

NORWEGIAN UNIVERSITY OF LIFE SCIENCES



The costs of establishing REDD +: The case of Kilosa REDD +pilot project, Tanzania.

By

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DECLARATION

I, Deus Ngabo, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

DEDICATION

First and foremost I dedicate this work to my late uncle, Chris Bayisa, who passed away while I was in the field in Kilosa, my loved wife, Esperance Ndayishimiye, my daughter Nathalie Teta, and son, Danny Ngabo.

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LIST OF ABBREVIATIONS

- CBFM:** Community-based forest management
- CBO:** Community- based organisation
- CCBA:** Community, Carbon and Biodiversity Alliance
- FAO:** Food and Agriculture Organization of the United Nations
- FCPF:** Forest Carbon Partnership Facility
- FPIC:** Free, Prior and Informed Consent
- GDP:** Gross domestic product
- GHG:** Greenhouse gas
- IPCC:** Intergovernmental Panel on Climate Change
- IRA:** Institute of Resource Assessment
- JFM:** Joint-forest management
- LUP:** Land use planning
- MJUMITA:** Tanzania Community Forestry Network
- MRV:** Monitoring, reporting, and verification
- NOK:** Norwegian kroner
- NCCSC:** National Climate Change Steering Committee
- NCCTC:** National Climate Change Technical Committee
- NCMC:** National Carbon Monitoring Centre
- NFP:** National Forest Programme
- NFRs:** National forest reserves
- NFS:** National Forest Service
- NGOs:** Non-governmental organizations
- PFRA:** Participatory forest resource assessment
- PES:** Payments for environmental service
- PFM:** Participatory forest management
- RECOFTC:** Regional Community Forestry Training Centre
- REDD+:** Reduced Emissions from Deforestation and Deforestation
- TCs:** Transaction costs
- TCCE:** Tanzania Community Carbon Enterprise

TFCG: Tanzania Forest Conservation Group

TNRF: Tanzania Natural Resources Forum

UN-DRIP: United Nations declaration on the Rights of Indigenous Peoples

UNFCCC: United Nations Framework Convention on Climate Change

UN-REDD: United Nations programme on reduced deforestation and forest degradation

USD: United States dollar

VLFR: Village land forest reserve

VLUC: Village land use committee

VNRC: Village natural resource committee

SUMMARY

REDD+ pilot project '*Making REDD+ work for people and forests in Tanzania*' implemented in Kilosa district aims to achieve the stated goal by providing financial incentives to community forest managers through established payments system also referred to as Tanzania Community Carbon Enterprise, based on performance and verified emission reductions from deforestation and forest degradation.

The study investigates implementation process of the project. The objectives are to characterize governance structure that has been established for REDD+, and the costs of establishing it— here referred to as transaction costs (TCs). As such, the study seeks to generate knowledge about the costs of establishing REDD+, hence contributing to on-going debate on the REDD+ design by focusing on local level costs. Establishing REDD+ implies changes in the governance structures of forests, i.e., changes both in actor structures and institutions. Using governance structure framework, the study attempts to shed light on the processes behind such changes in Kilosa. Based on qualitative and quantitative data collected using semi-structured interviews and focus group discussion methods, with focus on the process of introducing REDD+ in Kilosa; identifying actors involved; and changes in actor structures and institutions— and data from certified accounts of the project and interviews with accountant as well as the review of relevant documents:

The findings reveal that, through the FPIC process villagers consented to implement REDD+. As part of the process also each village through elections formed two committees namely VNRCs and VLUCs to represent them in the REDD+ activities. Of the committee members one third are women. Following national legal frameworks— through participatory processes of land use planning and forests resource assessments, villages established their respective community-based forest management—i.e., land use plans; forest management plans and associated by-laws containing rules and sanctions. Lastly, they established REDD+ by-laws defining rules that will govern the distribution of REDD+ benefits. The findings on costs suggest that total TCs of establishing the aforementioned governance structure are about USD \$ 1,331,281. While TCs per hectare of protected forest are estimated at about USD \$ 21/ha of total TCs. In terms of TCs per ton of carbon dioxide as expected the results suggest about USD \$ 0.4tCO₂/ha of total TCs.

The study concludes that considering the financial projections of the project from the voluntary carbon markets, and the current household opportunity cost of shifting cultivation for most communities in Kilosa it will be difficult if not impossible for MJUMITACarbon Enterprise as self-financed entity to accomplish the stated goal. As such, the study recommends that the stated goal be treated as an assumption. The study also recommends that further studies should focus on the costs associated with the establishment of the MRV and the decision-making process at the district level.

1. INTRODUCTION

It is widely recognized that the forests could play a significant role in the current global climate change mitigation agenda. However, global forests estimate suggests that there is an alarming loss of forests cover due to widespread deforestation particularly in the tropical countries, hence responsible for about 17 % of global greenhouse gas emissions (FAO 2011; IPCC 2007). In response, the ongoing international negotiations among the parties to the United Nations Framework Convention on Climate Change (UNFCCC), seek to establish systems through which developed countries will use to channel financial incentives to developing countries able to protect and manage their primary forests (Vatn et al. 2009). The underlying assumption is that REDD+ could provide a low-cost mitigation pathway to industrialized countries towards their emissions reduction obligations relative to other mitigation options (Stern 2007). Moreover, REDD+ proponents maintain that REDD+ has potential to provide a window of opportunity to developing countries to achieve the overarching goal of sustainable development and poverty eradication, as well as biodiversity protection (Karsenty 2008).

Following the decision¹ of parties to the United Nations Framework Convention on Climate Change (UNFCCC) at the Bali, in December 2007—affirming REDD+ as potential part of post-2012 global climate change regime, developed countries were encouraged to take voluntary initiatives and provide financial and technical support to developing countries in order to develop governance structures, which will facilitate the delivery of REDD+ goals (UNFCCC 2007).

Since then, as part of ongoing series of negotiations, there have been a number of voluntary funding programmes in which developing countries are being supported to develop and implement strategic measures to address the drivers of deforestation and forest degradation relevant to their national context, including also monitoring systems for verifications of their achievements (Clements 2010). As such, voluntary initiatives such as the Norwegian International Climate and Forest , and multilateral arrangements, e.g., the World Bank—forest carbon partnership facility (FCPF²), and UN-REDD³ programme have been

¹ (Decision 2/CP-13)

² This was also launched during Bali negotiations, and has two mechanisms —i.e, a readiness mechanism to assist developing countries get prepared for REDD+, and carbon finance mechanism to pilot incentive payments for REDD+.

established to support readiness activities for REDD+ on the ground (Corbera & Schroeder 2011; Merger et al. 2012).

Bali decision further call for the parties to the convention to recognize the rights of indigenous and local communities when the REDD+ actions being undertaken (UNFCCC 2007; UNFCCC 2008). As such, internationally accepted norms⁴— have been developed as procedural decision- making guidelines to inform REDD+ policy design and implementation processes (Lyster 2011). Specifically, the UN-REDD+ guidelines which form the basis on how countries participating in the programme should undertake REDD+ actions on the ground (UN-REDD 2011). The guidelines preconditions these countries and other actors involved in the REDD+ activities to recognize the principles of free, prior and informed consent (FPIC) (UN-REDD 2011).

Tanzania is one of the early pilot countries participating in the UN-REDD+ programme. The programme aims to support developing countries to get prepared, with a focus on the capacity building through training for both the public and civil society organizations involved in the REDD+ activities, with a focus on carbon monitoring technologies (Merger et al. 2012).

Additionally, in 2008, as part of its international climate and forest initiative, the Norwegian government signed a bilateral partnership with the Tanzanian government which aims to support the Tanzanian government towards its REDD+ strategy development efforts; establishment of demonstration activities; carbon account methodologies and capacity building (Norwegian Embassy inTanzania 2011).

1.1. Statement of the problem and Rationale

Despite the continued uncertainties about the future international REDD+ architecture, in Tanzania the implementation of REDD+ measures through the pilot projects have been ongoing since 2009. The purpose of these demonstration activities have been to inform the recent concluded processes of Tanzania National REDD+ strategy development, as well as the ongoing international REDD+ negotiations (United Republic of Tanzania 2013).

³ This is a collaborative initiative between UN agencies including FAO;UNDP and UNEP known as the Nairobi framework

⁴ In REDD+ literature written as social safeguards

As part of the Norway-Tanzania partnership mentioned above, the Norwegian government through its Embassy in Tanzania has further been supporting the processes of establishing nine (9) REDD+ pilot projects, since 2009, with a 5-year budget of NOK 230 million about USD \$ 41million across Tanzania (Norwegian Embassy inTanzania 2011). One of these REDD+ pilot projects is titled “*Making REDD and the Carbon Market work for Communities and Forest Conservation in Tanzania*” led by the Tanzania Forest Conservation Group (TFCG) — a local non-governmental organization.

The project is comprised of two REDD+ pilot projects established in two different ecological regions namely: 1) The Kilosa REDD+ pilot project operating in Kilosa district, Morogoro region; and 2) The Lindi REDD+ pilot project operating in Lindi rural district, Lindi region. The project seeks to reduce carbon emissions from deforestation and forest degradation by providing financial incentives to community forest managers through established payments system— also referred to as Tanzania Community Carbon Enterprise based on verified results (Tanzania Forest Conservation Group 2009). It is envisaged that, the enterprise will have the capacity to aggregate the emissions generated by these communities in ways that are consistent with the internationally recognized standards, and sell them through the voluntary carbon markets— receive, manage and distribute equitably the accrued REDD+ revenues(Norwegian Ministry of Foreign Affairs 2009; Tanzania Forest Conservation Group 2009).

However, it is argued that for such payments system to deliver REDD+, it will depend on the capacity it has in terms of power and resources, and structures facilitating the interactions between actors involved. Moreover, how costly the system is to establish and maintain, i.e., transaction costs (Vatn et al. 2009; Vatn & Vedeld 2011). While some studies have shed light on potential costs of running REDD+ payments system based on existing structures e.g., Viana et al. (2009), thus far, there is little knowledge about the real costs offsetting up REDD+ payment systems, partly because those being developed including MJUMITA carbon enterprise are still under development.

As Corbera (2012) point out, REDD+ is a global experimental program of performance-based system of payments for environmental services (PES) apparently under development at global; national; and local levels. While looking at the level of transaction costs for existing programs of PES, Wunder et al. (2008) find costs to be in the order of 15-50% of total costs. The costs concern both the setting up the governance structures and running them. While

Wunder and Albán (2008) and Wunder et al. (2008) emphasize that the former is larger than the latter, there are reasons to believe that this depends on the type of governance structure.

In view of the above observations, this study attempts to address the knowledge gap by presenting the real costs of establishing REDD+— using the case of the Kilosa REDD+ pilot project, Tanzania. By doing so, the study seeks to contribute to the ongoing debates concerning REDD+ design and costs by focusing on local level costs. Moreover, the study sets out the baseline for the final part of measuring full costs of establishing the Kilosa REDD+ pilot project.

1.2. Objectives and research questions

The overall objectives of the thesis were to assess the implementation process of the Kilosa REDD+ pilot project and attempt to:

- A. Characterize the type of governance structure that had been established for REDD+ within the participating communities in Kilosa; and
- B. Generate knowledge about the level and structure of costs of establishing this governance structure.

In order to assess the processes behind the establishment of such governance structure, the following research questions were addressed. Concerning objective (1):

- 1) Who were the actors, and what were their responsibilities in the process?
- 2) To what extent were the local communities involved in the process?
- 3) What type of organizations and institutional structures had been established?

Regarding the objective (2), the research questions were:

- 4) What were the transaction costs by cost function and actors involved?
- 5) What were the transaction costs by cost categories and actors involved?
- 6) What are the transaction costs per hectare of forest protected, and per ton of reduced carbon dioxide as expected?

1.2. Delimitation

The research was undertaken in the Kilosa REDD+ pilot site area, focusing on the transaction costs of establishing governance structure for REDD+ within the Kilosa project. The head office in Dar es Salaam served as the source of secondary data. While the TFCG/MJUMITA REDD+ pilot project encompass also Lindi REDD+ project— it is purposively excluded herein.

1.4. Structure of the thesis

This thesis is structured as follows. First, I provide a background to the REDD+ in Tanzania and the specific pilot studied. Chapter 3 presents theoretical framework guided this study. Next, I present the research methods employed; describing research design; sampling procedures; instruments used for data collection; data analysis techniques used; and the study limitations. Chapter 5 presents the analysis and discussion of the results. Finally, Chapter 6 I draw conclusions and offer recommendations.

2. BACKGROUND

2.1. The Tanzanian context

Tanzania is the biggest (land area) country among five states constituting the East African Community (i.e. Tanzania; Kenya; Uganda; Rwanda and Burundi) with an area of 948 067 km². Tanzania has at present a population of about 42 million people, growing at a rate of 2.8% per annum with population density of about 50 per/km², which is relatively low compared to the countries in the region (Vatn et al. 2009).

Tanzania is considered as one of the most stable countries in the region if not in the continent, and has experienced economic growth in recent years (Norwegian Embassy in Tanzania 2011). Nevertheless, Tanzania still remains among the least developed countries ranking at 153th out of 187 in the world, according to the Human Development Index (UNDP 2012). In terms of per capita income, Tanzania is ranking at 199 out of 229 of the world's economies. The country is highly dependent on agriculture and the sector employs about 80% of the work force. Agriculture sector provides 85% of Tanzania's exports and agricultural commodities account for one quarter of the nation's GDP⁵.

In relation to the forest resources, Tanzania has about 35 million ha, of which forest reserves make up 16 million ha, national parks comprising about 2 million ha, and the rest 17 million ha are general land in reality open access (United Republic of Tanzania 2009). However, while Tanzania has very many forest resources—deforestation and forest degradation is widespread with the estimated annual deforestation rate of more than 400,000 ha which has caused concern (Chiesa et al. 2009; Mwakalobo et al. 2011; United Republic of Tanzania 2009; Vatn et al. 2009; Zahabu 2008).

There are both proximate and underlying drivers of deforestation in Tanzania. Proximate causes of deforestation and forest degradation include agriculture expansion; wildfires; wood extraction, and lack of land use plans, with all three direct causes being at play particularly outside reserved forests (Chiesa et al. 2009; Zahabu 2008). The underlying drivers include demographic; economic; policy and institutional factors that are frequently interacting (Mwakalobo et al. 2011; Vatn et al. 2009).

