necessary to achieve REDD objectives. Provides necessary supporting conditions for equitable benefit sharing including in relation to

Activity description	Expected outcomes	Relevance to project's objectives
<p>democratically established and will implement their roles and responsibilities in accordance with good governance principles. They will raise awareness amongst other community members on governance issues.</p> <p>Based on training and awareness raising supported by the project, MJUMITA members will also raise awareness amongst the communities regarding good governance; and will help communities to hold village leaders accountable.</p> <p>Training and awareness raising on good governance was / will be provided by TFCG and MJUMITA between 2010 – 2014 to the villages managing the project area. Village Natural Resources, Land Use Management and REDD Committees were elected where they were absent or incomplete.</p> <p>Local MJUMITA networks have been established as a forum for resolving governance issues between and within communities. TFCG and MJUMITA have also constructed village offices for the ten villages in order to provide a more conducive environment for the implementation of governance functions. Reinforcement training on good governance principles and practices will be provided to Village Council, Village Natural Resources</p>	<p>regeneration.</p> <p>Village council provide a more effective and equitable service to the communities as a result of improved knowledge on their roles and responsibilities and greater accountability.</p> <p>Public services and community-owned infrastructure are managed in a more equitable, effective and efficient way.</p> <p>Improved governance at village level will underpin strategies to adapt to climate change including through improved land and natural resources management and improved conflict resolution.</p> <p>There is equitable and well-governed access to water and natural resources for communities during droughts and other times of climate change-related stress.</p>	<p>more equitable gender-relations and for sustaining free, prior and informed consent.</p> <p>Provides a stronger foundation for the implementation of community based forest management; sustainable land management; and for REDD payments to incentivise practices that reduce emissions.</p> <p>Improved governance brings cross sectoral benefits at village level that will also contribute to more secure tenure; improved public services including in relation to health, education, land tenure and the local economy; more resilience to climate change; and better management of infrastructure intended for community benefit.</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>Committee and REDD Committee members by MJUMITA and Lindi District Council prior to each round of REDD payments. Training has been provided to local government staff on conflict resolution.</p> <p>MJUMITA and the Lindi District Council will continue to provide backstopping to the MJUMITA networks and village leaders on governance issues.</p> <p>Timing: Training provided by TFCG and MJUMITA 2010 – 2013; improved governance to be practiced throughout project lifespan.</p>		
<p>Activity 2. Implement sustainable land management</p> <p>Each village will prepare a village land use management plan in a participatory way and modelling the integrated approach to land use planning and community based forest management planning that has been practiced by the project. See Luwuge <i>et al.</i> 2011a for guidelines on the project's approach.</p> <p>The planning process will be facilitated by the District Participatory Land Use Management team. The plans specify the geographical distribution of land uses for the community and the mechanisms to ensure implementation. The plans are reviewed and</p>	<p>All villages have developed and are implementing village land use plans which guide the community on the agreed location for different land uses including forests and agricultural land.</p> <p>Communities will benefit because water and other ecological services are maintained as a basis for more sustainable livelihood activities.</p> <p>Land tenure is strengthened and conflicts over land are reduced.</p> <p>More effective, equitable and sustainable management of forest resources will reduce emissions of greenhouse gases and protect high conservation values.</p>	<p>The boundary mapping process that is integrated into the village land use planning provides an accurate basis for defining the village boundaries.</p> <p>Provides the precondition for delineating areas for participatory forest management and for improving the security of land tenure at community and individual levels.</p> <p>Zonation of village land into different land uses makes clear the agreed locations for agriculture, public services, residential areas, sensitive ecological zones including water sources and forests.</p> <p>On the basis of the village land use plans, villages can begin to issue customary rights of</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>approved by the District Council. Through awareness raising amongst the community; training to village leaders; and installation of sign boards in key locations, the plans are widely communicated within the community. The village land use management committee will oversee the implementation of the plans with oversight from the Village Council and accountable to the Village Assembly. Lindi District Council will provide backstopping where resources allow.</p> <p>Additional training will be provided to village natural resources committee on fire prevention activities combined with widespread awareness raising on the causes of fire; the risks of fire; and ways of preventing and tackling fire.</p> <p>For the ten project area villages, each village has prepared a village land use plan and by-laws in a participatory way and in accordance with national guidelines.</p> <p>Timing: VLUP training and development between 2010 and 2012; implementation throughout project lifespan.</p>	<p>Through training and awareness raising on wildfire prevention, there will be less fire damage to forests even during periods of climate change-related drought.</p>	<p>occupancy.</p>
<p>Activity 3. Community based forest management.</p> <p>Following widespread awareness raising to all</p>	<p>The effective management of the village forest reserves will significantly reduce deforestation in the reserves and therefore will also reduce</p>	<p>Community based forest management is relevant to all of the climate, community and biodiversity objectives of the project. CBFM will help</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>community groups, each village will establish village forest reserves. This involves agreeing the location of the village forest reserve; and preparation of a management plan and by-laws following a participatory approach facilitated by the District. The plans and by-laws are presented to the village assembly for approval; and from there they are presented to the District Council for review and approval.</p> <p>Once approved at District level the communities will implement their Village Forest Reserve management plans and by-laws according to the rules that they have agreed amongst themselves and as stipulated in their plans and by-laws. These include some sustainable use. As part of REDD readiness, each village has established a forest reserve and has prepared and approved management plans and by-laws for the Village Forest Reserves. REDD revenues will be used to contribute to, or cover in their entirety, management costs. The Village Natural Resources Committees are responsible for overseeing the implementation of the plans with oversight from the Village Council and accountable to the Village Assembly.</p> <p>Lindi District Council will provide backstopping where resources</p>	<p>emissions of greenhouse gases. The management objectives for the reserves include maintaining natural forest cover. By conserving the natural habitat, so the biodiversity and other high conservation values will also be protected. Communities will benefit by having access to sustainably managed forest products, even during times of climate-change induced stress; by avoiding degradation of water sources and soil erosion that would otherwise result from deforestation; and by earning revenues from REDD.</p> <p>By seeking to avoid forest fragmentation by having mostly contiguous village forest reserves, the project aims to reduce the risk of forest damage as a result of high winds associated with climate change.</p>	<p>communities to conserve the ecosystem services that they depend on; and ensure a sustainable supply of forest products.</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>allow.</p> <p>Awareness raising activities will be conducted on wild fires; and training will be provided on preventing wildfires.</p> <p>For the ten project area villages, each village has established a village forest reserves and is implementing its management plan.</p> <p>Timing: CBFM training and development between 2010 and 2012; implementation throughout project lifespan.</p>		
<p>Activity 4. Channel REDD payments to communities.</p> <p>As part of the REDD readiness activities, MJUMITA and TFCG have modelled a payment mechanism based around making individual payments to all women, men and children registered as residents of a village. Residents are treated as shareholders in the REDD enterprise and are entitled to dividends in the form of REDD payments. Each village has developed by-laws to govern the REDD payments; have established REDD committees who have been trained on how to implement the payments; and have been through two rounds of payments. The REDD committees will take on responsibility for distributing payments from the sale of the voluntary emission reductions. This will involve maintaining a</p>	<p>The REDD payments will provide an incentive to communities to maintain forest cover; and will cover the direct costs of managing the village forest reserves. As such the payments are critical for ensuring the longer term climate, community and biodiversity benefits. The payments will be paid equally to women, men and children; and to all households regardless of wealth.</p> <p>REDD payments will provide funds for community development projects including improved infrastructure and social services.</p> <p>REDD payments will provide a direct income to individuals.</p>	<p>The payments contribute to the project's climate and biodiversity objectives by providing an incentive for communities to manage their forests sustainably and by covering the costs of forest management. They contribute to the community objectives by providing an income to individuals and / or, depending on the decision of the communities, to pay for community development activities including public services. The payment system is designed to avoid elite capture by making every woman, man and child (collected by their mothers) eligible thereby ensuring that poorer households and women benefit.</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>register of residents; liaising with MJUMITA regarding the emission reductions and earnings; and ensuring that the budget allocation process is in line with the village's by-laws. The model allows for communities to decide whether / how much to allocate to individual payments and / or to allocate to community development projects. Village Councils must present detailed plans and budgets to the Village Assembly for any community development projects and the Village Assembly can then vote whether they agree to support the project. The MJUMITA Community Liaison officer will assist with the process and Lindi District Council will provide backstopping where resources allow.</p> <p>Timing: throughout project lifespan.</p>		
<p>Activity 5. Improve profitability, ecological sustainability and climate change resilience of agriculture.</p> <p>As part of the REDD readiness activities, the project developed an agricultural strategy (TFCG 2012). On the basis of this strategy, and working closely with the District, TFCG has been training women and men small-scale farmers on conservation agriculture and reducing crop losses from crop-raiding</p>	<p>It is expected that by adopting conservation agriculture, farmers can improve the profitability of their agricultural practices.</p> <p>It is expected that by improving practices, farmers can move away from shifting cultivation and deforestation. .</p> <p>It is expected that REDD payments will enable farmers to invest in improved agriculture and thereby generate more profit; be more ecologically sustainable; and avoid</p>	<p>In terms of relevance to climate and biodiversity objectives, as agriculture is the main deforestation driver in this area, it is critical that communities adopt improved agricultural practices that will allow farmers to improve their livelihoods without bringing forest areas into agriculture. In terms of the relevance to the community objectives, improved agricultural practices aim to increase the profitability of farming practices. By adopting agricultural practices that are more resilient</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>animals.</p> <p>The agricultural strategy promotes conservation agriculture techniques that avoid shifting cultivation; and generate more value from less land. The techniques now being practised also enhance soil moisture management, soil nutrient conservation and improved seed selection thereby also contributing to climate change adaptation. The project's agricultural strategy is available at www.tfcg.org/MakingREDDwork.html</p> <p>More in-depth training is provided to community-based trainers. The community-based trainers are expected to provide technical backstopping for other farmers in their village. Farmer field schools also serve as demonstration plots for other farmers to observe the benefits of conservation agriculture. Open days where everyone is invited to visit the demonstration plots and meet with the Farmer Field School members have been used to promote the approach. Radio is used to raise awareness about conservation agriculture and training materials are provided in each village.</p> <p>It is expected that farmers trained in conservation agriculture will work with local government staff, ward</p>	<p>deforestation outside of the village forest reserves.</p> <p>By introducing improved agricultural activities that are designed to increase farmers' resilience to climate change, it is anticipated that farmers will be able to withstand</p> <p>the shift in growing season; increase in crop pests and diseases; increase in weeds; and decrease in crop productivity that are anticipated as a result of climate change.</p>	<p>to climate change, farmers will be less vulnerable to climate change.</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>extension officers and community based trainers to implement improved agricultural practices and to support other farmers in their respective villages to adopt improved agricultural practices. Lindi District Council will provide backstopping where resources allow. REDD payments will provide a source of cash for farmers to invest in agricultural inputs including improved seed varieties.</p> <p>Timing: Most training provided between 2010 – 2014 in project villages; and in leakage belt villages in 2014 with District and Community Based Trainers providing ongoing support post-2014. Additional funds are being raised in order for TFCG to continue to support farmers on conservation agriculture in the project area villages.</p>		
<p>Activity 6. Improve access to microfinance services for community members.</p> <p>Training is provided to women and men on establishing and operating village savings and loans associations. The VSLAs provide a mechanisms for community members to access loans d to save. The VSLAs are linked with the training on improved agriculture and with the training on enterprise development.</p>	<p>This activity is closely linked with Activities 4 and 5. The village savings and loans associations are intended to help farmers and those with small enterprises to have access to capital to help with enterprise development and purchasing inputs relevant to adopting improved agricultural practices.</p> <p>Farmers will have access to microfinance facilities that will help them to invest in more climate-resilient agricultural practices; and to survive and</p>	<p>This activity aims to provide a mechanism whereby the REDD payments can be linked with improved livelihood activities.</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>The VSL Associations are intended to link with the REDD payments by providing a mechanism by which community members can save their REDD incomes until it can be invested.</p> <p>Lindi District Council will provide backstopping where resources allow.</p> <p>Timing: Most training provided between 2010 – 2014 with District and Community Based Trainers providing ongoing support post-2014.</p>	<p>recover from climate change-related stress.</p> <p>Loans can also be used to help farmers switch to other enterprises.</p>	
<p>Activity 7. Generate incomes from the sale of bee products.</p> <p>Beekeepers within the communities will produce honey and other bee products with some of their hives being placed within the village forest reserves. As part of the REDD readiness activities, over 200 beekeepers were trained in beekeeping and were provided with equipment. Beekeepers are expected to work closely with the Village Natural Resources Committees providing support in reserve management. Lindi District Council will provide backstopping where resources allow.</p> <p>Timing: Most training provided between 2010 – 2014 with District providing support post-2014.</p>	<p>Revenues to the beekeepers from the sale of honey and other bee products is expected to improve the livelihoods of the bee keepers.</p> <p>Benefits from beekeeping are expected to include additional support to the Village Natural Resources Committees from the beekeepers in relation to effective management of the village forest reserves. This will help to reduce deforestation and emissions of greenhouse gases.</p>	<p>This is relevant to the community objectives by contributing to improved incomes and by providing an alternative income to agriculture thereby improving climate change resilience and adaptation by providing households with a broader spread of economic activities to rely on.</p> <p>This is relevant to the climate and biodiversity objectives by incentivising effective reserve management.</p>
<p>Activity 8. Growing and harvesting trees on woodlots</p>	<p>Farmers will have easy access to trees for fuelwood and</p>	<p>This will contribute to the climate and biodiversity impacts by</p>

