Involving forest-dependent communities in climate change mitigation

Obstacles and opportunities for successful implementation of a REDD mechanism in Babati District, Tanzania

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Abstract

The aim of this thesis is to identify how forest management in Tanzania can contribute to global climate change mitigation while improving livelihoods of forest-dependent communities.

A mechanism for reducing emissions from deforestation and forest degradation (REDD) is meant to slow increases of atmospheric CO₂ while channelling funds to developing countries. In Tanzania, pioneering work in participatory forest management (PFM) has promoted local-level control over forest resource use. The purpose of this study is to contribute to a linkage between REDD and PFM that maximises benefits for communities, forests and global climate.

Three PFM projects with relation to REDD have been studied, primarily using semi-structured interviews with villagers, district officials, project facilitators, researchers, consultants and policy-makers. Analysis consists of comparing experiences at different levels and putting them in the theoretical context of climate change and forest conservation.

The study identifies several issues: local and central government institutions cannot ensure equitable benefit sharing; cross-sectoral co-ordination to address fundamental causes of the problems is lacking; participation of local communities is not satisfactory.

However, the process is at an early stage. Current activities will hopefully contribute to a future framework that properly addresses these and other obstacles. If this is accomplished, PFM and REDD can complement each other in a positive way.

Keywords: deforestation, environmental policy-making, participatory forestry, rural development.
**List of acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAU</td>
<td>Assigned amount unit</td>
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<tr>
<td>AWF</td>
<td>African Wildlife Foundation</td>
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<tr>
<td>CBFM</td>
<td>Community-based forest management</td>
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<td>CDM</td>
<td>Clean development mechanism</td>
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<td>CER</td>
<td>Certified emission reduction</td>
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<tr>
<td>CO$_2$-eq</td>
<td>Carbon dioxide equivalent</td>
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<td>COP</td>
<td>The Conference of the Parties (to the UNFCCC)</td>
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<td>CSO</td>
<td>Civil society organisation</td>
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<td>ERU</td>
<td>Emission reduction units</td>
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<tr>
<td>FAO</td>
<td>The Food and Agriculture Organization of the United Nations</td>
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<td>FARM</td>
<td>Food and Agriculture Research Management</td>
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<tr>
<td>FBD</td>
<td>Forestry and Beekeeping Division</td>
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<td>FTPP</td>
<td>Forests, Trees and People Programme</td>
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<td>GHG</td>
<td>Greenhouse gas</td>
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<td>ha</td>
<td>Hectares</td>
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<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>IRA</td>
<td>Institute for Resource Assessment (of University of Dar es Salaam)</td>
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<td>JFM</td>
<td>Joint forest management</td>
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<td>JI</td>
<td>Joint implementation</td>
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<tr>
<td>LAMP</td>
<td>Land Management and Environment Programme$^1$</td>
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<tr>
<td>LULUCF</td>
<td>Land use, land use change and forestry</td>
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<tr>
<td>MJUMITA</td>
<td>Shirikisho la Mtandao wa Jamii wa Usimamizi Misiitu Tanzania/Federation of Community Forest Conservation Networks in Tanzania</td>
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<tr>
<td>MOU</td>
<td>Memorandum of understanding</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>NOK</td>
<td>Norwegian kroner</td>
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<tr>
<td>PFM</td>
<td>Participatory forest management</td>
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<tr>
<td>PMO-RALG</td>
<td>Prime Ministers Office - Regional Administration and Local Government</td>
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<tr>
<td>ppm</td>
<td>Parts per million</td>
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<tr>
<td>REDD</td>
<td>Reducing emissions from deforestation and forest degradation$^2$</td>
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<tr>
<td>RMU</td>
<td>Removal unit</td>
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1 Variations exist. This is the definition used by Sida in a 2003 evaluation of the Tanzanian forestry sector (Katila et al., 2003).

2 The words “... in developing countries” are sometimes also added (UNFCCC, 2009), although this shorter version is more common and is used in official Tanzanian policy documents (URT, 2009a).
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>RNE</td>
<td>The Royal Norwegian Embassy in Dar es Salaam, Tanzania</td>
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<td>RRA</td>
<td>Rapid rural appraisal</td>
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<tr>
<td>SEK</td>
<td>Swedish kronor</td>
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<tr>
<td>Sida</td>
<td>Swedish International Development Authority/Swedish International Development Agency</td>
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<tr>
<td>SUA</td>
<td>Sokoine University of Agriculture</td>
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<tr>
<td>TFCG</td>
<td>Tanzania Forest Conservation Group</td>
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<tr>
<td>TPFMP</td>
<td>Tanzania Participatory Forest Management Project</td>
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<tr>
<td>TZS</td>
<td>Tanzanian shillings</td>
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<tr>
<td>UNEP</td>
<td>The United Nations Environment Programme</td>
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<tr>
<td>UNFCCC</td>
<td>The United Nations Framework Convention on Climate Change</td>
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<tr>
<td>UN-REDD</td>
<td>The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries</td>
</tr>
<tr>
<td>URT</td>
<td>The United Republic of Tanzania</td>
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<tr>
<td>USD</td>
<td>United States dollars</td>
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1 Introduction

This thesis deals with an issue that joins together two different types of environmental problems. The first one, that of climate change, has come to be one of the most prominent items on the global political agenda during the past few years. Never before has an environmental issue had so many, so unpredictable and so potentially severe effects, and never before have its causes been so fundamentally linked to how the human society is organised.

The second problem, that of deforestation, is more local regarding its causes and effects, but still global in scale and distribution. Efforts to stop the cutting of trees and to encourage the planting of new ones have been going on for decades, sometimes achieving the desired results, sometimes not. The situation in Africa is “particularly disconcerting” according to the United Nations Food and Agriculture Organization (FAO) – the loss of forest area during the 1990-2005 period was greater than in any other region of the world (FAO, 2006:xxiii).

This study has focused on a proposal that is intended to address both climate change and deforestation. In this chapter, the subject, purpose and research questions of the thesis are outlined.

1.1 What is REDD?

REDD, reducing emissions from deforestation and forest degradation, does not exist yet. It is a proposal that is being discussed in the international negotiations for an agreement on how to stop climate change.

The idea is to combine the interests of two different categories of countries: industrialised nations that seek to reduce the impact of CO$_2$ emissions on the global climate; and developing countries that are trying to protect their forests while achieving sustainable development. By “creating a financial value for the carbon stored in forests, [REDD is] offering incentives for developing countries to reduce emissions from forested lands” (UN-REDD, 2009a).

In other words, REDD will be a mechanism that provides a way for rich countries to compensate poor countries financially for not having their forests cut down.

1.2 Why study REDD in Babati, Tanzania?

REDD is being supported by arguments that it “could simultaneously address climate change and rural poverty, while conserving biodiversity and sustaining vital ecosystem services” (Parker et al. 2008:12). To ensure successful implementation including all desired side effects it is crucial that the communities which depend on the forests are participating fully and that their rights are respected (UN-REDD, 2009a).

This broad approach to forestry corresponds to what could be called a trend in global forest management policy that became more prominent during the final decades of the 20th century. During the colonial period many areas controlled by colonial powers had employed forestry policies which said that forests need shielding from the pressures of growing populations. The resulting state-run reserves were not always successful in keeping the former users of the forests out (Bruce, 1989). Soon, experiences showed that if the forest-dependent communities are involved in its management instead of being kept out, considerable improvements in forest condition can be achieved at a relatively low cost (Wily & Dewees, 2001; Abdallah & Monela, 2007; Blomley et al. 2008).

One approach that has been used in pioneering work in Tanzania during the 1990's is called participatory forest management (PFM). In Babati district, a group of villages established community-managed village forest reserves in the Duru-Haitemba Forest (Wily, 2000; Kajembe et
Meanwhile, in Dar es Salaam, work has started to create a strategy for how a future REDD mechanism can be implemented and administered at a national level (URT, 2009a). A National Task Force has been established by the government with support from a partnership between the governments of Norway and Tanzania (RNE, 2009a). Several non-governmental organisations (NGOs) have been invited to submit proposals for projects that aim at increasing knowledge about how the activities that REDD would require can be incorporated into PFM (URT & RNE, 2009).

There are several reasons why a study like this is important. It can be argued that REDD is just a way for rich countries to avoid taking responsibility for their actions, that it moves the problem of CO₂ emissions to the poorest and most vulnerable part of the world. But no matter how true this might be, it might just as well be true that the loss of forests is a real problem in countries like Tanzania. Four out of five Tanzanians work with agriculture, and the rural population is highly dependent on land and natural resources (Milledge et al., 2007:24). If REDD can contribute to solving deforestation problems while playing a part in a global scheme to stop climate change, then at least it deserves a closer look. The pioneering role of Babati regarding forest management makes it a particularly relevant case study – even today, several PFM and REDD related activities are being planned and implemented around the district. The participatory approach to forestry could prove to be a safeguard for REDD, ensuring that it benefits forest-dependent communities.

1.3 What questions will the study try to answer, and why?

This thesis is part descriptive and part analysing. By scrutinising selected activities at local, district and national level I have compiled experiences and expectations of combining PFM and REDD in forest conservation. The purpose is to find out to what extent the process of PFM is relevant for the concept of the suggested REDD mechanism, and, conversely, what impact such a mechanism would have on PFM in Tanzania.

In more investigative parts of the thesis, the obstacles and opportunities for REDD implementation in Tanzania are analysed. The purpose will be to find out what issues need particular attention in order to make sure that REDD works in the interests of the forest-dependent communities, and promotes a PFM process from which they can benefit.

It is my wish that this study will help accurately gather, compile and, ultimately, contribute to the dissemination of information on what is happening regarding REDD in Babati and Tanzania. Moreover, the goal of the study is ultimately to promote a fair and just REDD process. If the proposed mechanism becomes reality, I sincerely hope that safeguards will be included to avoid it becoming anything of a burden to those who would deserve it the least and be put down by it the most.
2 Methodology

In this chapter, the method for reaching the set goals of the study is described and motivated. The advantages and drawbacks of the used method are also discussed.

Some governmental, non-governmental and other organisations and institutions are mentioned below. A more comprehensive description of how they are interrelated will follow in Chapter 3.

2.1 The study area

This study evolves around three forest areas where participatory management has been or is being implemented: Haitemba-Warib, Dareda Escarpment and Kolo Hills (see Appendix 1 for map). For each forest at least one of the involved villages has been visited. In all three projects there is also one or several outside parties involved in the PFM work, such as NGOs, district staff, researchers, civil society organisations (CSOs) and foreign development partners. Information has also been gathered from these.

2.1.1 Haitemba-Warib Forests

The Haitemba-Warib Forests are a part of the larger Duru-Haitemba Forest in southern Babati District (NB. For more information about Babati District see section 3.2 Forest conservation in Tanzania). Haitemba, 500 hectares (ha), and Warib, only 50 ha, are located on land belonging to Ayasanda village3. The reasons for choosing Haitemba-Warib are twofold: firstly, the PFM regime there took part of the pioneering project of the 1990's and has been described as a successful one (Wily, 2000; Kajembe et al., 2003); secondly, Ayasanda recently hosted a research project, which looked at how communities can be involved in the monitoring of forest biomass that REDD will

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3 For history and socio-economic study of Ayasanda, see Zahabu (2008:100-104).
require (Zahabu, 2008).

2.1.2 Dareda Escarpment Forest

In Dareda, western Babati District, work is going on to put about 34,000 ha of forest under PFM. Babati district officers and extension workers are co-operating with staff from Food and Agriculture Research Management (FARM) Africa. FARM-Africa is an NGO which is operating there as a part of a larger project funded by the European Union (FARM-Africa, 2009a:13), covering over 60,000 ha of forest (FARM-Africa, 2009d:3).

One of the six villages involved is Qameyu, bordering the government-owned Nou Forest Reserve and the outskirts of the town of Dareda. This project is relevant because it is an ongoing effort to implement PFM involving district officers that have a long experience of such work. Another reason is that it involves a facilitating NGO in the process, an NGO which has recently submitted a proposal requesting additional funding to add REDD activities to the project plans (FARM-Africa, 2009d; URT, 2009b). However, the proposal was not among those to receive funding in 2009 (map of locations for approved projects is shown in Appendix 2).

2.1.3 Kolo Hills Forests

The third forest is located in Kondoa District, bordering Babati to the north (Appendix 3). The reason for including this project despite the location is that the African Wildlife Foundation (AWF), the NGO which is co-ordinating the PFM activities, has succeeded in receiving funds from the Tanzania-Norway partnership to do REDD piloting in Kolo Hills. Fifteen villages and 18,000 ha of forests are included in this phase of the project, which only just started (during the field work of this study, to be precise). However, AWF has been working in the area since 1995 (AWF, 2009).

Two of the fifteen villages were visited: Mnenia and Itundwi. I chose to visit more than one in order to reduce the risk of coming to a community that was not representative of the many others involved. Another reason was to enable some level of triangulation of data; since Kolo Hills is not in Babati District none of the interviewed district officers could provide substantial information about the activities in the area, only villagers and NGO staff.

2.2 Informants

Almost seventy people have been interviewed for this study. Below, an account is given for how they were selected and how their inputs are relevant for my research. The rule of thumb has been to let all stakeholders involved in the studied PFM and REDD activities have their say, but also to follow up tracks where the most information has seemed to be available. This has resulted in more extensive interviews in some cases, and briefer ones in those where the informants knew little about the subject.

Despite intentions to conduct the field work in a way that ensured gender balance in the selection of interviewees, this was not achieved. More information on particular aspects of forest use and management that relate to women's situations and roles could have been gathered. These aspects were discussed only on a few occasions in a couple of villages, almost exclusively upon direct question from me. In the cases where I, intentionally or unintentionally, let village leaders, project facilitators or my interpreter find and choose informants the results were in almost every situation all male groups. Because of poor field work experience on my part I was not able to prevent this at all village visits. Regarding the non-village informants, almost all were male. This is also unfortunate

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4 Triangulation is a method of cross-checking information by consulting different sources and using different methods of data collection (Molnar, 1989).
but harder to prevent, since I interviewed those who were relevant and available. Only one of these positions was held by a woman.

These factors have most likely given my study a somewhat male bias. In aspects where women and men have different relations to the forest, conclusions from the thesis might not apply.

2.2.1 Villagers

In each village mentioned in the previous section, two types of interviews were carried out. First, more formal meetings were held with 4-6 representatives of the village government and the committee or working group that was dealing with forest management. These group interviews were semi-structured, being guided by prepared questions but allowing for improvisations as the discussions progressed (Appendix 4). They aimed mainly at establishing what the awareness level and opinions were regarding forest management in general and REDD in particular. The compositions of the groups were to my knowledge decided by the village leaders, and in the cases of Qameyu, Mnenia and Itundwi also possibly influenced by the respective NGO staff (who were present during the village visits, but not during the interviews). This was not desirable, but accepted since the help of these parties was required to conduct any interviews at all. It was my intention to compensate for the questionable representativeness of these groups by conducting additional interviews with regular villagers.

These were carried out with 4-8 people in each village. The intention was to select these randomly while walking through the villages, without any chance for local leaders or NGO staff to influence the interviewees or the selection. However, this was only possible to achieve in in Mnenia and Itundwi. In Ayasanda and Qameyu, the villagers were selected by someone from the first group interview. My interpreter and I were in most cases at least able to talk undisturbed with the selected villagers. These talks were more informal than the meetings; the purpose was to determine the awareness level and attitudes on the issues of PFM and REDD. The more experience of REDD work that a village had, the longer the interviews tended to be.

Apart from the longer visits to Ayasanda, Qameyu, Mnenia and Itundwi, villagers in three other communities were interviewed briefly. In Riroda, the forest committee was questioned about PFM work in general – like Ayasanda, Riroda was part of the initial Duru-Haitemba group that started PFM work in 1994. In Enda, village doing PFM since 2003, three members of the village council were questioned about their knowledge about REDD. A visit was also paid to a third community involved with the Kolo Hills project: Kolo village in Kondoa District. An informal discussion was held with three villagers, two of them members of the village environment committee (all villages and towns mentioned have been marked on the maps in the appendices).

Although it was pointed out by almost every informant (who were not themselves villagers) that villagers “know nothing” about REDD, I still considered it important to meet as many villagers as possible. This served several purposes. By finding out the awareness level myself, I could cross-check the secondary data, provided by other informants, with primary data – in other words, I could see if what they were saying was true. Another purpose was to find out what villagers’ opinions were on whatever was known, or at least find out what their attitudes were towards forest conservation in general. I wanted to see if and how this varied depending on the level of experiences of REDD and different types of forest management.

All interviews with villagers had to be interpreted from Swahili, or other local languages, to English. It was not possible to use trained translators; at best, they had previous experience. This caused problems of assessing what villagers knew about the subject, since small pieces of information risked being lost in translation, giving the impression that the interviewee knew nothing. Similarly, asking questions in a way that explains too much of the concept of REDD might
help the villager 'improvise' an answer based on what he or she understands when the question is asked. Informing the interpreter about the concept of REDD also proved risky, since it in some cases resulted in him telling the interviewees about it too soon in the conversations.

These problems have caused a limited ability to pick up nuances from individual villagers' statements. Therefore, the results gathered through them are used with caution and primarily to form a general impression of community-level awareness.

All villagers are kept anonymous in this study.

2.2.2 District staff

At district level, my aim was to establish how present and previous forestry staff see the role of themselves in implementation of PFM, and in the future, of REDD. Since it was not my purpose to compare different districts, I did not visit the offices in Kondoa (the district where Kolo Hills is located) or Mbulu (whose district staff were observing the PFM work in Dareda Escarpment Forest, which is neighbouring Mbulu District – see Appendix 1). In Babati, thorough semi-structured interviews were conducted with the District Environment Officer Anatoly Rwiza, with the District Forestry Officer Josiah Maanga, and with forestry adviser Calyst Kavishe, forester in Babati since 1977 (Rwiza, 2010; Maanga, 2010; Kavishe, 2010). All three can be considered key informants for this study; they were interviewed in their offices under quite informal circumstances.