⁵(World Fact Book)

2.2. Land and forest policy framework in Tanzania

Tanzania National REDD+ strategy underlines existing measures of participatory forest management (PFM) as an entry point of REDD+ in Tanzania (United Republic of Tanzania 2013). As a result, the core activities of all the REDD+ pilot projects are focused on expansion of participatory forest management measures in their respective areas of operation across the country. For this reason I intend to review the current PFM related policies and legal frameworks in Tanzania, and by doing so I lay the foundation for the understanding the institutional structures informing decisions in the implementation processes of the Kilosa REDD+ pilot project. In what follows both land and forest tenure systems in Tanzania will be presented (subsection 2.2.1). Next, a discussion of REDD+ in Tanzania including the REDD+ pilot project will follow (section 2.2.2).

2.2.1. Land tenure in Tanzania

Tenure security is critical for REDD+ implementation on the ground (Corbera 2005; Leggett & Lovell 2012; Lorenzo & James 2009). This is so, particularly for the communities under the MJUMITA carbon cooperative that will act as service providers, thus unless they have clear and defined rights or user rights over the land where the service is based, there are growing concerns that they may not benefit from the REDD+ (Campese 2011).

Veit et al. (2012) defines land tenure as the set of institutions and policies that determine how the land and its resources are accessed; who can hold and use these resources; and for how long and under what conditions they may be used. Veit et al. point out that, the form of land tenure concern the rules and norms associated with any number of entities such as: individual; a public/state; a common-property arrangements and so on.

In Tanzania, the current land Act of 1999 is the basic law in relation to land other than the village land— i.e., the management of land, settlement of disputes and related issues. The village land Act of 1999 provides legal framework for the management and administration of village land, and for associated issues. These Acts support the current national land policy of 1995, which according to the Tanzanian government aims to promote an equitable distribution of, and access to, land by all Tanzanian citizens (United Republic of Tanzania 1995).

It is further emphasized that, the current land policy aims to streamline the institutional arrangements in land administration and land dispute resolution, as well as protecting land resources from degradation, thus for sustainable development(United Republic of Tanzania 2009).

There are three main land categories in Tanzania:

- 1) Reserved land includes designated areas (public land) such as game reserves; forest reserve; and national parks etc. Taken together they form about 30-40% of Tanzania's total area and they are governed by the land Act.
- 2) Village land, is the land which have been surveyed and registered under the provisions of the village land Act of 1999 (United Republic of Tanzania 1999)with the village council as managers.
- 3) General land, which consists of all land that is neither village land nor reserved land, i.e., in reality it is land under open access.

Both reserved and general land falls under the authority of the Commissioner for land with power to administer them on behalf of the President. It is should be noted, legally, all land in Tanzania is public land and remains vested in the President for and in trust of all Tanzanians, both the present and the future generations (United Republic of Tanzania 2009). In the context of REDD+, however, the REDD+ framework document highlight that, a significant number of village lands are not yet formally registered, implying that their land are categorized as general land, thus insecure tenure for villagers.

It is argued that, land Act and subsequent village land regulations of 2001provides guidelines for which village land registration process must follow, including surveying village land; preparation of village land use plans and by-laws, and consequently their formalization (Wily 2003). According to the REDD+ framework, the registration of land is the responsibility of the commissioner for lands, as mentioned he is the principle administrator of the land Act(United Republic of Tanzania 2009).

As Wily (2003) asserts the commissioner for lands is very powerful person, he handles all issues over land in Tanzania, for instance under section 12 (1) the Minister of lands is required to establish the land allocation committees across levels of government to advise the Commissioner on decisions over all applications for right of occupancy. In the following

Subsection, I will provide an overview of the relationship of land tenure and forest use and management in Tanzania mainland.

2.2.2. Governance of forest resources in Tanzania

Tanzania forestry policy, as in most other developing countries, has been influenced by the international forestry policy debates. Since the 1990s, Tanzania introduced decentralization policies which sought to shift from ‘command and control’ approach to participatory form of management as a way to involve local communities in the decision-making of sustainable use and conservation of land-based natural resources and management of environment (Mwakalobo et al. 2011).

As a result, participatory forest management (PFM) approaches emerged as key strategies for the forests management in Tanzania, thus supported by a set of policies; laws and regulations, including the national forest policy of 1998; the accompanied forest Act of 2002; the local government Act of 1982 and the national forest programme (NFP) of 2001 among others (United Republic of Tanzania 1998; United Republic of Tanzania 2001; United Republic of Tanzania 2002). In the light of REDD+, Tanzanian government asserts that the implementation of REDD+ strategy will be done within the existing forestry policy framework, i.e., which support participatory forest management strategies, it is stated that, *“Tanzania is putting efforts in addressing drivers of deforestation and forest degradation through adoption of legal framework that promotes PFM approaches”* (United Republic of Tanzania 2013).

The forest Act of 2002 provides the following forest categories:

- a) National forests reserves— i.e., public forests which comprised of natural forests designated as national forest reserves and forests on general land.
- b) Local authority forest reserves which comprised of both local authority forest reserves and forests on general land.
- c) Village forests encompass village land forest reserves and community forest reserves created out of village forests, and
- d) Private forests which encompass the forests on village land held by one or more individuals under a customary right of occupancy; and forests on general land or village land of which the rights of occupancy or lease has been granted to an individual or individuals— NGOs or corporate entity for the purpose agreed

between the right holder and the granting authority as required by forest Act (United Republic of Tanzania 2002).

There two forms of participatory forest management (PFM) practiced in Tanzania: 1) The community-based forest management (CBFM)— which takes place in forests on general land, i.e. After the forest land have been surveyed and demarcated, and subsequently formalized— through drafting village forest management plans and by-laws of the proposed village forest reserves.

It is argued that, once the district council approves the forest management plans and by-laws, the demarcated forest land is declared as village land forest reserve (VLFR), registered or formalize by the district council (Blomley et al. 2008). On the basis of this legal transfer of rights and responsibilities to the village government — villagers can harvest the forest products including timber and poles; collect and retain forest royalties, and undertake patrols (ibid). As such, the role of district authorities is limited to the monitoring compliance of the forest management plans (United Republic of Tanzania 2006).

The second form of participatory forest management is the joint forest management (JFM), which takes place on state owned forests such as national forest reserves (NFRs). With JFM the forest owner— that is, the central/ local government enter into agreement with the local communities living adjacent to the forest to share management responsibilities, and in return they get user rights and access to some forest products and services while the forest ownership remain with the owner (Mwakalobo et al. 2011).It is important to note that, joint forest management (JFM) has been officially endorsed as the most preferred approach by the Tanzanian government, when it comes to the implementation of the REDD+ strategy plans on the ground(United Republic of Tanzania 2013).

The role of participatory forest management strategy and its impact on sustainable use and management of Tanzania forests is documented by many (Alden Wily 1997; Blomley 2006; Blomley et al. 2010; Kajembe et al. 2009; Zahabu 2008).These studies and many others suggest that, where participatory forest management (PFM) has been practiced; forests have remarkably been recovered due to improved management as a result of secured tenure.

The held view is that FM strategy has been effective in realizing its stated objectives namely: (1) improved forest quality through sustainable management practices; (2) improved livelihoods through increased forest revenues and secure supply of subsistence forest

products, and (3) improved forest governance at village and district levels through effective and accountable natural resource management organizations (Blomley & Ramadhani 2006; Kajembe et al. 2009). However, according to the Tanzanian government only 4 million hectares (i.e., less than 14 % of 35 million hectares of mainland Tanzania forests area) are estimated to be under PFM.

The Tanzanian government attributes this low coverage and slow speed to the limited resources in terms of funds and knowhow (lack of skilled personnel). For this, as the Tanzanian government vision towards REDD+ it states that, *“Access to REDD+ finances through fund based financing arrangement could facilitate and speed up this process and possibly reduce the high levels of deforestation and forest degradation. The government of Tanzania considers the REDD+ policy a viable option for providing opportunities for the country to meet its obligation of managing her forest and woodlands on a sustainable basis and at the same time responding to poverty reduction initiative accordingly”* (United Republic of Tanzania 2013, p.).

Furthermore, the Tanzanian government in line with participatory forest management lays down its strategic action plans for effective emission reductions from deforestation and forest degradation that will be undertaken through the national forest programme under the coordination of the newly established national forest service (NFS):

- To establish proper land use plans on both the protective and productive village forests
- To develop sustainable harvesting plans for productive village forests
- To establish management institutions including forest management plans and by-laws for village forest reserves; and
- To promote good governance across levels.

As alluded to earlier, the national forest programme was established, in 2001, as a 10-year strategic framework for the implementation of both the forest policy of 1998 and the forest Act of 2002, through broader strategic activities including PFM development (United Republic of Tanzania 2001). Hence, National forest programme provides guidance in which PFM should be undertaken in Tanzania, Table 1 below shows the conditions necessary for the communities to establish a community-based forest management over the forests on general land (ibid).

Table 1: National PFM guidelines

<p>Stage One : Getting started</p> <ul style="list-style-type: none"> ❖ District level : select the villages for PFM, brief district staff, create a District PFM facilitation team ❖ Village level: District PFM team meet Village Council and Village Assembly and establish a Village Natural Resource Committee (VNRC)
<p>Stage Two: Assessment and Management Planning</p> <ul style="list-style-type: none"> ❖ Identify and agree on the boundaries of the village and village forest reserve ❖ Carry out a Participatory Forest Resource Assessment with the VNRC, and measure and assess the forest and consult stakeholders and natural resource users ❖ Develop a village management plan and village by-laws draft
<p>Stage Three: Formalizing and Legalizing</p> <ul style="list-style-type: none"> ❖ VNRC presents the draft to the Village Council and Assembly for Approval ❖ Village chairman takes the draft to the Ward development committee ❖ The ward development committee inform the neighboring villages in ward about the location and rules of the new village forest reserve ❖ Together with the district PFM team the VNRC takes the draft to the District Council for final approval
<p>Stage Four: Implementing</p> <ul style="list-style-type: none"> ❖ Awareness raising among village members concerning the management plan and by-laws ❖ Strengthen the VNRC and its ability to hold meetings, undertake patrols, perform record-keeping and monitoring of the forest, and methods to deal with forest encroachment ❖ Starting afforestation activities if there are any ❖ District monitoring and supervising and acting as conflict resolution if necessary
<p>Stage Five: Revising and gazette</p> <ul style="list-style-type: none"> ❖ Three years after implementation the forest management plan is reviewed and revised if necessary ❖ If villages want their VLFR be gazette, they can submit an official request to the FBD <p>Stage Six: Expanding to new areas</p> <ul style="list-style-type: none"> ❖ CBFM villagers can expand their VFR if they want, i.e., they can include more general forest land to village land forest reserve. ❖ Neighboring villagers can expand their VFR if they want ❖ Neighboring villages or others in the district can request CBFM <p>If so priorities needs to be balanced; action plan created, an administrative framework and support system set up and a budget set.</p>

Source: (MNRT- FBD 2007, cited in Dyngeland & Eriksson 2011, p.95)

2.3. REDD+ in Tanzania

This section provides a brief overview of REDD+ introduction in Tanzania, before I turn to the TFCG/MJUMITAREDD+ pilot project.

As mentioned earlier, in 2008, the Norwegian government and Tanzanian government signed a letter of intent expressing commitment to form a strategic partnership on climate change issues. As a result of this commitment, in 2009, both governments signed further a 4-year (2009-2013) bilateral agreement worth of NOK 40 million equivalent to approximately USD \$ 71 million—as a financial support towards the development of Tanzania national REDD+ strategy (Norwegian Embassy in Tanzania 2011).

Accordingly, Tanzanian government started this process by appointing a special committee known as National REDD+ Task Force committee to oversee the REDD+ strategy development process, with representation drawn from mainly public agencies, including the Vice president's office; Ministry of Natural Resources and Tourism; Zanzibar government; Ministry of Agriculture, Food Security and Cooperatives, Ministry of Energy and Minerals; Ministry of Finance; Ministry of Regional Administration and Local government; Ministry of Lands, Housing and Human Settlements Development; Ministry of Community development, Gender and Children.

The government also designated institute of resource assessment (IRA) of the University of Dar es Salaam, as a secretariat to the National REDD+ task force committee to coordinate the work of the committee (United Republic of Tanzania 2009).

In 2009, the Tanzanian government published its national REDD+ framework to guide, the processes of the strategy development. According to the framework document, its preparation process involved extensive consultative meetings with all stakeholders across the country (United Republic of Tanzania 2009). Moreover, as part of the aforementioned agreement the REDD+ secretariat was tasked to carry out a selection process of civil society organizations (NGOs) to participate in the process of the National REDD+ strategy development through undertaking demonstration activities in order to generate knowledge and inform the ongoing REDD+ design debates both at national and international levels (United Republic of Tanzania 2009, p.34).

In December 2010, the Tanzanian government released a draft of its national REDD+ strategy to the public debate— as the draft document put it, “This draft Strategy has been produced for stakeholders’ consultation and engagement for its consolidation” (United Republic of Tanzania 2010, p. 6).

In February 2013, the Tanzanian government published its final version of the REDD+ strategy implementation. According to United Republic of Tanzania (2013) its National REDD+ strategy aims “*to facilitate well-coordinated and effective implementation of REDD+ related policies, processes and activities so as to contribute to climate change agenda and overall sustainable human development, enabling Tanzania to benefit from a system based on result-based payments for demonstrated emission reductions from deforestation and forest degradation*” (ibid, p.8).

The government further highlights that— objectively the strategy “*envisages to guide the coordination and implementation of mechanisms required for Tanzania to benefit from a post-2012 internationally approved system for forest carbon trading, based on demonstrated emission reductions from deforestation and forest degradation and other aspects of REDD+*”(*ibid*).As such, the government spells out the core strategic interventions or action plans as under:

- 1) To develop robust reference levels and an effective MRV system for determining forest carbon changes.
- 2) To establish an equitable and transparent REDD+ financial mechanism and running incentive schemes.
- 3) To engage and enhance active participation of the stakeholders in REDD+ processes.
- 4) To strengthen a national system for governance and coordination of REDD+ processes.
- 5) To develop the capacity in terms of training as well as develop infrastructure, systems and equipment to support the implementation of the REDD+ policy
- 6) To generate knowledge and promote scientific understanding on the REDD+ issues through research.
- 7) To strengthen public awareness, communication and information sharing systems on the REDD+ issues.
- 8) To strengthen mechanisms to address drivers of deforestation and forest degradation in various agro-ecological zones, and finally

- 9) Ensure that gender is mainstreamed in the implementation of the REDD+ process and action plan.