Activity description	Expected outcomes	Relevance to project's objectives
<p>and through agroforestry.</p> <p>Farmers in the project villages will grow and harvest trees in woodlots and through agroforestry. This is based on the training provided to farmers during the REDD readiness phase. The local MJUMITA networks will promote tree planting and providing training where resources allow. Lindi District Council will provide backstopping where resources allow.</p> <p>Timing: Most training provided between 2010 – 2014 with District providing ongoing support post-2014.</p>	<p>building materials from their woodlots.</p> <p>There will be less pressure on the natural forests to supply fuel wood and building materials.</p> <p>Farmers can generate an income from the sale of their trees.</p>	<p>reducing pressure on the forest from tree cutting for fuel wood and construction.</p> <p>It will contribute to the community objectives by providing fruits and wood products for domestic consumption; by providing an income from the sale of timber; and by diversifying household incomes thereby contributing to climate change adaptation.</p>
<p>Activity 9. Improve social services and infrastructure</p> <p>Communities will have the option of allocating some or all of their REDD revenues to pay for better social services and infrastructure. This is closely related to Activities 1 and 4.</p> <p>Timing: throughout project lifespan.</p>	<p>Expected impacts include better health care, education and infrastructure for community members. Other expected impacts include more positive attitudes and practices in relation to sustainable forest management by the majority of community members.</p>	<p>This will contribute to climate and biodiversity impacts by increasing the incentive to maintain forest cover as communities see the benefit of the REDD revenues in terms of better schools, clinics and roads.</p> <p>It will contribute to the community objectives by providing better public services including education, health care and governance.</p>

9 Project Location

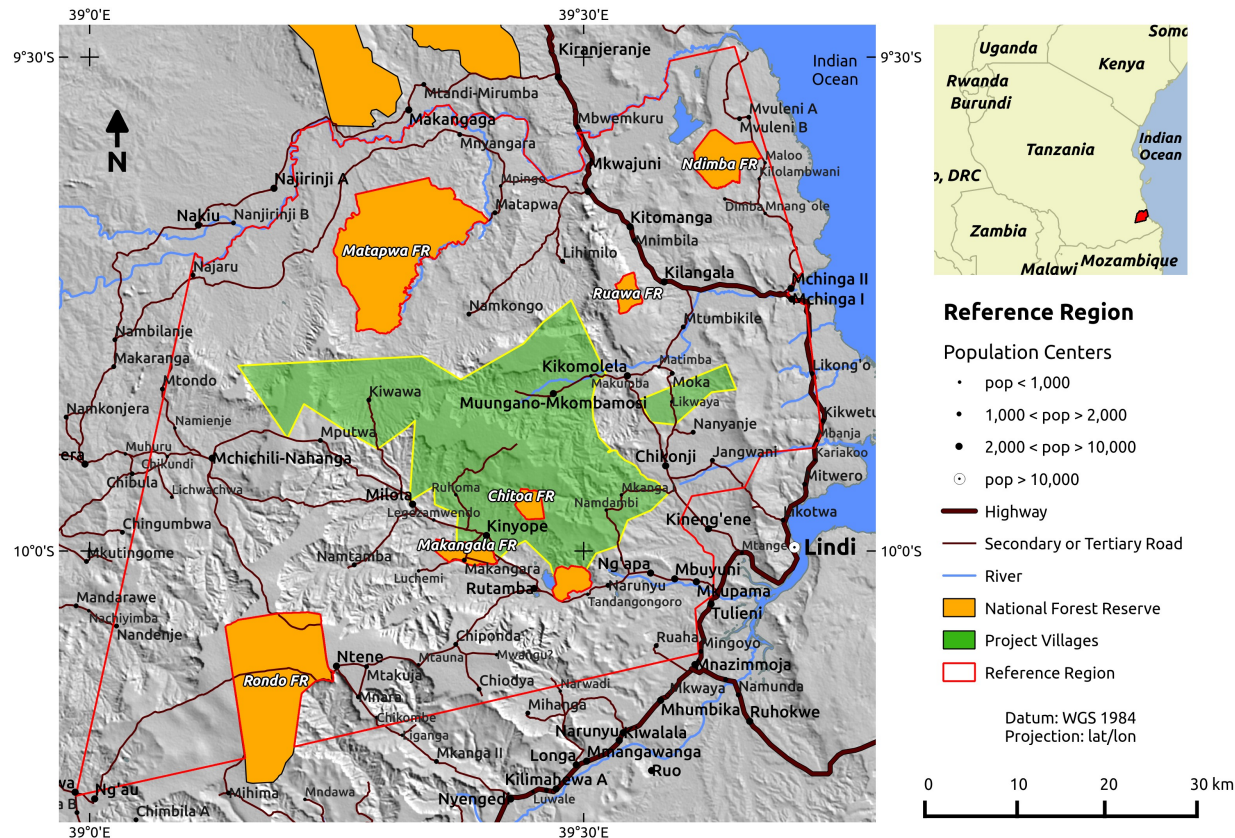


Figure 1: Initial project area villages and potential expansion areas (Reference Region)

The project area is on village land located in Lindi District, Lindi Region approximately 30 km inland from the Indian Ocean in south-eastern Tanzania (Figure 1). The initial project area consists of all forest areas (41,924 ha) at least 10 years old within the 10 initial participating project villages: Kinyope, Kiwawa, Likwaya, Makumba, Milola Magharibi, Mkanga 1, Mkombamosi, Muungano, Nandambi and Ruhoma. If funding becomes available, the project area may expand to include the forests in villages directly bordering the initial project area, including, but not necessarily limited to Namkongo, Lihimilo, Moka, Mtimba, Kikomolela, Rutamba, and Mputwa. GIS files have been shared with the validator covering the initial participating project village boundaries, the reference region and the forest areas within these boundaries.

Figure 2 is a close up of the initial project villages showing the boundaries of each village and their forest areas. Full page versions of Figure 1 and Figure 2 are presented in Part 2, Step 1 of the Methodological Annex.

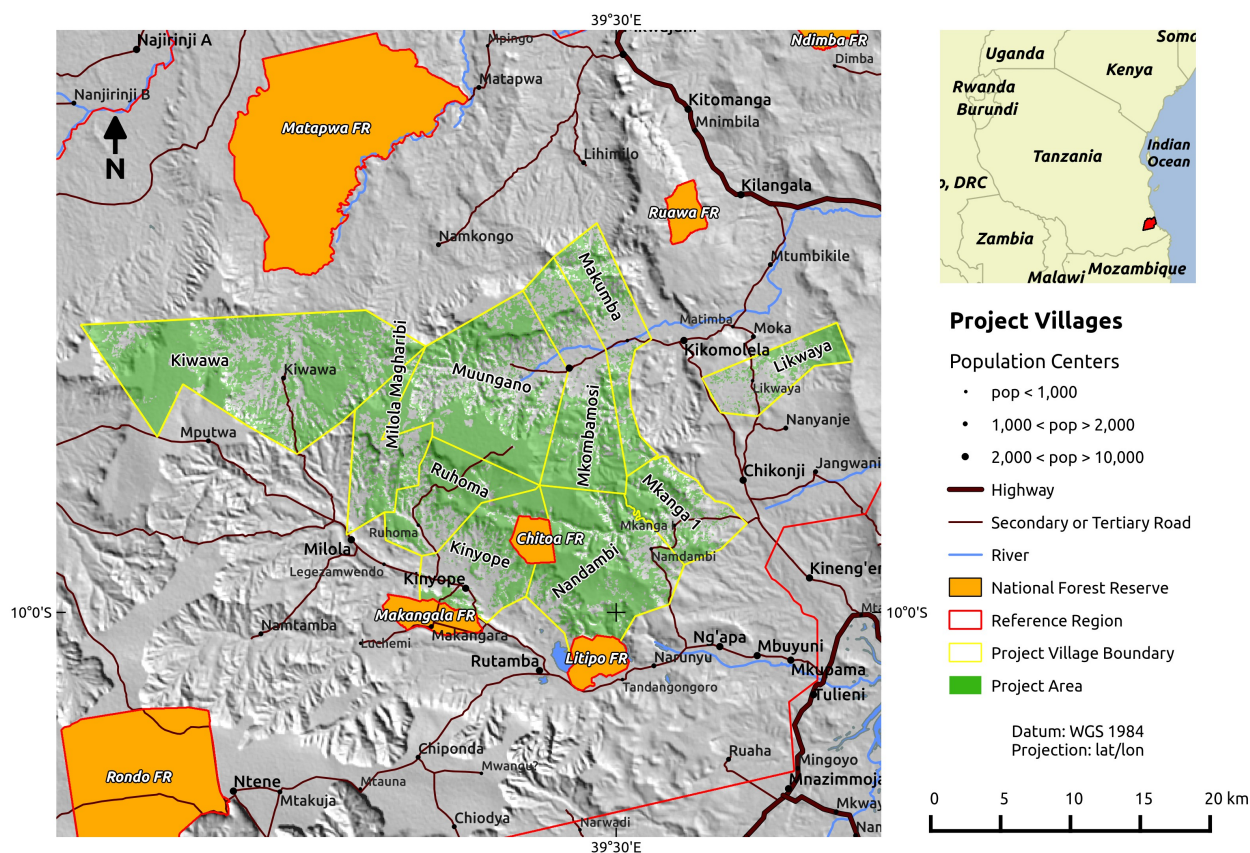


Figure 2: Initial project villages and forest area

10 Conditions Prior to Project Initiation

The conditions existing prior to project initiation were the same as the baseline scenario presented in Section 2.4. Thus, as per the instructions, in this section, we describe only the general environmental conditions of the project area including information on climate, hydrology, topography, soils, and vegetation.

Climate

The climate of the Eastern African Coastal Forests is 'characterised by high temperatures and incident sunlight with little seasonal or annual variation, combined with very variable rainfall patterns (Burgess and Clarke 2000).'

The position of the Inter-Tropical Convergence Zone (ITCZ) determines the direction of the prevailing winds and rainfall patterns in the project area. Between October / November to February / March when the ITCZ lies to the south of the project area, the north-easterly trade winds prevail whilst between May and September when the ITCZ lies to the north, south-easterly winds prevail (Burgess and Clarke 2000).

Meteorological data from the project area are scarce, particularly from the plateau tops. The closest meteorological station is in Lindi at 37 576624E 88940221S at 41 m asl (Burgess and Clarke 2000). A rainfall station was operational at Rondo Ntene (10°08'S, 39°15'E, 758 m altitude) on the nearby Rondo plateau from 1954 – 1973; at the Ngurumahamba Estate (12 km east of Litipo) between 1932 – 1962; at the Rutamba Tanganyika Refugee Service (10°02'S, 39°30'E, 300 m) from 1969 – 1973; and at the Naitivi Plantation (10°02'S, 39°33'E, 90 m altitude) from 1934 – 1957 (Clarke 1995)

Across the District, annual mean rainfall varies from 800 mm in the lowlands to an estimated 1200 mm on the plateau. Over the time that they were operational, the various rainfall stations described the above recorded annual mean rainfalls that ranged from 1074 mm at Rutamba; 1096 mm at Naitivi Plantation; and 1215 mm at Rondo Ntene. There is considerable variation in the total annual rainfall. For example the Ngurumahamba Estate rainfall station, recorded a peak annual rainfall of 1418 mm and a minimum of 667 mm over the 30 years that it operated between 1932 and 1962 (Clarke 1995).