2.2.3 Non-governmental project facilitators

To cover all parties involved in the ongoing PFM and REDD projects, representatives from FARM-Africa and AWF were also interviewed. At FARM-Africa these were: Adrian Kahemela, Forestry Project Co-ordinator for East Africa; Ernest Moshi, PFM Team Leader in Dareda; and Slaa Salutary, Gender Research and Advocacy Officer in Dareda (Kahemela, 2010; Moshi, 2010; Salutary, 2010). Kahemela was interviewed at the FARM-Africa Babati office, whereas the more informal conversations with Moshi and Salutary primarily took place 'in the field' in or near Dareda Escarpment Forest.

A similar approach was used for African Wildlife Foundation. Steven Kiruswa, Maasai Steppe Heartland Director and head of AWF in Tanzania, was interviewed quite briefly at a climate change conference in Dar es Salaam (detailed below); his subordinates Godlisten Matilya, Project Co-ordinator for the REDD pilot in Kolo Hills, and Wasiwasi Baharia, Project Development Officer and facilitator in the project, were both interviewed during an informal lunch in Babati and during a field visit to the project area in Kondoa District (Kiruswa, 2010; Matilya, 2010; Baharia, 2010). With both FARM-Africa and AWF, the purpose was to get an idea of how PFM and REDD activities are planned, prepared and carried out in the communities. This is why both field-level staff and senior officers were questioned.

In the case of Haitemba-Warib, the REDD activities went on at a quite small scale and the project ended over a year before the start of this study. On the other hand, quite extensive information about its implementation can be found in the doctoral dissertation of Eliakimu Zahabu (2008). It was complemented by a semi-structured interview with Zahabu, held in his office at Sokoine University of Agriculture in Morogoro (SUA) (Zahabu, 2010). Accounts on what the project has meant for forest management in Ayasanda have also been given by Babati District foresters, listed above.

Of the people mentioned in this subsection, especially Kahemela and Zahabu can be considered key informants to this study. Kahemela directly or indirectly enabled the whole part of the study described in the following subsection, through his knowledge and contacts from working with forest conservation in Tanzania. Zahabu provided extensive information about REDD implementation in practise, which no other informant could.
2.2.4 National policy-makers

The informants listed so far provided an outline of the process at the local and district level. However, it was considered useful to complement these accounts with some insights on national level policy-making. The guiding principles for this was to 'follow the money' and to take advantage of information and names given by other informants.

A contribution from Norway makes one of the biggest sources of funding for REDD activities in Tanzania at the moment; the commitment is worth NOK (Norwegian kroner) 500 million (RNE, 2009b). A semi-structured interview with Simon Milledge, Consultant on Environment and Climate Change was carried out in his office at the Royal Norwegian Embassy (RNE) in Dar es Salaam (Milledge, 2010). The Tanzanian party to facilitate the development of a national strategy has been selected to be the Institute of Research Assessment (IRA) at University of Dar es Salaam. Its director Pius Yanda is also heading the National REDD Task Force. He has contributed to this study with a short telephone interview, but also through his participation at a panel discussion at a Meeting on Climate Change and REDD in Tanzania and East Africa, in Dar es Salaam 30-31st March 2010 (Yanda, 2010).

This conference, which I participated in, was arranged by ForumCC (a CSO dealing with climate change issues), and Tanzania Forest Conservation Group (TFCG). TFCG is an NGO that, like AWF, has submitted a proposal and received funds to carry out REDD pilots (see Appendix 2). The project is implemented in collaboration with MJUMITA, a network for communities doing participatory forest management (TFCG, 2009b). Both the executive directors of TFCG, Charles Meshack, and of MJUMITA, Rahima Njaidi, gave presentations and participated in the conference workshops. They also contributed to this study by answering some of my questions, Meshack via later telephone and e-mail correspondence, Njaidi in a short semi-structured interview at the conference (Meshack, 2010; Njaidi, 2010).

2.3 Previous knowledge

Information from reports, national policy documents and project proposals and contracts has been compiled and summarised. Background descriptions are thereby provided of the concept of REDD in a climate change context and of the forest conservation process in Tanzania. This will provide a basic understanding of both technicalities and the bigger picture, to facilitate a summary of the results of the field work.

Previous research on REDD implementation and on PFM in Tanzania has also been reviewed to provide a theoretical context in which the results can be analysed. This aspect is essential for the validity of the conclusions of the thesis; since all the information gathered is qualitative in its nature, scrutiny and comparison with previous findings are necessary steps of the data analysis.

Previous knowledge is used to connect different pieces of information, but it also complements the accounts given by the informants and thereby gives them broader meaning.

2.4 Qualitative research methods – critique and motivation

There are several shortcomings of the types of data collection chosen for this study. The weakest points can be found in the interviews and meetings with villagers. Apart from difficulties resulting from the use of interpreter, mentioned earlier, NGO representatives and village leaders were not successfully prevented from influencing the choice of interviewees. Bruce (1989) has described how the presence of officials can both dominate the situation, answering all questions, and influence other interviewees in one way or another. When possible, interviews were therefore held away from others than interviewer, interviewee and interpreter.
Molnar (1989) has provided a review of Rapid Rural Appraisal (RRA) techniques guiding forest-related field work in Third World countries. Many of them have not been possible to apply in this study, because of limitations in time and because a team of researchers is required for many methods. The approach is relevant, however, and has been used to guide much of the field work. The semi-structured interview has been described by McCracken and colleagues (1988:20) as the “most powerful of the RRA techniques”. It is a less formal way of interviewing where some questions or themes are prepared beforehand, but time is also set aside to allow for following up new subjects of interest as they arise (McCracken et al., 1988). All interviews in this study were semi-structured, except the very short ones in some villages.

I have also made an effort to triangulate data when possible, another prominent component of RRA. When done properly, it has the advantage of reducing bias in the results while it also “considerably enriches the quality of the data collected” (Schoonmaker Freudenberger, 1995). Information from semi-structured interviews with informants at NGOs, districts or other institutions have, when applicable, been compared to what has been written in project proposals, reports, studies and official policy and legislation documents. In village visits, it has been a priority to meet with several members of the community and ask the same questions several times to different people.

The choice of more villager interviews over longer ones is however likely to have negatively affected the chances of uncovering remarkable statements, especially since the need for interpreter usually means that more time is needed, not less (Molnar, 1989). Lack of time also made it difficult to create a comfortable interview environment and to build a strong feeling of confidence between interviewer and interviewees. However, as the results show most of the villagers did not know what REDD was or what it meant. This had the implication that subjects related to the research questions could not be discussed in depth in most cases. It is therefore likely that the drawbacks mentioned above did not have a big impact on the results since the choice was made to not focus primarily on the accounts of villagers. This choice can of course also be criticised. One approach could have been to provide a description of the proposed REDD mechanism and arrange discussions with villagers to find out what their attitudes would be towards such a scheme. This, however, would be problematic. Telling forest-dependent communities that they might be able to earn money by protecting their forests means that you create an expectation which someone else eventually will have to live up to.

As for the more thorough interviews, one weakness is that some of them were a bit short and there was no opportunity to follow up with a second or third interview. Again, priority was given to a larger number of interviews, especially in the cases were little relevant information was being uncovered. Whether crucial information is going to surface further into an interview is of course hard to predict, but for this study I was somewhat helped by the fact that REDD awareness was quite low at almost all levels. For example, some interviewees were not able to accurately describe how REDD is supposed to work. It might be a reasonable assumption, then, that these were less likely to be able to express insightful thoughts about the probable effects of the mechanism.

Just as Babati District only provides one set of examples of the process in the field, so do the accounts from the climate change conference only provide a glimpse of the process in the offices of Dar es Salaam. It is a weakness that not more of the informants have been questioned more thoroughly, and some accounts could have been better triangulated. To some extent, there has been a priority of breadth over depth. This approach is the result of the effort to create an understanding of the district-level process in the national-level context. It lowers the validity of the findings, and makes it hard to draw general conclusions. On the other hand, the aim is not to provide lessons for other cases than Tanzania, but to provide knowledge for the continued process in this one particular case.
The information gathered in the field consists of primary data when it comes to the opinions and awareness levels of the informants and interviewees, and secondary data when it comes to information about the process of REDD and PFM implementation in Babati and Tanzania. All data has also been summarised and analysed by me, and thereby undergoing some level of interpretation. This is a weakness in the sense that the risks for misunderstandings increase with every step, but if precautions are taken it can also be seen as a strength. A lot of information is summarised, and generalisations can – if they are more constructive than they are overly simplified – provide useful key messages to anyone concerned with, affected by, or just curious of the REDD process in Tanzania. For the purpose and scale of this study, I find that the adopted methodology has served its purpose very well.
3 Theoretical framework

This chapter presents the background for the subject of the thesis. It is divided into three sections, dealing with REDD and climate change, forest management, and the REDD process in Tanzania, respectively. In each section a general description of the historical development and political background is given. Also, reviews of previous research in each of the three areas are made to provide an analytical framework for the study and improve the understanding of the results.

Definitions and concepts used in the thesis are explained in this chapter.

3.1 Background on REDD

In this section, a more detailed account is given of what REDD might be and how it could function. The circumstances of the climate change negotiations are also briefly outlined.

A lot has been said about the climate change issue, both within and outside academic circles; it has to a large extent become an issue of politics, economy and of social justice, not only science. This thesis does not deal with those aspects, at least not explicitly. It does not question or try to test the findings of the Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report presented in 2007. The study has been conducted assuming what seems to be most likely: that emissions from human activities cause changes in the global climate and that this is a problem.

The purpose of the thesis is to scrutinise one of the suggested solutions to that problem.

3.1.1 Climate change action

Emissions of CO₂ and other greenhouse gases (GHGs) from human activities have been shown to affect the global climate (IPCC, 2007). Different claims have been made about safe levels of atmospheric CO₂-equivalent concentrations (CO₂-eq, see Box 1); it is widely recognised that 450 parts per million (ppm), which would keep temperature increases within 2°C, should not be exceeded (Angelsen et al., 2009). Because of the great uncertainties in predicting the effects of climate change, many demand even more ambitious goals. What is certain is that deep emission cuts will be required to stop the trend of rising temperatures (IPCC, 2007).

At the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, a framework for information sharing and co-operation between governments was adopted to tackle the many challenges of climate change. The framework is called the United Nations Framework Convention on Climate Change (UNFCCC); the countries that have signed and ratified the convention are referred to as Parties. They are all represented in the Conference of the Parties (COP), which rules the UNFCCC. Since 1994, when the UNFCCC entered into force, the COP has met at least once every year (UNFCCC, 2010a).

At its 1997 meeting, the COP adopted the Kyoto Protocol to the UNFCCC. It can be described as an addition to the framework, where developed nations are committed to reduce their emissions of GHGs by, on average, five percent from 1990 levels. This is to be accomplished over the period

<table>
<thead>
<tr>
<th>Box 1. Climate change terms and definitions</th>
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<tr>
<td>CO₂-eq – unit that emission levels for different GHGs are often converted into, to facilitate comparison.</td>
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<tr>
<td>GHG – gas that contributes to climate change, considered by the UNFCCC: CO₂, CH₄, N₂O, F-gases.</td>
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<tr>
<td>Mitigation – activity to reduce climate change.</td>
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<tr>
<td>Party – country that has signed the UNFCCC.</td>
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<tr>
<td>Sink – activity that absorbs GHGs.</td>
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<tr>
<td>Source – activity that emits GHGs.</td>
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Source: UNFCCC (2010a) and IPCC (2007).
2008-2012, and primarily by efforts at the national level. The Kyoto Protocol does not include REDD; however, there are other options for Parties that do not wish to reduce emissions domestically; three market-based mechanisms (UNFCCC, 2010b):

- **Emissions trading.** Parties that manage to reduce their emissions more than they are required to are allowed to sell their leftover emission rights to other Parties. These rights are called *assigned amount units* (AAUs). These transactions are also referred to as the *carbon market*, since the major GHG is CO\(_2\) – carbon dioxide. The idea is that the emission reductions should take place where it costs the least. A simple comparison can be made of the costs for two different Parties to reduce emissions by a certain amount – if there is a difference, both countries will make a profit if the reductions are made where it is cheaper, and AAUs are traded in order to get the net emission cuts right.

- **Clean Development Mechanism (CDM).** Parties can implement a project in a developing country, that (if it results in emission reductions that would not have occurred without the project) will generate *certified emission reductions* (CERs). These will count as extra AAUs for the implementing Party. The idea is that sustainable development and emissions reductions can be achieved while the developed countries are provided with an alternative, should their domestic efforts be insufficient.

- **Joint Implementation (JI).** Parties can implement a project in another country that also has reduction commitments. If the project results in reduced emissions or increased removal of CO\(_2\) from the atmosphere, the implementing Party receives *emission reduction units* (ERUs). Like CERs, they can be used to help the Party reach its Kyoto target. The host Party is supposed to benefit from the arrangement by receiving investments and technology transfer.

As implied above, AAUs, CERs and ERUs can be traded and exchanged. The different units are each equal to one tonne of CO\(_2\)-eq *emissions* – an important clarification, since it is not the actual carbon that is being bought, rather, it is the *right to emit* carbon.

There is also a fourth type of unit in the Kyoto Protocol, called *removal units* (RMUs). These are achieved through activities that sort under *Land Use, Land Use Change and Forestry* (LULUCF). The convention texts on LULUCF are rather complex, but the basic idea is that RMUs are generated by the creation of *sinks*, i.e. something which captures and stores carbon, like planting forests. Such projects can be carried out through the CDM mechanism (UNFCCC, 2010b).

To summarise, the only binding agreement on GHG emission reductions that is active today is the Kyoto Protocol. It has some provisions for forest related activities. Countries that seek to reduce CO\(_2\) emissions can use the CDM mechanism to invest in different activities abroad. One option is *afforestation* projects – the creation of forests in areas that have not been forests during the last 50 years; another is *reforestation* projects – the recreation of forests in areas that have been cleared, and still had no forest cover on 31st December 1989 (Parker *et al.*, 2008:111-112). These options fulfil the purpose of capturing CO\(_2\), but do not address problems of *deforestation*. This means that the present agreement on climate change mitigation (Box 1) does not include a REDD mechanism.
3.1.2 The importance of stopping deforestation

So why is REDD needed, why is it necessary to also add deforestation to the already complicated issue of climate change?

There are good reasons. The IPCC has shown that 17.4% of global GHG emissions in the year 2004 came from the forestry sector (IPCC, 2007:36). Every year, about 13 million hectares of forest land is converted to some other use – an area equivalent to Nicaragua in size. Earth’s tropical forests, covering 7-10% of the global land area, contain up to half of all carbon stored in land vegetation (Lewis et al., 2009:1003) – about a fourth if all of the terrestrial biosphere is counted (Parker et al., 2008:10). This means that even though the emissions from forestry do not emit fossil carbon, they are still of a magnitude that will affect the climate (IPCC, 2007:36). If considerable cuts in emissions are to be achieved, efforts will be required to also reduce emissions from the forest activities. Slowing deforestation rates by 50% by 2050 would by 2100 have achieved 12% of the emission cuts needed to reach the 450 ppm goal (Gullison et al., 2007). Stopping deforestation completely and allowing for re-growth would achieve even more.

An outline of the negotiation process around REDD is given in Appendix 5. Gibbs and colleagues (2007) have provided a convenient definition of REDD that is illustrative to what is being proposed, discussed, researched and advocated for:

“The REDD concept is – at its core – a proposal to provide financial incentives to help developing countries voluntarily reduce national deforestation rates and associated carbon emissions below a baseline (based either on a historical reference case or future projection). Countries that demonstrate emissions reductions may be able to sell those carbon credits in the international carbon market or elsewhere. These emissions reductions could simultaneously combat climate change, conserve biodiversity and protect other ecosystem goods and services” (Gibbs et al., 2007).

So far, no new agreement has been reached on what will happen after the Kyoto Protocol commitment period ends 31st December 2012. At the last meeting of the COP, Parties agreed that a REDD mechanism should be established, but uncertainty remains on exactly what is should include and how it will fit into the bigger scheme to tackle climate change.

3.1.3 Issues to be solved

There are a lot of ways to design a REDD mechanism and many aspects it must include. Some of the issues are presented here.

Reference levels are needed to know the effect of activities on carbon sources and sinks. Most agree that a national approach should be employed, which means that entire countries participate in
REDD and that all forest biomass is taken into consideration. Smaller project areas enable greater participation and easier implementation, while larger areas can deal with issues of leakage (Parker et al., 2008:78). Leakage is a term used to describe a situation where the activities in one area affect a neighbouring one negatively – for example, protecting one forest might increase deforestation in another, as it has to cater for needs of more people. Reference levels also have to be either historical, based on previous forest cover and condition, or projected, using an estimated ‘business-as-usual’ scenario (Parker et al., 2008:78). How reference levels are established will affect which countries will benefit the most from a REDD mechanism, since historical processes and likely future development differ (see subsection 3.3.2 Deforestation and degradation – is there anything to reduce? for an example).

Other issues to be solved regard financing. Distribution of funds could either be based directly on the achievements of a particular project, or it could in various ways compensate some countries more. Compensation would be directed at countries with large existing carbon stocks and historically well protected forests (Parker et al., 2008:20-21). They might benefit little from an achievements-based REDD mechanism because deforestation and degradation have not been causing emissions and therefore cannot be reduced. A stabilisation or conservation fund might therefore have to be established (Zahabu, 2008:24).

Financing of REDD can either be done through a voluntary fund or through market-based trade of emission rights (such as CERs or RMUs). A market approach would generate more funds in the longer term (Miles & Kapos, 2008). Fund-based approaches on the other hand can be more predictable and controllable; therefore, using a hybrid model is a likely solution (Parker et al., 2008:20-21). What such a hybrid would look like remains to be negotiated.

Many concerns about REDD are connected to experiences from the implementation of CDM projects. Minang (2007) has studied the national-level “implementability” of this other climate-related mechanism, with special attention to forestry projects. One thing that has become clear is that Africa is lagging behind, only accounting for 2% of the CDM projects in 2006, while India, China, Brazil and Mexico hosted 83% (Minang, 2007:103-104). “[T]here is need for a rethink of current CDM forestry modalities. Current rules are complex, unfeasible and unfairly beyond the capacity of poor communities” Minang concluded (2007:104).