Furthermore, REDD+ strategy document unveils national governance structure for the implementation of the above strategic plans. At national level, the Tanzanian government has established two committees with mandate to guide the implementation of REDD+ activities in the country. The first committee is an inter-ministerial committee known as National Climate Change Steering Committee (NCCSC), which is made up of technocrats (PSs) from relevant sector ministries and agencies of the government, including the V/President office in-charge of environment for mainland Tanzania; the 1st President Office in-charge of environment for Zanzibar (United Republic of Tanzania 2013). The second committee is named as National Climate Change Technical Committee (NCCTC), which comprised of Directors of the Ministries represented in the NCCSC committee, including also representatives from Civil Society Organizations; private sector; and higher learning and research institutions (ibid).

Additionally, Tanzanian government aims also to establish a National REDD+ Fund which will receive and distribute REDD+ funds to various stakeholders on the basis of their efforts coordinated by established National Carbon Monitoring Center (NCMC)—which will provide MRV technical services to various stakeholders involved in the REDD+ activities throughout the country (United Republic of Tanzania 2013).

It is further indicated that, the implementation and coordination of REDD+ activities at sub-national level will follow the existing local government structures, i.e., regional administrative secretary will serve as the link between the ministries and the district councils in their respective regions. Moreover, REDD+ activities at the district and municipal levels will be the responsibility of the environmental management committees in their respective districts and municipalities. With regard to institutional framework, the government highlights that it aims to reform and harmonize the existing forest related institutional frameworks, including not least the environmental management Act (2004); the forest Act (2002); the beekeeping Act (2002); the wildlife Act (2009); the land Act (1999); and village land Act (1999).

2.4. TFCG/REDD+ pilot project and Context

This section provides general descriptions of TFCG/MJUMITA REDD+ pilot project. For specificities of the study area— i.e., the Kilosa REDD+ pilot site see Chapter 5.

As mentioned earlier, as part of Tanzania National REDD+ strategy development process, in August 2009, TFCG signed a 5-year contract (2009-2014) with the Norwegian Ministry of Foreign Affairs through its Embassy in Dar es Salaam, to develop and manage one of the nine REDD+ pilot projects implemented across the country, titled *‘Making REDD and the Carbon Market work for communities and Forest Conservation in Tanzania’*. As a result, financial support estimated at NOK 41million equivalent to approximately USD \$ 6 million was earmarked for the implementation of the REDD+ pilot project activities(Norwegian Ministry of Foreign Affairs 2009).

Following this, TFCG signed a memorandum of understanding with the Tanzania community forest network (MJUMITA)— a national network of 318 villages involved in participatory forest management (PFM believed to be operating in 11 regions and 22 districts across Tanzania to jointly undertake the strategic interventions for the REDD+ including establishing a REDD+ payments system also referred to as Community⁶ Carbon Enterprise hosted within MJUMITA structures as discussed below(TFCG 2009).

TFCG/MJUMITA REDD+ pilot project encompass two REDD+ pilot sites, namely (1) the Kilosa REDD+ pilot site located in Eastern Arc Mountains, Morogoro region and (2) the Lindi REDD+ pilot site situated in Lindi rural district with coastal forests (ibid).

Goal of the project

“To reduce greenhouse gas emissions from deforestation and forest degradation in Tanzania in ways that provide direct and equitable incentives to rural communities to conserve and manage forests sustainably”.

Project purpose

“To demonstrate, at local, national and international levels, a pro-poor approach to reducing deforestation and forest degradation by generating equitable financial incentives from the global carbon market for those communities that are sustainably managing or

⁶ Literally MJUMITA

conserving Tanzanian forests at a sub-national level” (Tanzania Forest Conservation Group 2009). In terms of the emission reductions potential, it is estimated that the project will avoid 110,000 tons of carbon dioxide by 2014.

To attain the overall goal and purpose of the project, the following four main outputs are expected:

- **Output 1:** *To establish a self-financed Community Carbon Enterprise*
- **Output 2:** *To develop leakage strategy to address drivers of deforestation and forest degradation*
- **Output 3:** *To develop effective monitoring, evaluation and communication plan*
- **Output 4:** *To develop robust advocacy strategy at national and international levels.*

Output 1: Establishing a Community Carbon Enterprise

“Replicable, equitable and cost-effective models developed and tested at the group or community level for reducing emissions from deforestation and forest degradation (REDD) on village and government forest land in ways that maximize benefits to communities, forests and the nation”.

This component is led by MJUMITA with support from different partners, namely: Katoomba and Forest Trends who provided support on site selection; Sokoine University of Agriculture and CARE—provides support on issues of carbon monitoring and carbon enterprise set up and engagement with carbon market, in particular on issues of CCB⁷ monitoring procedures.

Indicators for Output 1:

- A self-financing carbon co-operative based on sound “state of the art” business principles established and functioning within existing MJUMITA structures by end of the current timeframe of the project.
- REDD+ carbon credits revenues being distributed to at least 20 communities managing at least 50,000 hectares of forest by end of current timeframe of the project.
- At least 25,000 poor men, women and children report financial benefits from REDD+.

⁷A global partnership of leading companies and non-governmental organizations created in 2003 including CARE and Conservation International.

Output 2: Effectively mitigating leakage

“Replicable, equitable and cost-effective models developed that are designed to reduce leakage across project sites and provide additional livelihood benefits to participating rural communities”. This component is led by TFCG with support from RECOFTC— Regional Community Forestry Training Centre.

Indicators for Output 2

- Leakage strategies developed and implemented in and around 20 communities involved in the sale of voluntary emission reduction credits
- Leakage strategies identify drivers of deforestation and include measures to address those drivers.
- 150 government, project and partner staff and 200 community leaders trained in REDD+ leakage strategies and climate change;
- Increased technical backstopping and training opportunities on REDD+ and participatory forest management are provided over the long term to Tanzania.

Output 3: Effective monitoring, evaluation and communication plan developed

“Monitoring, evaluation and documentation processes supported that assess the overall impact of the project at local and national levels and communication of the findings undertaken”.

This component is led by TFCG with support from the Tanzania Natural Resource Forum - TNRF; Valuing the Arc; CARE; IRA; and Katoomba Group respectively.

Output 4: Develop robust advocacy strategy at national and international levels

“Advocacy process supported at the national and international levels that promote equitable and effective REDD benefit sharing mechanisms and in particular with regard to forest managers at the community level”. This component is led by MJUMITA with support from the Katoomba Group; CARE; TNRF and IRA.

Indicators for Output 4

- Carbon benefit sharing agreements reached with FBD, Ministry of Finance and local governments in jointly managed forests.
- The findings of the project are directly contributing to international policy dialogue in at least three international climate change meetings relating to REDD+.
- The findings of the project have directly influenced Tanzanian policy in relation to REDD+ (Tanzania Forest Conservation Group 2009).

3. CONCEPTUAL FRAMEWORK

Introduction of REDD+ project in Kilosa district, implied a change in the governance structures of forests. This concerns both changes in actor structures and institutions. Hence, to fulfill my study objectives this chapter presents theoretical framework that has been used to assess the processes behind the changes in actor structures and institutions for the Kilosa REDD+ project. The study draws from governance structure framework by Vatn (2011) Figure 1 below with its underlying theory. In the following I will define governance (Section 3.1). Next, the framework elements will be defined and discussed (Section 3.2). Third, I provide a working definition of transaction costs for this study (Section 3.3).

3.1. Governance

Governance is a wide concept that necessarily includes many aspects of a society and can be defined in various ways, and proposals abound. The general consensus though is that, governance is broader than government. It include not only actions of the state but encompass also actors such as NGOs; businesses and communities(Lemos & Agrawal 2006).

Regarding environmental governance,Paavola (2007) views environmental governance as the processes of “ the establishment, re-affirmation or change of institutions to resolve conflict over environmental resources” (p.96). Specifically, governance relates to the processes of developing social goals, as well as establishing and running systems to attain the set goals (Vatn & Vedeld 2011).

3.2. Governance structure

While conceptualizing governance as structure as discussed below, Vatn (2011) put into perspectives the following core elements: 1) actors; and 2) institutions. In what follows, I will first distinguish actors before I turn to institutions.

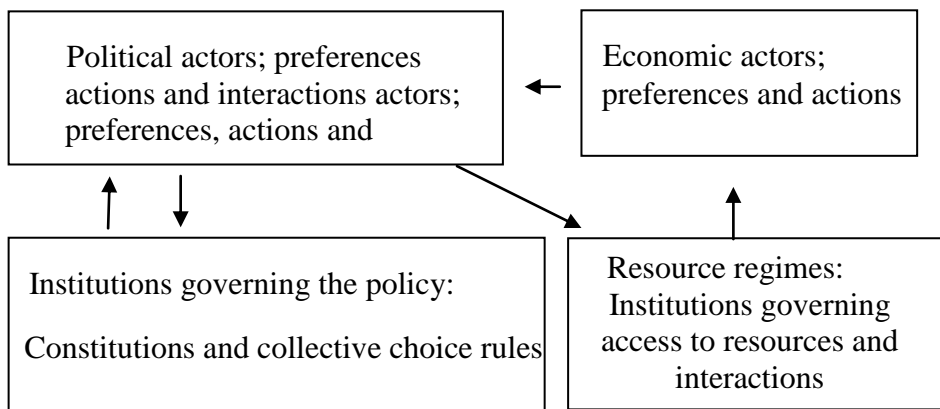


Figure1: The elements of a governance structure

Source : Adapted from Vatn (2011)

3.2.1. Actors

Vatn (2011) distinguish two types of actors, i.e., political and economic actors. Concerning the former, they are defined as those actors across levels of society with power to influence rules governing access to economic resource or benefit streams, and interactions between actors having such access.

In the context of the Kilosa REDD+ project, political actors include district officials; village councils; NGOs implementing the project (i.e., TFCG and MJUMTA); and community-based organizations, in this case village representatives (committees).

Political actors at national level, include the Parliament; government officials; NGOs etc. While at the international level, political actors include the international donor agencies and international NGOs. It is worth noting that, non-governmental organizations (NGOs) whether national or international operate across levels, basically acting as intermediaries representing different interest groups.

While the economic actors are those actors with access to economic resource or benefit streams. These may include the state; communities; community groups; and individual respectively. Again, using the Kilosa REDD+ project as an example, economic actor is MJUMITA community carbon cooperative on behalf of its members. It is important to observe that the above political actors may also be seen as economic actors, e.g., the village

government and the district. In the context of Tanzania, there is no clear cut between these actors, when it comes to the issue of forests on general land within village land boundaries.

3.2.2. Institutions

Institutions are prominent features across disciplines of social sciences and the definition of institutions itself has been the subject of contention. Even within one discipline such as economics there are divergent perspectives. For instance, there are those who define institutions based on individualist perspectives (North 1990; North 1997). Individualists claim that individuals are self-contained with predefined capabilities, as opposed to those who view institutions from social constructivist lenses (Vatn 2011). The latter tradition basically views individuals as influenced by external society in relation to their abilities, ideals and needs.

Institutions are herein understood as, conventions; norms and formally sanctioned rules (Vatn 2005; Vatn 2011). While looking at the roles of institutions on human behavior, Vatn (2011) distinguish between political institutions and economic institutions. In the following, I explain political institutions (Subsection 3.2.2.1). Next, economic institutions will be defined and discussed (Subsection 3.2.2.2).

3.2.2.1. Political Institutions

Political institutions are explained as rules regulating the policy process (Vatn 2011). According to Vatn, institutions must not only be seen as external constraints, but also as important features owing to the fact that they regularize life, support values, and produce and protect interests. Vatn adds that, while individuals create institutions, institutions also form us, and facilitate the way we interact with others— thereby influencing the costs of interactions— that is, transaction costs (Vatn 2011). Important issue concerns the source of these rules and how acceptable they are, i.e., rules derived from the constitutions and collective choice rules such as conventions.

3.2.2.2. Economic Institutions

Economic institutions are defined as institutions governing access to resources and interactions between economic actors (Vatn 2011). Basically, the former concerns property rights, while the latter concerns the rules facilitating the interactions between actors having

access to economic resources or benefit attached. In what follows I will define and discuss the basic concepts of both property rights and interaction rules.

Property rights

Property rights defines who has access to economic resource or other benefits attached (Vatn 2005). Bromley and Cernea (1989) defines property rights as “*a structure of rights and duties characterizing the relationship of individuals to one another with respect to that particular resources*” (cited in Dyngeland & Eriksson 2011, p.24). More specifically, rights are social relations specifying relationship between rights holders and rights holder under a specific authority structure, basically the state. As formal rules, they provide the legitimacy and security to the rights holders of a specific resource or benefit streams (Vatn 2005). As such, a natural classification of these property rights structures or regimes is to distinguish them as follows: (1) private property; (2) common property; (3) public property; and (4) open access (Vatn 2005).

Private property is usually thought of as a property held by an individual; but, also this applies to common property, which is privately owned by a group of co-owners. A practical example is a village land forest reserve in Tanzania, which is a property to all community members belonging to a given village or a specific group granted user rights among village members.

Public or state property is under the state ownership. As Vatn (2005) puts it, “*ownership at lower level, like the county or the formalized municipality level, is largely on the same form and could, by changing the label from state to public property, be explicitly covered by this category*” (p.256). Again in Tanzania an example is the district forest reserves and general village land forests under their jurisdiction.

Common property, as noted above is similar to private property, in the sense that co-owners are a management group that has the rights to exclude non-members. They define rights to resources, determine which benefit streams can be utilized, which members are eligible to utilize, and to what extent and means (Vatn 2005).

Open access is a situation with no property.

Interaction rules

Interaction rules are coordination structures facilitating the interactions between economic actors, while carrying out different transactions. Vatn (2011) divide interaction rules into four types, in which each type operate independently as discussed below:

First, there is exchange between parties; basically this form of interaction takes place in markets where goods and services are traded. This form of interaction takes place between equal parties.

Second, there is command, as Vat emphasizes this form of interaction '*is based on hierarchical power and the authority typically rests with the state*' (p.9).The state has both internal and external power. The former basically concerns the power of legislation, through this power the state guarantees security on legally defined property rights. Moreover, through this power, the state regulates unwanted situations such as pollutions or externalities in the language of economics by setting standards. The state further has power to collect and establish resource redistribution mechanisms. With regard to the external power, the state commands its administrative systems to enforce the rules and regulations.