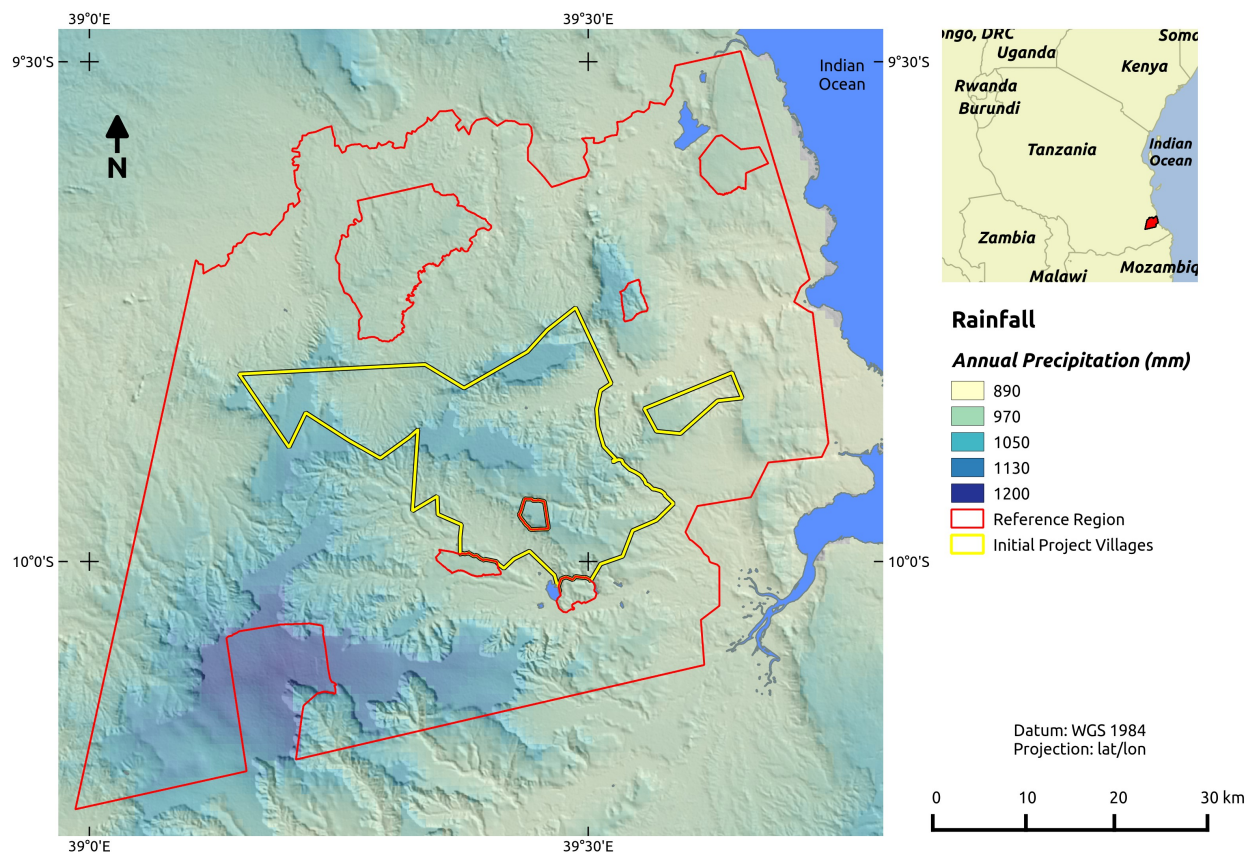


Figure 3: Average annual rainfall in the initial project area and potential expansion areas (reference region)

The rainfall pattern in Lindi is bimodal with rains between November and January (vuli) and between March and May (masika). Clarke (1995) reports that the rainfall stations at the Rutamba Tanganyika Refugee Service; at the Naitivi Plantation and at Rondo Ntene all recorded an average monthly rainfall of less than 50 mm between June and October. The seasonal pattern of precipitation varies annually.

Loveridge (1944) describes a significant occult precipitation effect from both the morning and evening mists that gather over the Rondo plateau and a similar phenomenon may also affect the Noto, Chitoa and Likonde plateaux.

The mean annual temperature across the District ranges from 24°C - 28°C.

Tropical storms are rare in the coastal forest belt although high winds occasionally cause tree falls.

Topography and Hydrology

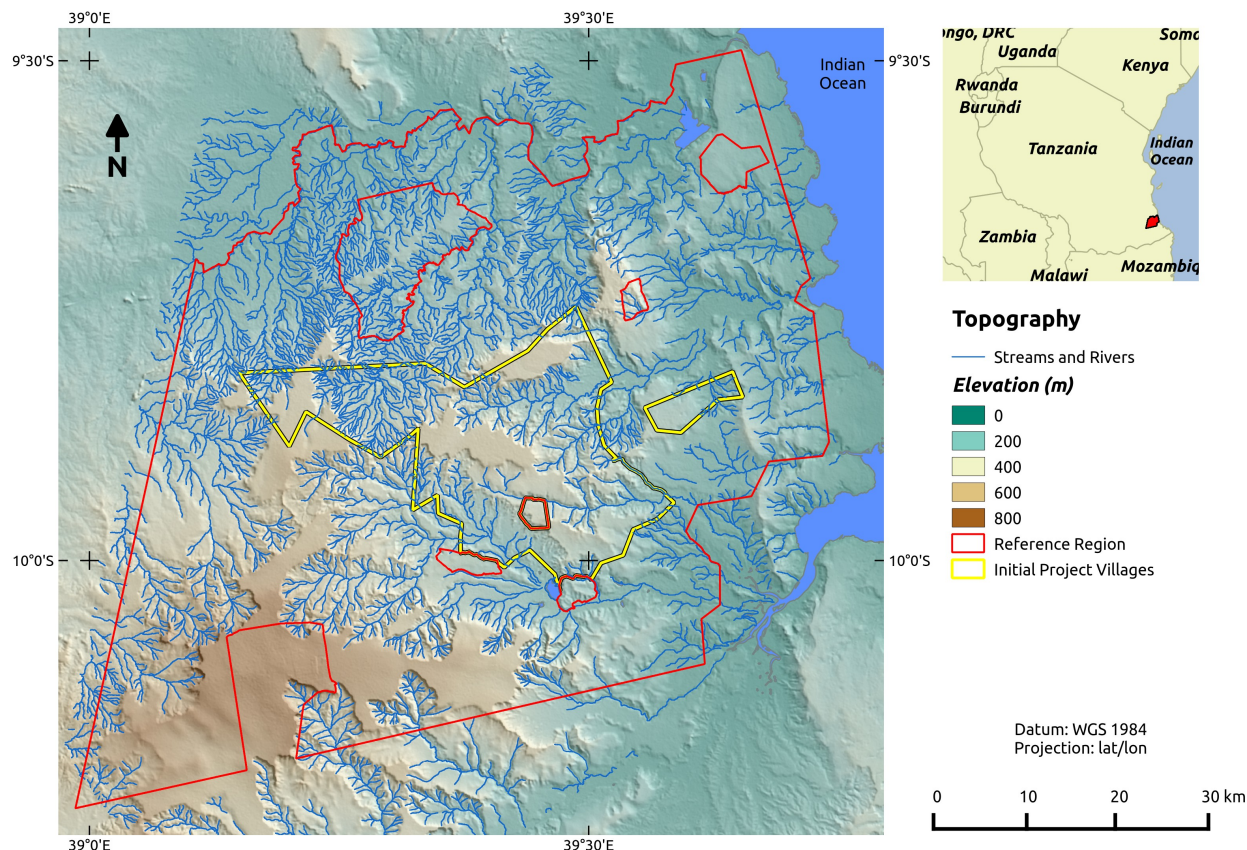


Figure 4: Topography and hydrology of initial project villages and potential expansion areas (reference region)

The initial project area extends for 40 km from North to South and 54 km from East to West. At the centre of the landscape, the Mnanguru River has cut down into the Pliocene surface leaving a 3 km wide valley, now the site of Muungano, Mkombamosi, Makumba and Kikomolela Villages. To the north, the Likonde plateau rises up the steep escarpment from the valley floor at around 215 m asl to the plateau top at 300 – 380 m asl. The Likonde plateau undulates gently descending in the east towards the coastal plain. To the west the Likonde plateau meets with the Jurassic surface at Kiwawa and along the watershed between the Mnanguru and Milola basins.

South of the Mnanguru Valley, the Noto plateau rises up, steeply in the west and more gently in the east. The highest point in the landscape lies at the north western edge of the Noto plateau at 534 m asl. From north-west to south east the plateau descends gently down towards the coastal plain. To the south the narrow Mkomole Valley divides the Noto plateau in the north from the Chitoa plateau in the South. The Chitoa plateau is lower than the Noto plateau extending up to only 340 m asl on its western edge. As with the Noto plateau, its western escarpment rises steeply from the Milola Valley whilst the eastern side descends gently down to the coastal plain. To the south of the Chitoa plateau are a series of shallow lakes.

With the exception of the streams and rivers in the valley floors, most of the streams are seasonal and many only have surface water during heavy rains.

Soils

The landscape is characterised by a gradation or 'catenary succession' of soils from the well-drained, sandy loams and loamy sands of the plateau tops down to the dark cracking clays and sandy clays formed from lacustrine and riverine alluvium in the valleys and floodplains (Burgess and Clarke 2000). Typical of many parts of coastal Tanzania, there is high local variability in the soils reflecting different substrates, slope angles, vegetation and drainage. Broad-scale maps are therefore misleading.

Clarke 1995 describes the soils of Chitoa Forest Reserve, on the south-western edge of the Chitoa plateau as 'Red brown sandy soils prone to retreating scarp erosion at the plateau edge' whilst he describes soil samples from Litipo Forest Reserve, at the southern edge of the landscape as having 'a pH that ranges from slightly acidic to neutral. The texture of the soil is sandy and the moisture content low. The leaf litter is fairly shallow and there is no fermentation layer due to the quick turnover of minerals and ions. Soil profiles from the riverine forest show more of a mineral horizon.

Vegetation

Like many parts of the Eastern African coastal forest ecoregion, the project landscape includes a mosaic of different vegetation types. The project area is centred on coastal forest of the Chitoa and Noto plateaux and the Likonde escarpment. These are characteristic of the East African Coastal Dry forests; are botanically diverse; and are home to several endemic and threatened plant species. The coastal forests are bordered by miombo woodland to the west and shorter coastal scrub forest to the east interspersed with agricultural land, agroforestry, fallows and regenerating areas. There is a smooth transition between forests and woodlands in the region, with coastal forest species existing in closed woodland formations with grassy understories in some areas.

The project area and immediately surrounding areas are part of the Zanzibar-Inhambane regional mosaic (sensu White 1983a and b). As its name suggests, this is a mosaic of different vegetation types. Within the Zanzibar-Inhambane regional mosaic, Burgess and Clarke (2000) define the East African Coastal Forests as an 'archipelago-like regional sub-centre of endemism'. They are forests dominated by Swahilian near endemic tree species. Burgess and Clarke (2000) identified the typical formation as East African Coastal Forest with five variants, of which four have been recorded within the project landscape: Coastal Dry Forest, Coastal Scrub Forest, Coastal Brachystegia Forest, and Coastal Riverine/Groundwater/Swamp forest. The fifth variant, the Coastal Afromontane Forest was not recorded in the project area.

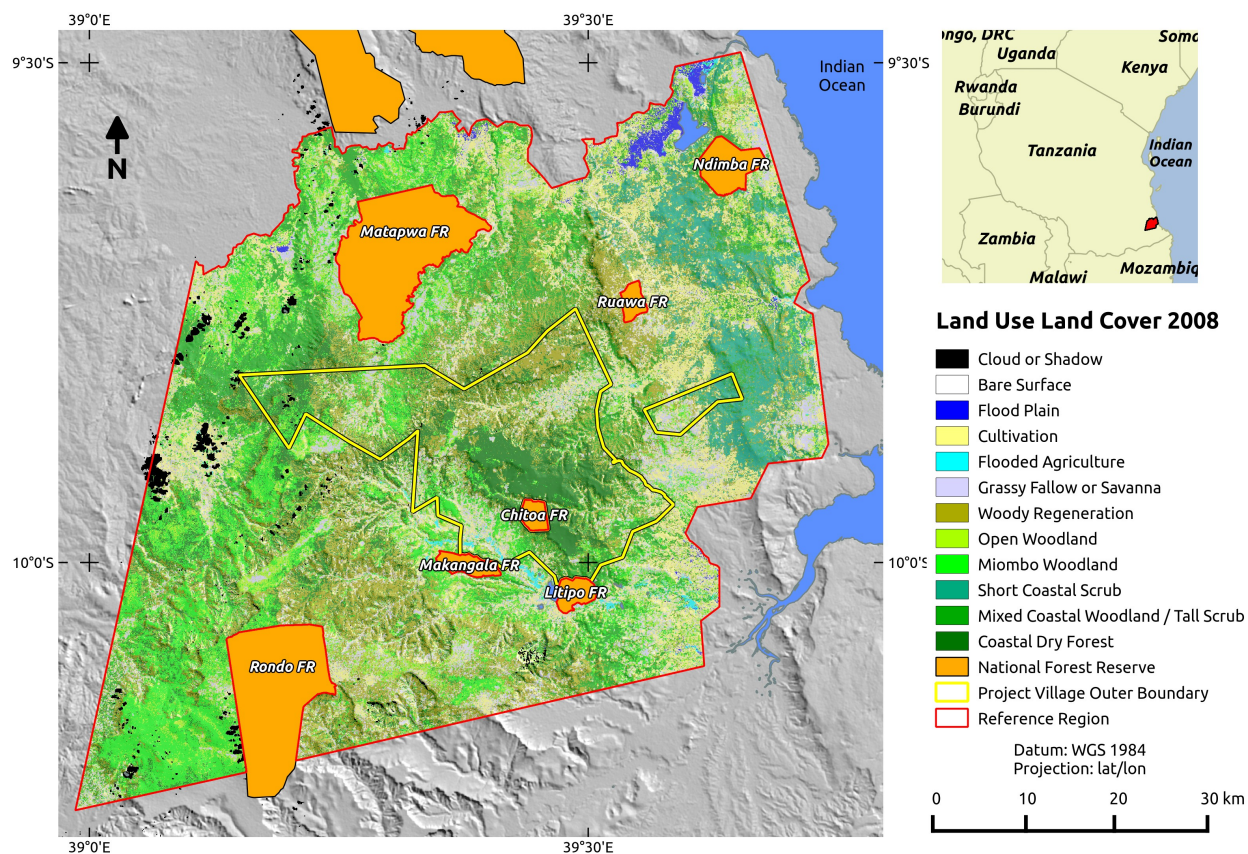


Figure 5: Classification of land use land cover in initial project area and potential expansion areas (reference region).