Another issue is that of the role of outside actors. The large sums of money that are likely to be involved in a global REDD mechanism is expected to attract the attention of big businesses: “transaction costs of projects tend to favour large operators at the expense of small landholders … Clear governance, including well-defined property rights, is critical for emerging international markets” (Campbell et al., 2008:120). Using REDD to motivate land-grabbing and large-scale industrial plantations is to be prevented. But there are also actors whose role is not simply good or bad. Many claim that NGOs can play an important role in awareness raising and capacity building. However, in CDM projects NGOs have sometimes been tempted to promote its own staff rather than involving local communities (Minang, 2007:103-104). There is a risk that the same thing happens if REDD money become available.

Another aspect of REDD lies in the forests themselves. Many of the areas are also valuable in terms of biodiversity and other ecosystem services. It is unlikely that a REDD mechanism will explicitly credit other services than carbon capturing, which means that its implementation may cause negative effects in these other areas. Considering the global scale that will be necessary, it is essential that the design of the mechanism is carefully considered beforehand. Particular concern is needed for the “least productive forest ecosystems [which] may become the most threatened simply because they are the only remaining accessible source of land and forest products” (Miles & Kapos, 2008:26) lists several kinds of issues regarding the establishment of baselines/reference levels for deforestation.

5 Zahabu (2008:26) lists several kinds of issues regarding the establishment of baselines/reference levels for deforestation.
Studies of this leakage (see Box 2, p.18) have concluded that “the extent to which deforestation is merely displaced to surrounding areas is unclear” (Campbell et al., 2008:117). Since climate change is not a local or regional problem, leakage is particularly serious and cannot be tolerated if results are to be achieved. In REDD piloting projects, leakage can cause methodological problems if reference levels from unprotected forests are used: it may cause increased deforestation and degradation in those reference areas, making the difference compared to the project area greater than it would be for a ‘true’ baseline (Zahabu, 2008:48).

Several studies have stated that conventional ‘protection’ will not suffice (Campbell et al., 2008; Miles & Kapos, 2008). This means that broader approaches are needed for REDD than when just implementing forest conservation in a limited area. “Management strategies need to be designed to address local needs and deforestation drivers” (Miles & Kapos, 2008).

### 3.1.4 Finding a way forward

Despite the many issues remaining, many support and advocate for REDD (Gullison et al., 2007; Minang, 2007; Zahabu, 2008; Lewis et al., 2009). One argument is that of cost-efficiency, put forth by Gullison and colleagues (2007:985): “Emissions reductions from reduced deforestation may be among the least-expensive mitigation options available”. It has been shown that allowing deforestation to go on would cause the release of 87-130 billion tonnes of carbon into the atmosphere before 2100. This corresponds to more than a decade of fossil fuel use at current rates (Gullison et al., 2007). Another way of looking at the comparison the authors are making is to say that halting deforestation would buy over a decade of time for the countries that are emitting GHGs. However, there is “widespread consensus” that REDD is not intended to replace emission cuts, but to be an important complement to these (Angelsen et al., 2009:1).

There also seems to be a widespread desire to provide good advice on how forests are best managed under a REDD mechanism. To begin with, developing a national definition of what a ‘forest’ is will be an important task (Minang, 2007:50). Promoting active management, NGO involvement, cooperation between NGOs, government agencies and research institutions, ensuring communities' participation and equitable benefit sharing are other examples of what is considered important (Campbell et al., 2008; Minang, 2007:50). Campbell and colleagues (2008) have found that many of the issues of REDD could be effectively address by various forms of community management. However, they have also observed that there are aspects that are not necessarily dealt with in these schemes, such as biodiversity. There is a need for further research on how to incorporate carbon capturing, livelihood improvement and biodiversity conservation into one effective management model.

Miles and Kapos (2008) have called for revisions of strategies for biodiversity conservation. The argument goes as follows: a potential carbon market has been estimated at USD 1.2-10 billion a year. This can be compared to the total sums spent on protecting areas (not only forests) in the developing world during the 1990s, which was USD 695 million annually. The developing world exported USD 39 billion worth of forest products in 2006. Therefore, REDD could generate funds way above what has been used for forest conservation earlier, and for the first time close to some of the sums that today drive deforestation (Miles & Kapos, 2008). This means that funds meant for biodiversity conservation can be directed towards area with lower REDD ‘potential’, i.e. where there is little chance of getting funds from the mechanism.

### 3.2 Forest conservation in Tanzania

This section describes the characteristics of the study area, providing a background to its recent experiences of increasing community involvement in forest management.
In 1961 the British colony Tanganyika gained independence and soon united with Zanzibar to form the United Republic of Tanzania. In the late 1960s a villagisation process was initiated as a part of the national development strategy. Large scale resettlement projects followed as the population was organised in villages. In the late 1970s and 1980s, Tanzania suffered an economic crisis (Abdallah & Monela, 2007). Reforms carried out since the 1980s have contributed to the country now having a strong GDP growth, and the country is stable and peaceful. However it still ranks among the poorest countries in the world6; in 2002/03, 45% of the government budget was dependent on foreign aid (Milledge et al., 2007:26) (regarding aid and forestry, see Box 6, p.25).

The Tanzanian population is approaching 40 million (Miles et al., 2009:1). Over 80% of the rural population depend primarily on land and natural resource use, and 80% of the country's work force is employed in the agricultural sector (Milledge et al., 2007:24).

### 3.2.1 Natural resource management

Tanzania is the third largest country in eastern and southern Africa. Most of the country is 1,000-1,500 meters above sea level. Climate varies greatly between different parts and rainfall is seasonal and irregular. Half of the country's area is grazing land, a third is forested, while agriculture, mostly small-scale, takes up less than 5% of the area (Milledge et al., 2007:24).

Babati District is found in the eastern part of Manyara Region, in north-central Tanzania. The area has a semi-arid climate and normally two rain periods every year, although rainfall fluctuates a lot (Sandström, 1995:19-20). A century ago the area was mostly forested and inhabited by Maasai and Barabaig pastoralists. Colonial rule and cattle disease outbreaks weakened the influence of these groups and allowed for others to move in. Increasing problems with tse-tse fly resulted in extensive forest clearings peaking in the 1940s and 1950s. The population increased dramatically during the following decades. This contributed to a massive land use changes; in 30 years over 80% of the land had been turned into open farmland (Sandström, 1995:20-21).

When the forest types most common in Tanzania become degraded, it often results in serious erosion, increased sedimentation in rivers and irrigation systems, and changed water flows (Abdallah & Monela, 2007:17). Lake Babati, about 5 km² in size, is located just south of Babati Town. It has flooded about once every decade since the 1960s (including a few days during the field work of this study), damaging the low-lying parts of the town. Sandström (1995) has shown that at least two of three severe floods (in 1979 and 1990) would not have occurred if the forests had not been cut down7. These lessons were not new, however; deforestation had become an apparent problem in Tanzania already during the 1970s. In several areas, government and villages started projects to control erosion and plant trees; however, funds for this were reduced during the economic downturn of the 1980s (Abdallah & Monela, 2007:15-16).

Several drivers behind deforestation and forest degradation have been mentioned in different studies and reports. Shifting cultivation and charcoal making have been described as the most important, but tree cutting for legal and illegal timber trade, overgrazing, mining, forest fires and forest encroachment due to small-scale agriculture also contribute (Milledge et al., 2007:34-35; Abdallah & Monela, 2007:17). The bulk of the wood production in Tanzania is used for fuel, and it is by far the most important energy source in the country (Abdallah & Monela, 2007:12).

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6 In a socio-economic study of the 419 households in Ayasanda, 60% were considered poor (earning on average USD 0.4/day per household), 35% middle income (USD 0.6/day) and 5% well-off (USD 1.8/day). Put another way, the majority of the household could only eat one meal a day and could not afford to send their children to secondary school (Zahabu, 2008:102).

7 According to Sandström (1995), the degraded lands increase overland runoff which fills the lake with sediments, making the lake more vulnerable to heavy rainfall.
It has been emphasised that this situation needs to be seen as symptomatic of more profound structural and economic problems (Abdallah & Monela, 2007:17). 61% of Tanzanian forests and woodlands are general lands lacking proper management (Milledge et al., 2007:32). This open access state (see Appendix 6 for more information about different types of land tenure) combined with the socio-economic factors mentioned above contribute to the ongoing process of deforestation and degradation (Abdallah & Monela, 2007:11).

3.2.2 Reorganising the forestry sector

The Forest Act (2002) describes different forms of forest tenure. National and local authority forests are reserved for either ensuring sustainable timber production, protecting 'catchment areas' (see Box 5, p.25), and/or preserving areas of environmental value. Village forests can be managed in different ways: either by one or several village governments; or by village government(s) in co-operation with central or local authorities if the forest is on land they control; or, thirdly, forests can be on village land but without being under formal management (Milledge et al., 2007:31). Wily (2000:128) has simplified this some by noting that there is basically two kinds of forests: reserved and unreserved ones. In Tanzania, less than half of the forests and woodlands are reserved.

Box 3. What is a forest?
The Forest Act of 2002 defines a “forest” as “an area of land with at least 10% tree crown cover, naturally grown or planted and or 50% or more shrub and tree regeneration cover and includes all forest reserves of whatever kind declared or gazetted under this Act and all plantations”.

The practical organisation of government-owned reserves is a bit complicated. Many districts have

8 Although technically not entirely correct, reserves are often commonly said to be “owned” by the central or local
forest reserves that are managed centrally because of their importance to biodiversity or water supplies (Blomley, 2006:6). Because of this situation, different officers in the same district and with similar tasks answer to different ministries: either the Prime Ministers Office – Regional Administration and Local Government (PMO-RALG), or the Forestry and Beekeeping Division (FBD) of the Ministry of Natural Resources and Tourism (Blomley, 2006:6).

The background to this arrangement is hard to summarise comprehensively. One aspect of it is that Tanzania for some years has been undergoing a process of general political decentralisation. The central government is increasingly assuming a role of supervising and guiding, while local authorities are receiving more influence over financial, administrative and political issues. These local authorities consist of regional administrative secretariats, district councils, wards and village governments. It is the district councils and village governments that have most responsibilities regarding law enforcement and general functioning of their respective area, while region and ward administrations act as co-ordinating and communicating institutions between the levels above and beneath them (Blomley, 2006:5). Village areas are registered with varying precision and size, depending on demographic pressure and availability and use of land. Villages that grow considerably often choose to split in two. Sub-villages also exist, having certain functions in local-level management and governance (Wily & Dewees, 2001:4).

Tanzanian villages are somewhat unique. They have extensive legal rights and responsibilities, and are ruled by their own elected governments which answer to quarterly village assemblies. This, in combination with decentralisation efforts in the country, some mean makes the village unit “possibly the smallest democracy in the world” (Wily, 2000:128).

When it comes to management of forests, it has historically been strongly influenced by the periods of first German then British colonial rule. It led to an increase in the number of forest reserves (Abdallah & Monela, 2007:16), a trend which endured for some time after independence. The reasoning behind these policies was that forests need protection from the pressures of growing populations (Wily, 2000:129). However, during the last quarter of the 20th century this approach faced increasing criticism, arguing that a system with “policing” foresters cannot fulfil its purpose properly (Kajembe et al., 2003; Wily, 2000:128).

This has led to extensive reform of Tanzania's forestry sector since the end of the 1990s (Milledge et al., 2007:28-31), as a part of the general decentralisation process. Policies and legislation have been revised, focusing on “decentralising forest management, encouraging participatory forest management (e.g. Joint Forest Management [JFM] or Community Based Forest Management [CBFM]), and ensuring forests contribute towards national poverty alleviation goals” (Milledge et al., 2007:29). This process of PFM (see Box 4 above) has become “the most important approach within the forestry sector”, being included in and provided for in the National Forest Policy in 1998, the Land Act of 1999 and the Forest Act of 2002 (Abdallah & Monela, 2007:18).

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**Box 4. PFM terminology**

**Participatory forest management**

PFM is the term used in this thesis (and by all informants) for Tanzanian management regimes where communities participate. It includes both CBFM and JFM.

**Community-based forest management**

CBFM is when a community is responsible for managing a forest that is on village land.

**Joint forest management**

JFM is when a community is responsible for managing a forest that is in a reserve “owned” by the local or central government.

3.2.3 Pioneering PFM – how it actually started

The previous subsection mainly describes what has happened in Tanzania during the last fifteen years to provide legal and institutional support for PFM. However, the process had begun before that, and was not initiated by any central institution.

The extensive land conversion in Babati District (described above, in subsection 3.2.1 Natural resource management) had made the Duru-Haitemba Forest heavily degraded in the early 1990s. The traditional management was not effective, the fines for offences were too low compared to the income generated by harvesting forest products (Zahabu, 2008:103). A process initiated in the 1980s aimed at protecting the forest through the then conventional approach of creating a reserve (Wily, 2000:130; Zahabu 2008:103). The local people concluded that the forest would soon no longer be accessible to them, and reacted by trying to maximise the extraction of forest resources before it was too late. Because of the strong local opposition, an external adviser, Liz Wily, was brought in to facilitate negotiations. The situation was resolved by abandoning the reservation plans and instead creating a management regime were eight villages assumed control of the forests on village land – community-based forest management (CBFM) (Wily, 2000:130).

Key steps in this process involved removing open access to the forest and establishing rules for use and protection of the forest for which the communities became solely responsible. Two thirds of forest became strict no access areas. Forest management committees were elected by the communities. To be able to fine and enforce rules, the eight villages drafted by-laws (Box 5) to be approved by the Babati District Council\(^9\). The council supported the villages who proceeded to declare eight 'village forest reserves' (Wily, 2000:131) (For an example of how a village can organise CBFM work, see Appendix 7).

\(^9\) This was a new approach and an act of empowerment for the communities; the possibility for villages to make by-laws applying to everyone had existed in theory but with few examples in practise (Wily, 2000:131).
Wily (2000) has concluded that the process of CBFM is not only facilitated by the already far-reaching decentralisation, but more importantly that the process has empowered village-level institutions and is promoting democracy and devolution. Wily emphasises that the management practice is not originating from new policy formed at central level, but that new policies are now to some extent instead influenced model piloted and tried by grass-root communities.

The JFM process, to involve communities in the management of government forest reserves, is more complicated and has moved slower. Implementation started in nine Tanzanian reserves 1998. Of these, Ufiome Forest Reserve and Nou Forest Reserve are located in Babati District (Wily & Dewees, 2001:15). The Ufiome work moved faster; the eight villages involved have been recognised as managers of their respective village forest management area. Wily and Dewees (2001:17) have described the arrangement as “a breakthrough”, since the community is to operate on its own without intervention from FBD as long as the management plan and by-laws are respected (Wily & Dewees, 2001:15).

In Nou Forest, the process has been largely influenced by the involvement of an external facilitator. FARM-Africa is an NGO working in five East African countries with “training and support that poor rural communities need to identify and implement appropriate solutions to many of the key problems they face” (FARM-Africa, 2009b). The Tanzania Participatory Forest Management Project (TPFMP) in Babati and Mbulu Districts addresses problems of forest resources (both wood and non-wood products) being depleted. Project activities in Nou Forest include developing alternative livelihood options, helping communities assume responsibility of their forests and training government staff, but also developing a model for how the JFM work can be replicated for CBFM schemes in areas outside the reserve (FARM-Africa, 2009c). One of these areas is Dareda Escarpment Forest.

Box 5. PFM terms and definitions

**By-laws**
Village laws, approved by the district council but drafted and enforced by village authorities.

**Land use plan**
Determination of what activity a piece of land should be used for. “Village land use plans will be used as a tool for implementing policies for better land use and management” (National Land Policy 1997).

**Management plan**
“A forest management plan shall define the management objectives by which the forest manager shall use its best endeavours to achieve the sustainable management of the forest resources over the period for which the plan has been prepared” (Forest Act 2002).

**Catchment area**
The drainage area for a river, lake or other water body.

Box 6. LAMP

The role of foreign development projects has not been insignificant to Babati District or PFM. Four villages in Babati began piloting approaches to community forestry already in 1987 through the international Forests, Trees and People Programme (FTPP). In 1988 the FTPP was incorporated into a land management project in Babati launched by the Swedish International Development Authority (Sida) (Katila et al., 2003:18) that would become known as LAMP (Land Management and Environment Programme). The work done by LAMP in Babati and neighbouring districts is described in a Sida evaluation as “[a]n area where Swedish support has really made a difference [by] turning community forestry and community-based natural resource management into a mainstream management approach” (Katila et al., 2003:26).
3.2.4 Threats to the PFM process

There are three main objectives of PFM policy in Tanzania:

- “Improved forest quality through sustainable management practices
- Improved livelihoods through increased forest revenues and secure supply of subsistence forest products
- Improved forest governance at village and district levels through effective and accountable natural resource management institutions.”

[my emphasis] (Blomley, 2006:4)

According to Zahabu (2008:132) the ongoing severe degradation throughout Tanzania contributes to communities usually being positive to the establishment of PFM regimes in their forests. Despite this, and despite the quite thorough reforms of policies and legislation, only a small fraction of Tanzania's forests have become reserves under PFM yet – 1% according to Abdallah and Monela (2007:20). The main issue constraining the process is a lack of human, financial and institutional capacities (Milledge et al., 2007:29).

Studies have shown that establishing a PFM system can cost between USD 60,000 and USD 100,000 and take two to four years (Abdallah & Monela, 2007:20, Zahabu, 2008:112). Financing is not only important for the establishing phase, the continual work is also costly. “[O]pportunities for earning cash are extremely limited”, Zahabu has found. “CBFM in particular has little to offer in terms of timber revenues, fines from offenders and ecotourism” (Zahabu, 2008:112). The dependence on income from fines paid by offenders means that the more successful the protection of the forest is, the less income is generated to the community (Abdallah & Monela, 2007:20). “Limited revenue sources clearly restrain villagers managing [PFM], as evidenced from Ayasanda …, where all revenues collected were spent and yet the [village forest committee] have to volunteer to carry-out other activities free of charge” (Zahabu, 2008:108). Meshack and colleagues (2006:8) disappointingly conclude: “Any expectation that CBFM would prove a cheap way of obtaining benefits has not been realized”.