Third, community-based interaction rules represent the form of interactions which are characterized by cooperation and reciprocity. And, like in markets it operates horizontally, but, with difference in the way the interactions are conducted, i.e., exchange as opposed to reciprocity.

The last option, there no rules. In this situation actors are free to do whatever they wish, irrespective of possible consequences for others. It is mostly under this situation that externalities such as greenhouse gas emissions appear due to implicit rights of emitters. Taken together i.e., access rules and the interaction rules form a specific resource regime (Vatn 2011).

3.3. Transaction Costs

As noted earlier, the main focus of this study was to generate knowledge about the level and structure of transaction costs of establishing governance structure for the Kilosa REDD+ pilot. This section seeks to provide a working definition of transaction costs analyses in the REDD+ pilot areas (Section 3.3.1).

Defining transaction costs

Arrow (1969:48) defines transaction costs as the “costs of running the economic system”. Dahlman (1979) divide transaction costs into three broad categories, i.e. as the costs of information gathering; contracting; and controlling contracts.

While the above definitions are exclusively to the market transactions, according to Commons (1934) the other types of transactions beyond markets such as: (1) Bargaining transactions (typically in markets); (2) Managerial transactions (within firms); and (3) Rationing transactions (governments, courts that distribute rights) (Vatn 2005).

Following Commons' latter element of rationing transactions, Vatn (2005) defines transaction costs as the costs of interactions between actors when establishing and running a given policy and legal regulations. Concerning REDD+, Vatn maintains that the costs of establishing and running governance structures for REDD+ are referred to as transactions costs (TCs) (Vatn et al. 2009; Vatn & Vedeld 2011).

For this study, transaction costs (TCs) are of establishing governance structure for the Kilosa REDD+ projects are there sources incurred by actors involved while undertaking the following functions:

- (1) Negotiating contracts for the pilot to get funded
- (2) General planning and administration, i.e., planning and decision-making processes through the setting-up of the REDD+ pilot project
- (3) Organizing and running of start-up information and communication programs such as the FPIC
- (4) The setting-up of the institutional basis for making REDD+ work at local level:
 - Defining necessary land rights, land use plans etc.
 - Establishing new organizations/ committees at village level.
 - Establishing the program for payments.
 - The setting-up of a monitoring, reporting and verification (MRV) program, and
- (5) general administration and accountancy (Vatn Unpublished).

4. METHODS

This chapter aims to present the study methods and materials employed. This study is related to the IIED/UMB REDD project, which has a component focused at measuring the costs of establishing and running REDD+ governance structures within REDD+ pilot projects in different countries including Tanzania. As such, a transaction costs template was developed to guide the process of data collection and their analyses (Vatn Unpublished). Moreover, the project provided a copy of the REDD+ project contract, i.e., a contract between the Norwegian Ministry of Foreign Affairs and Tanzania Forest Conservation Group (TFCG) providing the basic information and obligations of the actors involved. In the following, I provide an account of data collection processes. First I describe the research design used (Section 4.1.). Next, I explain and discuss the procedures used in selection of key informants and data collection (Section 4.2.). Third, I explain the methods used for the data analysis (Section 4.3). Lastly, I provide study limitations (Section 4.4.).

4.1 Research design

This section draws on the previous chapter as it provides an account of the analytical choices I made when approaching my elements of analysis. As mentioned, a template was designed to guide the study, i.e., specifying the study area and delimitations. As such, a case study design was used—the Kilosa REDD+ pilot project, in Morogoro region being my case study.

As Bryman (2008) puts it “the basic case study entails the detailed and intensive analysis of a single case” (p.52). More precisely, Kothari (2009) describe a case study as a strategy for doing research, which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence i.e., data triangulation. In data triangulation, he adds, data collection methods such as use of interviews, literature review and observations are recommended (ibid).

This study aimed at assessing the processes behind the establishment of the Kilosa REDD+ pilot project with focus on the process of introducing REDD+ in the district; identifying actors involved; and changes in actor structures and institutions, as well as the costs associated with such processes— here called transaction costs (TCs). Thus, as my research questions in order to address them I designed ways of obtaining and selecting the sources of reliable data based on local context as discussed below.

4.2. Selection procedures

The study objectives and the research questions demanded that identify actors with direct involvement and responsibilities in the processes of establishing the Kilosa REDD+ project, thus possessing information or knowledge about the resources involved. As such, the selection process of material and key informants to answer my research questions was based on purposive procedures.

Purposive or deliberate procedure is one of the non-probability methods, in which a researcher decides on those elements which he/she believes will be able to provide the required data (Bryman 2008). While the method is sometimes associated with greater chance of bias, it is useful and recommended particularly when the variables under investigation dictates what ought to be done in selection of both the sample and tools of data collection (Kothari 2009).

4 out of 14 villages were selected owing to the fact that they were the only villages that had established REDD+ structures through the REDD+ interventions of participatory forest management and land use planning. Key local informants included REDD+ focal person in the Kilosa district; village council representatives; and members of newly formed committees. At the project level key informants included a consultant in-charge of the project supervision at the Norwegian Embassy in Dar es Salaam, and the project developers— TFCG and MJUMITA personnel.

4.3. Data collection procedures

Primary data from the above villages primarily for my first objective were collected using PRA techniques mainly semi-structured interviews and focus group discussions. Concerning my second objective as mentioned in the previous chapter, a transaction costs template was developed to guide the process of data collection on cost categories associated with the processes of establishing the pilot (Vatn Unpublished). Many studies of transaction costs observe that there are challenges in measuring transaction costs empirically, partly because there is little professional consensus on either the definition or standard measurement of transaction costs (Antinori & Sathaye 2007; McCann et al. 2005; Nathalie & Joshua 2009; Wertz-Kanounnikoff 2008). As a result of that, Vatn (Unpublished) not only provides definition of transaction costs, it serves also as an effort to address methodological challenges

of measuring REDD+ related transaction costs— i.e., as defined both the costs of establishing and running governance structures for REDD+ pilot projects. Vatn (Unpublished) suggests the following approaches of measuring TCs:

- 1) Using accounts and interviews, particularly if the accounts are reliable. Vatn adds that interviews are important especially in cases where REDD+ developers are involved in more than one REDD+ pilot and costs associated with each pilot are not separated in accounts— yet one aims to study on of them, hence splitting of costs is required;
- 2) Interview people and make them assess the amount of time and resources they have used on specific activities of REDD+ pilot project, i.e., particularly with people marginally involved in the REDD+ activities.
- 3) Direct observation, ask people to record how much time they use on specific activities of REDD+ project and multiply with the total value of period used.

As I mentioned earlier, TFCG/MJUMITA REDD+ pilot project is comprised of two REDD+ pilot project. As such, because of the reasons discussed below, methods 1 and 2 were used. The former combined were used for objective (2), and the latter was instrumental for objective (1), i.e., at the local level as I mentioned with focus on the process of introducing REDD+ in Kilosa; identifying actors involved; and changes in actor structures and institutions. In the following I discuss the instruments that were used to collect data along the mentioned variables.

4.3.1. Interviews

Interview as a method of data collection is common and important for both qualitative and quantitative research. It is argued that when a researcher uses interview research as one of the methods for both qualitative and quantitative research, the selected respondent must have access to the information asked, understand the question asked and a motivation as to why he/she should answer the questions accurately (Bryman 2008). Interview can be structured or unstructured. While the former is highly standardized and the interviewer has to follow a predetermined or rigid procedure, the latter commonly known as in-depth interview does not follow standardized format of questioning, thus the interviewer has more freedom on how the questions are asked, and also the interviewee can speak more freely (ibid).

For this study, semi-structured interviews were employed throughout. The journey of data collection started with a preliminary survey process of selecting reliable sources of data, and understanding how the implementation process of Kilosa REDD+ pilot project is organized. Following (section 6.1) of the contract between the Norwegian Ministry of Foreign Affairs and the TFCG—which states that, “the annual financial statements of the Project shall be audited by an independent and recognized professional accountant (auditor) acceptable to MFA”(Norwegian Ministry of Foreign Affairs 2009)—I carried out one in-depth interview with the Norwegian Embassy staff responsible for the supervision of the TFCG/MJUMITA REDD+ project. As a result, I obtained the copies of audited accounts for Year 1 and 2 (i.e., 2009/09 to 2011/08, and other written information relevant to the study, including defined objectives for the TFCG/MJUMITA REDD+ project.

However, because this project encompass two REDD+ pilot project sites as mentioned earlier, and the account reports are prepared as consolidated accounts, i.e., for the whole project including the Lindi REDD+ pilot site, I carried out several interviews with the TFCG and MJUMITA staff in Dar es Salaam, involving the CEO for TFCG, Executive Secretary for MJUMITA; the project Manager and accountant. These interviews sought to establish the details of these accounts as well as to discuss with the project staff about my study objectives and delimitations. Following these interviews, I was able to establish the core actors involved in the processes of establishing the Kilosa REDD+ pilot project, and their main functions.

For the accounts, I obtained more detailed data, i.e., soft copies of raw cost data specifying the break-down of costs categories associated with each function and actors involved in the processes of establishing each REDD+ pilot site. Thus, these accounts formed the basis of establishing a fraction of costs attributable to the Kilosa REDD+ pilot project, particularly along shared costs⁸—through splitting exercise. To complement the accounts the following reports were also reviewed: the FPIC report; biannual reports and extensive document searches from the project website.

In relation to objective (1) — the data collection process at local levels employed PRA techniques, using mainly semi-structured interviews with key informant, and focus group discussions (FGDs). Concerning the former I interviewed the district forest officer, who is also REDD+ contact person in the district— the interview sought to understand the role of

⁸ The costs associated with: 1) General planning and administration; and 2) general administration and accountancy.

the district in the implementation of the REDD+ pilot project activities. With regard to the latter, I interviewed both the village chairpersons and village executive officers separately, in order to establish the roles of their respective village governments in the implementation of the REDD+ project activities.

4.3.2. Focus group discussions

A focus group discussion (FGDs) is an approach or method of interviewing a group of interviewees at the same time. This method was used in all villages studied, as such it was used to triangulate and verify underlying myths of individual response⁹. Bryman (2008) describes focus group discussion as a useful method of obtaining data through which a researcher follow the interaction between informants, while observing how they respond to each other ideas. In villages studied I brought together two committees, which had been formed to represent their respective communities in REDD+ activities to discuss the implementation processes of the REDD+ project in their respective villages, their responsibilities; decisions and resources involved. Lastly, I conducted a group interview with the project field personnel, including the TFCG¹⁰ (2) and MJUMITA¹¹ (1) — basically asking them if and how the individuals involved in project activities were paid by the project. Taken together, I was able to double-check the data collected at this level.

4.4. Data analysis

As discussed above, a template for the REDD+ pilots transaction costs analyses was developed to guide the process of data collection, and their analyses. The template provides a list of functions, as well as cost categories along which data were collected. As such, an excel spreadsheet was developed and the data were entered and analyzed respectively see Chapter 5.

4.5. Limitations

The study limitations include both technical and cultural aspects. Concerning the first aspect, the transaction costs template which guided the study had to be adjusted to the local conditions. For example the process of specifying the costs categories attributable to the

⁹ From key informants of the village councils

¹⁰ TFCG field coordinator and agricultural officer, in principle in charge of leakage activities

¹¹ MJUMITA field coordinator basically in charge of PFM activities

Kilosa REDD+ pilot project along the study cost categories was not straightforward. As such, assumptions had to be made, and this has been acknowledged and explained in Chapter 5. In addition some costs could not be obtained, for instance the costs associated with contracting process incurred by the project developer. Moreover, for decision-making costs at local level I did not include the costs of the district because this process was yet to be undertaken.

Concerning the latter aspect, particularly at local level the study involved to collect data on historical transactions, i.e., recalling the time spent on specific activities and asking payments received from the REDD+ project which proved to be sensitive issues, thus affecting the exact estimate of costs faced by actors involved.

4. ANALYSIS AND DISCUSSION

In this chapter I will present and discuss findings of the study. The main aim has been to assess the implementation processes of the Kilosa REDD+ pilot project, and accordingly: 1) characterize governance structure that had been established for the Kilosa REDD+ pilot project; and 2) generate knowledge about the level and structure of TCs of setting up the above governance structure. The analysis is based on governance structure framework explained in Chapter 3. The analysis is divided as follows: First, I provide an overview and specificities of the Kilosa REDD+ pilot project (section 5.1). Next, the processes behind the establishment of governance structure for REDD+ project will follow (Section 5.2). Finally, I present TCs analysis of establishing this governance structure (Section 5.3).

5.1. An overview of the Kilosa REDD+ pilot project

As noted in Chapter 2, the Kilosa REDD+ pilot is part of the REDD+ project known as, '*Making REDD work for communities and forest conservation in Tanzania*' located in Kilosa district, Morogoro region. The project is implemented by the Tanzania Forest Conservation Group (TFCG) in partnership with Tanzania Community Forest Network (MJUMITA) — both local non-governmental organizations. The latter aims to organize communities participating in the project, build their capacities in view of preparing them to be part of existing MJUMITA network¹². By the time of this study 14 out of 163 villages of the Kilosa district had been included in the REDD+ pilot project. These villages include Ibingu; Lunenzi Chabima; Munisagara; Dodoma Isanga; Mfuluni; Masugu Juu; Masugu Kati; Mkadage; Lumbigi; Nyali; Idete; Ilonga; and Kisongwe (see Figure 3) below.

The forest area of the project, according to the initial estimates is about 75,000 hectares. However, only 64,000 hectares are considered as potential REDD+ forests (MJUMITA Community Carbon Enterprise 2010).

The main drivers of deforestation and forest degradation in the project area, and in the district in general include shifting cultivation, fire, charcoal making, timber harvesting, firewood collection, and livestock, i.e., burning forest for pasture among others (Forrester & Baraka 2010). For all these factors, however, shifting agriculture is the prevalent direct driver

¹² In other words, becoming members of the MJUMITA Carbon Enterprise

of deforestation due to its economic returns(MJUMITA Community Carbon Enterprise 2010). The financial potential estimates for Kilosa REDD+ project Table 3 below indicates that, household opportunity cost of shifting cultivation for most communities in the Kilosa district is higher (almost triple) than the projected household REDD+ payments, based on what has been considered as a conservative price of USD \$ 5 per ton of carbon dioxide as expected.