11 Compliance with Laws, Statutes and Other Regulatory Frameworks

Relevant national laws include the following:

- Local Government (District Authorities) Act 1982 – The principle legislation in the country establishing and regulating local governments including district and village governments.
- The Land Act 1999 – The principle legislation in the country establishing and regulating land tenure.
- The Village Land Act 1999 – The principle legislation in the country establishing and regulating village land tenure.
- The Forest Act 2002 – The principle legislation in the country establishing and regulating forest management and use rights.
- Land Use Planning Act 2007 – The principle legislation establishing and regulating land use planning on village land in Tanzania.

The project complies with these acts. At the beginning of the project, the project developed a field manual (see Luwuge et al. 2011a) to establish a single process that integrates the land-use planning guidelines from the 2007 Land Use Planning Act and the guidelines for establishing community based forest

management associated with the 2002 Forest Act. As per the guidelines, the land-use and forest management planning process was participatory involving village residents, village government authorities, and district government authorities. MJUMITA and TFCG staff members facilitated the process and provided guidance to communities regarding the compatibility of their plans with REDD. For each participating village, the resulting management plans and bylaws were reviewed, revised, and subsequently approved by the village assembly. The plans and bylaws were then submitted to and approved by the Lindi District Council. For more details on the process and how it conforms with the established guidelines, see the field manual. Copies of the approved management plans and bylaws have been shared with the validating organization.

12 Ownership and Other Programs

Right of Use

The project proponents (participating project villages), under law, have the right of use of 100% of the land where the GHG emissions reductions will be produced and thus meet the VCS requirements for the right of use.

The project area is defined as village land as per the 1999 Land Act and 1999 Village Land Act definitions of Land. As per section 7 of the Village Land Act, the project areas are on '(a) land within the boundaries of villages registered in accordance with the provisions of section 22 of the Local Government (District Authorities) Acts ' where ' (d) land, the boundaries of which have been agreed upon between the village council claiming jurisdiction over that land and (i) where the land surrounding contiguous to that village is village land, the village councils of the contiguous village; or (iii) where the land surrounding or contiguous to that village is reserved land, the official or public organization for the time being responsible for that reserved land.' The boundaries between the participating villages and surrounding villages were clarified and mapped as part of the land-use planning process facilitated by the project (see the description of process to resolve all village boundary conflicts in the project area at the end of this section). The boundaries of reserved land (national forest reserves) were already established. The village boundary maps have been approved by the participating villages and the district council, and have been sent by the district land officer to the ministry of lands.

Section 8 of the Village Land Act empowers the village council to manage all village land and makes specific reference to the management of natural resources and the environment. As per section 4 of the 2002 Forest Act, the project area is defined as '(c) village forests which consist of: (i) village land forest reserves; and (ii) forests which are not reserved which are on village land and of which the management is vested in the village council'. While, the village land act give village councils authority over all land in the village, this authority becomes more formalized and effective when villages have established clear boundaries, conducted land-use planning, established forest management plans, and created village land forest reserves, as all of the participating villages have as part of the project startup activities. The process to create forest management plans is established in sections 11-14 of the Forest Act, while the process to declare a village land forest reserve is established in sections 32-34. The forest by-laws approved by each village assembly place forest areas within the village forest reserves and on village land outside of village forest reserves under the authority of the village natural resource committees, which are elected by community members to represent their interests and serve as an extension of the village council. Thus, 100% of the forest within the project area is under the control of the project proponents.

Village boundary conflict resolution

During the social impact assessment, stakeholders were asked to identify any ongoing or unresolved conflicts over rights to lands, territories and resources. Stakeholder identified a number of village boundary conflicts within the project area. Other boundary conflicts were identified during the village land use planning exercises. Village boundary disputes are common in Tanzania and are part and parcel of the national process of formalizing village boundaries which were historically unclear in some areas, particularly in unsettled areas such as forests. Between 2007 – 09 the Ministry of Lands undertook a mapping exercise to determine village boundaries across the country. With more than 10,000 villages in Tanzania many of which were unclear on their boundary location, and with a limited budget, many boundaries were decided hurriedly and beacons were often placed in a different location than was recorded on the map. This has caused boundary disputes between many villages.

Procedures are in place to resolve such boundaries. These involve consultation between representatives from the concerned villages facilitated by the District Government. Once agreement is reached between the community representatives, the resolution is presented to the respective village assemblies for review and approval. From there the District is responsible for requesting a change to the national cadastral map of village boundaries from the Ministry of Lands. The project supported various boundary resolution processes following these procedures.

The following disputes were identified and resolved:

Kiwawa village had a border dispute with neighboring Mputwa village with the latter claiming that a large area of Kiwawa village belonged to Mputwa. This conflict started in 2006. This conflict was resolved in January 2011 in the process of developing the LUP for Kiwawa Village.

Muongano Village had boundary conflicts with two neighbours, Ruhoma and Milola Magharibi villages (both project villages). Following the normal conflict resolution process mediated by District staff, the issue was resolved in December 2010.

Likwaya, Moka, Matimba and Kikomolela had a boundary conflict regarding the location of Beacon Number 854. In order to resolve this conflict, a meeting was held on 8th April 2013 involving 8 members from each village including Village leaders (Chairperson and Village Executive Officer), four elders and two members from Village Land use Management Committee (VLUM) making it 32 (including 1 woman) community members. Three District staff also participated including the District surveyor. After reviewing the steps that had been taken during participatory land use planning process in the respective villages and after each village had the opportunity to present their perspective, the participants looked at the satellite image for the areas and it was agreed that the beacon was in the correct place and each of the four villages agreed that its location should be respected.

Milola Magharibi and Ruhoma, Muungano, Kiwawa and Milola 'B' had a boundary conflict regarding two sub-villages. The conflicts arose because some families who consider themselves to be residents of Milola Magharibi are living within the borders of Muungano (Kipunga sub-village) and Ruhoma.. A related conflict was between Milola B and Milola Magharibi. Milola B was formerly part of Milola Magharibi and there was still some uncertainty regarding the boundary between the two villages following the Ministry survey of Village lands when the two villages were formed. These two conflicts were resolved in March 2013 following a re-survey. The resurvey involved members from the five villages i.e. Milola Magharibi,

Milola B, Kiwawa, Muungano and Ruhoma. Meetings were held between Milola Magharibi and Milola B; and Milola magharibi and Kiwawa, Muungano and Ruhoma. A follow up meeting was also held between Milola Magharibi, Milola B and Kiwawa to agree on one of the proposed boundary amendments. The Divisional Secretary from both Milola and Nangaru and the WEO from Nangaru also participated. New boundary points were agreed between Milola Magharibi and each of the other four villages and beacons were installed.

The project facilitated village assembly meetings in 19 project zone villages: Kiwawa, Mputwa, Milola Magharibi, Milola B, Ruhoma, Kinyope, Rutamba, Mkanga 1, Nandambi, Chikonji kaskazini, Likwaya, Nanyanje, Moka, Komolo, Makumba, Muungano, Mkombamosi and Lihimilo. These VA meetings were meant: to explain the village boundary amendments made subsequent to the land use planning in all project villages and non project villages that share the disputed boundary beacons; and to obtain a copy of the meeting minutes of the VA indicating that all villages accepted the changes. The meetings were held between 27th August - 5th September 2013. Two village assembly meetings were done per day using a music system to attract the villagers to attend the meeting. The proposed boundary amendments have been submitted to the Ministry of Lands and Human Settlements for approval. A new issue raised during these meetings related to the location of Mtele sub-village in Nandambi Village. The project shall proceed with the normal boundary resolution process for this case and will report on progress in the 2nd Project Implementation Report. This last remaining unresolved conflict involves approximately 600 ha of forest, which is far less than 5% of the project area.

Emissions Trading Programs and Other Binding Limits

The project activities are not included in any emissions trading program.

Other Forms of Environmental Credit

The project has not sought and has no plans to seek out any other form of GHG related environmental credits.

Participation under Other GHG Programs

The project is not registered or seeking to be registered under any other GHG programs.

Projects Rejected by Other GHG Programs

The project has not been rejected by any GHG programs.

13 Additional Information Relevant to the Project

Eligibility Criteria

If funding becomes available, the project may expand to include new project instance (villages). Potential expansion villages must be within the reference region (see Part 2, Step 1.1.1 of the Methodological Annex), must have a leakage belt which does not fall outside the reference region (see Part 2, Step 1.1.3 of the Methodological Annex), and must pass a resolution agreeing to participate in REDD activities in the village assembly after engaging in a process of free, prior, and informed consent as described in

Forrester-Kibuga et al. 2011. Expansion villages must engage in the same project activities as the initial project villages.

Leakage Management

The project's main leakage management/prevention activity is activity 5 - improve profitability and ecological sustainability of agriculture, which is described in detail in section 8. The aim of these activities is to improve yields and the sustainability of farming in the project area so that villages can produce more on less land. Under the current farming practices in the project area, soil fertility is quickly exhausted and yields are generally low. Agricultural land use is typically expansive rather than intensive. The strategies employed under activity 5 were developed based on the results of an in depth study of farming practices in the project area commissioned by the project (TFCG 2012). As part of the selected VCS methodology, the project will monitor for leakage using remote sensing (see Methodological Annex Part 3). If a substantial amount of leakage is detected, the project will target greater efforts under activity 5 to the actors (both residents of the project area and residents in neighboring villages) who are responsible for the leakage. Any plans for project area expansion will also take leakage mitigation into consideration so that neighboring communities where leakage occurs will be the first to be invited to join the project.

Commercially Sensitive Information

The project was started with public funds and is intended to be a pilot project that will provide lessons learned for future REDD initiatives. As such, no information has been withheld from the public version of this document.

Further Information

Numerous study reports and other documents related to this project can be found at <http://www.tfcg.org/makingReddWork.html>.

See the CCB project design document for details on numerous social and environmental benefits that the project will generate in addition GHG emissions reductions. The CCB PDD for this project is available from <http://www.tfcg.MakingREDDwork.html> or from the CCB website.

On the next page, the project presents the risk monitoring and mitigation plans developed for the CCB PDD and Monitoring Plan, but also relevant to understanding the project plans for mitigating risks related to the project's GHG benefits.

Risk monitoring plan

Through an exhaustive consultative process with stakeholders (described in section 6 of this PD) the project identified ten potential risks to the project. The project will monitor the indicators specific to each risk. In addition the project will monitor progress in relation to the mitigation measures proposed. The plan to monitor these risks is presented in the following table.

Risk	Indicator	Method	Frequency of monitoring and reporting	Means of Verification	Responsible	Costs of monitoring	Reference for baseline value
Risk 1. Conflicts over village boundaries cause delays to land use planning and the issuing of village land certificates; and revised boundaries are not accepted by all farmers with some farmers continuing to clear forest in an adjacent village's land.	R 1.1 Status of village land use plans and village land certificates for all villages.	Review of village land use plans and by-laws through consultation with VLUM Committees and Village Councils.	Monitoring annually. Reporting at each verification.	Project implementation reports, monitoring reports and copies of VLUPs and Village Land Certificates	VLUM Committees for collation by Carbon Enterprise Coordinator	MJUMITA personnel time and transport costs to visit participating villages.	Project Design Document.
	R 1.2 Number and status of village boundary conflicts.	Consultation with VLUM Committees, Village Councils and VNRCs.	Monitoring annually. Reporting prior to each verification.	Project implementation reports, Monitoring reports and boundary resolution documentation.	VNRCs, VLUM Committees and Village Councils for collation by Carbon Enterprise Coordinator	MJUMITA personnel time and transport costs to visit participating villages.	Project Design document.
Risk 2. Increase in human-wildlife conflict associated with increase in forest cover and forest enhancement.	R 2.1 % of communities in which an increase in H-W Conflict is recorded.	Consultation with CA CBTs and Village Councils.	Monitoring annually. Reporting prior to each verification.	Project implementation reports, monitoring reports.	CA CBTs, Village Councils for collation by Carbon Enterprise Coordinator	MJUMITA personnel time and transport costs to visit participating villages.	Project Design document.
Risk 3. Private investors purchase	R 3.1 Number of sales of village	Consultation with Village	Monitoring and reporting prior to	Project implementation	Village Councils for collation by	CEC Time	Project Design