This means that most projects so far have been dependent on outside support; it is simply not something that villages can afford to do on their own. It has been pointed out (Meshack et al., 2006) that communities are in a disadvantageous position when it comes to looking after their own interests, since the Tanzanian government can dominate decision-making through its district officers. This risks being a problem particularly with the poorest and least developed villages. Also, according to the same study, it is the villagers with the lowest income that have to bear the larger share of the forest management costs (Meshack et al., 2006:8). This inequality seems correspond to findings in other parts of the world: “The more prominent members of society tend to capture most of the benefits from protected areas whilst suffering less of the costs” (Campbell et al., 2008:119).

Meshack and colleagues (2006) have suggested that new options for continued financing should be investigated, so that the process can go on without risking that the poorest groups bear the costs.

Other more indirect problems for PFM exist. Since the energy sector is almost entirely dependent on forest products it causes a continual degradation of forests, especially near large cities. A widespread lack of land use plans contribute to conflicts over access to lands (Milledge et al., 2007:31). Even though it is required by law, only about half of all villages have developed such plans (Zahabu, 2008:136). Weak capacity and poor co-ordination between agriculture, water and wildlife management sectors also have negative impacts on local communities and rural poor in particular (Milledge et al., 2007:31). Zahabu (2008:135) has also stressed that the way district governments are organised contributes to the limited PFM implementation: the placement of forestry and lands.

10 Land use plans are not to be confused with management plans. See Box 5, p.25 for definitions).
officers under the district councils prevents effective sectoral communication and co-ordination. Brockington (2007) has scrutinised the work done by Liz Wily in Babati. His main argument is that the village governments, which play a key role in the PFM process, are not working in the best interest of the villagers. Drawing on experiences from other communities in Tanzania, he points at a number of areas where conflicts have arisen. He concludes that unless Duru-Haitemba is an exception, the claims of PFM success are either false in the sense that the forest is not protected, or they are false in that the local democratic institutions are not at all strengthened by the PFM process.

There are points to Brockington's reasoning, but also several weaknesses. An obvious one is that he has not studied any villages involved with PFM, he merely draws on experience of local-level corruption from other communities. Also, many of these experiences cannot be supported by any data and some parts seem to be mere speculations: “the absence of published accounts and the continual suspicions [from Brockington] of what might be going on spoke volumes” (Brockington, 2007:841).

However, corruption is not an area where data is easily found, and while Brockington might fail to advocate for another model than PFM (which he does not explicitly set out to do), he does point at some apparent weaknesses in Wily's work. As mentioned above, financing the start-up and running costs of villagers' work is an issue that even if village governments are not corrupt will still need to be addressed. Accountability and transparency need to be guaranteed to avoid problems. This would also help prevent the local elite from benefiting more than other groups (Brockington, 2007:841).

Another potential problem is that there might be some truth in Brockington's guess that Duru-Haitemba villages are indeed different compared to other Tanzanian villages (Brockington, 2007). For example, Sweden has supported the Tanzanian forestry sector since the late 1960s with an average contribution of almost SEK 40 million annually. This work was from the late 1980s onwards to a large extent co-ordinated by the LAMP office in Babati (see Box 6, p.25), where also most of the activities were implemented (Katila et al., 2003).

Speaking against this is the fact that the CBFM model has been replicated in several other communities around Tanzania. However, there might be certain preconditions making these villages more suitable for such a model while others are not. One explanation could be that the external support they have received from other actors (Meshack et al., 2006) might have made all the difference. The call for future PFM assessment to also study issues of corruption, bad practises and poor governance (Brockington, 2007) therefore makes a lot of sense.

3.3 Approaching REDD – the situation in Tanzania

This section gives a brief description of the events so far in the REDD preparations going on in Tanzania. The country has developed a framework for a National REDD Strategy (URT, 2009a; RNE 2009a), there are several REDD pilot activities being conducted by NGOs (URT, 2009a; Appendix 2), and the country is involved in several international REDD preparation programmes (RNE, 2009b; UN-REDD, 2009b).

3.3.1 The Tanzania-Norway partnership

Norway has considerable commitments in Tanzania when it comes to development co-operation in general. In the two countries' memorandum of understanding (MOU) for the period 2007-2011, Norway aims at allocating at least NOK 400 million annually (RNE, 2007). In 2008, the two countries signed a letter of intent addressing climate change issues, listing five components: promoting a national REDD process, reviewing of environment policies regarding climate change, starting a
major climate change research programme, undertaking training at all levels, and facilitating investments and access to carbon markets. The partnership has a budget of NOK 500 million for the period 2008-2012 (RNE, 2008).

One example the partnership's intentions being fulfilled is a call that was made in 2009 to Tanzania-based NGOs, to submit concept proposals for projects to pilot REDD activities. Specifically, five aspects were emphasised:

- “Approaches to organising REDD work at the local level, with a focus on governance and tenure;
- Incentive schemes that provide equitable benefit sharing mechanisms, especially to local communities;
- Baseline studies and methods for estimating deforestation, carbon sequestration and emissions;
- Participatory methods for monitoring, assessing, reporting and verifying; and
- Approaches that address drivers of deforestation and forest degradation.” [my emphasis] (URT & RNE, 2009)

The partnership with Norway is not the only source of funding for REDD activities in Tanzania, neither is it going on isolated from other programmes\(^{11}\); however, the case studies chosen for this thesis primarily deal with activities linked to the Norwegian funds.

Almost fifty NGO proposals were submitted in response to the call made through the Tanzania-Norway partnership. Ten NGOs were asked to develop full proposals, including Tanzania Forest Conservation Group (TFCG), AWF and FARM-Africa (URT, 2009b).

AWF is an organisation working in several Sub-Saharan countries with the mission to preserve Africa's wildlife and landscapes. This is considered instrumental to ensuring “future prosperity of Africa and its people”. What is mainly emphasised at the NGO's website is its activities and achievements when it comes to protecting the African wildlife. The plans for Kolo Hills Forests are not detailed there yet (AWF, 2010). The revised AWF proposal (AWF, 2009) gives more information. The project will involve Kondoa District Council, its forestry officers, and fifteen communities in Kolo Hills in preparations for REDD. Both CBFM and JFM activities will be going on. Five main activities are listed: the establishment of baseline information including present carbon stock and projected deforestation rates; REDD capacity building for communities, local government and CSOs; addressing the drivers of deforestation and forest degradation to halt and reduce those processes; promoting alternative livelihood options that are consistent with forest conservation; and, finally, sharing of information about and experiences of REDD both with project partners and other national stakeholders. The proposal also emphasises the importance of Kolo Hills Forests for supplying water to Tarangire River, which in turn provides water to both people and wildlife\(^{12}\) (AWF, 2009).

TFCG describes itself as an experienced Tanzanian non-governmental organisation actively and successfully improving forest management and reducing deforestation. It works both with practical solutions to forest issues, with information, communication and education campaigns, and with international-level advocacy strategies for CSOs at the COP meetings. In its commitment to making

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\(^{11}\) The country is involved with the UN-REDD programme (UN-REDD, 2009b) and the World Bank's initiative Forest Carbon Partnership Facility (FCPF) (URT, 2010).

\(^{12}\) Tarangire National Park is located north of Kolo Hills, in eastern Babati District (Baldus & Cauldwell, 2004:13; see also Appendix 1.)
sures REDD benefits the poor TFCG is acting in partnership with MJUMITA, a network of Tanzanian communities working with PFM (TFCG, 2009a:6). MJUMITA is working to empower “forest user groups through promoting their involvement in the decision making process”. This will be achieved by increasing information sharing, facilitating effective forest management regimes and uniting Tanzanian communities to help them safeguard their interests (MJUMITA, 2008). One apparently important reason for the network's involvement with REDD is a concern often raised by its members: the revenues from PFM are not sufficient to cover the costs of the work. To ensure sustainable forest conservation schemes, the benefits to the communities must increase (TFCG, 2009a:7).

These aspects also receive attention in the TFCG proposal. By using the existing structure of PFM in selected Tanzanian communities, the purpose is “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 communities that are sustainably managing or conserving Tanzanian forests at a sub-national level” (TFCG, 2009a:10). This is to be achieved by establishing a 'community carbon co-operative', through which the participating communities can sell carbon credits that have been created in their respective forests. These transactions will take place through the MJUMITA network. The direct payments to communities is central to the proposal, and a portion of the project money will – like the future REDD money – be results-based to “maximise incentives to maintain forest cover” (TFCG, 2009a:2).

FARM-Africa's rejected proposal outlined basically the same activities as in its TPFMP programme (described in subsection 3.2.3 Pioneering PFM – how it actually started), but also emphasised the potential of PFM approaches for the implementation of REDD (FARM-Africa, 2009d:3).

3.3.2 Deforestation and degradation – is there anything to reduce?

The extent of deforestation in Tanzania seems to be very hard to assess. Estimations of annual losses range from 91,200 to 500,000 ha (Abdallah & Monela, 2007:17; Milledge et al., 2007:34-35; Miles et al., 2009:1). This means that something between 0.2% and 1.5% of the country's forests are cut down every year. In addition, degradation is going on in both reserved and unreserved areas, although public lands are under more pressure (Milledge et al., 2007:34-35). Forest degradation is even harder to assess than deforestation and fewer numbers can be found. In a UNEP report, Miles and colleagues (2009:1) claimed that about 500,000 ha is degraded every year.

The proposals in the UNFCCC process mentioned earlier this chapter will affect countries differently depending on forest cover and historical rates of deforestation and degradation. In two different reports Tanzania is classified as a country with low forest cover, having <35% (Parker et al. 2008:101) and <50% (Angelsen et al. 2009:76), respectively. One of the reports stated that Tanzania has a low rate of deforestation, losing less than 0.3% forest cover every year. Countries with these characteristics are typically found in Africa (Parker et al. 2008:101). They “will find it difficult to benefit under REDD unless enhancement activities [see Box 2, p.18] are included in the scope of the mechanism” [my emphasis] (Parker et al. 2008:22). The argument is that in countries with relatively low forest cover that has not been deteriorating at a fast rate, protecting them will not result in a big gain in terms of reduced emissions. Enhancement activities could allow for the establishment of new forests or reward improvements in the existing ones.

The second report, on the other hand, characterises Tanzania as a country with a high deforestation rate, above 0.5% (Angelsen et al. 2009:76). This would mean that Tanzania would instead gain from using a historical baseline, rather than a projected one; a projection would have lower deforestation rates since there is not much forest left to cut down.

This rather confusing situation means that choosing what REDD proposal to support at the next
COP meeting might mean a lot for the future of Tanzanian forest management. It also has the implication that the way in which baseline levels are established will directly influence the country's ability to benefit from a REDD mechanism. These reports might be replaced by more accurate ones before REDD is implemented. However, at the moment one is found at the website of UN-REDD, the UN body co-ordinating REDD preparations for Tanzania and eight other developing countries on four different continents (UN-REDD, 2009b); the other is an assessment prepared for the Government of Norway, which, as mentioned, is playing a key role in Tanzanian REDD preparations (RNE, 2008). If the information about the pre-existing situation is this unreliable already before the work has started, one wonders what co-ordination issues might arise along the way.

3.3.3 Linking the REDD plans to the existing PFM process

As pointed out above, there are several issues that are holding back the ongoing shift in Tanzania to more participatory approaches in forestry. One of these is the cost of establishing PFM regimes. Zahabu (2008) has investigated the feasibility of incorporating a future REDD mechanism into CBFM and JFM schemes, so that the money earned could pay for the PFM work.

The study was made assuming REDD will credit reduced deforestation, reduced degradation and forest enhancement activities. Projects in four Tanzanian villages were studied during several years. One of the villages was Ayasanda, where activities were undertaken in the forests of Haitemba and Warib. The idea of the study was to involve villagers in the tasks that REDD would require, more precisely the monitoring of changes in the carbon stock of the forest. For this end, a methodology was developed for how sample plots could be selected and marked for continual measurements, and for how trees should be counted and measured to provide reliable data on forest growth. A methodology was also developed to establish credible reference levels (Zahabu, 2008).

The study also required an analysis of the cost of establishing PFM. These costs are of two kinds. The transaction costs consist of the actual measuring of trees to establish changes in carbon stock, and also the marketing of the produced credits. The opportunity costs are the products and services that the forest usually provides that will have to be given up by the community in order to qualify for REDD participation (Zahabu, 2008:114). It is worth noting that although the costs were considerable for communities, they did not actually pay money but rather in time, spent on planning, working and guarding the forest (see subsection 3.2.4 Threats to the PFM process for details about the costs for communities). The cost analysis was also complemented by socio-economic profiling of the community involved. Zahabu (2008:150) concluded that there are very few opportunities for villagers to earn a cash income, which makes even small contributions potentially very appealing.

From the findings of the study, it was argued that PFM can indeed become profitable for the communities if REDD becomes a reality. It will to some extent depend on how much carbon credits will cost, which in turn will depend on the design of the financing mechanism. For villages managing small forests, especially of less than 100 ha, a profit will be harder to achieve since the per hectare costs would rise considerably. Zahabu (2008:138) proposed that communities in those situations should consider forming groups that collaborate in carrying out the forest conservation tasks and REDD-related work.

As many advocates for and against REDD has warned, the Zahabu study showed that ensuring equal participation among all villagers is difficult. In particular, village forest committee members are likely to take a more active part than other villagers; the payment of wages are usually of particular interest. It is likely that this will become even worse if REDD funds start arriving on a big scale. This would be a problem because unfair sharing of the benefits might make villager opinions more negative towards forest conservation (Zahabu, 2008:129). The development of effective systems for benefit sharing is therefore crucial (Zahabu, 2008:140).
The Zahabu study is positive to the establishment of a REDD mechanism, but there are several problems that will need attention: issues of land shortage, unfavourable laws and policies, low capacity to facilitate activities and lack of funding for them (Zahabu, 2008).

The work done and the conclusions made by Zahabu provide important input to this study. However, it is also necessary to scrutinise it and compare with other projects and studies. Zahabu (2008:137) has stated that NGOs are an important resource for the implementation of PFM. This makes it interesting to ask what opportunities there are for communities to replicate his model without facilitation from the outside. In the case of Ayasanda, the presence of LAMP in Babati (Katila et al., 2003) most likely had a considerable effect on the success of both PFM and REDD activities. Any particular advantage for Ayasanda is not mentioned, however Zahabu (2008:80) admits that “[t]he role of staff of local supporting organizations was also pertinent as regard provision of technical assistance to villagers”.

It seems likely that the combination of PFM and REDD would be a successful one. However, the practical implementation is just one part of it, for a national scheme to work there has to be coordination on a much bigger scale. Several key issues have been identified regarding REDD, and many obstacles still seem to be in the way of the establishment of an effective and functioning PFM process in Tanzania. The experiences presented in the following chapter from three case studies will hopefully help shed some light on what problems remain to be solved, and what is being done at the moment to address them.
4 Results

The results of the field study are presented in this chapter, organised around the three case studies: Haitemba-Warib Forests, Dareda Escarpment Forest, and Kolo Hills Forests. The accounts are briefly analysed and compared to each other. The chapter ends with a more thorough analysis of how the informants' perceived reality corresponds to the purpose of REDD, PFM and the policies being put together at national level.

All villagers are kept anonymous. A list of all interviewees (including abbreviations) is provided on page 59, just after the literature references.

4.1 Haitemba-Warib Forests

The Ayasanda Village Chairperson (AVC, 2010-02-26), the Ayasanda Forest Committee Chairperson (AFC, 2010-03-03) and the Babati District Environment Officer Anatoly Rwiza (2010) all stated that land degradation in Haitemba-Warib was severe before CBFM work started 1994. When the REDD project started in Ayasanda about a decade later, the improvements achieved meant that the motivation for cutting down trees had already become low. It is a catchment forest and water for the cultivation is more important than the forest products. This raised awareness was confirmed by forestry adviser Calyst Kavishe (2010): “[Now], all know that the hilltops with trees, they are the ones which receive rain earlier than the other”.

4.1.1 PFM with and without REDD

The Ayasanda Forest Committee Secretary (AFS) described the practical organisation of CBFM in
the village. The Forest Committee surveys the forest once a month. Ten guards work in shifts and patrol the forest three times a day. These guards have some privileges – for example, they are excused from other communal work, and they receive part of any collected fines as a bonus (AFS, 2010-02-26).

All eight villagers interviewed Ayasanda said they think protecting of the forest is a good thing, and those who knew anything about REDD were positive about that as well. In most cases, the term 'REDD' was unknown to the villagers, but they were better acquainted with the project where tree growth had been measured. About half of the villagers could explain the concept of the project at least at a basic level – growing trees capture carbon, and thereby clean the air (Ayasanda, 2010-03-03; see also Appendix 8).

Almost all villagers knew that there had been money paid in relation to the measurements of the trees, and that the village has built a school with the money. All women who knew about the money said that they supported the way it was used. Of the men, one said that dividing the money directly among the villagers next time would be better. Another man explicitly said that communal uses are better than distributing cash (Ayasanda, 2010-03-03). All men but one said that PFM is the same with REDD as without it. No woman said this; one claimed that the rules have become stricter with REDD (Ayasanda, 2010-03-03).

AVC (2010-02-26) stated that “everyone is happy with REDD”. AFS similarly stated that there are no negative effects of REDD; no special by-laws had to be adopted to incorporate it into CBFM (this was confirmed by Rwiza (2010)). However, when asked directly if anyone is unhappy with the forest management regime, AFS informed me that in one sub-village (Haitemba), where the land is less suitable for cultivation, there are more problems with illegal forest use (AFS, 2010-02-26). For the measurements taken in 2008, TZS (Tanzanian shillings) 2.5 million have been paid (~ USD 1,750), AVC and AFC informed me. The villagers also took measurements in 2009, but they have not yet been paid for that. A second payment is supposed to be on its way. The money was used to help finance a school in Haitemba sub-village (AVC, 2010-02-26; AFC, 2010-03-03). Villagers told me that there had been a village assembly to decide on what to do with the money (Ayasanda, 2010-03-03). AVC expressed that he hopes and believes that more REDD money will come. Through his membership in MJUMITA, he knew that Norway has paid or committed to pay TZS 2.6 billion. This sum has not yet been distributed, he said, so he was confident that more REDD funds will be available (AVC, 2010-02-26). Also AFS (2010-02-26) seemed to be expecting more REDD activities, and at district level there was talk about a “big national plan” coming (Rwiza, 2010).