Net present value (10% discount rate) of potential REDD+ household payments and shifting agriculture (\$)

NPV of household payments	NPV of shifting agriculture	Difference	Leverage required
1,700,000	5,700,000	-4,000,000	2.35

Source: Adapted from MJUMITA Community Carbon Enterprise (2010)

In terms of carbon contents, the project projections suggest that about 12,487 hectares of forest will be protected over a period of 30 years by the project, with an average of 69tC/ha, corresponding to about 253tCO₂ (MJUMITA Community Carbon Enterprise 2010).However, strictly speaking there are some important caveats with these estimates as MJUMITA put it:

“The first step in determining the financial feasibility of the Kilosa and Lindi project sites was to calculate the historical rates of deforestation for each area that could be used as an estimate of future deforestation rates. Under VCS REDD methodologies; this involves creating at least 3 forest/non-forest maps covering the previous 10 years. Additionally, for VCS the analysis should cover a reference region that is roughly 4 to 5 times the size of the project site. Unfortunately, this level of analysis was not possible during the current time frame, but will be completed within the next 2 months. Instead, for the purpose of this business outlook, deforestation rates were calculated for just the project sites (defined using digitized village survey maps from the Ministry of Lands) comparing satellite images from 2000 to one later image. This approach is conservative because it likely underestimates the deforestation rates of the reference regions and does not allow for the possibility of accelerating rates of deforestation caused by population growth or migration which could only be detected by examining forest cover on multiple dates during the last decade”(MJUMITA Community Carbon Enterprise 2010)

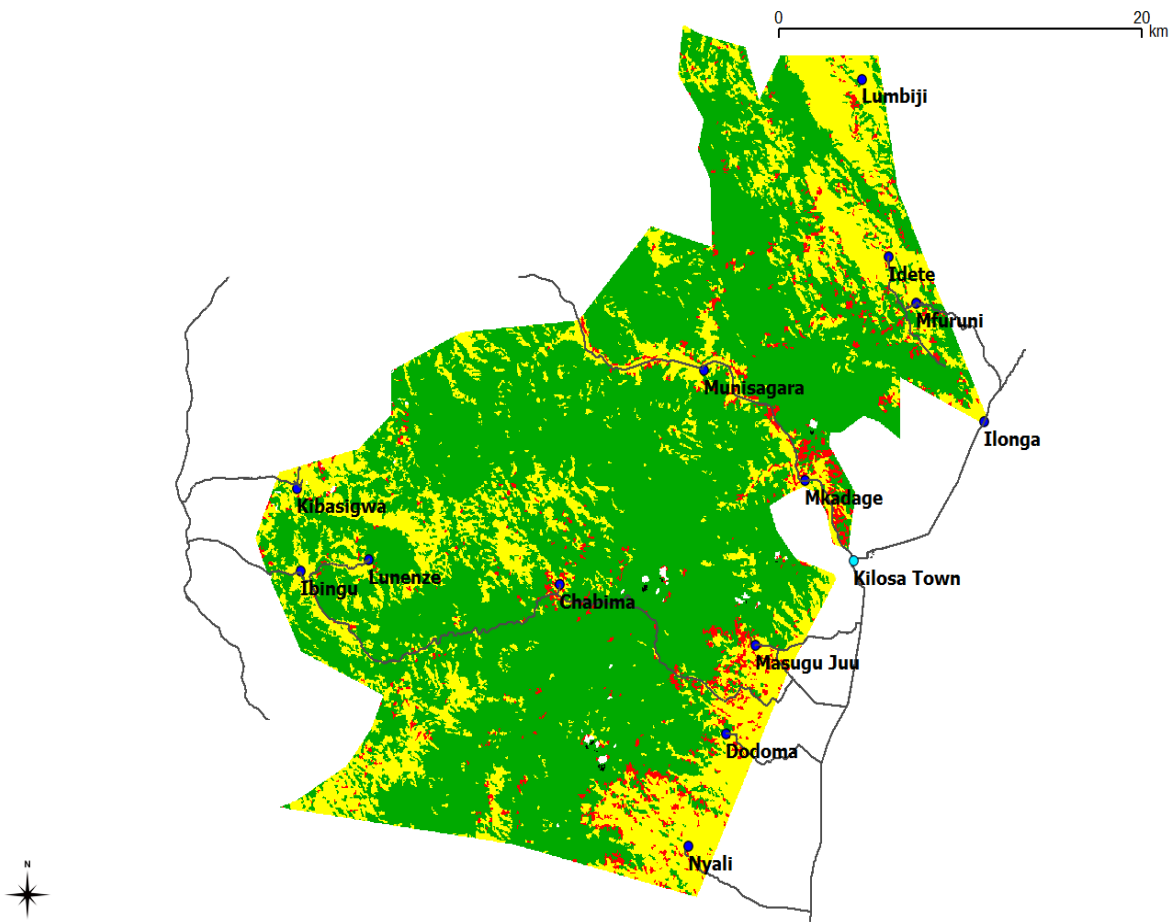


Figure 2 Map of the Kilosa REDD+ pilot site

Source: Forrester and Baraka (2010)

5.1.1. Documenting data collection process

As discussed in the previous Chapter, 4 out of 14 villages were selected for primary data collection, i.e., for objective (1). In each individual village studied, semi-structured interviews with key informants, and focus group discussions (FGDs) were used. Interviewees were selected based on their responsibilities and direct involvement in the REDD+ project activities. The interviewees included one district representative; village council representatives; members of the organizations formed; and the project field personnel.

For the objective (2), total TCs by function and actors, as well as total TCs by cost categories and actors, were collected using audited accounts of the project and interviews of the project staff. As discussed in Chapter 4, collection of data for this study started with the process of

selecting reliable sources of data, as such I held one interview with Mr. Simon Milledge¹³ at the Royal Norwegian Embassy in Dar es Salaam, which among others sought to obtain certified accounts of the REDD+ project.

Following the interview I obtained the copies of audited accounts for Year 1 and 2 (i.e., as of 2009/09 to 2011/08), and other written information relevant to the study including defined objectives for the TFCG/MJUMITA REDD+ project. On the basis of these reports I further carried out interviews with the TFCG and MJUMITA staff, including the CEO for TFCG, Executive Secretary for MJUMITA; the project Manager and accountant in order to have more clarifications on these accounts as discussed in Chapter 4.

In total, 65 key informants' interviews were conducted with the actors at the project, district and village levels. Moreover, the following documents and reports were reviewed to supplement the above sources: the project design document; biannual progress reports; baseline study reports; FPIC report; and extensive document searches from the project website (Forrester et al. 2011; MJUMITA Community Carbon Enterprise 2010; Tanzania Forest Conservation Group 2009; TFCG 2010; TFCG & MJUMITA 2010a; TFCG & MJUMITA 2010b; TFCG & MJUMITA 2011a; TFCG & MJUMITA 2011b).

5.2. The governance structure for the Kilosa REDD+ pilot project.

This section will present the processes behind the establishment of the Kilosa REDD+ pilot project. First, the actors involved in the implementation processes of the project are presented (Section 5.2.1). Next, I explain the institutional context for the implementation of the project interventions (Section 5.2.2). Third, the process of introducing REDD+ project through the FPIC process are presented (Subsection 5.2.3.). Fourth, the organizations and institutions established are presented (Subsection 5.2.4.).

5.2.1. Actors involved in establishing the Kilosa REDD+ pilot project

While characterizing the governance structure for the Kilosa REDD+ project that had been established, the focus was on political actors, i.e., their preferences and actions (Vatn 2011). As mentioned earlier, through the REDD+ pilot project TFCG and MJUMITA aims to make

¹³ Environment/climate change consultant for the Norwegian Embassy in-charge of the REDD+ pilot projects.

REDD+ work for communities and forest conservation, by providing financial incentives to the village level forest managers through established REDD+ payments system also referred to as the '*Tanzania Community Carbon Enterprise*¹⁴', which will function within the existing MJUMITA structures based on demonstrated emission reductions from deforestation and forest degradation within and outside their respective village land forest reserves (MJUMITA Community Carbon Enterprise 2010).

The above model is based on participatory forest management, with a focus to community-based forest management, as REDD+ regime. According to the project documents, MJUMITA Carbon Enterprise will act on behalf of the REDD+ communities as service provider, i.e., the MJUMITA enterprise will aggregate REDD+ credits generated by these communities, market and sell them. Accordingly, the enterprise will receive and manage, and distribute the accrued revenues through established village level REDD+ by laws—containing the rules which will govern the distribution of REDD+ benefits (Tanzania Forest Conservation Group 2009). In the following actors involved in establishing the above governance structure for the Kilosa REDD+ project are presented.

¹⁴ 'Cost-effective model'

Box 1. Tanzania Forest and Conservation Group (TFCG)

Tanzania Forest Conservation Group has over 20 years' experience in working with issues relating to forest conservation in Tanzania. Through TFCG's five programmes: advocacy, participatory forest management, environmental education, community development and research, TFCG has succeeded in rolling out innovative and high-impact solutions to the challenges facing Tanzania's forests and the people that depend on them. In particular, TFCG has been active in advocating for improved forest management and reduced deforestation throughout this period. TFCG has been at the forefront of the national awareness campaigns on forest conservation including the implementation of the information, education and communication component of the recent UNDP/GEP Conservation and Management of the Eastern Arc Management project and the development of the national communication strategy for the national forest programme and the participatory forest management programme. TFCG has also been active in promoting practical solutions to reduce deforestation and carbon emissions including the participatory forest management, improved land use, improved agriculture, fuel efficient stoves, and tree planting. TFCG has also been actively involved in developing an advocacy strategy with other Southern Civil Society Organizations in UNFCCC meetings to make carbon financing for REDD to be more pro-poor. In addition to advocating for improvements in REDD at the international level, TFCG is eager to pilot such an approach within Tanzania. To achieve this, TFCG will work closely with the Tanzanian Community Forest Conservation Network MJUMITA

Source : (Tanzania Forest Conservation Group 2009).

Figure 3 below shows the administrative structure of the Tanzania Forest Conservation Group. It is important to note that the Kilosa REDD+ field office is only for field level activities. The office is shared by both organizations, i.e., two personnel from TFCG and three personnel including a driver from MJUMIA.

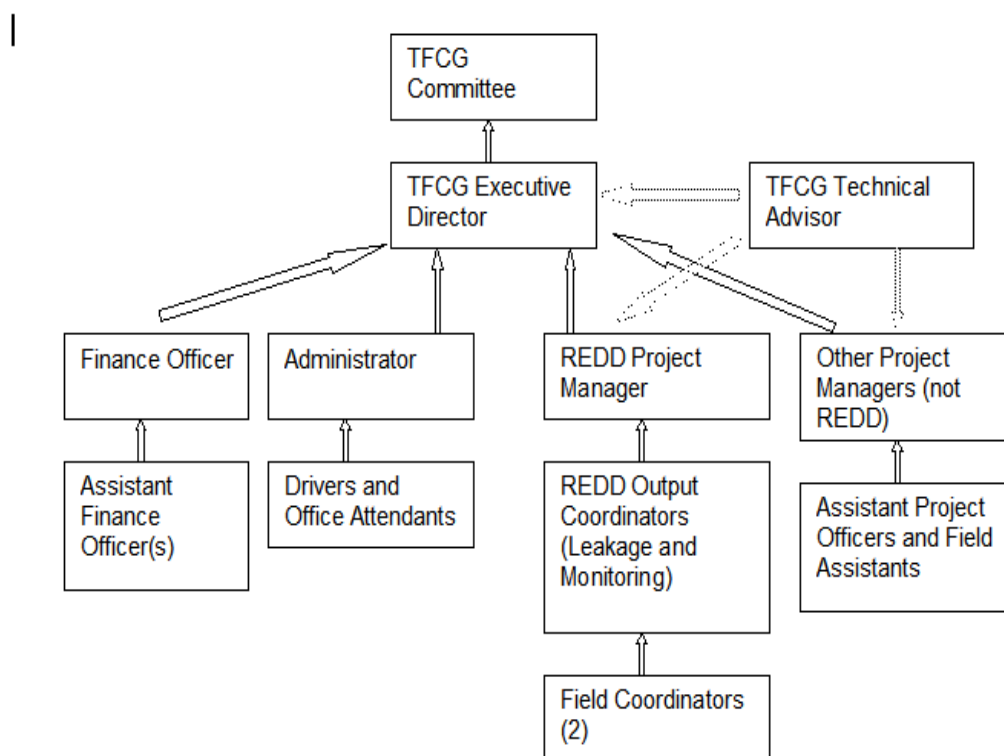


Figure 3 Organizational structure of TFCG

Source: Adapted from Tanzania Forest Conservation Group (2009)

Box 2: Tanzania Community Forest Conservation Network (MJUMITA)

MJUMITA is a national network of community groups involved in participatory forest management. The network provides a forum for capacity building, advocacy, and communication for these groups. It was established originally in response to the need for a forum for communities to share experiences with regard to participatory forest management and engage in dialogue with the Forestry and Beekeeping Division on ways to address policy, legal and implementation issues in relation to PFM. MJUMITA currently has 72 affiliated local area networks which are made up of Village Natural Resource Committees (VNRCs), and Environmental user groups. The local level networks are registered legal entities or are in the process of being registered. MJUMITA members are present in 22 districts, 318 villages and representing around 500 user groups or VNRCs involved in participatory forest management countrywide. MJUMITA has maintained good working relations to government, particularly FBD, other CSOs working within the Natural Resource Management sector as well as relevant university departments. MJUMITA was initially supported by TFCG starting from 2000 and became an independent NGO in 2007. MJUMITA is currently engaged with an internal change management process that aims at strengthening the organization as a whole with a view to improving the delivery of support to community networks and engaging constructively in policy dialogue. Many lessons have been learned by MJUMITA with regard to community networking on participatory forest management and from the community forest network in Nepal, FECOFUN, who have been actively engaged in representing community forestry interests at national and policy levels.

A key issue that continues to be raised by MJUMITA members is the need to increase benefits, particularly cash incomes, from participatory forest management. Many members claim that the revenues from participatory forest management are not sufficient to cover the costs of forest management and that incentives must be increased if forests on village land are to be protected in the long term. The stage of competence MJUMITA has reached as a National Community Forestry Network makes it a relevant partner in the endeavor of making REDD and the carbon market work for communities and sustainable forest management in Tanzania” (ibid).