Risk	Indicator	Method	Frequency of monitoring and reporting	Means of Verification	Responsible	Costs of monitoring	Reference for baseline value
forests within the project area and clear them for agriculture	land to external investors.	Councils; review of community records, site visits and maps.	each verification	reports and monitoring reports	Carbon Enterprise Coordinator		Document. SIA report
	R 3.2 Area of forest within the project area sold to private investors for non-forest land uses.	Review of community records, site visits and maps.	Monitoring and reporting prior to each verification	Project implementation reports and monitoring reports	Village Councils for collation by Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report
Risk 4. Internal conflict within communities over forest access rights.	R 4.1 Number of conflict events over forest access rights per village per year.	Review of community records, consultation with VC, VLUM Committees and VNRCs	Monitoring and reporting prior to each verification	Project implementation reports and monitoring reports	VNRCs (for VFRs), VLUM Committees and Village Councils for collation by Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report
Risk 5. Forest fires cause deforestation within the project area.	R 5.1 Area of forest converted to non-forest as a result of fire within the project area.	Review of community records of forest fire events Deforestation analysis using remote sensing images.	Monitoring and reporting prior to each verification	Project implementation reports and monitoring reports	VNRCs (for VFRs) and VLUM Committees for collation by the Carbon Enterprise Coordinator. MJUMITA TA for remote sensing analysis.	GIS Officer and MJUMITA TA time. Image cost shared with deforestation monitoring.	Project Design document.
Risk 6. Reluctance to	R 6.1 and CM	Consultation	Monitoring and	Project	CA CBTs and	MJUMITA	Project

Risk	Indicator	Method	Frequency of monitoring and reporting	Means of Verification	Responsible	Costs of monitoring	Reference for baseline value
adopt alternative land-use practices to shifting agriculture, due to deeply ingrained and long land-use management traditions, as well as capacity and financial barriers to adoption of alternative techniques.	8.2 Number of women and men farmers who adopt improved agricultural practices, value addition and / or other enterprises within the project villages.	with CA CBTs and Village Councils.	reporting prior to each verification	implementation reports and monitoring reports	Village Councils for collation by Carbon Enterprise Coordinator	personnel time and transport costs to visit participating villages.	Design Document
Risk 7. Corruption in relation to the REDD payments undermines the effectiveness and equitability of REDD	R 7.1 Number of corruption events involving REDD payments per year; value of resources involved; and follow up action taken.	Review of community records, consultation with VC, REDD Committee members and MJUMITA members.	Annually	Project implementation reports and monitoring reports supported by REDD payment records and REDD payment Report	REDD Committees, Village Councils for collation by Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report
Risk 8. Corruption in relation to forest reserve management results in forest clearance	R 8.1 Number of corruption events in relation to village forest reserve management.	Review of community records, consultation with REDD Committees, VCs and MJUMITA	Annually	Project implementation reports supported by REDD payment records and REDD payment	REDD Committees, Village Councils for collation by Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report

Risk	Indicator	Method	Frequency of monitoring and reporting	Means of Verification	Responsible	Costs of monitoring	Reference for baseline value
		members.		Report			
Risk 9. Political support for REDD in Tanzania is withdrawn or legislation is changed to prevent communities accessing REDD revenues directly	R 9.1 Policy statements supportive of / obstructive of community access to REDD revenues.	Review of national policy and legislation	Monitoring and reporting prior to each verification	Project implementation reports	Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report
Risk 10. REDD revenues are insufficient to incentivise sustainable forest management	R 10.1 Number of communities who opt out of the project due to insufficient revenues.	Community consultation	Annual	Project implementation reports	Carbon Enterprise Coordinator	CEC Time	Project Design Document. SIA report

Risk Mitigation Plan

Through the same stakeholder consultation process as well as contributions from expert consultants and in house analysis of the risk by MJUMITA and TFCG, the following mitigation measures were developed.

Risk description	Probability and potential impact of risk	Mitigation measures
Risk 1. Conflicts over village boundaries cause delays to land use planning and the issuing of village land certificates; and revised boundaries are not accepted by all farmers with some farmers continuing to clear forest in an adjacent village's land.	Probability: medium / high. Potential impact: high.	Mitigation measures: seek consensus from all affected villages on the location of village boundaries through joint meetings; boundary visits; and participatory mapping. Raise awareness on the location of the new boundaries within the affected villages. Support the District Lands Office to apply for a village boundary amendment from the Ministry of Lands and ensure that all required documents and other evidence is submitted. Provide training to District staff on Conflict Management in the context of Climate Change.
Risk 2. Increase in human-wildlife conflict associated with increase in forest cover and forest enhancement. Existence of wild animals in the area (and possible increase in wildlife due to forest enhancement) could threaten safety of communities and agricultural efforts (through crop destruction).	Medium. Potential impact: medium	Training to farmers on techniques to avoid crop losses due to wild animals. Shifting to more permanent agricultural techniques in fields that are further from the forests.
Risk 3. Private investors purchase forests within the project area and clear them for agriculture	Probability: low / medium Potential impact of risk: high	Mitigation measures already taken include: awareness raising on land rights; strengthening the tenure of the village land through village land use planning; boundary resolution; and obtaining the village land certificates; and providing an incentive to communities to retain ownership of their forests through REDD

Risk description	Probability and potential impact of risk	Mitigation measures
		payments. The local MJUMITA networks are also ready to advise communities on the risks of selling land to private investors. Through their membership of the national MJUMITA network, they have access to legal and political support.
Risk 4. Internal conflict within communities over forest access rights.	Probability: medium Potential impact of risk: high	The REDD readiness activities were implemented with a commitment to free, prior and informed consent. Through the participatory planning and social impact assessment work, community members have directed the design of the REDD implementation phase. They were also given opportunities to opt out of the project at various stages. Those communities with groups of individuals who were not happy to continue with REDD implementation are not included. All of the villages that are included in this PDD have chosen to continue with the project through their village assembly meetings. The Village Assembly meetings have passed by-laws on REDD and have signed a Memorandum of Understanding with MJUMITA outlining their commitment to the REDD process. In addition, a conflict resolution mechanism is in place, to ensure that conflicts that do arise can be addressed in a fair way. By engaging with a wide range of stakeholders during the project design phase, there is also a broad network of support for the initiative at local and national level including from local MPs, the District Council and the Ward Development Committees. The project also provided training to District staff on Conflict Management in the context of Climate Change.
Risk 5. Forest fires cause degradation within the project area.	Probability: medium Potential impact of risk: medium	Awareness raising on fire prevention and fire fighting. By-laws that prohibit the use of fire to clear forests; or the starting of fires within village forest reserves for any other reason. Training farmers on alternative agricultural methods to reduce dependence on 'slash and burn' agriculture.
Risk 6. Reluctance to adopt alternative landuse practices to shifting agriculture, due to deeply ingrained and long landuse management	Probability: medium Potential impact of risk: medium	Farmer field schools will be used to demonstrate the direct benefits of conservation agriculture and other improved techniques. Farmers days will be organized in order to attract people to come and see the new approaches. By providing training to community based trainers it is intended that there will technical backstopping available within the communities for farmers. Access to microfinance for agricultural

Risk description	Probability and potential impact of risk	Mitigation measures
traditions, as well as capacity and financial barriers to adoption of alternative techniques.		investment will be increased as a result of the project supporting the establishment of village savings and loans associations. The agricultural strategy has been carefully designed to focus on locally-appropriate strategies. REDD finance will provide an incentive to adopt practices that do not result in deforestation. TFCG will seek additional funds to provide continued agricultural support following the close of the Norwegian-funded project.
Risk 7. Corruption in relation to the REDD payments undermines the effectiveness and equitability of REDD	Probability: medium Potential impact of risk: low / medium	The individual payment mechanism modeled by this REDD project is designed to maximize accountability around REDD payments. It is based on the premise that individuals are more likely to demand accountability where they have a direct stake in the outcome of transactions. As part of the REDD readiness activities, there has been widespread awareness raising in relation to the model and two rounds of payments have been made in all villages so that a majority of people are familiar with the process and the roles and responsibilities of different stakeholders. The MJUMITA networks have also been trained to provide support to communities to prevent and where necessary address any governance shortfalls in relation to the REDD payments. The presence of civil society organizations is known to moderate the risk of elite capture in participatory forest management (Persha and Andersson 2014). The highest risks relate to the use of any funds allocated for community development projects. Where communities do not trust their leaders, they have the option of not entrusting any money to them.
Risk 8. Corruption in relation to forest reserve management results in forest clearance	Probability: medium Potential impact of risk: medium	Over the last decade there has been growing awareness on the scale of corruption within the forest sector in Tanzania and its impact on national development. As such various efforts are now underway at local and national levels to mitigate these risks. Many of these initiatives such as the Mama Mitsu (Mother Forest) Campaign and the Forest Justice Project have invested in building the capacity of communities to address governance shortfalls. As part of the REDD readiness activities, TFCG and MJUMITA have provided training to village leaders on good governance. They have also provided training and

Risk description	Probability and potential impact of risk	Mitigation measures
		support to community based advocacy groups so that they can address governance shortfalls directly at village level. These local MJUMITA networks are now in place and will monitor and expose any corruption in relation to reserve management.
Risk 9. Political support for REDD in Tanzania is withdrawn or legislation is changed to prevent communities accessing REDD revenues directly	Probability: low Impact of risk: high	With support from the Norwegian government, the UN REDD program and the Forest Carbon Partnership Facility, there is widespread awareness about REDD and support for it within Tanzania. The National REDD strategy was published in 2013 documenting the government's commitment to continue with REDD. By raising awareness amongst communities and MPs about the potential benefits that REDD could offer rural communities, the issue also has political support.
Risk 10. REDD revenues are insufficient to incentivise sustainable forest management	Probability: medium Impact of risk: high	By seeking CCB and VCS validation, the project aims to secure a price for REDD credits that will provide sufficient incentives to communities to reduce deforestation. In addition, during the REDD readiness activities, TFCG and MJUMITA emphasized the other benefits to communities of maintaining forest cover and will continue to look at ways to secure other revenues for communities that support and are compatible with REDD.

APPLICATION OF METHODOLOGY

1 Title and Reference of Methodology

The project uses the "Methodology for Avoided Unplanned Deforestation" (VM0015, Version 1.1) approved by VCS on December 3rd, 2012. The methodology provides its own template for demonstrating compliance with the methodology. This completed template is presented in the VM0015 Methodological Annex to this project document. Thus, for most parts of this section, the reader is referred to the relevant part of the methodological annex.

2 Applicability of Methodology

Refer to Part 1, Section 1 and 2 of the Methodological Annex.

3 Project Boundary

Refer to Part 2, Step 1 of the Methodological Annex.

4 Baseline Scenario

The baseline scenario is continued conversion of forest on village land to small scale farming for a variety of cash and subsistence crops. Refer to Part 2, Step 3 of the Methodological Annex for a complete description of the scenario and the basis for its selection.

5 Additionality

As per the methodology, the additionality of the project is assessed using the most recent version (3.0) of VT0001 Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities. Refer to Part 1, Section 3 of the Methodological Annex for the step by step application of the tool.

6 Methodology Deviations

As demonstrated in the Methodological Annex, no methodological deviations have been applied.

QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

1 Baseline Emissions

Refer to Part 2, Steps 2 through 6 of the Methodological Annex.

2 Project Emissions

Refer to Part 2, Step 7 and Part 3 of the Methodological Annex.

3 Leakage

Refer to Part 2, Step 1.1.3, Part 2, Step 8, and Part 3 of the Methodological Annex.

4 Net GHG Emission Reductions and Removals

A summary of estimated GHG emissions reductions for the first fixed baseline period (2012-2022) is shown in the following table. Refer to Part 2, Steps 6 through 9 of the Methodological Annex for the details on the quantification of net GHG emission reductions.