Eliakimu Zahabu (2010), senior lecturer at Sokoine University of Agriculture, wrote the dissertation on REDD work in Ayasanda (Zahabu, 2008) and was the one who managed to find funding for the village. He explained that the money that has been paid to Ayasanda came from a project and it was a one time payment. The forests of Haitemba-Warib, or Duru-Haitemba for that matter, are not a part of any of the formal REDD pilot project sites. Ayasanda will not, to Zahabu's knowledge, get paid for any growth measured during 2009.

AFC knew that REDD is a part of something bigger, where developed countries pay to compensate for their emissions. As he saw it, there is nothing you can do about the emissions, so at least it is good that they are compensated for. The emissions and the forest growth should be measured and compared, AFC suggested, and if the emissions are higher, “… it's stealing!” (AFC, 2010-03-03).

4.1.2 Effects outside Ayasanda

The Zahabu work seems to be well thought of among Babati District staff. Forestry Officer Josiah Maanga (2010) said that the work done in Haitemba-Warib shows that it is possible to create a
system where money from REDD manages to reach the people, and that they are capable of deciding about its use themselves. Another forester talked about his last visit to Ayasanda and how the patrols have become very serious:

*PFM* has never shown ... *a good and substantial income to the community. Most of the PFM activities have been just to conserve the forest, and the benefits to the communities have never been shown in terms of cash, like that. [...] REDD money* has contributed to a more serious conservation.

(Kavishe, 2010)

The project carried out in Ayasanda has contributed to raising REDD awareness among district foresters (Maanga, 2010; Kavishe, 2010), thereby addressing what a majority of all informants in this study said is a problem. My recurring meets with district staff enabled me to get a quite good idea about this issue. Some officers were very eager to tell me as soon as they had any new information on REDD. It was as if they wanted to give the impression of being quite knowledgeable about REDD (after all, I was interviewing foresters who were supposed to know about the forestry sector). This helped my study, but was also interesting. It made it clear that they really had not had anything more to tell me the last time we met, that there was not a lot of information available to them. Some even said explicitly that there were no official information coming from the government, others mentioned occasional awareness raising meetings. However, my impression was that no one attends these; one district officer said that what he knows about REDD, he knows from his own reading. Researchers visiting villages in Babati, students asking questions directly to the officers, or workshops arranged by NGOs were other sources of this indirect information (Kavishe, 2010; Maanga, 2010; Rwiza, 2010). Rwiza made a comment that could be interpreted as frustration. When speaking about the low awareness at local level, he mentioned that all the information is going from villages and to universities and ministries in the form of research or reports; nothing is coming back. My impression was that the situation is similar at district level.

Both AFS and AFC claimed that other villages are very much interested in working with REDD. AFS said he is expecting more opportunities to come with the big national scheme (AFS, 2010-02-26). AFC mentioned Gidas, Riroda, Duru and Bonga as examples of neighbouring communities that had expressed interest in REDD. He said that it is important to have a good existing forest management regime in place before you 'join' REDD (AFC, 2010-03-03).

One of the mentioned villages, Riroda, has just like in Ayasanda been doing CBFM since 1994 (Appendix 7). The forest is also patrolled – but not three times a day, only once a week, and only 300 of its 800 ha is surveyed. The reason for this is a lack of money, according to the Forest Committee Chairperson (RFC, 2010-02-23). The claim that the village should be interested in an extra income from REDD (Zahabu, 2008:112) therefore seems reasonable.

Endaberg is another Babati District village involved in CBFM. Of three members of the village council, only the chairperson had heard about REDD. As he understood it, you have to be a “member”, but if you join you can get paid for protecting your forest (EVC, 2010-04-05).

4.1.3 Does REDD promote deforestation?

During the interview with Zahabu (2010), he brought up Ayasanda to explain one of the many methodological problems that still exist around REDD. To calculate the amount of carbon credits produced though CO$_2$ absorption, a baseline year has to be chosen against which any changes in carbon stock can be compared. In Ayasanda, the trend of reduced emissions most likely started when CBFM started in 1994. However, a REDD mechanism probably will not come before 2013.
This makes choosing a baseline year tricky; 1994 is not possible, because there is no data on the carbon stock in Haitemba-Warib before 2006 (Zahabu, 2008:49). But starting 2013, or even as early as 2006, would mean that some of the work that has been undertaken will be uncredited – in fact communities with forests in a bad condition might have an incentive to wait with implementing PFM until a REDD mechanism comes. This will be an issue that the national strategy will have to deal with (Zahabu, 2010).

The problem was also brought up by Rwiza (2010), who claimed that REDD could actually promote deforestation. Cutting down the trees before starting a REDD project would give you a profit when selling the timber, and also, the more degraded the forest is when you start protecting it, the more you can achieve in terms of CO₂ capturing (this assumes that REDD will include forest enhancement activities). Zahabu also admitted that places with “bad past practises” have an advantage. That is why the starting year for the baseline is so important (Zahabu, 2010).

4.2 Dareda Escarpment Forest

FARM-Africa's PFM Team Leader Ernest Moshi gave a thorough description of what the organisation is doing in Dareda Escarpment Forest. Apart from Qameyu, five more villages are involved in the work. The activities are a part of FARM-Africa's Tanzania Participatory Forest Management Project (TPFMP) (Moshi, 2010).

4.2.1 Seeing what is wrong, and making it right

All informants with any relation to the escarpment area agreed that the forest had been in a bad condition earlier, although the stated causes for the degradation varied from forest fires and tree cutting to overgrazing and settlement expansion (Kavishe, 2010; Maanga, 2010; Moshi, 2010; Rwiza, 2010). At least most informants could agree on the fundamental problem: the forest has been on unmanaged village land, which means it basically is an open access resource (see Appendix 6) (Kahemela, 2010; Maanga, 2010; Moshi, 2010; Salutary, 2010).

The six villages formed “planning committees” that function as working groups that implement the PFM activities in collaboration with FARM-Africa and district staff. The first task was to establish the boundaries of each village's forest and make maps of the area. Now, a participatory forest resource inventory (PFRI) is conducted. Areas that will be completely restricted are not surveyed very thoroughly, while those where some resources will be harvested need closer monitoring, Moshi (2010) explained. This account was backed by that of the Qameyu Village Council Chairperson (QVC, 2010-04-09). He, however, also mentioned a conflict that arose with a neighbouring village regarding forest boundaries. Some village elders had opinions on where to draw the boundary between Qameyu and Dareda Kati (a village below the escarpment). As QVC described it, FARM-Africa resolved the conflict by drawing its maps according to older map originals (QVC, 2010-04-09). FARM-Africa officers preferred to say that it was a more or less common decision to use the “original village map”, and did not emphasise their active part in finding a solution (Moshi, 2010).

The interviewed members of the planning committee (QPC, 2010-04-09) told me that young men from the village are patrolling the forest. The group of Qameyu villagers were aware of the PFM project. According to them, the reason for doing it is because there were some problems with the forest before. People from Dareda (below the escarpment) came into the forest and cut trees. Now, it is patrolled and protected from outsiders (Qameyu, 2010-04-09; see also Appendix 9).

4.2.2 Differing opinions

When FARM-Africa first came to the villages in the Dareda Escarpment area, villagers basically thought that they wanted to steal the forest, Moshi (2010) told me. They had to make it clear that
the purpose was to help the communities prevent others from using their resource. By creating village forest reserves the forest benefits would be protected and also shared more equitable than now:

The people who have money, they go to the forest, cut trees, do pit sawing, they get money from the timber. But by putting the forest under PFM, every villager will in one way or another benefit from the forest, because they have to open [a] village account. All the income coming from the forest ... – whether it's fines or fees – ... will be used for all people, not for few people, like now.

(Moshi, 2010)

Quite interestingly, Forest Officer Maanga described parts of the project in Dareda Escarpment Forest a bit differently than Moshi did. According to Maanga (2010), the management plans and by-laws have already been set up, which has improved the situation in the forest. I did not find out why his statement differed from Moshi's. As Maanga (2010) put it, “FARM-Africa is assisting the district to conduct PFM [in] six villages” [my emphasis]. He made an effort to point out that the NGO just provides some “transport” and “logistics”, and that the salaries of the district staff is being paid by the district and the central government. The NGOs can be useful in these projects, but are not crucial to their success (Maanga, 2010).

At FARM-Africa, some claimed that accountability is a lot better in NGOs compared to districts. Money cannot be used for what it is not meant, and this means more benefits for the people. Districts take the money designated for one thing and use it for another. However, this does not mean that district officers cannot facilitate projects, but the NGO officer said there should be someone monitoring them, a “project adviser”. A memorandum of understanding (MOU) should be set up if NGOs and districts co-operate, so that responsibilities are clearly defined.

There was also an apparent irritation among certain NGO staff regarding the awareness level at the district. Staying up-to-date on REDD issues requires a lot of reading, which according to one officer is something district staff just do not do unless they are “spoon-fed” material, to use his words. “Actually, that's the biggest problem that we have [concerning REDD]”, he stated. Co-operation issues between NGO and district staff was also mentioned as a cause to the failure of the proposal (see below). It was not made clear exactly what did not work, just that there were problems with the awareness level and something about money – it might have been implied that they wanted to get paid to help prepare the proposal.

4.2.3 “In the future, you may get money”

As mentioned, FARM-Africa developed plans to incorporate REDD activities into its TPFMP project (FARM-Africa, 2009d). Forestry Project Co-ordinator Adrian Kahemela (2010) provided extensive information on the proposal sent to the Tanzania-Norway partnership (see Appendix 11). As to why it was turned down, I got a variety of explanations from different informants. They
revealed some frustration among NGO staff regarding district officers. It was stated that developing the proposal was complicated by the low awareness level in involved communities and at district level. A lack of time rushed the process and made it difficult to involve district staff properly in the process.

Even though FARM-Africa did not receive REDD funds, the work to implement PFM goes on. In Qameyu, Moshi (2010) said that the PFRI will be completed and the information used to set up a resource management plan (see Box 5, p.25). It will determine what activities can be allowed in what areas while ensuring the sustainable use of the forest. Banning all use completely is not possible, Moshi explained, but you can control it. The planning committee also mentioned that trees will be planted and the forest will be divided into two small areas where some uses will be allowed, and one bigger area that will be completely protected (QPC, 2010-04-09).

None of the interviewed villagers in Qameyu knew about the term 'REDD' (QVC; QPC; Qameyu, 2010-04-09; Appendix 9). Moshi was not very talkative regarding REDD, but he knew about it and was quite positive about the concept. He said that if it works properly it can help improve PFM by adding incentives for the villagers. It also seemed like REDD was helping FARM-Africa's work, even though their proposal was not accepted:

\[
Right \text{ now, they [the villagers] are very encouraged ... because we told them: 'By keeping your forest good, in the future, you may get money from these people who are supporting the REDD project' – so they are eager.}
\]

(Moshi, 2010)

To Moshi, a key issue for a successful REDD scheme seemed to be benefit sharing: “We need to set a good mechanism that would make sure that the money goes straight to the … people”. He continued: “If you channel the money through the districts, the districts will take [a] part of it”. Kahemela agreed with his colleague on this issue:

\[
There \text{ will be problems in the future – we have been tackling them before ... If we follow the governmental system, at the end of the day, the benefits will not trickle to the communities.}
\]

(Kahemela, 2010)

He also pointed out that using the existing government structure would mean that the level of success will depend on what area you are in: “It will vary from one district to another district … [and cause] problems [for] the communities when it comes to cost/benefit sharing”. Benefit sharing, a key issue for Kahemela, cannot be properly addressed with a ‘governmental system’ approach (Kahemela, 2010). Even one of the district officers seemed concerned about functioning of the governmental structure, arguing that a REDD mechanism should not be managed by the government but by some independent institution. That way problems could be avoided where bad relations between foresters and communities prevents effective implementation.

Zahabu (2010) was of a different opinion, saying that it is precisely the existing government structures that will have to accommodate REDD in the future. The extension officers at district level will be the facilitators for the villages. The NGOs operating in Tanzania are too few and two unevenly distributed to manage the whole country. They can still have a role to play, though, to “build capacity of the local people to manage the forests” (Zahabu, 2010). They are also suitable for

Royal Norwegian Embassy (RNE) told me that the basic problem was that the feedback given to FARM-Africa was not really incorporated into the revised proposal. However, Milledge informed me that FARM-Africa is not out of the picture yet, they still might come up with a new proposal (Milledge, 2010).
information dissemination.

4.3 Kolo Hills Forests

Before AWF started working in Kolo Hills Forests in 2007, “there was no clear management, because the government had no power … to manage the whole [area]”, I was told by Wasiwasi Baharia, Project Development Officer. There is both deforestation and forest degradation going on, but the part of the forest that is government-owned is in better condition than that on village land where charcoal making is one of several problems (Baharia, 2010).

4.3.1 Previous activities – “Environment Day”

Baharia's statement should be compared with the impression I got from the interviews with villagers. Of all the people I met with in Mnenia and Itundwi, not a single one said that the condition of the forest used to be bad or that they used to have problems with deforestation before AWF came to the area (Itundwi; IVO; Mnenia; MVO, 2010-04-12; see also Appendix 10), although no one said that the situation has become worse either. At both village office meetings I was told that there had been some form of work to protect the forest before, but that this had some weak points and was now improving with the support that AWF provides (IVO; MVO, 2010-04-12).

Among the participants in the meeting at Itundwi Village Council Office (IVO), there seemed to be some dissatisfaction with how the management was set up earlier, before AWF. The rules were made up by the government and the villagers were not involved in the decisions (IVO, 2010-04-12).

Villagers generally mentioned tree planting and awareness raising as activities AWF had undertaken before. Apart from this, the group interviewed at Mnenia Village Council Office (MVO) described how an Environment Day had been arranged in 2009, where those who did the most to “preserve the environment” were given prizes or rewards. Both households or institutions such as schools could participate. Households should have “real toilets”; planted trees, practise agroforestry and have a house built from “modern materials” (i.e. not wood). Schools should have a lot of posters up with environmental information, and also have a “nice garden”. Prices mentioned were mainly of practical use, such as bicycles, or more recreational, such as footballs (MVO, 2010-04-12).

A short visit was paid to Kolo, a village also involved in the AWF activities. A conversation with a group of villagers supported the IVO information that previous management under district rule had not been involving the villagers in the work. However, the Kolo villagers contradicted their neighbours' statement about the situation before AWF. They said that there were problems with charcoal burning, overgrazing and tree cutting for agriculture. The reason given was that the guards lack equipment and weapons to do their job, but also that awareness level is low among villagers. The situation had improved with AWF, though (Kolo, 2010-04-12).

AWF had sponsored a tree planting project (in 2009, if I understood it correctly) and said that villagers would get paid for preparing and carrying out the planting. The preparatory digging was done, but when it came to planting, AWF had run out of money so no more work could be paid for. The villagers even had to buy seedlings themselves, if they wanted to plant any (Kolo, 2010-04-12).

When asked about REDD, one villager knew about it. She thought it was a part of the AWF project. None of the villagers had heard anything about money for protecting the forest or any relation to the global climate. However, they stated that they know about the environmental benefits of having trees and plant them even without AWF's presence. They did not think that NGOs should come and talk about money before a project starts – it is better if it just assists the communities with education and equipment, instead of raising expectations (Kolo, 2010-04-12).
4.3.2 Keeping it simple – “First of all, more awareness”

Project Co-ordinator Godlisten Matilya (2010) informed me that the overall goal of the REDD pilot in Kolo Hills is to conserve the ecosystem of the area. This is to be achieved by preparing the communities in and around the forests for future carbon trading schemes. The plans are listed in Appendix 11. As for starting up the project, Matilya outlined the short term priorities:

First of all, more awareness on REDD and PFM. And also gather knowledge – completing the socio-economic study that we started ... and also the forest survey, to establish the carbon stock of the area. But otherwise, awareness of the people.

(Matilya, 2010)

The rules about how the forest can be use will “definitely” be more strict when REDD is included in the forest management, Matilya (2010) told me. “Provision of alternatives ... [to] cutting the trees in the carbon reserve” will be essential because what is left outside will not be enough to sustain current needs. AWF plans to promote agroforestry (combining tree planting with crops or livestock) and the establishment of woodlots (small forests kept for production purposes). The problem is that it will take time before such initiatives deliver any benefits – what will happen until then is still an issue that has to be solved.

AWF’s Tanzania director Steven Kiruswa (2010) told me that it is essential to involve the local partners in projects; making sure their capacity level is sufficient makes a big difference to the success of the activities. AWF field officers said that the district staff in Kondoa had been involved in the development of the project proposal. They will be included in the capacity building activities mentioned above, but have already benefited from the preparation process and have more awareness now (Matilya, 2010). Matilya made it clear that capacity building is a priority for all stakeholders, since the level of readiness is very varying in different parts of the country.

Among some of the villagers there seemed to be some discontentment about AWFs involvement with the district. The IVO group expressed a wish that AWF should deal more directly with the communities instead of with the district staff. There was an explicit concern that money going through the district will not reach the villagers in full (IVO, 2010-04-12). AWF field staff told me that some villages, including Itundwi, were more negative towards the project. They claimed this was because of bad past relations with district foresters and their management practises (Baharia, 2010; Matilya, 2010). More education would be needed in some cases to “to make people understand” (Matilya, 2010), in villages where they “didn't understand clearly” (Baharia, 2010).

We'll make it simple to show the relationship between what function the forests are doing, and the production in the factories, for example; and why the forest is important to stabilise the climate – the global climate and also the micro-climate – and how they will benefit from conserving the forest with the objective of offsetting emission ... – we'll keep it simple.

(Matilya, 2010)

The IVO and MVO (2010-04-12) groups stated that they had received information about REDD from AWF. The concept was not entirely clear in either group, but in both of them at least one person could explain the idea fairly correct – demonstrating more or less the same level of awareness as regular villagers in Ayasanda. In Itundwi, the whole group agreed that there is no money involved in REDD. It was even stated quite firmly that they plant trees because they know the value of them, not because someone is giving them money (IVO, 2010-04-12).
None of the villagers interviewed 'on the street' knew about REDD, but a statement similar to that of IVO was made by a Mnenia villager participating in a group interview; she said that planting trees and protecting the forest should not need any financial compensation. To a person that is conscious about the forest, these things are “duties”, they should be a part of that person's life (Mnenia, 2010-04-12).