Source: Tanzania Forest Conservation Group (2009)

The figure below depicts MJUMITA in the context of the Tanzania community carbon enterprise.

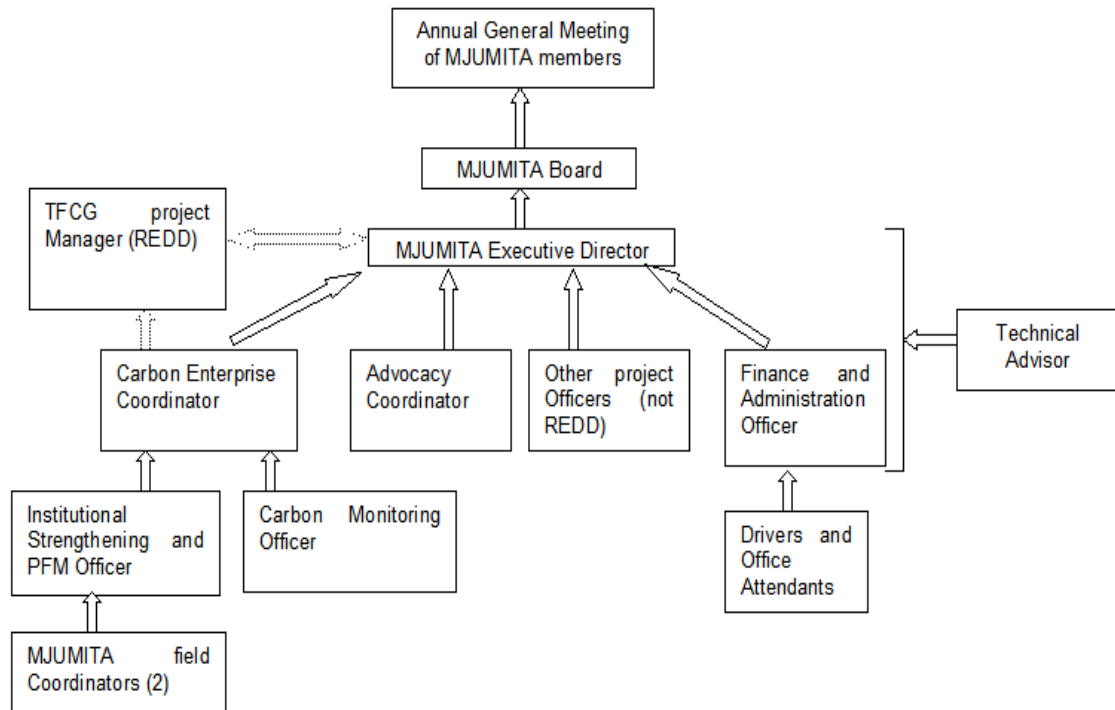


Figure 3: Organizational structures for MJUMITA

Source: Adapted from Tanzania Forest Conservation Group (2009)

Table 2 presents the summary of the TFCG/MJUMITA REDD+ project expected outcomes and other partners involved. These partners have supported the establishment of the Kilosa REDD+ pilot project at different levels. To be consistent, the next discussion will focus on output 1— local government (joint planning and implementation of field level activities), i.e., the decisions and procedures guiding these processes/activities.

Table 2: Summary of involved actors and expected outcomes

Output	Lead Agency	Support
Output 1: To set up Carbon financing for MJUMITA community forest	MJUMITA	SUA (with regard to developing participatory carbon monitoring). Katomba Group (marketing VERs, financing mechanism, carbon baselines) Local government (joint planning and implementation of field level activities) Care International Poverty, Environment and Climate Network through in puts on cooperative structure and legal issues
Output 2: Reducing Leakage	TFCG	Local governments (assistance with tree planting, improved agriculture and bylaw formulation) RECOFTC (preparing and implementing training programme on community forestry, REDD and leakage training programme)
Output: Documentation, Monitoring, Evaluation and Learning	TFCG	Katomba Group (forums at national and regional level to disseminate project findings and lessons TNRF in the production of simplified guides and updates
Output 4: Advocacy at national and international levels	MJUMITA	Care International Poverty, Environment and Climate Network and Katomba Group (advocacy processes at the international level)

Source: Adapted from Tanzania Forest Conservation Group (2009)

5.2.2. Institutional context for implementation of the REDD+ interventions

As discussed in Chapter 2, the Tanzania Forest Act 2002; Local Government Act 1982; Land Act 1999; and village land Act 1999 provides the legal framework for the villages to manage forests resource¹⁵ through the implementation of participatory forest management. In relation to this TFCG/MJUMITA REDD+ pilot project focus on establishing community-based forest management, i.e., putting general land forests, i.e., de facto open access within village land boundaries under village land forest reserves (VLFRs). However, as I said this process of institutional change—requires a village or villages which intend to set up community-based forest management to fulfill the formalization steps spelled out under the PFM guidelines (see Table 1, p.12).

In brief, the proposed village general land forest must be surveyed and demarcated. Next, a village natural resource committee must be established through election; then the forest management plan and corresponding by-laws must be drafted and approved by the village general assembly. Following the village level approval, village council must submit them together with the map of the proposed village forest reserve to the District Council for the review and approval (United Republic of Tanzania 2002). When the district council approves these documents, then the village land forest reserve is registered/or formalized by the district. Following this legal formalization, the village council is granted executive power to manage and enforce established forest management plans and by-laws containing rules and sanctions through the village natural resource committees.

Furthermore, despite the continued lack of international REDD+ binding convention —high level decision-making procedures or rules have been developed to guide early actions of REDD+. Following Bali decision, and in accordance with the United Nations Declaration on the Rights of Indigenous Peoples (UN DRIP)—UN-REDD+ developed guidelines to inform the implementation of REDD+ activities on the ground. These guidelines emphasize the principles of free, prior and informed consent (FPIC) as the preconditions to the countries participating in the program. In what follows I provide an overview of these FPIC elements, before I present how they were fulfilled in Kilosa.

¹⁵ Note that, carbon as new forest resource is not yet defined.

5.2.2.1. Free, Prior and Informed Consent (FPIC) principles

UN-REDD (2011) defines the FPIC principles as follows:

Free concerns, a process that is self-directed by community from whom consent is being sought, unencumbered by coercion, expectations or timelines that are externally imposed (p.8). Prior concerns “to a period of time in advance of an activity or process when consent should be sought, as well as the period between when consent is sought and when consent is given or withheld (ibid). While informed concerns “to the type of information that should be provided prior to seeking consent and also as part of the ongoing consent process” (ibid)

Consent relates to, “the decision made by indigenous peoples and other local communities reached through their customary decision-making process. The collective right to give or withheld consent applies to all projects, activities; legislative; administrative measures; policies; and their associated processes and phases that directly impact the lands, territories, resources, and livelihoods of indigenous peoples and other local communities. Consent must be sought and granted or withheld according to the unique formal or informal political-administrative dynamic of each community (ibid).

Anderson (2011) views FPIC as, “the establishment of conditions under which people exercise their fundamental right to negotiate the terms of externally imposed policies, programs, and activities that directly affect their livelihoods or wellbeing, and to give or withhold their consent to them” (p.15). While looking at issues of transparency and participation Lyster (2011) asserts that, “it is essential for indigenous peoples and local communities to be able to access information about: where REDD+ sites will be established; who will manage the sites; how they will be impacted by the establishment of sites and the legal obligations which they will have within the sites; what financial benefits will be distributed for managing REDD+ sites; and, importantly, what financial benefits they are likely to receive” (p.2). To what extent were the communities involved in the FPIC process in Kilosa then? The following subsection accounts the process.

5.2.3. Application of FPIC in Kilosa

In June 2010, in line with the FPIC requirements, REDD+ project developers— TFCG and MJUMITA initiated a process of informing the communities which had been selected to participate in the project about REDD+(Katomba group 2010),and the REDD+ pilot project plans. The consultation process started with the official launching of the REDD+ project to the Kilos district authorities. The report documenting the FPIC process, says that the official launching ceremony was attended by the District Council and Village Government officials from the villages participating in the project(Forrester et al. 2011).

According to the District Forest Officer, who is also the REDD+ contact person in the district—the officials of the district received well the plans of the project presented to them, and accordingly the district authorities assured the project Manager, Bettie Luwuge who represented both organizations cooperation whenever needed (A. Mazingira, pers.comm, 2011). Following the official launching, TFCG/MJUMITA personnel in collaboration with the District Natural Resource Office (DNRO) conducted what is described as intensive consultative sub-village level meetings for a period of about 4 months across 14 villages. According to the report which documented the FPIC process, sub-village level meetings aimed at reaching all community members, including marginalized groups(Forrester et al. 2011).

The report further indicates that, villagers who attended the meetings were provided time to express their concerns, through a question and answer session in each sub-village meeting. It is emphasized that the REDD+ team informed villagers about their right to accept or reject the REDD+ project, and that once they accept the project, they will be required to elect their representatives to be involved in the REDD+ project activities. The report says also that, through consensus villagers consented to implement the REDD+ project. The following table presents the level of villager's participation in the FPIC process relative to the total adult population across 14 villages.

Table 3: Sub-village meetings through FPIC process (From August to November 2010)

Village	Adult population	Sub-village	Attendance		Total attendance
			Men	Women	
Ibingu	658	4	118	49	167
Lunenzi	270	2	63	24	87
Chabima	520	3	88	41	129
Munisagara	958	4	85	53	136
Dodoma Isanga	850	3	113	101	214
Mfuluni	442	3	88	73	161
Masugu Juu	95	1	51	30	81
Masugu Kati	264	1	72	51	123
Mkadage	285	1	44	14	58
Lumbigi	1787	3	209	74	283
Nyali	1162	11	198	234	432
Idete	726	5	139	72	211
Ilonga	2962	7	213	206	419
Kisongwe	1711	3	71	21	131
Total	12679	51	1552	1043	2632

Source: Modified table adapted from Forrester et al. (2011)

Table 3 above shows the total adult¹⁶ population from 14 villages who participated in the FPIC meetings. The data suggest that only about 21 percent of the total adult population attended consultative meetings, hence representing those consented. Of the total number of attendees women represented about 40 percent, whereas men accounted for 60 percent. The table further indicates that, the number of sub-villages per village range from 1 to 11, with an average of about 4. For the 4 villages studied the attendance varied significantly— exception of Dodoma Isanga, for the rest it appears women were poorly represented.

While the data suggests the overall poor attendance, the report documenting the FPIC process writes that, “ *although FPIC is a long term, ongoing approach, so far it appears to have been effective, particularly in its principle aim of providing information for as many people as possible about and of gaining their consent* (ibid, p.31). The report further suggest that while the FPIC process was length exercise the project staff were able to involve all stakeholders, thus emphasizing that the anticipated outcomes will be sustainable. However, one wonders if 21 % represented the views of all those that did not participate in this crucial decision-

¹⁶ An adult person according to the Tanzanian law must have 18 years of age.

making process. For example, there are concerns with Masai community; experience from the focus group discussions I held revealed that the Masai communities did not participate in all sub-village meetings, and surprisingly the participants (community representatives) voiced satisfaction with them not being part of the process. In fact the FPIC report summarized this issue, as under:

“One group who were not represented was pastoralist in Kilosa. In some villages (e.g. Chabima, Dodoma Isanga, Masugu Juu, Nyali, Ibingu) Masai and Barabaig may pass through to graze their cattle, particularly, in the dry season. In Chabima, there have been conflicts with Masai livestock keepers grazing cattle in the forest, and during land use planning, people were hostile to the idea of setting aside an area of grazing – ‘we don’t want this’, they objected, because then Masai will come to this area’. No pastoralists came to the sub village meetings, although they were expected in Dodoma Isanga and Nyali (ibid).

Three out of four villages studied are mentioned above, and indeed these villages expressed their anger and hostility towards Masai when I asked them to describe the exercise of land use planning and issues involved. The common argument in all FGDs exercise was that, they did not allocate land for grazing due to the fact that doing so could imply granting Masai access to their land. I asked if they or other community members do not keep animals like cows, goats etc., and the responses I received were not convincing. In fact, they did not like to discuss the issue of Masai at all.

Unlike FGDs, however, village council members I interviewed in Dodoma Isanga and Chabima revealed that village leaders seem to be worried of this issue because of ongoing conflict between two communities, i.e., farmers and pastoralists (Benjaminsen et al. 2009)—they argued that REDD+ might exacerbated this protracted conflict, particularly in Dodoma Isanga where village leaders voiced concerns about the issue of land shortage. While the REDD+ project implementers committed extra resources in order to create awareness among the Masai community— as part of the broader leakage strategies, this conflict will be one of the challenges that could be beyond the capacity of the REDD+ project to handle, thus negating the efforts possibly gained.

5.2.4. Organizations and institutions formed

5.2.4.1. Organizations

As I mentioned above, villagers were informed about what it implied once they accept to implement the REDD+ project. According to the village council representatives I interviewed, as part of the FPIC process each sub-village through election 2 members were elected to represent their respective sub- villages at village level. Interviewees added that, following sub-village elections, each village council convened a village general assembly meeting to approve the elected sub-village individuals as members of village level committees in the REDD+ activities. Following the approval of these committees, village assembly also officially launched the implementation of REDD+ project activities. Note that, village level committees include two independent committees, i.e., village natural resource committee (VNRC) and village land use committee (VLUC).

In Chabima; Dodoma Isanga; Ibingu and Kisongwe each Village Natural Resource Committee is comprised of at least 12 members and 10 for village land use committee respectively. According to village council officials one of the criteria during election of sub-village members was at least to have one third of committee members as women—irrespective of their level of illiteracy. The formation of these committees as well as the approval of REDD+ project by village general assemblies, created the basis of initiating the processes of setting up community-based institutions.

5.2.4.2. Institutions

Integrated PFM

As noted earlier, through the implementation of participatory forest management measures, notably the community-based forest management village government could be granted executive rights to manage the village land forest reserve, through an elected natural resource committee(United Republic of Tanzania 2002). Community-based forest management takes place on general land forest, i.e. De facto open access within village land boundaries governed by the Land Act 1999— hence in order for the villages to set up CBFM—the proposed general land forest must be surveyed, demarcated and formally transferred to the village land following National FM guidelines.