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2012-2013	136,464	-95,525	-6,960	33,980
2013-2014	122,890	-79,878	-7,312	35,699
2014-2015	121,471	-72,882	-8,260	40,328
2015-2016	121,907	-67,049	-9,326	45,532

2016-2017	116,296	-58,148	-9,885	48,263
2017-2018	112,310	-50,540	-10,501	51,270
2018-2019	106,804	-42,721	-10,894	53,188
2019-2020	108,312	-43,325	-11,048	53,939
2020-2021	104,932	-41,973	-10,703	52,256
2021-2022	102,802	-41,121	-10,486	51,196
Total	** Expression is faulty **	** Expression is faulty **	** Expression is faulty **	** Expression is faulty **

MONITORING

1 Data and Parameters Available at Validation

Data / Parameter	Forest cover benchmark map 2001
Data unit	ha
Description	Digital map of forest cover in the reference region, leakage belt, and project area at the beginning of the reference period (2001).
Source of data	Remote sensing analysis involving Landsat 5 and Landsat 7 data from path 165, row 67.
Value applied:	N/A
Justification of choice of data or description of measurement methods and procedures applied	Landsat data is the most easily accessible data. It is systematically gathered year round and at an appropriate resolution for this type of analysis. The analysis was carried out by MJUMITA. See Part 2, Section 2.4 of the Methodological Annex for a complete description of the procedures used to create the map.
Purpose of Data	This data was used as the starting point for the deforestation analysis used to determine the baseline scenario.
Comments	Geotiff raster – 30m resolution – projection UTM Zone 37S – datum WGS84

Data / Parameter	Map of 2001 to 2012 deforestation
Data unit	ha
Description	Digital map of deforestation and forest persistence in the reference region from 2001 to 2012.
Source of data	Remote sensing analysis involving Landsat 5 and Landsat 7 data from path 165, row 67. Training and accuracy assessment data for the analysis were derived from high resolution imagery available of google earth, Spot 5 imagery and ground truthing.
Value applied:	N/A
Justification of choice of data or description of measurement methods	Landsat data is the most easily accessible data. It is systematically gathered year round and at an appropriate resolution for this type of analysis. The analysis was carried out by MJUMITA. See Part 2,

and procedures applied	Section 2.4 of the Methodological Annex for a complete description of the procedures used to create the map.
Purpose of Data	This data was used to calculate historical deforestation rates used to determine the baseline deforestation rate (historical average). See Table B of the Methodological Annex for the deforestation rates calculated from this map.
Comments	Geotiff raster – 30m resolution – projection UTM Zone 37S – datum WGS84

Data / Parameter	Forest cover benchmark map 2012
Data unit	ha
Description	Digital map of forest cover in the reference region, leakage belt, and project area at the beginning of the project crediting period (2012).
Source of data	Remote sensing analysis involving Landsat 5 and Landsat 7 data from path 165, row 67. Training and accuracy assessment data for the analysis were derived from high resolution imagery available of google earth, Spot 5 imagery and ground truthing.
Value applied:	N/A
Justification of choice of data or description of measurement methods and procedures applied	Landsat data is the most easily accessible data. It is systematically gathered year round and at an appropriate resolution for this type of analysis. The analysis was carried out by MJUMITA. See Part 2, Section 2.4 of the Methodological Annex for a complete description of the procedures used to create the map.
Purpose of Data	This map was used as the starting point for projecting baseline deforestation. This map will also serve as the starting point for monitoring future deforestation.
Comments	Geotiff raster – 30m resolution – projection UTM Zone 37S – datum WGS84

Data / Parameter	Land use, land cover map 2012
Data unit	ha
Description	Digital map of forest cover types in the reference region, leakage belt, and project area at the beginning of the project crediting period (2012).
Source of data	Remote sensing analysis involving Landsat 5 and Landsat 7 data from path 165, row 67. Training and accuracy assessment data for the analysis were derived from high resolution imagery available of google earth, Spot 5 imagery and ground truthing.
Value applied:	N/A
Justification of choice of data or description of	Landsat data is the most easily accessible data. It is systematically gathered year round and at an appropriate resolution for this type

measurement methods and procedures applied	of analysis. The analysis was carried out by MJUMITA. See Part 2, Section 2.4 of the Methodological Annex for a complete description of the procedures used to create the map.
Purpose of Data	This map is used together with the map of projected baseline deforestation to determine baseline annual areas of deforestation of different forest types in the project area and leakage belt during the first fixed baseline period from 2012 to 2022. This map will also be used in combination with change detection to determine the annual areas of observed deforestation during the crediting period.
Comments	Geotiff raster – 30m resolution – projection UTM Zone 37S – datum WGS84

Data / Parameter	Map of projected baseline deforestation 2012-2022
Data unit	ha
Description	Digital map of projected deforestation and forest persistence in the reference region, leakage belt, and project area from 2012 to 2022.
Source of data	Spatial model based on the relationships between historical deforestation and factor maps.
Value applied:	N/A
Justification of choice of data or description of measurement methods and procedures applied	The historical average deforestation rates for high carbon forest and low carbon forests obtained from the analysis of the Map of 2001 to 2012 deforestation were applied to a deforestation risk map generated from a spatial model. The analysis was carried out by MJUMITA. See Part 2, Section 4 of the Methodological Annex for a complete description of the procedures used to create the map.
Purpose of Data	This map is used together with the 2012 land-use land-cover map to determine annual areas of baseline deforestation from different forest types in the project area and leakage belt during the first fixed baseline period from 2012 to 2022.
Comments	Geotiff raster – 30m resolution – projection UTM Zone 37S – datum WGS84

Data / Parameter	$ABSLPA_{t,icl}$
Data unit	ha / y-1
Description	Area of baseline deforestation in the project area in year t per forest class icl .
Source of data	Spatial model based on the relationships between historical deforestation and factor maps.
Value applied:	See VM Table 11.b in the Methodological Annex for values
Justification of choice of	Crosstab analysis of the map of projected baseline deforestation

data or description of measurement methods and procedures applied	from 2012-2022 and the land-use, land-cover map of 2012 in the project area. For further details see Part 2, Steps 2, 4 and 5 of the Methodological Annex.
Purpose of Data	Data is used in the calculation of baseline emissions from the project area.
Comments	None

Data / Parameter	$ABSLLK_{t,icl}$
Data unit	ha
Description	Area of baseline deforestation in the leakage belt in year t per forest class icl .
Source of data	Spatial model based on the relationships between historical deforestation and factor maps.
Value applied:	See VM Table 11.c in the Methodological Annex for values
Justification of choice of data or description of measurement methods and procedures applied	Crosstab analysis of the map of projected baseline deforestation from 2012-2022 and the land-use, land-cover map of 2012 in the leakage belt. For further details see Part 2, Steps 2, 4 and 5 of the Methodological Annex.
Purpose of Data	Data is used in the calculation of baseline emissions from the project area.
Comments	None

Data / Parameter	$\Delta Cab_{icl,t}$
Data unit	t CO ₂ e/ha
Description	Above ground carbon stock change factor for <u>initial</u> forest class icl in year t in the <u>project area or leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: -159.23 in year t Low Carbon Forest: - 107.03 in year t
Justification of choice of data or description of measurement methods and procedures applied	Mandatory carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types.
Comments	Also see VM Table 20.a.1-2 in the Methodological Annex for values. These values may change due to periodic carbon stock monitoring.

Data / Parameter	$\Delta Cbb_{icl,t}$
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Data unit	t CO ₂ e/ha
Description	Below ground carbon stock change factor for <u>initial</u> forest class <i>icl</i> in year <i>t</i> in the <u>project area or leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: -4.98 per year from year <i>t</i> to year <i>t</i> +9 Low Carbon Forest: -3.74 per year from year <i>t</i> to year <i>t</i> +9
Justification of choice of data or description of measurement methods and procedures applied	Mandatory carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types.
Comments	Also see VM Table 20.a.1-2 in the Methodological Annex for values. These values may change as a result of periodic carbon stock monitoring.

Data / Parameter	$\Delta Cab_{fcl,t}$ (project area)
Data unit	t CO ₂ e/ha
Description	Above ground carbon stock change factor for <u>final post-deforestation</u> class <i>icl</i> in year <i>t</i> in the <u>project area</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: 2.72 per year from year <i>t</i> to year <i>t</i> +9
Justification of choice of data or description of measurement methods and procedures applied	Significant carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied. Values for project area and leakage belt are different due to methodology rules for dealing with measurement uncertainty.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types in the project area.
Comments	Also see VM Table 20.b.1 in the Methodological Annex for values.

Data / Parameter	$\Delta Cbb_{fcl,t}$ (project area)
Data unit	t CO ₂ e/ha
Description	Below ground carbon stock change factor for <u>final post-deforestation</u> class <i>icl</i> in year <i>t</i> in the <u>project area</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: 0.82 per year from year <i>t</i> to year <i>t</i> +9
Justification of choice of data or description of measurement methods	Significant carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied. Values for project area and leakage belt are

and procedures applied	different due to methodology rules for dealing with measurement uncertainty.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types in the project area.
Comments	Also see VM Table 20.b.1 in the Methodological Annex for values.

Data / Parameter	$\Delta Cab_{fcl,t}$ (leakage belt)
Data unit	t CO ₂ e/ha
Description	Above ground carbon stock change factor for <u>final post-deforestation</u> class <i>icl</i> in year <i>t</i> in the <u>leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: 0.97 per year from year <i>t</i> to year <i>t</i> +9
Justification of choice of data or description of measurement methods and procedures applied	Significant carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied. Values for project area and leakage belt are different due to methodology rules for dealing with measurement uncertainty.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types in the leakage belt.
Comments	Also see VM Table 20.b.2 in the Methodological Annex for values.

Data / Parameter	$\Delta Cbb_{fcl,t}$ (leakage belt)
Data unit	t CO ₂ e/ha
Description	Below ground carbon stock change factor for <u>final post-deforestation</u> class <i>icl</i> in year <i>t</i> in the <u>leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Value applied:	High Carbon Forest: 0.28 per year from year <i>t</i> to year <i>t</i> +9
Justification of choice of data or description of measurement methods and procedures applied	Significant carbon pool. See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied. Values for project area and leakage belt are different due to methodology rules for dealing with measurement uncertainty.
Purpose of Data	This data is used to calculate the carbon stock changes associated with deforestation in different forest types in the leakage belt.
Comments	Also see VM Table 20.b.2 in the Methodological Annex for values.

Data / Parameter	EBBtot _{icl}
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Data unit	t CO ₂ e/ha
Description	Factor for non-CO ₂ emissions from forest burning per forest class <i>incl.</i>
Source of data	Field observations and IPCC default values.
Value applied:	High Carbon Forest: 12.54 Low Carbon Forest: 8.43
Justification of choice of data or description of measurement methods and procedures applied	Optional emissions monitoring. See Part 2, Step 6.2 of the Methodological Annex for details and equations applied.
Purpose of Data	This data is used to calculate the CO ₂ equivalent of emissions from burning forest biomass during the process of deforestation.
Comments	Also see VM Table 23 in the Methodological Annex for values.

2 Data and Parameters Monitored

This section presents the data that will be collected as part of monitoring for verification. This data will in turn be used to update a series of tables as described in Part 3 of the methodological annex in order to calculate the net GHG reductions that occur during the crediting period.

Data / Parameter	Deforestation Map (2013 – 2022)
Data unit	ha
Description	A map of areas of deforestation and forest persistence in the project area and leakage belt during the project crediting period.
Source of data	Landsat 7, Landsat 8 and ALOS PALSAR data as needed, with high resolution imagery or field observations for ground truthing
Description of measurement methods and procedures to be applied	See Part 3, Task 1.1.2 of the Methodological Annex for a description of the procedures to create this map.
Frequency of monitoring/recording	Every 1 to 2 years depending on satellite image availability
Value applied:	N/A
Monitoring equipment	See Part 3, Task 1.1.2 of the Methodological Annex for a description of the tools used to create this map.
QA/QC procedures to be applied	High resolution satellite imagery and ground monitoring data will be used for ground truthing. The minimum accuracy of the deforestation map will be 80%.
Purpose of data	Deforestation detected in this map will be used as the basis for determining where deforestation has occurred in the project area and leakage belt during the crediting period.
Calculation method	N/A
Comments	none

Data / Parameter	$ABSLPA_{t,icl}$ (ex post)
Data unit	ha
Description	Annual area of ex post (observed) deforestation in initial forest class <i>icl</i> in the project area in year <i>t</i> of the crediting period.
Source of data	Deforestation Map (2013-2022) and Land-use land-cover map 2012
Description of measurement methods and procedures to be applied	R script generates a crosstab table showing the number of hectares deforested in each forest type in the project area.
Frequency of monitoring/recording	Every 1 to 2 years depending on satellite image availability
Value applied:	N/A
Monitoring equipment	See Part 3, Task 1.1.2 of the Methodological Annex for a description of the tools used to create the maps used in the analysis.
QA/QC procedures to be applied	High resolution satellite imagery and ground monitoring data will be used for ground truthing. The minimum accuracy of the deforestation map will be 80%.
Purpose of data	This data is used in the calculations of emissions from the project area during the crediting period.
Calculation method	N/A
Comments	These figures will appear in the verification report in the ex post versions of VM Table 11.b from the Methodological Annex.

Data / Parameter	$ABSLK_{t,icl}$ (ex post)
Data unit	ha
Description	Annual area of ex post (observed) deforestation in initial forest class <i>icl</i> in the leakage belt in year <i>t</i> of the crediting period.
Source of data	Deforestation Map (2013-2022) and Land-use land-cover map 2012
Description of measurement methods and procedures to be applied	R script generates a crosstab table showing the number of hectares deforested in each forest type in the leakage belt.
Frequency of monitoring/recording	Every 1 to 2 years depending on satellite image availability
Value applied:	N/A
Monitoring equipment	See Part 3, Task 1.1.2 of the Methodological Annex for a

	description of the tools used to create the maps used in the analysis.
QA/QC procedures to be applied	High resolution satellite imagery and ground monitoring data will be used for ground truthing. The minimum accuracy of the deforestation map will be 80%.
Purpose of data	This data is used in the calculations of emissions from the leakage belt during the crediting period.
Calculation method	N/A
Comments	These figures will appear in the verification report in the ex post versions of VM Table 11.c from the Methodological Annex.

