



UNITED REPUBLIC OF TANZANIA

PREPARING FOR THE REDD INITIATIVE IN TANZANIA: A SYNTHESISED CONSULTATIVE REPORT

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1.0 INTRODUCTION

1.1 Background to the Consultations

The impact of climate change on sectors such as agriculture, water, health, energy and others was first recognised and articulated as the source of many of the environmental problems facing Tanzania by the Tanzania National Adaptation Programme of Action (NAPA). This document was prepared with the primary objective of identifying and promoting activities that would address urgent and immediate needs for adapting to the adverse impact of climate change. The focus of the Programme was on adaptation needs in the agriculture, water, energy, health and forestry sectors.

Recently, however, it was realised that deforestation and forest degradation is the cause of around 20% of greenhouse gas emissions responsible for global warming. According to Gibbs et al, (2007), the annual forest carbon emissions in Tanzania between 2000 and 2005 was 37.6 MtC, while the average annual deforestation during the period 1990-2000 was 400,000ha, which is equal to around 1%. These statistics put Tanzania in the 4th and 12th positions, respectively, in forest carbon emissions and deforestation in the world.

In 2008, an assessment of climate change impact in Tanzania was done (URT, 2009). The overall objective of this assessment was to reveal and document both the key locally based impact of climate change and its cultural, socio-economic and environmental implications to local communities, and to the country as a whole. The assessment further sought to collect and consolidate pictorial and textual materials that could facilitate comparability of the past and present physical environment so as to reveal the magnitude of change where possible.

Results of that assessment reveal that temperature measurements from 21 meteorological stations in the country have shown a steady increase in temperature for the past 30 years. Severe and recurrent droughts in the past few years have triggered the recent devastating electricity power crisis. There has been a dramatic drop of water levels in all lakes in the country. Lake Victoria dropped by 2.57m between 1965 and 2006. Lake Tanganyika, Lake Jipe and Lake Rukwa have also experienced significant drops in levels in recent years. Elsewhere, 80% of the glacier on Mount Kilimanjaro has been lost since 1912 and it is projected that the entire glacier will be gone by 2025. The intrusion of seawater into water wells along the coast of Bagamoyo town and the inundation of Maziwe Island in Pangani District are other pieces of evidence of the effects of climate change.

These developments have already affected not only local communities but also economic development. For example, it was initially projected that Tanzania's GDP would grow by 7% in 2006. However, recent estimates show that the average growth rate has been well below 6%. This drop is attributed to severe drought that affected most parts of the country, triggering food shortages and a power crisis. More telling are reports that malaria prevalence has extended to include areas where it was not commonly found, such as parts of Kagera Region, Rungwe in Mbeya Region, Lushoto and Amani in Tanga Region.

Current global and national efforts to address climate change are, therefore, looking at measures to reduce deforestation and forest degradation, including the provision of incentives. REDD is a form of payment for environmental services and has the potential to not only help address climate change by reducing greenhouse gas emissions, but also make a positive impact on forest management, biodiversity and sustainable development, including poverty reduction.

In response to this challenge, Norway launched an International Climate and Forest Initiative in 2007, with a global commitment of around US\$ 500 million annually towards REDD efforts at international and national levels. The Climate Change Partnership between Norway and Tanzania, which was signed in April 2008, is part of this global initiative. Tanzania is involved in this Norwegian initiative as a pilot country. Other African countries involved in the first round of FCPF include Kenya, Madagascar, Ghana, Liberia, DRC, and Gabon. The Institute of Resource Assessment (IRA) has been facilitating a strategy development process coordinated by a taskforce comprising representatives from the Division of the Environment (Vice President's Office) and Forestry and Beekeeping Division (Ministry of Natural Resources and Tourism)¹. The National REDD Strategy is expected to guide the coordination and implementation mechanisms required for Tanzania to benefit from a post-2012 internationally-approved system for forest carbon trading, based on demonstrated emission reductions from deforestation and forest degradation.

From August to October 2010, a series of consultative meetings have been conducted nationwide involving national, regional, and district and local level representatives. The consultations aimed at developing a consultation and outreach plan with the specific goal of enabling key players in the strategy development and implementation to have an adequate knowledge base of REDD.

This report presents a synthesis of the results of those extensive consultations. It includes discussions on key issues and lessons learned from experiences of other initiatives related to REDD, especially so for Participatory Forest Management (PFM) and Wildlife Management Areas (WMA), and presents suggestions on the way forward with regard to the establishment and implementation of the proposed national REDD strategy and activities in Tanzania.