In the context of REDD+ issues, TFCG/MJUMITA adopted an integrated approach of participatory forest management, i.e., combining PFM and land use planning exercise— that is, as part of village land formalization process, and also implementation of leakage plans to address local drivers of deforestation. Like PFM the latter exercise is done also in line with the National land use planning commission guidelines and Land Use Planning Act 2007.

As mentioned in Chapter 4, in each individual village studied, through the participatory processes involving the district land surveyor; village natural resource committee; village land use committee; and village council representatives— the project field staff facilitated the establishment of community-based forest management. According to the village council interviews and focus group discussions—village land allocation process was based on the village land size and villagers needs. Examples of different types of land use allocated in almost all villages studied include the land for settlement; cultivation; village land forest for sustainable use; and village land forest reserve. When I asked in FGDs about the land for grazing, they said there are no pastoralists among them (see discussion under the FPIC process above).

Following the establishment of community-based forest management as REDD+ regime, the project staff further facilitated the processes of drafting and approval of the following management institutions: 1) village land use plans and corresponding by-laws; 2) forest management plans including by-laws; and 3) the REDD+ by-laws. Concerning the latter, they are rules which will govern the distribution of expected REDD+ benefits. By the time of this study, however, these documents had been submitted to the district council, but they were awaiting approval before they could be enforced as per the Forest Act 2002.

Furthermore, as an outcome of the FPIC process and the above processes of setting up governance structure for the Kilosa REDD+ pilot project, each village government together with the community representatives signed a contract with MJUMITA field personnel who also signed on behalf of the MJUMITA Carbon Enterprise. According to the FPIC report the roles and responsibilities of the communities, include not least to: 1) effectively enforce the rules and plans, as the operational tools for the management and conservation of the forests under their jurisdictions; and 2) seek consent from MJUMITA before they can be involve in any other project(s) which might be in conflict with MJUMITA Carbon Enterprise interests.

To ensure an effective and coordinated flow of information the report states that: *“One person will be appointed as community communication facilitator. He/she will act as a channel for information and feedback between the project and the communities (ibid, p.19).* It is important to note that, it was not yet clear at the time of this study to establish who will be exactly the REDD+ beneficiaries— that is, in the context of the community carbon enterprise. As the notion of rewarding village level forest managers as stipulated in the project documents is confusing when it comes to the concept of individual dividend or payment to every village member including children.

5.3. The level and structure of costs of establishing governance structure for REDD+ project in Kilosa.

This section presents TCs analysis of establishing the aforementioned governance structure for the Kilosa REDD+ pilot project. The analysis is structured as follows. First, total TCs summed up by function and actors are presented and explained (Subsection 5.3.1). Next, village level costs of 4 villages studied are presented and explained (Subsection 5.3.2). Third, total TCs by cost categories and actors are presented (Subsection 5.3.3). Lastly, TCs per hectare of expected forest to be protected and per ton of carbon dioxide expected to be avoided are presented (Subsection 5.3.4).

5.3.1. Costs by function and actors

Table 4 below presents the range of total TCs by function and actors. Total costs share of each function, i.e., general planning and administration costs; general administration and accountancy costs; the FPIC process costs; and institutions and MRV system set up costs range from 2 to 68 percent of the total TCs. In the following subsections the costs categories associated with each function are further explained.

Table 4: Set-up Costs by function and actor (\$)

Functions	TFCC		MUJUMITA		District	Village ¹	Villagers	Sum 1	Sum 2
	H.O	L.O	H.O	L.O					
General planning and administration								909489	1331281
- Site selection	1494		833					6448	
- Drivers of deforestation and forest degradation analyses								4772	
- Development of participatory plans to address leakages		20748						20748	
- Capacity building on PFM, Leakage and REDD+					4346			86929	
- Study tour in Zambia on conservation agriculture	4858							4858	
- Agricultural strategy design	10773				14626			25399	
- Environmental education for primary school teachers	5886							5886	
- Participation in trade events with regard to the carbon market	2432							2432	
- Study tour in Namibia on benefit-sharing	1266		3663					4929	
- Participation in international REDD+ related meetings	50449							50449	
- Advocacy strategy development					2303			2303	
- MUJUMITA meetings and workshops			29835					29835	
- Meetings with MPs			1157					1157	
- Project advisory committee meetings	1013				652			1665	
- Mid-term and annual participatory evaluation meetings	21877							21877	
- HIV strategy design for the project					2221			2221	
- Presentation of the REDD+ project at relevant meetings	6746							6746	
- TV and Radio programmes					26785			26785	
- Policy briefs & Arc Journal					6686			6686	
- Participation in National events - Environmental day			2463					2463	
- Personnel and office costs	167434	113348	127579	186540				594901	
Sub Total	274228	134096	165530	186540	144749	4346		909489	909489

¹ Village encompass Village Council and village level Committees (community representatives)

Continuation Table 4												
General administration and accountability												
-	Administrative and finance overhead costs	64849	9132	33938		5606						
	Sub Total	64849	9132	33938		5606					113525	113525
The FPIC process												
-	Contract negotiation through FPIC process	592	10452	162	4719	1688				5447	23060	
	Sub Total	592	10452	162	4719	1688				5447	23060	23060
Institutional building												
-	Formulation of internal regulations for the cooperative			5622								5622
-	Establishment of CBFM:											
-	Surveying & formulation of village land use plans		19850				41001	31542				92393
-	CBFM establishment - demarcation of VFRs.				32947		33872	52004				118823
MRV system:												
-	Setting up of carbon monitoring procedures	226						15007				43245
-	Setting up of internal M, E and C plan	5537						6161				11698
-	Project staff training on Social Impact Assessment	9272										9638
-	In-depth biodiversity surveys								3788			3788
	Sub Total	15035	19850	5988	32947	37961	74873	98553		5447	285207	285207
GRAND TOTAL		354704	173530	205618	224206	190004	79219	98553		5447	1331281	1331281

5.3.1.1. General planning and Administration

As mentioned earlier, general planning and administration are part of the shared costs with the divide pilots. As discussed above, the potential REDD+ forest area for the Kilosa REDD+ pilot is about 64 000 ha, whereas the potential REDD+ forest area for the Lindi REDD+ pilot project is about 53 000 ha (MJUMITA Community Carbon Enterprise 2010). Thus, in order to

ascertain the costs attributable to the Kilosa REDD+ project, a simplified formula was developed for the splitting exercise based on the percentage 55 % of the total potential REDD+ forests.

Table 4 shows that the total costs of general planning and administration account for 68 % of the total TCs. While breaking-down the cost of general planning and administration by actors as per Table 4— personnel and office costs are significant costs constituting about 65 % of the total costs of general planning and administration. The other costs constituting general planning and administration include consultancy costs. Consultancy costs account for 16 % of total costs of general planning and administration. These costs include the costs associated with the processes of establishing baseline studies, including site selection; leakage strategy development, i.e., analysis of drivers of deforestation and stakeholders, agricultural strategy design, and capacity building through training on PFM, leakage and REDD+; advocacy strategy development including overall awareness campaigns through policy briefs development and distribution and participations in various national and international meetings and HIV strategy development for the area under the project. These costs include also the costs associated with internal monitoring, evaluation and communication processes of the project progress through periodical evaluation meetings and workshops which bring together the project staff and partners, and the management of the project website.

5.3.1.2. General administration and accountancy costs

General administration and accountancy costs include personnel costs for support staff and office costs. These costs account for about 9 % of the total TCs.

5.3.1.3. The FPIC process costs

Following the FPIC process described earlier, Table 4 indicates that the costs of the FPIC process represent about 2 percent of the total TCs. The FPIC costs include the costs of the project personnel; the district representatives; and the village council representatives as compensation of their time spent in the FPIC process (i.e., allowances), as well as consumables borne by the REDD+ project. However, while the study was able to understand that the village council officials were satisfied with the compensation they received; it was not possible to establish whether the district officials involved, i.e., the district forest officer and his senior— the district natural resource officer were happy as well.

During my interview with him he neither responded positively nor negatively. Nevertheless, given the fact that the meetings had to be scheduled according to their availability— which is one of the factors that was mentioned to be behind the FPIC process taking longer than expected— it is assumed here that their time allocated to the REDD+ activities represented low opportunity cost; given also that the REDD+ project provided transport It is assumed here that their allowances were reasonable.

In relation to the villagers cost, i.e., their time value or opportunity cost of participating in the FPIC process Table 5 below presents the estimates.

Table 5. Villagers opportunity cost (\$)

Village	Population(Adult)	Sub-village	Total attendance	Duration (Hrs.)	Costs
Ibingu	658	4	167	10	313
Lunenzi	270	2	87	5	82
Chabima	510	3	129	9	218
Munisagara	959	4	136	12	306
Dodoma Isanga	850	3	214	10	401
Mfuluni	442	3	161	6	181
Masugu Juu	95	1	81	2	30
Masugu Kati	264	1	123	4	92
Mkadage	285	1	58	3	33
Lumbigi	1788	3	283	13	690
Nyali	1162	11	432	20	1620
Idete	726	5	211	10	396
Ilonga	2962	7	419	11	864
Kisongwe	1711	3	131	9	221
	12679	51	2632	124	5447

Source : Modified table adapted fromForrester et al. (2011)

Table 5 above shows the summary of the adult population attendance in the FPIC meetings in each village and total time (hrs.) spent. In order to ascertain the opportunity cost of villager’s participation in each village meetings—their time spent were converted in monetary terms using an average village farm wage rateof2500 TSHS about USD \$ 1.5 per day for 8hrs — which was determined in focus group discussions. Hourly wage estimates of USD \$ 0.19

(i.e., \$ 1.5/8hrs) was multiplied by the number of attendance, and then multiplied by total hours per village. The estimates added up to about USD \$5447.

5.3.1.4. Institutions building costs

Institutions set up costs include the costs of establishing the land use plans and corresponding by-laws. These costs also include the costs of establishing village forest reserves and associated structures including the village forest management plans and by-laws, as well as the REDD+ by-laws as discussed above. The total costs of establishing community-based forest management in 14 villages as a percentage of the total TCs account for 16 %. These costs include the costs associated with awareness raising, village land boundary verification; conducting participatory forest resources assessment (PFRA) including identification of REDD+ village forest reserve and mapping; drafting and approval by village assemblies of the above management institutions; and administrative costs, i.e., allowances and consumables.

It is important to note that these costs do not include the costs associated with the decision making process at the district level, i.e. the review and approval of the above documents by the district council. In terms of the costs associated with the follow up process of village land titles, these will be part of the general planning and administration costs which will be captured in the second phase of TCs analysis.

5.3.1.5. MRV system costs

For the MRV system, TFCG/MJUMITA REDD+ project is required to develop two types of PDDs, i.e., one that is developed in accordance with the Voluntary Carbon Standards (VCS) and the other developed following Carbon, Community and Biodiversity standards (CCB). As such, the MRV costs include costs associated with the ongoing processes of establishing the project baselines, i.e., accounting deforestation rate with use of both remote sensing technologies and ground measurements consistent with voluntary carbon procedures. The costs include also the costs associated with capacity building through training of the project staff -GIS officer and the village natural resource committees on-ground level monitoring and reporting procedures. Concerning the costs of setting up social and biodiversity baseline, the associated costs include the costs of training the project staff on social impact assessment; the costs of village visioning exercise; and the costs of carrying out in-depth biodiversity surveys

within the project area. Meanwhile, it is worth noting that the costs of MRV reported herein are underestimated due to the fact that, by the time of this study the processes of establishing the project baselines were still in early stages. For instance, as noted above apart from social impact assessment study that had been completed through village visioning exercise, the processes of accounting deforestation rate had not yet started (TFCG & MJUMITA 2011b).

5.3.2. Village level costs (\$)

This subsection presents the village level costs by function between 4 villages studied.

Table 6. Village Costs(\$)

Function	Village				Sum ¹	Sum ²
	Ibingu	Chabima	Dodoma Isanga	Kisongwe		
LUP	10843		7567	7988	26398	92393
CBFM	8319		4846	6730	19895	69633
Village office Construction				8569	8569	119966
	19162		12413	23287	54862	281992
Area (ha)	2505	2123	2590	3392		

Sum1: presents total TCs of 4 villages **Sum 2:** presents total TCs of 14 villages
(Using scale up method)

Table 6, indicates that the costs by function between villages vary less compared to their respective village forest area. The possible explanation for this relative low variation is mainly twofold. First, the processes of carrying out these tasks are focused at village level and the facilitators, i.e., TFCG and MJUMITA field staff use a set format across villages. Second, because most villages are located far away from the field office, as part of the overall strategy of reducing costs, particularly costs related to consumables such as fuel as well as maintenance, the field staff camp in the villages when carrying out these tasks.

Concerning the costs of village office construction, only the costs of one village was available by the time of this study, and it is expected that all participating villages will benefit from this support because village office will be shared between the village council; village land registrar; and MJUMITA networks in their respective villages. Hence, the study assumes the above costs as maximum estimates. Perhaps the next phase of TCs analysis will have to test this assumption by looking at the costs of other village offices that are likely to be finished by now, like Chabima village office which was under construction. These costs

include the costs of brick-making machine and other construction related materials such as cement, roofing materials, windows, doors and office equipment.

However, although the villages studied had established REDD+ by-laws, by the time of this study these by-laws were provisional. In other words MJUMITA was still making consultations on the payment modalities and organizational structures, i.e. how REDD+ money or other benefits should be distributed and who should handle the distribution. It appears that— MJUMITA carbon enterprise has been institutionalized through village level REDD+ by-laws defining the rules of REDD+ benefits distribution, as well as a special committee which will handle the distribution aspects has been established in each village (Vatn, A. pers. Comm., 2013). As such, the above village level costs do not reflect the costs associated with these processes. Whether these will increase the overall costs of village level costs (sum²), it is not easy to predict.

5.3.3. Costs by cost categories and actors

Table 7 below presents the break-down of costs by cost categories and actor associated with the above functions of setting up the Kilosa REDD+ pilot project.