Data / Parameter	$\Delta Cab_{ic,t}$
Data unit	t CO ₂ e/ha
Description	Above ground carbon stock change factor for <u>intial</u> forest class <u>ic/</u> in year <u>t</u> in the <u>project area or leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Description of measurement methods and procedures to be applied	See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied.
Frequency of monitoring/recording	First re-measure will occur in 2015 and then every 2 to 5 years depending on detected rate of growth (only measured at intervals where significant change is likely to be observed).
Value applied:	Starting Values: High Carbon Forest: -159.23 in year t Low Carbon Forest: - 107.03 in year t
Monitoring equipment	Measurements will be made by already trained community members with support from a MJUMITA staff member. Each village already has their own GPS, measuring tape, and calipers necessary to make the field measurements.
QA/QC procedures to be applied	Monitoring data will be fed into the same database used for storing and organizing the initial carbon plot data. Anomalous values will be detected using queries and checked against paper forms and possibly revisited in the field.
Purpose of data	This data will be used to update VM Table 20.a.1-2 for both baseline and project emissions estimates from the time of measurement going forward.
Calculation method	See Part 2, Step 6.1 of the Methodological Annex for calculation details. The significance of detected changes in carbon stocks will be evaluated using a matched-pair t-test.
Comments	When measured, updated versions of VM Table 15.b from the

	Methodological Annex will be presented in the verification report.
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Data / Parameter	$\Delta Cbb_{icl,t}$
Data unit	t CO ₂ e/ha
Description	Below ground carbon stock change factor for <u>initial</u> forest class <u>icl</u> in year <u>t</u> in the <u>project area or leakage belt</u> .
Source of data	Allometric equations applied to field measurements
Description of measurement methods and procedures to be applied	See Part 2, Step 6.1 of the Methodological Annex for details of field measurements and the allometric equations applied.
Frequency of monitoring/recording	First re-measure will occur in 2015 and then every 2 to 5 years depending on detected rate of growth (only measure at intervals where significant change is likely to be observed).
Value applied:	Starting Values: High Carbon Forest: -4.98 per year from year t to year t+9 Low Carbon Forest: -3.74 per year from year t to year t+9
Monitoring equipment	Measurements will be made by already trained community members with support from a MJUMITA staff member. Each village already has their own GPS, measuring tape, and calipers necessary to make the field measurements.
QA/QC procedures to be applied	Monitoring data will be fed into the same database used for storing and organizing the initial carbon plot data. Anomalous values will be detected using queries and checked against paper forms and possibly revisited in the field.
Purpose of data	This data will be used to update VM Table 20.a.1-2 for both baseline and project emissions estimates from the time of measurement going forward.
Calculation method	See Part 2, Step 6.1 of the Methodological Annex for calculation details. The significance of detected changes in carbon stocks will be evaluated using a matched-pair t-test.
Comments	When measured, updated versions of VM Table 15.b from the Methodological Annex will be presented in the verification report.

3 Monitoring Plan

In addition to the description of the data and parameters described in the previous section, Part 3 of the Methodological Annex provides a detailed monitoring plan including the process and schedule for obtaining, recording, compiling and analyzing monitoring data and parameters. Here we provide information on the parties responsible for different parts of the monitoring plan and the plan for data management.

Responsible Parties

- TFCG GIS Officer – responsible for obtaining and analyzing the satellite data as described in Part 3, Task 1.1.2 of the Methodological Annex, updating all ex post tables described in Part 3, Task 1 of the Methodological Annex, and compiling verification reports.
- MJUMITA Carbon Monitoring Officer – responsible for organizing the collection, recording, and analyzing of carbon stock data as described in Part 3, Task 1.1.3 and Part 2, Step 6.1 of the Methodological Annex. Also responsible for entering data from village natural resource committee forest patrol reports into excel to be used for ground truthing and monitoring of project activity implementation.
- MJUMITA Enterprise Officer – responsible for documenting REDD dividend payment books, village assembly meetings, and photographic evidence of the village development projects funded by REDD revenue.
- MJUMITA Technical Adviser – responsible for providing technical backstopping to the TFCG GIS Officer and MJUMITA Carbon Monitoring Officer.

Plan for data storage and management

- All gis data described in this project document and the methodological annex, and any gis data generated as part of monitoring activities will be stored on a network drive and at least one external drive in the TFCG/MJUMITA head office.
- New gis data generated on individual computers will be backed up to an external drive within 1 week of being created and will be backed up to the network drive within 1 month.
- New result data (tables and figures) from the analysis of gis data and any updates to the mysql carbon stock database will also be backed up to a cloud server within 1 week of being created, in addition to being stored on network and external drives.
- Paper copies of field data forms will be stored at the TFCG/MJUMITA head office.

ENVIRONMENTAL IMPACT

The core project activities center around the conservation of natural forests and are provided for in the Forest Act 2002, are not subject to requirements for an environmental impact assessment. The project anticipates substantial net positive environmental impacts and is seeking to verify these impacts through the Climate, Community, and Biodiversity (CCB) project standards. The CCB PDD for this project is available from www.tfcg.org/MakingREDDwork.html or from the CCB website.

STAKEHOLDER COMMENTS

Stakeholder identification has been carried out and reviewed at various stages of the REDD readiness process in order to ensure that all key stakeholders have been identified and consulted. The stakeholder consultation process broadly followed the steps recommended by Forest Trends in relation to social impact assessment of land based carbon projects (Richards and Panfil 2010 a and b). At the project

outset, a stakeholder analysis was conducted with the aim of identifying and understanding the stakeholders within and external to the communities (Forrester-Kibuga and Samweli 2010). This is available at www.tfcg.org/MakingREDwork.html. During the social impact assessment workshops at village and landscape level, this list of stakeholders was reviewed and validated by the participants (Mwampamba et al. 2011). Participants in the SIA process included representatives of the communities, community groups and other stakeholders identified by the initial consultancy. In addition the REDD readiness process was well publicized at local level through newsletters and local media thereby ensuring that all local stakeholders had the opportunity to engage with the project during the design phase.

The initial consultation with the communities at sub-village and village level is described in Forrester-Kibuga *et al.* 2011; records of the village level consultation on project design are recorded in Mwampamba *et al.* 2011 and Nguya 2011; and the stakeholder workshop to present the PDD is described in Mbegu 2014. MoUs have been signed between MJUMITA and the communities further documenting their consent to participate. Copies of the MoUs signed by each community have been provided to the Validators.

In terms of stakeholder involvement in project design through effective consultation, a multi-step process was implemented reflecting the project's commitment to free, prior and informed consent. These steps are outlined below with more information available in Luwuge *et al.* 2011, Luwuge *et al.* 2011a and in Mwampamba *et al.* 2011. The process aimed to ensure that as many people as possible were informed about REDD and the REDD readiness initiatives; that they had more than one opportunity to confirm their consent for REDD as the process continued, or withdraw from the process; and that marginalized groups including poorer households, women and those living in more remote sub-villages were included. Local government staff participated at each stage and elected officials including the MP and Ward councilors were involved at key points.

Changes to the project design included the withdrawal of six villages from the process: Kikomolela, Moka, Chikonji, Rutamba ya Sasa, Lihimilo and Namkongo Villages. In each of these villages there were groups who did not consent to the REDD readiness or REDD implementation activities proceeding. In keeping with our commitment to free, prior and informed consent as a per-requisite for participating in REDD, these villages are not included in the project area for this PDD. The project's desired impacts and the strategies to achieve those impacts are a culmination of stakeholder comments.

Communication between the project was helped by identifying community communicators who were given responsibility for liaising between the project and their respective community. Each communicator was provided with a mobile phone and airtime each month during the REDD readiness phase.

Community Stakeholder Consultation Process

Introductory meetings with Village Councils

Introductory meeting to all Village Councils were held to introduce TFCG and MJUMITA and explain about REDD, climate change and participatory forest management. Village councils were asked whether they would like to continue with REDD readiness activities.

Community level awareness raising and consultation at sub-village level

Consultation and awareness raising meetings were held at sub-village level. All sub-villages were

visited and people had the opportunity to learn about REDD, climate change and participatory forest management; discuss any concerns; and express their support or objection to REDD readiness activities proceeding. The outreach at sub-village level aimed to ensure that even those living in more remote parts of the village including poorer households and women, who often do not attend village assembly meetings, could be contacted. See Forrester-Kibuga et al. 2011.

Community level awareness raising, consultation and request for consent to proceed at village level

Village assembly meetings were held in each village including drama and discussions to raise awareness on REDD and to document the consent of the village to proceed with the project. All adult residents of a village are members of the village assembly. Many children also participated. Members of the village natural resources committee were confirmed, ensuring that at least 1/3 of members were women. The village assemblies were requested to decide whether they wanted to proceed with the REDD readiness. All villages included in this PDD chose to accept the REDD readiness project and to proceed towards REDD implementation. See Forrester-Kibuga et al. 2011.

Community level, participatory project design and social impact assessment workshops with community representatives

Three-day social impact assessment workshops were held in all villages involving an average of 29 people per village including representatives from all sub-villages, village elders, village leaders, at least one village natural resources committee member and different forest users including herbalists. On average 9 out of the 30 participants were women. The workshops initiated a theory of change approach to social impact assessment. Steps taken during these meetings included: participatory mapping of high conservation values; development of with and without REDD scenarios; identification of REDD project objectives and activities; validation of lists of internal and external stakeholders; community recommendations on a conflict resolution mechanism. The results of the workshops are synthesised in Mwampamba et al. 2011.

Participatory social impact assessment workshop at landscape level involving community representatives and other stakeholders

The village level workshops were followed by a workshop at District level involving representatives from all villages plus other stakeholders. The objective of the workshop was to a) verify the information gathered at the village workshops and validate the post-workshop synthesis and analyses, b) identify key project activities needed to fulfil the long-term social objectives i.e., Phase 2 of the REDD project, c) agree on the conflict resolution mechanism and communication strategy; d) document plans by stakeholders external to the communities on relevant initiatives, including local government plans, to feed into the with and without project scenarios; and e) with workshop participants, identify the intended and unintended social consequences of project activities. The principal approach for conducting Stage 4 of the SIA was the Open Standards for the Practice of Conservation's theory of change (or causal model) approach. Open Standards (OS) are a set of standards that "provide the steps and guidance necessary for successful implementation of conservation projects" (CMP, 2007). The objectives and activities agreed upon by stakeholders during these planning workshops form the basis for the design of the REDD implementation process as outlined in Sections G 3.1 and G 3.2. The workshop report is available as supplementary material (Luwuge et al., 2011) and the results are synthesised in Mwampamba et al. 2011.■

Consultation meetings with community leaders on village land use planning, participatory forest management and REDD

A process of integrated village land use planning, establishment of community based forest management and REDD readiness was initiated in all villages. This involved introductory meetings with the Village Land Use Management (VLUM) committees, the Village Natural Resources Committees (VNRC), the Village Councils and elders on potential REDD revenues, principles of REDD and climate change, natural resources policies, land use planning principles and procedures, community based forest management principles and procedures and REDD benefit sharing by-laws.

Community consultation meetings on proposed REDD readiness activities

Meetings were then held in each village with the Village Assembly on linkages between REDD, village land use planning and community based forest management; and signing of an MoU between the community and the project to document roles and responsibilities in relation to REDD readiness. This was another key step in ensuring free, prior and informed consent. All villages included in this PDD agreed to proceed and signed an MoU with the project consenting to proceed with REDD readiness activities. These are available as supplementary material.

Community-led land use planning, village forest reserve establishment and REDD by-law development

The village land use planning and CBFM establishment processes then proceeded. The approach taken aimed to ensure that all of the required steps were followed as per government guidelines. An integrated approach was adopted whereby the two processes, which are often implemented separately, were well integrated. In each village the process was led by the community representatives with technical support from local government staff and facilitated by TFCG and MJUMITA field teams (see Luwuge et al 2011a for a detailed description of this process). Steps that were taken included: village boundary review, participatory rural appraisal, forest utilization assessment, development of community action plan, verification of village boundary beacons, reach consensus with neighbouring villages on location of village boundaries, data collection to map the current land uses, forest walks and forest sample plot assessment, meeting to prepare drafts of the village land use plan and by-laws, village forest reserve plan and by-laws and the REDD benefit sharing by-laws. Draft REDD, VLUP, VFR plans and by-laws presented at sub-village level for consultation. VNRC, VLUM and Village Council REDD meeting to address issues raised at sub-village level and revise by-laws and plans accordingly. Village Council meeting to present draft village land use plan and by-laws; draft VFR management plan and by-laws; draft REDD benefit sharing mechanism by-laws; and service provider agreement between community and MJUMITA. Mapping of village forest reserve boundary, forest management units and land use classes for incorporation in final land use plan and VFR maps involving selected members of the VLUM and the VNRC. Village assembly meeting to present REDD benefit sharing by-laws; select REDD benefit sharing committee; present the draft VFR management plan, by-laws and map; present the draft Village Land Use plan and by-laws; and present and sign the MJUMITA - Village service provision agreement; describe the payment procedures for initial payment; and identify community development projects from initial payment. Based on comments at the village assembly meetings, corrections were then made to the maps. In some cases this was quite a lengthy process. Similarly, in some cases the project facilitated a more extensive consultation and conflict resolution process regarding the village boundaries. Once approved at the village level and once the maps were finalised, The documents were presented to the Ward

Development Committee; the District Lawyer and the District CMT. Additional comments were then incorporated. These mainly related to the maps. From there they were submitted to the District Council for approval. Once approved they were submitted for signing by the District Commissioner and once signed were returned to the respective villages.