The AWF project co-ordinator was concerned that REDD would not generate enough money to cover the costs of PFM work:

For the moment, we tell them: 'Now we are just preparing you to enter into this carbon trading'; and the money that they will get will depend of the market. And of course, the willingness of buyers, to buy ... You may put so much in conservation, and then you get very little from the market.

(Matiliya, 2010)

Kiruswa (2010) expressed optimism regarding the preconditions for REDD in Tanzania. For AWF, REDD was seen as an entry point to start working with climate change issues. The project basically came as an opportunity for the NGO.16 Kiruswa listed environment issues as at least equally important as development aspects of REDD, during statement at the Dar es Salaam climate change conference, 2010-03-31: “I would like to see REDD as an opportunity to use the power of the global carbon marketplace to preserve the most spectacular forests we have, to preserve the ecosystem, to preserve biodiversity, while preserving and enhancing ... the way of life of communities and provide economic to the government and landowners.”

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Kirahma (2010) told me that before, work had been going on in at least five of the Kolo Hills villages. They had been a priority because of the catchment of Tarangire River, he continued, and were particularly important because of their contribution to the wildlife in the Tarangire National Park. REDD therefore seems to have added new priorities to AWF’s previous ones.

4.4 Vision and reality – the correlation between policy and implementation

To get an idea of how well-founded the expectations at the district level were, interviews with a few key actors at the national level were conducted. The results are presented in the following section, incorporated with accounts of the case study informants. This part also provides an analysis of the results in a broader context.

4.4.1 Stakeholder roles – “The polite way to approach a rich man with cows”

The few official policy documents and strategy frameworks that are available (URT, 2009a) suggest that it is the path of participatory forest management that will be chosen for REDD in Tanzania. This means that to a certain extent, REDD, which nobody seems to know everything about, will be implemented by the group which, according to all other groups, knows the least about it.

Despite this, Kahemela (2010) was optimistic when it comes to communities' capabilities. If you just make sure there is some awareness, a management plan and by-laws, the forest will be protected. Rahima Njaidi (2010), head of MJUMITA, was more concerned, and said that poor governance is a problem at community level that need to be addressed. This issue was also brought up by Moshi (2010), and some information provided by Qameyu villagers (2010-04-09) indicated that village institutions do not always function properly.

At district level, one forester said that there is not very much that the communities can do on their own – technical assistance from district staff is needed for practical management issues, for example to increase growth of trees (Kavishe, 2010).
One organisation that is claiming to look after the interests of forest-dependent communities is MJUMITA. It is also involved with a REDD pilot project, in collaboration with TFCG. MJUMITA's part is focusing on two issues: advocacy and awareness raising among villagers, and the creation of a carbon co-operative. This is intended to develop methods for facilitating villages' contacts with the carbon market (Njaidi, 2010).

Both Njaidi and Charles Meshack, head of TFCG, and Pius Yanda, head of the National REDD Task Force agreed to the importance of ensuring community participation in decision making. Yanda (2010) added that CDM has shown that accessibility is not always great, a statement in accordance with reviewed research (Minang, 2007:103-104). Meshack also criticised the mindset saying that it is practises of local communities which is causing deforestation – REDD must not treat the local people as a part of the problem (Meshack, 2010).

Yanda stated that it is crucial to complement REDD activities with considerations on how incentives to achieve this will be provided. “The deforestation which is going on is actually done … with a very good cause: communities … have to live”. To tell people to stop cutting trees in order to reduce CO$_2$ emissions without providing alternative farming practises and/or energy sources “would be a criminal offence” (Yanda, 2010).

Yanda's statement fits into a trend that Milledge pointed out

One thing that the REDD discussions are bringing ... [is that] it has got people thinking far more strategically, and critically as well, about incentives, and about drivers; it's very interesting. A lot of the discussions have been around ... how payments for forest carbon could provide sufficient incentives to keep the forest and improve the forest, and there's never really been discussions like that before ... Finally, it's getting people to talk about how to identify ... whatever is the fundamental problem.

(Milledge, 2010)

The need to address drivers and provide alternative livelihood options was something that many other informants also stressed as a big obstacle to overcome for successful forest conservation (Kavishe, 2010; Kiruswa, 2010; Maanga, 2010; Matilya, 2010; Njaidi, 2010; Rwiza, 2010; Zahabu, 2010). Both Kavishe and Maanga brought up electricity prices, saying cheap and reliable power supply and particularly kitchen appliances could dramatically reduce the demand for charcoal. Changing people's behaviour, energy use and agricultural practises is a big challenge, Zahabu (2010) claimed. Some said the answer is awareness raising:

You can't [just] go to a Maasai or Barabaig and tell him 'Now, you have 2,000 cows – reduce them!' Do zero grazing! ... You have to tell him 'This grazing land needs only 200 cows'. And he will see, just before September, he will see: the land is bare, it's just dusty and – nothing. Then he will start to move ...

[If] they are [also] provided with advice, that 'If you sell those cows, and if they are healthy, you can get money, you can take [your kids to school], you can build a guest-house in town, you can make a shop...' – that kind of education ...

That is the polite way to approach a rich man with cows.

(Kavishe, 2010)

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17 A normal family of six uses about four bags of charcoal (20kg each) every month, Maanga (2010) informed me.

18 In “zero grazing” livestock is tied up and can only graze on a couple of square meters at a time.
Most informants mentioned the task of awareness raising to increase local-level REDD readiness as the main role for NGOs (Kiruswa, 2010; Meshack, 2010; Njaidi, 2010; Rwiza, 2010; Salutary, 2010; Zahabu, 2010): “awareness on REDD is very low at all levels. This is a big challenge that needs to be [addressed] before the local communities are involved, so that they can make an informed decision” (Meshack, 2010). Meshack repeated his conclusions from previous work (Meshack et al., 2006) that community efforts in PFM are usually supported by NGOs or other development partners, and stated that REDD will have to be supported in a similar way.

According to Milledge (2010), the NGOs in Tanzania have three functions in the preparations for REDD (these are compared to the activities described by Matilya and Kahemela in Appendix 11). Something important that all of the projects are doing (although in different ways) is the development of models on how to measure carbon stock and establish baseline scenarios. As shown in sub-section 3.3.2 Deforestation and degradation – is there anything to reduce?, the present information on the situation in Tanzania is both imprecise, uncertain and contradicting. Therefore it should be very useful to gather future experiences from the pilots, and if they can be evaluated properly it will most likely be very valuable for the coming work with REDD.

Milledge (2010) mentioned that NGOs have been selected to do this piloting because of certain advantages they have, as for instance regarding social and environmental safeguards. This answers well to calls made by Campbell and colleagues (2008) for approaches to address these aspects of REDD. For Tanzania in particular, there are great biodiversity values (Miles et al., 2009) that might be affected by changes in forestry. Lessons from projects run by NGOs with, for example, wildlife experience could provide important input to the national policy-making process.

PFM issues that remain to be solved include participation of the majority of the community, ownership, and equitable benefit sharing mechanisms (Meshack, 2010; Milledge, 2010; Njaidi, 2010). Milledge said that these “could be solved with REDD, and they could be made worse”. His hope was that the NGO pilots will provide more experience.

In three or four years time there will probably be “a mosaic” of different kinds of REDD projects: some run by NGOs, some as a part of a national system, and some will be managed by districts. Milledge told me. In the intermediate perspective, he expected NGOs to have assumed a watchdog role, mainly monitoring governance, corruption and other social aspects. However, in the long run, it would be better to be able to run the system without NGO involvement. It would not be a sustainable arrangement to count on never-ending support (Milledge, 2010). This would also avoid a potential problem raised by Minang (2007:103-104), that NGOs which have a chance of making money on REDD might fail to keep the best interest of their beneficiaries in mind. One approach could be, like Moshi (2010) recommended, that MOUs are signed, stating respective future roles.

**4.4.2 A more friendly job – how to use PFM for REDD implementation**

There was an overwhelming majority of informants that said that it is a good idea to use the ongoing PFM process to host the mechanisms needed for REDD (Kahemela, 2010; Kavishe, 2010; Maanga, 2010; Matilya, 2010; Moshi, 2010; Njaidi, 2010; Meshack, 2010; Yanda, 2010). This could answer well to the calls made by Miles and Kapos (2008) that strategies are needed that “address local needs and deforestation drivers”. Some informants emphasised that REDD without PFM would not guarantee that communities get any share of the benefits (Meshack, 2010; Yanda, 2010), and might even cause problems for the objective of protecting the forests.

If instead PFM has been going on in an area it will be an advantage “because people will tend to understand really the usefulness of managing their forests” and can also grasp the REDD idea more easily (Kavishe, 2010). This, too, is exactly what previous studies have asked for (Campbell et al., 19 Milledge seemed to be assuming that projects at the sub-national level will be allowed in the REDD mechanism.)
2008; Minang, 2007:50). The “most important” thing in implementing REDD will be to learn the lessons of PFM – it is “a very important entry point” (Yanda, 2010).

Milledge (2010) explained that every project has fundamental issues where you have to get results. For PFM, it is benefit sharing, and it is presently not working with JFM, something others confirmed (Kahemela, 2010; Kavishe, 2010; Njaidi, 2010). Village visits during this study also support these claims. This makes the role of the local and central government somewhat controversial, since it has been shown that equitable benefit sharing and a co-operating government is essential to REDD implementation (Campbell et al., 2008; Minang, 2007:50). District officers are often “very slow in delivering” (Meshack, 2010). Kahemela (2010) agreed, saying that Tanzania is in a good position for swift REDD actions, but “there are some people … that are thinking differently, and they are keeping the government machinery”. Njaidi (2010) and Kavishe (2010) both showed concern over the risk for high overhead costs if the government channels the REDD funds. Many informants opposed such an arrangement (Kahemela, 2010; Moshi, 2010; Rwiza, 2010). A possible solution has been suggested and advocated for by some informants (Kahemela20, 2010; Meshack, 2010; Njaidi, 2010): a community-based carbon co-operative that buys the carbon credits from participating communities and deals with the contact with the international system for carbon trade, be it a market or something else. This is being piloted by MJUMITA and TFCG.

The government structure does have important roles recognised by some, however. MJUMITA gets help from forestry officers to get in touch with communities and without successful collaboration with districts it will not be possible to implement REDD, Njaidi (2010) claimed. However, “poor governance” is a problem that needs solving in order to ensure equitable and effective benefit sharing (Njaidi, 2010). District officers’ opinions about MJUMITA are interesting to put in this context. Maanga (2010) said that “they are trying to strengthen the [management] plans which we have already [developed] … MJUMITA will try to make sure that the plan is still there”. When I asked him about the organisation’s potential as a REDD funds channelling institution, he was sceptical: it is not a legal organisation, it is just a networking group that oversee PFM implementation (Maanga, 2010). His colleague Rwiza (2010) was more positive about MJUMITA. They are doing a good thing; the right thing: “communities are an essential stepping stone for a successful REDD programme, because they are already doing the job [of conserving the forests]”.

Milledge explained that most of what will happen at the national and sub-national level will be up to the government to decide. This is a big challenge. Ideally, there should be some mechanism for monitoring social and environmental safeguards to ensure everything is going the way it should. The lack of accountability could be compensated for by having NGOs monitoring the process. However, counting on NGOs to do the watchdog work (similar to what they do in the EU, for example) is risky – they are in a different situation in countries like Tanzania, and they are also often less “mature” (Milledge, 2010).

Several informants at both NGOs, districts or other institutions emphasised the need to address the lack of national co-ordination in the REDD process (Kahemela, 2010; Rwiza, 2010; Zahabu, 2010), although they were not all in favour of this co-ordination being done by the government. Its role is controversial, to say the least. Some, however, claimed that no other way will be possible; it will have to be the government that handles the contact with the carbon market, and that will have to face the challenge of organising REDD in a way that does not benefit bad practices (Zahabu, 2010). As stated by Rwiza and Zahabu (see p.34) there is potential issues in that area.

4.4.3 Picking the low-hanging fruit – the special case of Babati

The REDD activities in Ayasanda have received attention from several different actors, but whether

20 Kahemela has worked for TFCG and co-founded MJUMITA before coming to FARM-Africa (Kahemela, 2010; Moshi, 2010; Salutary, 2010).
generalisations can be made about other areas is a bit controversial. One FARM-Africa officer pointed out that it was Ph.D. research and quite different from implementing a project of larger scale. Also, LAMP and other programmes have meant that PFM is at a different stage in Babati than in many other districts. Therefore, some think that community measuring like what was done in Ayasanda “could not be done in other places, because they [the Ayasanda villagers] have … prior experience” (Salutary, 2010).

Several other informants disagreed to this (Kahemela, 2010; Kavishe, 2010; Yanda, 2010), all more or less stating the same: the PFM principles are the same everywhere, all that is needed in some areas is some more training and REDD will be possible to implement. “It will work, but after some time. They need at least a basic understanding, … to know the importance of the trees even without REDD – and then, you can bring in REDD” (Kavishe, 2010).

The actual situation will depend a lot on the individual forester. Njaidi (2010) pointed out that the capacities for PFM varies among districts, many of them have other pressing matters to deal with. Rwiza (2010) confirmed this, and even stated that PFM has failed in some areas:

> People think, at high level, that once you have established PFM ... and everything is there, then you just sit in for example Babati, you don't go to the village ... that's a very wrong notion, [but] that's what has been happening! ... There must be continued facilitation – it's a non stop business. [his emphasis]

(Rwiza, 2010)

The failure is partly due to cut funds, Rwiza explained, but also caused by a negative attitude among many district foresters who think that communities are taking their jobs. “It's not true, you [just] have a more friendly job than before, rather than chasing people around!” (Rwiza, 2010).

There are also big differences in awareness about PFM, REDD and forest conservation in general depending on what district you are in or what sector a district officer is working in. A lot of capacity building is needed to face climate change issues, “they need to have a sort of integrated understanding” (Kavishe, 2010). This is important because non-forest sectors also affect forest use and rely on forest services. Kavishe used an example of the flooding of Lake Babati that happened in between two of our meetings. Not only did the floods use to be worse in magnitude before when the lake's catchment area had no trees; also, it used to be just mud, eroded from the hillsides (the water running through the town when I was there was indeed clear).

Njaidi (2010) and Milledge (2010) shared Kavishe's concern about engaging other sectors. District-level staff awareness is “very poor” at best. MJUMITA tries to improve the situation by inviting officers from different sectors when they organise workshops (Njaidi, 2010). Milledge (2010) pointed out that since some tasks will have to be taken over by the district eventually, it will be a problem that forestry is not seen as a priority.

> You can only change that by making sure that central government and local government politicians, and high-level administrators, really understand what the forests are leveraging: ... potential carbon money, water catchment – the wider values. There remains a big challenge, raising awareness ... It's much broader than REDD alone” [his emphasis].

(Milledge, 2010)

For Kolo Hills Forests, Kiruswa said that four of the eleven communities had previous experience of PFM. His solution was to temporarily leave some behind and let the villagers see the benefits
that their neighbours get – “You cannot move all at the same time” (Kiruswa, 2010). This solution was apparently evident to informants at all levels: working should start where there is most PFM experience, and then use the lessons to replicate or modify the approaches in other areas (Kahemela, 2010; Maanga, 2010; Milledge, 2010; Njaidi, 2010; Yanda, 2010; Zahabu, 2010). Milledge pointed out that climate change mitigation efforts are not uniformly successful in the developed part of the world, either. It makes sense to “try to pick the low-hanging fruits”, to start where it is more likely that you can achieve something. Then that can be an example for others (Milledge, 2010).

### 4.4.4 Land use and leakage

This approach can also spread PFM in less controllable ways. Zahabu (2010) claimed that if there is leakage from the area that starts protecting its forests, that might also be an incentive for neighbouring communities to start conservation projects in theirs as well. This is one reason why PFM has started in Dareda Escarpment Forest (Appendix 11). The best way of avoiding leakage, however, would be to implement REDD on a whole-country scale (Zahabu, 2010), an approach supported by Parker and colleagues (2008:78). That way, all forests are included and the net change in carbon stocks will be what counts (Zahabu, 2010). This would imply monitoring all forests in the country, which would need great improvement of capacities and comprehensive institutional frameworks. The extensive reform of policies and legislation that has taken place since the 1990's might solve some of the problems.

Research has recommended that countries have a well thought-through definition of what a ‘forest’ is (Minang, 2007:50). This was also emphasised by Meshack (2010), saying it will affect the risk of REDD ending up promoting plantations\(^21\). This risk was mentioned by several informants (Kavishe, 2010; Meshack, 2010; Milledge, 2010; Salutary, 2010). Milledge seemed to think that plantations would be hard to avoid: “[It] will have to happen to some degree, but not go on everywhere”. REDD might also give local communities incentives plant fast-growing exotic tree species to replace natural ones (Kavishe, 2010).

The issue of land use was controversial, and central to the discussion was the problematic status of the vast 'general lands' in Tanzania. It allows for free movement which has caused uncontrolled settlement expansion, overgrazing and conflicts between farmers and livestock keepers (Kavishe, 2010; Salutary, 2010). However, simply drafting laws to control land use will only make free movement illegal, not solve any real fundamental problems:

_I've been a rural development advisor. I can't tell him [a farmer with 300 cows] that 'Look, reduce the number of your cows' – I can't say that! But I can tell [his] village to make a land use planning, and then that land use planning will be delineated to different uses ... and one of the uses is a grazing land. And then I come to that land, and I tell him 'This piece of land of one acre should carry only four cows' – no need to tell this guy 'Reduce your 300 cows!' – I told him that ... 'if you have 300 cows, you need to move to other pieces of land.' ... So you see, it is not to solve his problem, it's just to bind him somewhere._

(Kavishe, 2010)

The idea is to make people realise that you cannot always just move to a new area when the old one has run out of resources. To also solve the problem, you need to provide options for the people whose practises you have just banned. However, REDD might revive the problem of land use conflicts, Kavishe (2010) remarked. _Kilimo kwanza_ (‘Agriculture first’), a prominent slogan in

\(^{21}\) Tanzania has defined ‘forest’ in the Forest Act of 2002, see Box 3, p.22
Tanzania's ongoing election year campaigns, indicates that there might be investments coming to non-forest sectors in the near future.