Table 7. Costs by cost categories and actors (\$)

Categories	TFCG	TFCG	MJUMITA	MJUMITA	Consultancy	District	Village	Villagers	Sum
	Head office	Local office	Head office	Local office					
Personnel costs	232283	113348	161517	186540	190004	79219	98553	5447	1063868
Office costs incl. consumables	35753	60182	23508	37666	0	0	0	0	157109
Travel costs	59005	0	3663	0	0	0	0	0	62668
Capital assets	27663	0	16930	0	0	0	0	0	44593
TOTAL	354704	173530	205618	224206	190004	79219	98553	5447	1331281

Table 7 shows that total costs by cost categories falling upon actors varied significantly. These costs range from almost zero percent, i.e., opportunity cost of villager's participation in the FPIC process to 40 percent of total TCs. 40 percent represents summed personnel, office, travel, and capital costs for both TFCG and MJUMITA head office, including MJUMITA carbon enterprise. Villagers opportunity cost is insignificant of the total TCs, because they are marginally involved in the REDD+ activities, as noted their participation beyond the FPIC process is based on representation.

The district costs represent costs estimate borne by the REDD+ project, as payments to the district surveyor based on total costs of 4 villages studied (Table 6). Whereas the village costs represent the estimated costs as payments to village councils and members of community organizations involved in the decision- making processes.

Regarding capital cost, Table 7 shows summed total of depreciation and maintenance costs of the project capital assets for both organizations, i.e., motor vehicles and motor cycles. The method and assumption used to determine depreciation value for capital assets is explained below. The study of TCs analysis is based on the assumption that the set up period will be done through the first three years of the project implementation. Since the project accounts like any other non-governmental organization are prepared as income and expenditure, the accounts include running costs, thus to ascertain the costs attributable to the set up phase the study calculated annual depreciation value of these assets based on their total value reported in the accounts. As such, a fixed percentage (10%) on the diminishing value was used based on the official interest rate¹⁷ of about 8 % as per the National bank of Tanzania for the year 2009, i.e., the year these assets were purchased¹⁸. With regard to the costs of office equipment I charged two third of their total costs (see costs detail for both capital assets and office equipment appendix 1). Note that I have used the official interest rate of 8% which basically under estimates depreciation value, hence the overall set up costs because there was no any other alternative.

5.3.4. TCs per hectare of protected forests and per ton of carbon (CO₂) dioxide as expected.

This section provides the analysis and discussion of my final research question. As noted above, the village forest reserves area expected by 2014 is about 64000 hectares(MJUMITA Community Carbon Enterprise 2010).These projections also indicates that, 12 487 ha of deforestation will be avoided over the period of 30 years, generating an average of69tC/ha, corresponding to 253tCO₂/ha (ibid). While the author¹⁹highlights that these are rough estimates, implying they could be more or less, thus far, the project is yet to establish the

¹⁷<http://www.tradingeconomics.com/tanzania/interest-rate>

¹⁸ (see the asset list and their original costs in appendix 1)

¹⁹Theron Morgan-Brown (Former MJUMITA technical advisor)

actual baseline against which its additionality will be measured. Thus, based on the study findings, TCs per hectare of protected forest are about USD \$ 21/ha of total TCs. In terms of per ton of carbon dioxide as expected the results suggest about SD \$ 0.4tCO₂/ha.

6. Conclusion and Recommendation

6.1. Conclusions

This thesis has been to assess the process behind the establishment of the Kilosa REDD+ pilot project. The assessment covered the period of the first 2 years, i.e., from 09/2009 to 08/2011. Two main objectives guiding the thesis have been 1) to characterize the form of the REDD+ governance structure that has been established for the Kilosa REDD+ pilot project; and 2) to generate knowledge about the level and structure of costs of establishing this governance structure. Introduction of REDD+ in Kilosa has implied changes in governance structures of forests, i.e., changes in both actor structures and institutions. For these reasons, I have employed a theoretical framework of governance structure as my tool of analyzing the process behind such changes and outcomes. Concerning the costs associated with these changes— here referred to as transaction costs (TCs) the study have used standardized working definition of TCs(Vatn 2011; Vatn Unpublished).

Concerning the first objective, the research questions were to assess (1) who were the actors, and what were their responsibilities in the process? (2) To what extent were the local communities involved in the process? And (3) what type of organizations and institutional structures had been established?

With regard to second objective, three related questions have further functioned to structure my thesis: (1) what were the TCs by function and actors involved? (2)What were the total TCs by cost categories and actors? And finally (3) what are the TCs per hectare of protected forests, and per ton of carbon dioxide as expected?

Key findings of the thesis are presented as under:

Concerning the actor involved in the processes of establishing the REDD+ pilot project. The thesis has shown that the core actors include the project developers— TFCG and MJUMITA; district personnel; the village councils; and community representatives in the form of committees. It has further shown their main responsibilities.

First, through the FPIC process the project staff introduced REDD+ project to key stakeholders, including the district authorities and the village government officials from the villages participating in the project. Following the official launching of the project, the project staff in collaboration with the District Natural Resource Office continued with the

processes of awareness raising and consultation across 51 sub-villages, constituting 14 villages that had been selected to work with the REDD+ project. As an outcome of this process communities consented to implement the REDD+ project. Moreover, as part of the FPIC processes the project staff facilitated the elections in which communities elected their representatives to be involved in the REDD+ activities, i.e., each individual village formed two committees namely, village natural resources committees and village land use committees. Of which one third of committee members are women.

Following national policy frameworks, TFCG and MJUMITA through participatory processes of land use planning and forest resource assessments, each individual village studied had demarcated their respective village forest reserves, and subsequently established community-based forest management as REDD+ regime, i.e., established village land use plans and forest management plans and corresponding by-laws containing rules and sanctions. Moreover, they have established REDD+ by-laws— as village level REDD+ rules which will govern distribution of REDD+ benefits. Note that in relation to the village level REDD+ by-laws—MJUMITA carbon enterprise is also established, i.e., institutionalized through the REDD+ by-laws. As alluded to earlier, the MJUMITA carbon enterprise as a service provider to these communities will aggregate REDD+ carbon credits generated from their village forest reserves, market and sell them to buyers in the voluntary carbon markets, and manage and distribute accrued revenues based on the above rules.

However, although communities accepted the implementation of the project interventions, and also elected their representatives to be involved in the decision-making processes noted above, there are couple of issues especially concerning the legitimacy of these committees and perhaps on the decisions they have made. As indicated, only 21 % of those eligible to make decisions participated in the FPIC process as well as in the elections process. In other words these processes were characterized by lack of effective participation and representation, for example on the issue of decision-making processes such as demarcating and allocating land, there are concerns that decisions made are likely to exacerbate ongoing conflict between farmers mainly involved in the REDD+ activities and pastoralists— hence undermining the sustainability of the project efforts being made on the ground.

For communities participating in the project, however, one may assume that interventions of the REDD+ project such land use planning and expected village land certificates will possibly guarantee secured tenure rights, as well as address other existing social conflicts

mainly related to village land boundaries, hence addressing the legitimacy concerns. Moreover, these interventions create the basis for sustainable resource use and management—preconditions for the fully functioning MJUMITA Carbon Enterprise which is expected to provide financial incentives from sales of the REDD+ carbon credits generated by these communities, and additional co-benefits including income generating schemes.

Furthermore, the Kilosa REDD+ project has focused on creating capacities through training of the district personnel and community leaders on governance issues, particularly on the linkage between PFM, leakage and REDD+. In the case of village leaders— village governments are trained on management skills in view of preparing them how best they should use awaited REDD+ benefits. Besides they are supported to have good working environment and improved service delivery through the construction of their offices which will also be shared with village land registration office, and newly established community-based organizations.

Furthermore, as part of the leakage mitigation plans and general awareness, REDD+ project have trained primary teachers on environmental issues, as well as participating communities on the use of improved cooking stoves; and awareness campaigns on forest fires. In line with this, farmers have also been organized and trained on improved farming techniques to increase the productivity of their land through agricultural extension services provided by the agricultural officer of the project.

Finally, the project has established internal monitoring and evaluation system to track periodical performance indicators spelled out in the project design document and potential risks, as part of the contractual obligations. As noted, in terms of establishing MRV system for the project— this process was still in its initial stages due to the challenges involved, including lack of technical capacity which had to be created through training. This concerns establishing the project baselines consistent with both the VCS and CCB procedures.

How cost-effective is TFCG/MJUMITA model²⁰ then?

The above question concerns the second objective of this study which aimed to generate knowledge about the level and structure of the transaction costs for establishing governance structure for the Kilosa REDD+ pilot project. The results on the research questions that have been used to structure the analysis are as under:

²⁰ Pro-poor model

Following Vatn (Unpublished) perspectives on TCs in the REDD+ pilot areas. This study defines transaction costs (TCs) as the resources incurred by actors involved in the processes of establishing the aforementioned governance structure for the REDD+ pilot project along the following functions: General planning and administration costs, the FPIC process costs, institutions building costs, and general administration and accountancy costs.

Thus, the first research question was to find out the level of costs per function and actors involved.

The results indicate that total TCs of setting up governance structure for the Kilosa REDD+ pilot project are estimated at about USD \$ 1,331,281. The results further suggest that, TCs by function and actors range from 2 percent to 68 percent of total TCs. Of the total TCs, the highest costs along functions are associated with the costs of general planning and administration (68%) — mainly because of fixed costs, i.e., personnel and office costs. When the general planning and administration costs are combined with the costs of general administration and accountancy (i.e., costs of support personnel) — they account for about 77 % of the total TCs. The remainder, i.e., 21 % represents the costs associated with the process of setting up institutions and ongoing MRV system on the ground; and finally 2 % represent costs related to the FPIC process respectively.

The second research question was to find out total TCs by cost categories and actors involved in the process of setting up governance structure for the Kilosa REDD+ pilot project.

The results indicate that the overall costs of setting up governance structure for the Kilosa pilot project are mainly borne by the REDD+ project. As such, total costs by cost categories falling upon actors range from nearly zero percent to 43 percent of the total TCs. The 43 percent of total TCs include personnel costs, office costs, travel costs, and depreciation and maintenance costs for both TFCG and MJUMITA head office. Field personnel costs and office costs account for 30 percent of total TCs. Consultancy account for 14 percent of total TCs; 6 percent as the allowance costs for district surveyor; and 7 per cent as the costs for training and allowances for village councils and community organizations involved in the decision-making processes respectively.

Lastly, the lower cost share of about 0.4 per cent of total TCs represent opportunity cost of villager's involvement in the FPIC process. As explained, the reason for this is that villager's

engagement in the REDD+ activities beyond FPIC process is limited to their representation. It is worth noting that, much as this could be argued or seen as a good strategy, i.e., in terms of reducing costs on either sides— there is possibility of insufficient knowledge among villagers about the REDD+ related issues, including decisions being taken— this situation creates potential risks of elite capture as lack of transparency and accountability might be an issue when REDD+ money starts flowing.

The final research question was to adjust total TCs on per hectare of forests protected, as well as per ton of carbon dioxide as expected. Based on initial estimates of forest area to be protected by 2014, the findings from this study suggest that TCs per hectare of protected forests are about USD \$ 21/ha of total TCs. In terms of per ton of carbon dioxide as expected the results suggest about USD \$ 0.4tCO₂/ha of total TCs.

However, as emphasized the costs captured in this study are in fact underestimated, particularly those costs associated with general planning and administration due to several limitations I discussed earlier. Moreover, much as this study has tried to consider all village costs estimate, i.e., based on the costs of 4 villages it appears that village level costs could increase, as a result of extra costs related to the processes of setting up conclusive village level payments system²¹, as well as creation of additional committees which will handle the distribution of REDD+ benefits.

To sum up, despite the underestimated costs presented herein, the findings from this study enables one to question the capacity of MJUMITA carbon enterprise as self-financed entity will have to scale up the same interventions above— in order to efficiently deal with potential offsite risks of leakage given the current forest area of the project. Even within the project area, i.e., considering the estimated village forest reserves (i.e., 64,000 ha) and the size of forest that will be under the so called sustainable management (i.e., about 15,000 ha) — it is clear that the challenges and risks because of pressure on these forests and overall non-compliance to the established forest management rules seem inevitable.

Specifically, given the financial projections of the Kilosa REDD+ project, and subsequent estimated of REDD+ household payments, which already fall short of expectations compared to the current household opportunity cost of shifting cultivation— it appears that it will be difficult if not impossible for the MJUMITA carbon enterprise to effectively raise enough

²¹ After 1st trial payments

resource to deliver or achieve the stated goal, i.e., ‘*making REDD work for communities and forest in Tanzania*’. The stated goal is to demonstrate additionality not only in reduced emissions from deforestation and forest degradation, but also on REDD+ co-benefits including protection of biodiversity and improved social and economic conditions of the participating communities based on the baselines yet to be known, as well sustaining them at least within the designed period of the project (30 years).

6.2. Recommendations

The study recommends that based on the challenges and risks mentioned above, it is realistic for the stated overall goal of the project to be treated as an assumption. The study further provides recommendations for further studies. It is expected that the analysis of full costs of establishing REDD+ in Kilosa will be done in two phases, thus for the purpose of the next round of transaction costs analysis— the study recommends the following:

- As emphasized, general planning and administration costs are underestimated in this study due to the limitations I explained, thus the following costs should be fully covered: It seems there is now more understanding of the motives behind the study of TCs, since the initial attempts of getting data related to the process of contract negotiation incurred by TFCG was not successful— as the CEO of TFCG argued that these costs were not readily available²²— I suggest that next study should try and see if the data could be obtained, perhaps the internalized costs could be ascertained by now. Further, as noted earlier attention also should be given to the costs related to the MRV set up processes.
- Concerning village level costs, the study recommends that public costs be covered, i.e., the costs associated with decision- making processes at district level. I suggest also that when looking at village level costs, let say for village 5 and so on, more attention is needed on the costs associated with the processes of establishing village level payments system, as well as REDD+ special committees— which as I understand were formed to handle the distribution of REDD+ benefits. It is unclear to me if these committees are different from village natural resource committees and MJUMITA local networks.

²²Though added that were internalized.

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Dissertation to obtain the degree of doctor at the University of Twente, the Netherlands.

Appendix 1

List of Capital assets and equipment (\$)

Items	TFCG	MJUMITA	SUM
Capital assets			
- <i>Vehicles</i>	94,481	74,576	169,057
- <i>Motor cycles</i>	22,901	11,136	34,037
Total	117,382	85,712	203,094
Office equipment			
- <i>Laptops</i>	6,997	1,620	8,617
- <i>Printers</i>	2,820		2,820
- <i>Photocopier</i>	4,890		4,890
- <i>Digital cameras</i>	2,112		2,112
- <i>Power point projector</i>	1,595		1,595
Total	18,414	1,620	20,034