Community consultation and planning on REDD payment mechanism and piloting of the REDD payment mechanism

Once the plans and by-laws had been approved at village level, training was provided to the REDD special committee on the REDD payment procedures. This included calculating the dividend to be paid to each resident. The total sum to be paid to each village was based on the calculations of potential emission reductions, proportional to the area of forest to be conserved and the historical deforestation rate and based on a conservative per ton price. This was then divided by the number of residents. The REDD committees were then responsible for ensuring that a complete list of the residents of the village was in place; and that proposals on community development projects were prepared. On the payment day, further information on REDD was provided and communities again had an opportunity to provide or withdraw their consent to proceed towards REDD implementation. At the time of the first payment Kiwawa Village withdrew their consent at this stage. However following further consultation over a four month period and a conflict resolution process related to the village forest reserve boundary, the village consented to proceed and a REDD payment was made. In each village, people were required to make a contribution from their REDD payment to forest management costs and, in some cases, community development projects based on a vote by the Village Assembly. In each village, the REDD payment was followed by a participatory evaluation of the process involving village representatives and the results of that consultation were integrated in a revised REDD model. Changes made were to ensure that some funds be set aside to pay for forest management activities by the Village Natural Resources Committee and to pay for the work of the REDD committees in preparing for the payments. A more detailed description of the REDD payment model is available in GL 2.6.

Stakeholder consultation and evaluation involving community representatives and other stakeholders

Following the trial REDD payments, a stakeholder workshop was held to generate feedback on the REDD readiness activities and on the proposed REDD implementation model. This was attended by community representatives, local government officials, Ward Councillors and the Member of Parliament. Key issues raised during the meeting included the need for the local government to accelerate the process of approving the by-laws and plans developed by the communities; and the need for greater cooperation in resolving village boundary conflicts. Comments were also provided regarding the REDD model including the need to clarify the role of the District. The project also facilitated the Lindi District Council Economic and Environment Committee members to visit six of the project villages in November 2012 in order to ensure that local government leaders were informed and had the opportunity to provide input into the process.

Strengthening community land tenure by securing village land certificates

Requests for village land certificates were submitted to the Ministry of Lands and requests for boundary revisions were also submitted where resolutions had been made to change village boundaries following extensive consultation with the affected villages. The project has been making close follow-up on this.

Community level awareness raising on implementation of village land use and forest management plans.

Awareness raising events to remind people about the land use plan and the village forest reserve.

Community consultation and participatory development of MoU between MJUMITA and the communities

Meet with the Village Council and REDD special committee to develop an MoU between the village and MJUMITA outlining the roles and responsibilities of the two parties in relation to the REDD implementation phase including allowing MJUMITA to represent the communities in the CCB and VCS validation and verification processes; and in negotiations with potential buyers of the verified emission reductions.

Community training on roles and responsibilities

Training to VLUM and VNRC (plus V Chair and VEO) on implementation of CBFM and VLUP (3 days) including training on roles and responsibilities of different stakeholders; training on relevant policies and laws; familiarisation with VLUP and VFR plan; preparation of monitoring plan, budget and work plan for CBFM; preparation of monitoring plan, budget and work plan for village land use management; and field visit to selected land use boundaries. And distribute relevant training materials.

Community consultation and request for written consent to proceed with REDD implementation

The memoranda of understanding were presented to the Village Assembly and where approved, the MoUs were signed in May 2013. These are available as supplementary material.

Stakeholder meeting in Lindi to present PDDs

On 4th February 2014 a stakeholder meeting was held in Lindi involving 91 participants including Village leaders from 10 villages, ward and divisional leaders, Ward Councillors, district and Municipal officials, Executive Directors from the District and Municipal councils, the District Commissioner and Member of Parliament, journalists and project officers. During the meeting presentations were made on the CCB and VCS PDDs; hard copies of summary documents were circulated; and there was an opportunity for comments and discussion (see Mbegu, 2014).

The processes described above focuses on the consultation at community and project area level. TFCG and MJUMITA have also been consulting with national level stakeholders including the National REDD task force, representatives of the National Carbon Monitoring Centre, the Land Use Planning Commission and the Tanzania Forest Service. A project advisory committee with representatives from the Vice-President's office, Ministry of Natural Resources and Tourism, Sokoine University of Agriculture, Prime-Minister's Office for Regional and Local Government, Lindi District Council, Lindi Regional Natural Resources Office and other civil society organization including CARE, WWF and the Mpingo Conservation and Development Initiative have met on a biannual basis to review progress on REDD readiness activities. Their comments and advice have also been included in the project design.

Consultations and participatory process have involved village assembly meetings open to all adult residents of a village; meetings with elected village councils and village natural resources committees; meetings at sub-village level; and meetings with specific groups including women and charcoal producers. The Village Assembly and the Village Council are considered to be the legitimate forums for

community consultations based on Tanzanian tradition and the Local Government (District Authorities) Act, 1982 which states that:

'141. A village assembly is the supreme authority on all matters of general policy-making in relation to the affairs of the village as such, and shall be responsible for the election of the village council and the removal from the council of any or all of the members of the council, and for the performance of any other functions conferred upon it by or under this Act or any other written law.

142.-(1) A village council is the organ in which is vested all executive power in respect of all the affairs and business of a village.

(2) In addition to any functions conferred upon it by or under this Act or any other written law, a village council shall

(a) do all such acts and things as are necessary or expedient for the economic and social development of the village;

(b) initiate and undertake any task, venture or enterprise designed to ensure the welfare and well being of the residents of the village;

(c) plan and co-ordinate the activities of and render assistance and advice to the residents of the village engaged in agricultural, horticultural, forestry or other activity or industry of any kind;

(d) encourage the residents of the village in undertaking and participating in communal enterprises;

(e) to participate, by way of partnership or any other way, in economic enterprises with other village councils.'

Where consultation has been through community representatives, the project has involved the Village Chair and / or the Village Executive officer with a preference for the Village Chairperson as the elected representative. The project has also involved the Ward Councilors as the elected community representatives on the District Council; and the Member of Parliament. During the village land use planning and village forest reserve planning, the project worked with the elected village natural resources committees and village land use management committees. For the REDD payments and by-law development and implementation, the project has worked with the elected, village REDD committees.

The project has also used a suite of communication tools including radio, video shows, project newsletters, posters, meetings and leaflets in Swahili to ensure adequate levels of information sharing with different stakeholders. These have included posters describing the MJUMITA Carbon Enterprise model which have been distributed in all villages; a documentary in Swahili explaining about the principles of REDD and presenting different community perspectives on REDD; regular radio programs on conservation agriculture; summaries of the CCB PDD, monitoring plan and 1st Project Implementation Report.

It is important that measures are in place to enable effective participation of all communities, including all the Community groups beyond the project design phase. Annual village assembly meetings will be held in each village involving all adult residents to review progress towards achieving the projects climate, community and biodiversity benefits; and to decide on the distribution of REDD revenues. As village assembly meetings are open to all residents of a village, these meetings will be open to all community groups within the respective villages including women.

In interactions with MJUMITAg going forward, communities will be represented by their village chairperson and two other representative chosen in village assembly meetings, at least one of whom will be a woman. These three representatives from each village will form the core of the project executive committee in charge of overseeing the implementation of the MOU between MJUMITA and the participating villages. The village members of the committee will review, change, and approve budgets proposed by MJUMITA to cover costs associated with MRV and marketing. The committee will also review the monitoring reports compiled by MJUMITA and the village level performance reports and portions of REDD revenue awarded to each village. In the event that a significant amount of leakage is detected outside of the project area, as per the MOU, the committee will identify the responsible village so that the leakage can be included in estimates of their performance. The village representatives on the executive committee will also be responsible for presenting this information to their village assemblies.

The executive committee will also include members with an advisory role, including representatives from the districts chosen by the district executive director, the executive director from TFCG, a representative from the Forestry and Nature Conservation department of Sokoine University of Agriculture, and a representative from the vice president's office dealing with national level REDD issues. To enable the committee to be able to make informed decisions, all of the executive committee members will receive training on REDD MRV, including basics of remote sensing and GIS that will be used by MJUMITA to monitor performance and report to VCS and CCB.

Additionally, during the startup phase of the project and continuing through out the project implementation phase, MJUMITA has and will continue to rely on phone conversations between the MJUMITA carbon enterprise coordinator and village leaders, MJUMITA members, and elected community communication agents (who are provided with a phone and airtime by MJUMITA) to gather information about project implementation progress and challenges.

TFCG and MJUMITA have and will continue to use a series of different communication channels to share full and summary project documentation. These are described below:

Internet –website the project design document has been submitted to the Climate, Community and Biodiversity Project Standards for posting on their website for public comment. It is also posted on the TFCG website. TFCG and MJUMITA will circulate an e-mail through the REDD pilot projects and the Tanzania Forest Working Group list serves to publicize the public comment period. Several of the supplementary documents are already available on the project's website including the project's policy on GMOs; the biodiversity survey report for the area; the social impact assessment; and the project's agricultural strategy.

Meetings with local stakeholders – the project model as outlined in this document has been presented to communities through various forums including the landscape level social impact assessment workshop; the landscape level participatory evaluation workshop held in November 2012; and the village assembly and village council meetings to present the REDD model in each village. During each of these events, there has been opportunity to discuss the proposed model for REDD. In addition a stakeholder meeting was held on 4th February 2014 in Lindi with representatives from all of the participating villages as well as local government staff and leaders at which the PDD was presented and there was an opportunity for questions and comments. Community stakeholders will continue to have an opportunity to make input in the project during village assembly meetings to discuss the use of REDD revenue and through their

elected representatives to the executive committee. All meetings were and will continue to be conducted in Swahili.

Printed materials – the project has distributed posters in all participating villages that document the project's REDD model. A summary in Swahili of the CCB PDD was presented to communities during the stakeholder meeting on 4th February 2014. Representatives from all villages as well as Ward Councillors and District Officials including the District Commissioner and District Executive Director were presented with a hard copy summary. The hard copy summary included a translation of Sections G1.1-9 plus summaries of sections G 2, 3, 5 and 8; CM 1 – 3; B 1 – 2; GL 1- 3. Similarly a summary of the 1st project implementation report was presented in hard copy and as a presentation followed by discussions on 04/02/2014. Please refer to the PDD Stakeholder Consultation Workshop report (Mbegu, 2014). Hard copies of the full PDD were presented to the District Executive Directors for Lindi and Lindi Municipal; and were available for stakeholders to access at the TFCG Project Office in Kinyope Village as well as at the TFCG Head Office in Dar. Registers for recording comments will be made available and comments will be provided to the Validators.

Conflict resolution and Grievance redress procedure

Through consultation with stakeholders at village and landscape level (see Nguya 2011 and Mwampamba *et al.* 2011) conflict resolution mechanisms and grievance redress procedures were identified. MJUMITA aimed to find mechanisms that are fast; easy to understand; transparent; accessible; and without risk of retribution. Given that REDD will be community-led, it was recommended that the conflict resolution procedures for REDD should follow the same procedures as are in place for other conflicts within the District. It was agreed that the normal procedures should be applied in case of any conflicts within communities or between communities. This will ensure that community members are familiar with the processes.

Within communities conflicts are addressed either by the Village Council or one of its committees. In the case of land disputes within communities, the Village Lands Tribunal is responsible; whilst issues related to natural resources management are the responsibility of the village natural resources committees. If the committees are unable to resolve the issue, or for other issues, then the conflict can be presented to the Village Council, Village Elders and / or the Village Assembly. If the Village Council is unable to resolve it, then issues can be taken to the Ward Development Committee.

For conflicts between communities, the District Council is responsible for intervening. Again the office responsible will vary depending on the nature of the conflict. Where government staff are unable to resolve a conflict, it may either be taken to the District Executive Director or to the District Commissioner to resolve.

Whilst these mechanisms apply to conflict resolution within and between stakeholders, it was recognized that clear feedback and grievance procedures are also needed to address grievances between the communities and MJUMITA.

The first stage of the grievance procedure is for communities or other stakeholders to raise an issue of concern with MJUMITA either by writing to the Site Leader; or the MJUMITA Executive Director; or by communicating with them verbally. At this stage an amicable resolution is sought and a response is provided in writing by the project. The process should not extend beyond two months.

For stage two of the grievance procedure, communities were asked to identify a neutral third party who is well-respected, trusted and freely available, to act as a mediator and to facilitate a resolution process in situations where the first stage has failed to reach a solution. Proposals included the Ward Development Committee, the District Commissioner, the Court and the District Executive Director. The participants in the landscape level SIA workshop in 2011 agreed that the District Executive Director should be the independent third party with the final say in the resolution of any conflicts between a community and the project. However it was acknowledged that, where possible, conflicts could also be mediated by the Ward Development Committee, or the Court. The procedures are detailed in the MoU between MJUMITA and the communities (see Annex 2). This procedure was presented at the workshop on 04/02/2014.

If the second stage of the grievance procedure fails then the issue would be referred to the District Court.

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