Again, central co-ordination of different sectors seems to be an important issue for ensuring that REDD does not affect some groups negatively. One informant mentioned bad experiences with another climate change related issue, namely biofuel investments. In some parts of the country, general land had been turned into plantations to supply this new industry, causing both deforestation and often a loss of access to land for the poorest and most vulnerable (Salutary, 2010). REDD might reverse the trend of deforestation, but it might also lead to large scale investments in land, that can deprive rural communities of any not yet formalised land tenure (as mentioned earlier, about half of all villages still lack land use plans). Miles and Kapos (2008) have raised similar issues, noting that the demand for land in general will rise considerably if forest land becomes valuable.

When asked about the risk for plantations and conflicting land uses, Yanda (2010) suggested that REDD activities should either focus on land where forests are already needed for other reasons, i.e. water catchment, or land where no other use is allowed anyway, e.g. reserves. Zahabu seemed confident that REDD would have a positive effect no matter what:

> The strong point on REDD policy is that it advocates good land use practise. I know there is a lot of criticism on how these climate change policies are tackled. But with this one, on REDD, even if it contributes a little to solving the problem ... then it's an advantage. ... The policy that advocates better land use is by itself positive.  

(Zahabu, 2010)

Zahabu's point is that land degradation is a more serious problem in Africa than climate change, at least in the shorter term. If REDD helps by promoting PFM, it is good, even without the climate change aspect.

4.4.5 The REDD business: showing another value of trees

The general opinion was that REDD would help PFM by providing a good, substantial incentive for villagers to conserve their forests (Baharia, 2010; Kavishe, 2010; Kiruswa, 2010; Maanga, 2010; Matilya, 2010; Meshack, 2010; Moshi, 2010; Njaidi, 2010; Rwiza, 2010; Yanda, 2010; Zahabu, 2010).

> We've been suffering ... to tell people 'Don't clear the trees', 'Protect these trees, you will get rain' ... But now there is a very good opportunity, that now we can show another value of trees, and this is the REDD business. [his emphasis]

(Kavishe, 2010)

Meshack, who in previous studies (Meshack et al., 2006) has called for the need of new options to fund PFM work, seemed to have found the answer in REDD:

> PFM has focused on improving forest condition, livelihoods and governance. [It] has done well in improving forest condition but not much in providing incentives, which are very crucial in long term forest management.

(Meshack, 2010)

Maanga (2010) pointed out that the benefits you normally enjoy from PFM often take some time
before they come, and said that REDD could help in the meantime. It is not even a big problem if
the REDD funds are only temporary, Zahabu (2010) claimed: “We will continue managing our
forests”. Rwiza (2010) did not agree; he was quite concerned that the money would come too late to
compensate for the costs of starting up the system. To set it up, do resource assessments, establish
baselines and measure increments takes time, so “to get funds, as such, it can go up to three years”.
He also talked about the unreliability of funds from abroad\(^2\), and suggested that initial REDD
money should be partly diverted to a fund that can finance the continuing process of creating REDD
readiness.

Rwiza mentioned that when he visits villages to inform
about PFM, he usually includes information about REDD
“as a surprise”. The concept is, according to him, quite
hard to grasp in the communities. Almost all informants
said that awareness about REDD is very low or non-
existent at all levels (Baharia, 2010; Kahemela, 2010;
Kiruswa, 2010; Maanga, 2010; Matilya, 2010; Meshack,
2010; Milledge, 2010; Moshi, 2010; Njaidi, 2010; Rwiza,
2010; Salutary, 2010; Zahabu, 2010).

Awareness raising is not a simple thing, however: you
need to know what you are doing. Climate change argu-
ments will not work, Milledge (2010) explained to me.
You need to know what the broader scale impacts of
REDD will be before you advocate for it. If land is used
for agriculture, food security might be impacted. If people
are depending on firewood and/or charcoal, the oppor-
tunity costs can be considerable. This should be known
beforehand (Kiruswa, 2010; Matilya, 2010; Milledge,
2010; Rwiza, 2010; Zahabu, 2010) – in Qameyu, for
example, parts of the forests will allow for grazing and
firewood collection (Moshi, 2010; QPC, 2010-04-09),
which might not be allowed if REDD is eventually imple-
mented there as well. If the opportunity costs of REDD mean that it is barely a profit for the
communities, then simply doing PFM with some allowed uses might be a more attractive option.

There is also a catch \(^2\) in awareness raising: you want to increase awareness to be able to deal with
the situation effectively. But at the same time, you do not want to raise people's expectations
regarding money. Expectations that are not met might cause a loss of support from other parties
(Milledge, 2010).

The REDD mechanism would, effectively, be a way for industrialised countries to offset their
emissions reductions to developing countries. Argument used to support this is that the money will
contribute to sustainable development, biodiversity conservation, protection of ecosystem services
(Gibbs et al., 2007), but also that this is simply less expensive than other options (Gullison et al.,
2007). It has been said that REDD will be complemented by efforts to reduce the emissions of fossil
carbon as well (Angelsen et al., 2009:1) but it remains to be seen when the cuts are eventually made
that will make the deal seem fair from the perspective of local Tanzanian communities. One
Ayasanda villager suggested that emissions in the North should be compared to absorption in the
South so that there are not too much CO\(_2\) entering the atmosphere. Climate change experts and
negotiators might easily show how this is not feasible, or realistic, or relevant. To be in the villager's

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\(^2\) The concern is called for: Rwiza and the other Babati foresters quite recently went through the termination of the
LAMP programme.
forest, in Ayasanda, and explain why this “stealing” should be accepted, is not done quite so easily. Looking at the frequency of forest patrols in Ayasanda and Riroda, one could argue that the former village’s PFM regime has benefited considerably from REDD. This would, at best, be a simplification. The money paid to Ayasanda was not used to pay guards and although general support for the CBFM regime might have risen from the payment, it is likely that there are more factors in play. It seems like cash payment for forest conservation would be something unprecedented in Tanzania (Meshack et al., 2006); however, there are also signs that the extra opportunity costs of a REDD regime could be considerable compared to PFM. Transaction costs are also likely to arise when communities need help from outside facilitators – at least during the start-up phase, and also later if funds from REDD turn out to be as hard to access as those from CDM. If this means that margins end up being slim for REDD/PFM project budgets it is likely that the sustainability of forest conservation is threatened. Cut funds has contributed to PFM failure before, and if REDD incomes prove to be unreliable (for example due to changing carbon market prices (Parker et al., 2008)) forest conservation can become a high risk business. Several researchers have concluded that the richest and most powerful in communities often enjoy most of the benefits, while the least well-off villagers usually suffer most of the costs (Meshack et al., 2006; Campbell et al., 2008; Zahabu, 2008) – and this could be expected to get worse when future more money becomes available in the future.

One argument used in earlier research (Zahabu, 2008) is that the limited opportunities for most villagers to earn cash would mean that small amounts of REDD money will be very attractive. However, one could also argue that since the overall goal of REDD is to put vast areas of forests under protection, it would increase demand and prices for timber and other forest products. A lucrative timber market might turn out to be more attractive to communities seeking to maximise revenue.

Another aspect is that of simple trust. In all projects studied there were signs that villagers are being or have been told that they will get money for protecting their forests. Even in some villages that has had nothing to do with REDD, what is known about it is that you can earn money. NGO and district officers alike seem to happily take advantage of this when advocating for or implementing PFM, while they during the same interview can express concern that there will not be any money or that there will not be enough. Similar situations have been accounted for in other studies (Minang, 2007). This situation is potentially damaging to both PFM and REDD implementation, since expectations not met can create resentment and distrust. The most insightful comment about this came from a person who had the least of power to influence the process – a woman I was not supposed to talk to, in a village I was not meant to go to: she told me that the facilitators should not mention the money to begin with – they should just provide education and equipment and let the villagers do the work. Making promises that are not fulfilled does not improve the situation.
5 A way forward

This chapter deals with some aspects of the results from a more general perspective and provides a summarising discussion. Subjects for further studies are also suggested.

5.1 Discussion of the results

Earlier research has claimed that PFM is a useful approach in the implementation of field-level REDD work. This thesis also scrutinises the broader organisation needed for a REDD mechanism, primarily at district level but to some extent also nationally in Tanzania. PFM is already being used to improve the condition of the country's forests, that have been seriously degraded during previous management regimes. It is thereby literally accomplishing 'REDD': reducing emissions from deforestation and forest degradation.

Other aspects of the mechanism deal with how to channel and who should receive the funds that will pay for this ecosystem service. In international studies it has been emphasised that active participation from local communities and equitable benefit sharing in order to ensure improved livelihoods are crucial to successful REDD schemes. These aspects are fundamental goals of the PFM work and part of Tanzanian law, which means that the framework and many of the experiences so far are very promising for REDD success also regarding secondary objectives of improving rural people's livelihoods.

Both previous studies and experiences from this one show that there are still some issues to be solved with PFM. One problem is that the communities are almost always dependent on support from outside facilitators in order to set up a PFM system, which has meant that the process

*Picture 6. Rural area in Karatu District, bordering Babati to the south.*
nationally is moving slowly. REDD could speed it up by providing an extra incentive for communities that wish to conserve their forest but do not have the resources to do so. Whether REDD money will be enough remains to be seen, however. Some still claim that REDD will require the same kind of involvement from facilitating parties as PFM does.

There are also issues of PFM that might not be solved by REDD, but in fact made worse. The repeated accounts of problems with benefit sharing in JFM regimes (involving communities and local or central government) suggest that channelling the money through government institutions might be risky. This could either be solved by setting up an alternative system for benefit sharing, or by making sure that government structures are transparent and overhead costs not unreasonably high. Undoubtedly, this will be a challenge either way. It is a positive sign that some NGO pilots are addressing precisely these issues.

The future design of a REDD mechanism is not yet negotiated, but there is nevertheless a need to assess what possible alternatives there are, and how they would affect Tanzania particularly. Money from a fund based REDD mechanism might be more reliable, but a carbon market is expected to generate more money in the long run. Depending on what the costs would be to protect all or parts of the Tanzanian forests, different options might suit the country better. Knowledge about this could not only help preparations, but also advocacy and international climate change negotiations.

If REDD ends up operating at the national level it will mean that individual projects can not approach a carbon market or fund on its own; the money will most likely go through some government body. If REDD is connected to a carbon market, a fund might be established centrally to distribute the revenues. How such a system would work remains to be decided. The share of informants with bad experiences from involvement with district or national government officers was discouragingly high, something which unfortunately fits into the pattern of previous studies. Considering the size of the resources that might become available through REDD, this poses a great challenge for a structure which has yet failed to achieve satisfactory results, particularly in JFM work.

Both international and Tanzanian reports indicate a lack of data on the condition of the country's forests, the rate of deforestation and most especially on the rate of degradation. This is worrying since reference levels and baselines will not only influence how much money it will eventually be possible to earn from REDD, but their credibility will also affect Tanzania's ability to access the global carbon marketplace. Therefore, surveys should be undertaken and models developed for how such data and baselines can be adequately established. This is currently being done in NGO pilots, which is positive. If results can be shared and lessons learned the situation stands a good chance of improving.

Tanzania has considerable biodiversity values and a majority of the rural population is directly dependent on natural resources. Previous studies as well as this one suggest that participatory approaches to forest management could cater for socio-economic aspects, but biodiversity values are not yet incorporated. Studies have also shown that large-scale businesses could have advantages over local communities – if Tanzania wants to avoid industrial plantations and promote community-managed forests, it should be assessed what precautions needs to be taken. One step could be to review the current definitions of 'forest' in the Forest Act of 2002. This definition can play an important role for the effects of REDD, also in other areas than forestry.

The efforts to protect forests can not simply consist of creating a legal framework that bans harmful activities and defines sustainable land uses. To avoid the displacement of the problems, or that the livelihoods of forest-dependent communities are negatively affected, there is a need for cross-sectoral co-operation to address drivers of deforestation and forest degradation. Clear plans and guidelines when it comes to land use is important to prevent potential land use conflicts. Agriculture and energy needs have a tremendous effect on forests today, and profound changes in
forestry can likewise affect these and other sectors in the future, as well as others. Again, the model eventually chosen will depend on what a REDD mechanism will look like, but alternatives should be assessed. A key challenge will be to involve non-forestry sectors in this work. Future climate change mechanisms might include them as well; increasing awareness about this could facilitate co-ordination.

This study has indicated that NGOs working in local communities can have different approaches to reaching similar goals. This can be of a tremendous advantage, for example, AWF’s focus on wildlife and biodiversity values could contribute to a PFM ‘version’ where more aspects of conservation are taken into consideration. However, it has been shown in previous studies that NGOs can also have their own agendas that are not entirely compatible with the interests of the local community with which they are working. In this study, several cases were shown where local communities are or have been expecting money for forest management, when in fact they will not or did not get any. At the same time, NGO staff do not seem to have any second thoughts about telling villagers that they may get more money in the future.

In Tanzania it seems like most PFM and all REDD projects are being undertaken with the cooperation of an NGO. It could be argued that this makes it important to set up guidelines for how roles, rights and responsibilities can be pre-defined. Such arrangements exist in some cases between NGOs and district authorities, however it might also be relevant to have them with local communities. What may be simple indications of problems today risk growing into major issues when, if, a REDD mechanism becomes effective.

Another aspect is that of sustainability of the forest conservation. It can be questioned whether NGOs are desirable in the longer run, since it basically means that the activities are relying on external support. Long term strategies should therefore also include how roles can gradually change to increase the independence of PFM and REDD regimes.

All informants in this study had a lot to say about how local communities were doing, what they needed, why their forests were degraded and how they should be helped to get a better life. Although I have not focused on the local level to a great extent, it has still become apparent on several occasions that the opinions of community members vary greatly from those of outsiders. For example, even though most villagers who knew about REDD (or the concept of it) were, naturally, positive to receiving money, there were also several who quite firmly stated that payment should not be necessary to protect the forests. At the same time, these were villages were NGO staff talked about the need for more “education” to “make them understand” why they needed help. The mere fact that these indications has surfaced even though I was not looking for them makes it seem quite strange that processes that are described as “participatory” and “community-based” can go on when attitudes apparently differ greatly.

Participation is also needed in a much broader aspects. As both previous studies and central-level informants has argued, REDD must not follow the tracks of its predecessor CDM and become effectively inaccessible for countries with poor capacities (such as the African ones). Experiences show that designing a mechanism which requires extensive administrative work and resources for proposal development has the effect that small-scale community forestry projects will not be able to benefit from it.

Lastly, there have been studies indicating that participation and equitable governance is somewhat dysfunctional also at the local level, within communities. This aspect needs further scrutiny, since it has also been mentioned by informants in this study – interestingly, only by the only woman interviewed in a non-village context. Women in villages also tended to give answers that differed slightly from those of the men. Benefits and costs of REDD should of course affect villagers of both sexes equally; to know if this is likely to happen, future studies will have to tell.
5.2 Unexpected findings

Something I did not explicitly set out to scrutinise was how different NGOs vary in terms of approach in their field work. I did, however, notice certain differences when interviewing villagers and field staff in FARM-Africa and AWF project villages. The general impression was that their work was very much guided by certain demands coming from above. The table in Appendix 11 might not convey this clearly, but the impression I got in the field was that FARM-Africa wanted to change the conditions for those who were negatively affected by imposed rules, while AWF wanted to change the behaviour of those who were negatively affecting the environment.

For FARM-Africa, concepts like participation, gender balancing, biodiversity values and equitable benefit sharing were emphasised on numerous occasions, both by NGO staff but also by villagers in the contact groups they were dealing with. AWF on their part seemed to be there to study the area, teach the villagers, show them how forest conservation should be done and the environment can be saved. The basic assumption is that the villagers are doing something wrong, and through information and encouragement AWF will 'help' them get it right. Both AWF field officers stated or implied that a certain amount of awareness raising and education was needed before work could start. Moreover, what is right and wrong seems to be very much decided somewhere else than in Kolo Hills; having houses built out of something else than wood does not mean it is necessarily more environmentally friendly. What is most striking compared to the FARM-Africa work is that what seems to be the main objective, or at least one of them, is something else than a forest or improving rural livelihoods: protecting wildlife.

There are different ways of looking at this, and different conclusions one could draw about its consequences. FARM-Africa's work could be very much influenced by 'politically correct' demands coming from its project supporters (EU), which causes either field work that is genuinely incorporating these aspects, or the use of a touched up terminology that gives the impression of incorporating them. In the case of AWF, the work could be very much dependent on continually providing the fund raising part of the organisation with concrete signs of their work. This could explain the noticeable focus on 'stuff': toilets, “environmental” houses, “nice” gardens, posters, bicycles, footballs – in other words, things that could look good on a website or in leaflets. The importance of wildlife conservation in AWF's activities also indicates that other priorities than those of the local communities very much influence the work.

To what extent this is actually true, this study cannot show. Even if it is, that would not necessarily be a bad thing for the results of either of the two projects, or for the communities involved. As the study has shown, the NGOs have been chosen because they have an advantage in certain areas. Having organisations with different agendas doing similar tasks could make sense if one is interested in finding out the best way of doing it. Several other issues than that of carbon capturing is likely to find its way into the future REDD mechanism. Therefore, being able to show results from projects that have incorporated biodiversity, social or other aspects into REDD work should be very useful. However, there is also an obvious risk that activities that are too 'top-down' end up not doing what is best for the local communities.

The land use situation in Tanzania has undergone several institutional reforms lately. They aim at making it clear for rural people that if the resources in one area get depleted, you cannot just move someplace else. Even though a lot remains to actually solve the problems causing the unsustainable resource use, one could argue that Tanzania has came further than the global community has. The rich countries are not discussing how to end unsustainable practises, we are still at the level were plans are being made for how the problems can be solved – by moving it someplace else.

REDD will not be a conventional development project, it will not be 'aid'. It will be a trade in ecosystem services where the role of the customers, i.e. the developed countries of the world,
should not be to decide how work on the ground ought to be organised. Rather it should be to involve local communities in the process as equal partners. The developed world is asking for help to solve a problem that the Tanzanian communities have little or no part in causing. It would not be fair to ask forest-dependent communities to change behaviour without offering compensation or alternatives. Development projects that fail are very unfortunate, but if REDD should fail the communities that are affected, it would indeed be – to use the words of one high-level informant – “a criminal offence”.

5.3 Suggestions for further research

There are several aspects that have not been properly scrutinised in this study. Many of them are also likely to be of fundamental importance to achieving the goals that the thesis is meant to promote. Therefore, it is recommended that the following areas receive further attention.

- **Gender issues.** This study has not adequately addressed the issue of cost and benefit sharing within communities. REDD may change the practical aspects of PFM as well as limit access to forests further. There have been indications that women perceive and are affected by these changes differently than men, and that they have different opinions on how forests should be managed. More thoroughly conducted field work and better research methods at the local level are needed to establish how the REDD process affects women's situations in particular.

- **Community-level governance.** It has been stated at national, district and local level, as well as in previous literature, that the governing structures in villages do not function properly. Participation and democratisation in the PFM process are aspects that will influence the functioning of a REDD mechanism.

- **“District-level climate change partnerships”**. These initiatives are to be launched in the near future. A educated guess is that Babati District will be involved in one of them – there are REDD project preparations going on at a 'whole district' level, although it is not clear who is behind it. Several problems identified in this study have a chance of being solved if effective district-level co-ordination can be achieved – however, there are also several obstacles to be overcome for this to happen.

- **National co-ordination.** As mentioned, the PFM process is at different stages in different parts of Tanzania. This study has mainly focused on an area where the preconditions must be described as beneficial, to say the least. REDD will either be implemented everywhere at the same time, nationally, or the approach of 'some first some later' will continue. Either way, it is most likely that REDD will affect forests and communities differently in different areas.

- **REDD effects on biodiversity.** An effective scheme that incorporates forest conservation, livelihood improvement and biodiversity protection has yet to be identified. It would be of great importance for Tanzania to be able to incorporate all three aspects in one approach under REDD. One study area could be the Kolo Hills Forests, Kondoa District.

- **A carbon co-operative.** The success or failure of the concept piloted by MJUMITA should provide useful lessons on what the opportunities and obstacles are for successful benefit sharing of REDD funds.
6 Conclusions

The results of this study indicate that the process of participatory forest management (PFM) which is going on in Tanzania would be a highly relevant and suitable entry point for the implementation of a mechanism for reducing emissions from deforestation and forest degradation – REDD. When working, PFM has proved to be effective when it comes to the primary objective of REDD: protecting forests. Moreover, social aspects that might be included under REDD, such as participation and equitable benefit sharing, stand a chance of being adequately addressed through the approaches implemented under PFM.

REDD could also provide a solution to key issues that remain with PFM. The possibility of earning money from payments for an ecosystem service could give momentum to a process that is presently relying on support from different development partners. Properly distributed, the extra incentive could give forest-dependent communities a way of financing both more appropriate forest management and improved opportunities in terms of alternative livelihood options.

A successful national structure for REDD needs to provide solutions to a number of serious problems highlighted in this thesis. Depending on the way the mechanism is designed internationally, a system for re-distribution of REDD funds within the country might become necessary. PFM experiences indicate that central and district government institutions might not have the capacity to fulfil their tasks under REDD. Considering the scale of the funds discussed for REDD, the risk of money being diverted is particularly serious.

There is a need to ensure that there is sufficient knowledge about Tanzania's ecological preconditions and baseline information regarding deforestation and forest degradation. Tanzania should consider the effects of REDD with its current definition of 'forest'. Depending on how the REDD mechanism will be designed, the country will have more or less potential of earning money from it. An improved preparedness for different scenarios is most likely needed, including knowledge about how a marked based or fund based REDD mechanism would affect financing. Research is also needed to assess, for example, how biodiversity will be impacted.

There is a need for national co-ordination to avoid leakage to forests that are not yet protected. The fact that PFM has not yet been implemented on a big scale will most likely complicate this work. To achieve this, public, private and civil society actors in both forestry and non-forestry sectors should be involved, to provide alternative livelihood options that address the underlying socio-economic drivers behind unsustainable forest uses.

The involvement of facilitating partners such as non-governmental organisations (NGOs) provides several opportunities in terms of addressing socio-economic, ecosystem service and biodiversity aspects of REDD. However, it is also important to make sure that the organisations facilitating REDD activities do what is best for the communities they work with, and do not act according to their own agenda. Relying on NGOs for long term solutions is also problematic because it means the system is not self-sustained. It is important to define roles in the short, intermediate and long term.

Last but perhaps most important is the question of what the roles of forest-dependent communities should be. This study shows that many of the issues brought up by actors in the preparations for REDD relate to how communities should be approached, educated, their needs catered for and their behaviour changed in one way or another. In such a situation it is crucial that genuine, meaningful and effective participation is ensured to prevent solutions that are not in the interest of those who are ultimately most affected by them. REDD is a part of a solution to a problem that the forest-dependent communities did not cause, and it cannot be allowed to become burden to them if a long term solution to climate change is to be achieved.
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Zahabu, Eliakimu (2010-03-16). Senior lecturer, SUA.
Appendix 1. Babati District

Southern Babati District with towns and villages mentioned in the thesis, including outline of Qameyu village land, and of the northern part of Kolo Hills (see Appendix 3). Source: Edited, from Photomap International Inc. (1989/90).
Appendix 2. NGO Pilot Projects in Tanzania

Appendix 3. Kolo Hills

Kolo Hills in northern Kondoa District, with boundaries of the fifteen villages participating in AWF's REDD pilot project. Source: Edited, from AWF (2009).
Appendix 4. Interview guide for village visits

Ayasanda village
– Do you know what 'REDD' is? Do you know about the measuring of the trees?
– Why is it being done?
– Do you know about any money being paid for this? What was it used for? Do you think it was a good choice?
– Has the access to the forest changed since the REDD project/the measurements started?
– What's your opinion on forest conservation?

Additional questions for Ayasanda Village Council and Forest Committee Members
– When has money been paid, and why was it used in the way it was?
– Are other villages interested in REDD? What should they think about before 'joining'?

Qameyu village
– What is the condition of the forest belonging to your village?
– What activities are going on to manage the forest?
– What is FARM-Africa doing about the forest condition?
– Do you know what 'REDD' is? Where did you here from, and what did you hear?
– (How would REDD affect the condition of the forest, the PFM work, and the livelihoods of the villagers of Qameyu?)

Mnenia and Itundwi villages
– What is AWF doing in your village, what is the idea of the project they are starting?
– Are these activities necessary, are they needed?
– How has the forest in your village been managed before the project?
– Do you know what 'REDD' is? What have you heard, and from whom?
– (How do you think REDD would affect PFM?)
Appendix 5. The Costa Rica/Papua New Guinea initiative

At the eleventh COP meeting in Montreal in 2005, during the negotiations of the treaty that is to replace the Kyoto Protocol after 2012, Costa Rica and Papua New Guinea presented a proposal for a new mechanism. Originally, it would only include activities that reduce deforestation.

However, it received support from most Parties and several additional proposals have been submitted since then, both by Parties and NGOs (Parker et al., 2008). In these proposals there is “an overwhelming consensus” that activities to prevent forest degradation should also be part of the mechanism. Some also stress the importance of including forest enhancement, but suggestions on how different activities should be defined vary. It is likely that an agreement will include provisions for later additions, since it is easier to reach a political agreement on a less complex mechanism (Parker et al., 2008:70). Also, some activities are already included under CDM and LULUCF, and double counting must be avoided – for example, it might be hard to draw the line between afforestation and forest enhancement activities.

There has also been discussions of eventually incorporating forestry, agriculture and other land uses into one regime to account for all carbon sources and sinks (Angelsen et al. 2009:1). This would improve cost-effectiveness and co-ordination, but requires a much more complicated administrative framework.

The fifteenth COP meeting (COP15) in December 2009 did not result in a new agreement; the COP only “took note” of the ’Copenhagen Accord’, a text which contains no new binding targets or solutions to the many remaining issues. However, a text was also produced with guidelines and recommendations on how Parties can continue preparations relating to REDD. It is called “Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” [my emphasis] (UNFCCC, 2010c). This version of the mechanism is referred to as REDD+, and is regarded as a progress compared to REDD (UN-REDD, 2009a). In this thesis, the word used is just 'REDD', even though what is referred to might fit better under the definition of REDD+. The reason for choosing 'REDD' is simply that it is what the term used by the informants.
Appendix 6. Forest and land tenure

The concept of tenure in the context of forest management has been described by Bruce (1989) as a “bundle of rights” that a person or a group holds regarding the use of a forest. “Ownership” is an example of a form of tenure common in most societies organised according to a traditional Western model. Combinations of traditions, contracts, legislation and other rules constitute “tenure systems”, regulating who has the rights to a particular resource.

Bruce uses three types of tree tenure situations: the agricultural holding, being trees planted on land belonging to an individual farmer or a household; the commons, a forest that a community holds the rights to, where all members have access while outsiders, and only outsiders, can be excluded from using it; and the government forest reserve, where a national, regional or local government is at least formally controlling a forest and setting up rules to restrict access to its resources for different purposes. Forests where no clear tenure rights exist are described as open access resources, and such situations often result in over-exploitation and degrading. Resources that sort under commons are often of particular importance to women's roles (Bruce, 1989).
Appendix 7. One of the CBFM pioneers

Riroda is, like Ayasanda, one of the eight villages that since 1994 have been managing the Duru-Haitemba Forest in southern Babati District. About 800 ha of the forest is on land that belongs to Riroda. 300 ha is patrolled once a week, the remaining 500 ha is not surveyed.

The village has formulated its own by-laws, a set of regulations for the use of the forest. They have to be approved by the District Council, but are enforced by the village authorities. Record keeping is important; the forest committee administers a patrol book, a meeting book, and an offence and permits book. The chairperson of a sub-village can give out permits to members of the community.

In Riroda, there are four kinds of forest uses:

1. Free use. All community members are allowed to collect deadwood and medicinal plants, and to place beehives in the forest. However, deadwood is to be used for communal needs; own trees have to be planted to cater for personal needs.

2. Permit use. Permits are needed if a villager wants to take branches from standing trees, but also for collecting honey from beehives – fire is needed to smoke out the bees, and the risk of forest fires necessitates permits for this task.

3. Pay to use. To collect and sell large quantities of deadwood to non-community members, a fee has to be paid.

4. Banned use. Grazing, logging, charcoal burning and timber making is always prohibited.

Riroda has five sub-villages. Each one of them appoints one woman and one man to represent it in the Village Forest Committee, responsible for the management of the forest. Also, two forest guards per sub-village help doing patrols in the forest, once a week.

Source: Riroda Village Forest Committee Chairperson (2010-02-23).
### Appendix 8. Ayasanda interview results

<table>
<thead>
<tr>
<th>Villager (odds numbers men, even are women)</th>
<th>Knew 'REDD'</th>
<th>Knew about measurements</th>
<th>Attitude towards REDD and forest conservation, and other comments.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayasanda 1</td>
<td>Yes</td>
<td>Yes</td>
<td>Positive. Knew about the Zahabu REDD research, the forest committee composition, the money and the school. REDD has not changed PFM, but awareness is higher now. Seemed to prefer “cash to the people” next time, though.</td>
</tr>
<tr>
<td>A-2</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Knew about the money and the school, supported the decision. Said that rules are more strict with REDD than with PFM: the sample plots must not be damaged. Said “this forest” (points) is heavily protected, but in “that” one grazing is allowed.</td>
</tr>
<tr>
<td>A-3</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Actually worked with measurements, but did not know the purpose of them. Knew about the money and the school. Said that awareness raising activities have increased with REDD.</td>
</tr>
<tr>
<td>A-4</td>
<td>No</td>
<td>No</td>
<td>Positive (only asked about PFM). Did not know about the money or the school.</td>
</tr>
<tr>
<td>Endaghulangun'g 1</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Knew about the concept of carbon capturing, but thought it is a part of the CBFM work. Did not know about any money or any new school.</td>
</tr>
<tr>
<td>E-2</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Knew that measurements were about making the air cleaner. Knew about the money and the school, supported the decision. REDD has not changed PFM; it is very strict, like before.</td>
</tr>
<tr>
<td>E-3</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Worked as a forest guard. Knew about cleaning the air (but not why), the money and the school. Said that it is better than to give the money to the households. REDD has not changed PFM, but awareness is higher now: it is important to protect the trees in the sample plots.</td>
</tr>
<tr>
<td>E-4</td>
<td>No</td>
<td>Yes</td>
<td>Positive. Did not know why measurements were being done. Knew about the money and the school, supported the decision. Thought that they will be allowed to cut down the trees when they have finished growing.</td>
</tr>
</tbody>
</table>
## Appendix 9. Qameyu interview results

<table>
<thead>
<tr>
<th></th>
<th>Forest benefits</th>
<th>Reasons for starting PFM</th>
<th>PFM activities</th>
<th>REDD awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Council meeting</td>
<td>(did not ask)</td>
<td>(did not ask)</td>
<td>- Planning committee, gender balanced (5f/5m).</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Information for villagers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Boundary establishment and conflict with Dareda Kati village.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- PFRI.</td>
<td></td>
</tr>
<tr>
<td>Planning Committee group</td>
<td>- More rain, improved local climate.</td>
<td>- Preserves the land.</td>
<td>- Transect walk, PFRI and zoning of the forest according to different uses.</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td>- Provides construction material.</td>
<td>- Protects water supply.</td>
<td>- Trees will be planted.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Enables beekeeping.</td>
<td>- Grazing allowed in some areas.</td>
<td>- By-laws will be created, to prevent grazing and tree cutting near waters.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Cash income from “picture taking.”23</td>
<td>- Deadwood collection will be allowed.</td>
<td>- “Young men” are patrolling the forest.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Improved biodiversity,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ecotourism opportunities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Boundaries makes it easier to catch offenders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Planning Committee gets education that it can pass on to villagers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Villager group</td>
<td>- Rainfall.</td>
<td>- Earlier, people from Dareda (below the escarpment) came and took wood from the forest before.</td>
<td>- Analysis of the types, number and size of the trees in the forest.</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td>- Medicinal plants.</td>
<td></td>
<td>- “Our kids” are patrolling, so the forest will be safe now.</td>
<td></td>
</tr>
</tbody>
</table>

23 It was not entirely clear what the villager meant by this. She said that a benefit would be that people will come to take pictures of the forest and this would generate money. It is possible she was referring to the possibility of future ecotourism.
## Appendix 10. Mnenia and Itundwi interview results

<table>
<thead>
<tr>
<th>Mnenia meeting</th>
<th>AWF activities</th>
<th>Need for PFM</th>
<th>REDD awareness</th>
<th>Other comments</th>
</tr>
</thead>
</table>
| Mnenia villagers | - Helps building toilets.  
- Supports tree planting activities.  
- Environment Day, a competition rewarding 'green lifestyles'.  
- By-laws in place.  
- Education. | | | |
| | - Not so bad before, but still better now.  
- Environment committee more powerful.  
- Awareness higher.  
- Participation better now than when the district managed. | | | |
| | - Knew about it, AWF has provided education.  
- Not entirely clear to everybody what it is.  
- Knew some about effects of climate change, REDD is to stop it. | | | |
| | (Some barely knew AWF.)  
- Tree planting.  
- Awareness raising and agroforestry campaigns have reduced pressure on the forest. | | | |
| | - No problem in the forest.  
- Effective rules in place already. | | None. | |
| | - Knew about it, AWF has provided education.  
| | - Concept a bit unclear.  
| | - Knew about trees capturing CO₂ from industries and bush fires, but not about any money. | | | |
| Itundwi meeting | AWF people are there because the village has “accepted” them.  
- Education is provided.  
- Tree planting is supported. | - Not so much need, but it can still help.  
- Old management programme “not powerful enough”.  
- Poor participation before: top-down arrangement. | - Knew about it, AWF has provided education.  
- Some about effects of climate change, REDD is to stop it.  
- Group agreed that there is no money involved in REDD. Villagers know that trees are good, that is why they plant, not because someone is paying them.  
- Group thinks AWF should deal directly with them, not go via the district staff.  
- Wanted more transparency. | |
| Itundwi villagers | - Came in June 2009.  
- Preserves the environment.  
- Plants trees.  
- Built school as reward.  
- Awareness raising. | - Other project did similar work before AWF.  
- Faster results with AWF.  
- Education was needed, low awareness caused deforestation. | None.  
Heard that some people got prizes or rewards for promoting a good environment. | |
### Appendix 11. Compilation of NGO REDD pilot project activities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creating “local REDD readiness”</strong>&lt;br&gt;“The idea … is to have six to eight projects which all experimented, all helped build local capacity on participatory methods – not just forest management, but for carbon monitoring estimations – engaging with markets and even testing for benefit sharing.” [my emphasis]</td>
<td><strong>Capacity building</strong>. Information about the long term benefits of forest conservation will be disseminated among villagers.</td>
<td><strong>Capacity building</strong>. Since REDD is a new thing, awareness and capacity at community, district and national level needed improvement.</td>
</tr>
<tr>
<td><strong>Formalising management.</strong>&lt;br&gt;Securing the legal status (setting up JFM and develop land use plans) of the forest to stop it being an open access area.</td>
<td><strong>Improving livelihoods.</strong>&lt;br&gt;Developing and promoting activities that make sustainable use of the forest possible.</td>
<td><strong>Benefit sharing</strong> models were to be piloted, to increase knowledge about how contact with the carbon market can be facilitated but also to develop alternative livelihood options for villagers who risk being negatively affected by stricter forest regulations.</td>
</tr>
<tr>
<td><strong>Increasing knowledge.</strong> AWF will gather information about the area, both in terms of ecological preconditions and socio-economic structure of the communities. Establishing baseline levels for the carbon stock and rate of forest degradation is a part of this.</td>
<td><strong>Information sharing.</strong> Experiences and lessons learned will be exchanged with other REDD pilots.</td>
<td><strong>Information sharing.</strong> Different studies were going to be conducted on which practises work and which do not, and the results was to be shared to assist the national process.</td>
</tr>
<tr>
<td><strong>Achieve reduced emissions.</strong> Some pilots will have “trial payments” to test benefit sharing. Attempts to approach the voluntary market will also be made.</td>
<td>(Not a project objective)</td>
<td><strong>Reducing emissions.</strong> Slowing down and stopping deforestation. A problem to address is that forest conservation in nearby Nou Forest has caused leakage to Dareda Escarpment Forest.</td>
</tr>
</tbody>
</table>

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24 The FARM-Africa proposal was, as mentioned before, rejected. Hence, the plans have not yet been realised.