1.2 The Consultative Process

1.2.1 Consultations at Regional and District Levels

Consultations in the eight zones were conducted at a selected venue in each one of the regional headquarters of the concerned areas. The zones were as follows: Eastern Zone, Western Zone, Northern Zone, Southern Zone, Southern Highlands Zone, Central Zone, Lake Zone and Zanzibar.

Participants were selected from a pool of regional and district level stakeholders, including people associated with natural resources management, especially forestry and other land-based resources. The participants included Regional Natural Resource Advisors (RNRAs), District Natural Resource Officers (DNRO), District Forest Officers (DFOs) and other participants from relevant government institutions and NGOs, such as representatives from TANAPA, the Jane Goodall Institute (JGI), TACARE, e.t.c. Representatives from other natural resources conservation programmes in the relevant regions were also invited.

1.2.2 Consultations at the Village Level

Meanwhile, one village in a selected ward was selected for village level consultations in each zone. Stakeholders at this level included local communities living adjacent to selected forest resources, villagers involved in PFM, extension staff, village leaders and environmental committee members. The criteria used for

¹ The Division of the Environment (Vice President's Office) is responsible for climate change and is the national designated authority for UNFCCC. The Forestry and Beekeeping Division (Ministry of Natural Resources and Tourism) is primarily responsible for forestry policy and coordination matters and has started the process on developing a national REDD strategy.

the selection of villages for local level consultations included the abundance of forest resources, involvement in PFM and/or WMA activities, and the potential for undertaking REDD activities at that level.

1.2.3 The Consultation Team

The consultations were undertaken by a team comprising two intermittent National REDD Taskforce members, alternating members from the REDD Secretariat and two facilitators. In some zones a representative from the Royal Norwegian Embassy also attended.

2.0 EXPERIENCES FROM OTHER REDD RELATED ACTIVITIES IN TANZANIA

2.1 Participation in REDD Related Activities

It was reported during the workshops in all the zones visited that all the represented districts had participated in one form or another of REDD related activities. This was also the case for villages visited during the community consultations. The major forms of the existing natural resources management regimes and/or activities mentioned included Joint Forest Management (JFM), Community Based Forest Management (CBFM), and WMA. In the discussions PFM seemed to be subsumed in CBFM.

2.2. Efficacy of Cost-Benefit Sharing Mechanisms

In all the visited zones, it was affirmed that communities practicing PFM had the potential to generate income from their forest resources. Income generation was, however, more significant in communities under CBFM where commercial use of products was permitted, thus providing the village governments with a proportion of permit fees. Other sources of community-level income included fines and revenue from tourism. Nevertheless, community-level income from all PFM sources combined was very low. For example, although in some districts local communities were billed to get up to 40% of the sales from PFM/CBFM forest products, the actual amounts accruing were just sufficient to cover the costs of activities of the Village Natural Resources Committees (VNRCs)².

Those communities that generated additional income from PFM and WMA - which got some 25% from tourist hunting fees from the districts - there were no clear guidelines or mechanism of benefit sharing between major stakeholders. Hence, village governments consistently used the income for improving community level infrastructure such as the construction of classrooms, dispensary buildings or water supply. This observation has also been confirmed elsewhere by Blomley and Iddi (2009).

It was noted, however, that although individual households did not directly benefit from funds accruing from PFM/CBFM activities, they still benefited indirectly from environmental goods and services and the reduced responsibility of having, from time to time, to contribute towards improving such community level infrastructure from individual pockets.

2.3 Issues Related to Land Tenure

JFM has been heavily promoted in all catchment forests, which are important biodiversity areas with high conservation value. In many places the protection status of the most critical forests is now being upgraded to nature reserves, which provides them with additional protection (Blomley and Iddi, 2009). This protection status notwithstanding, participants in the consultative workshops confirmed that both land and tree tenure in this management regime remained firmly in the control of the State, either national or local.

Hence, while JFM forests provided a range of crucial environmental services to the conservation of water sources and as biodiversity conservation hotspots and carbon sinks, their contribution to local users' livelihoods is highly limited as consumptive use is highly restricted. And because of it, there was virtually

² In some villages these committees are also known as Environmental Conservation Committees.

no need for legal mechanism that could provide the basis for sharing of management costs and benefits between governments and participating communities.

The situation was, however, reportedly different in the CBFM and WMA management regimes. While economically valuable trees/woods in the former, or wildlife resources in the latter, continued to belong to the state, the land upon which both of these resources thrived was village or public land.

2.4 Institutional Arrangements

Both CBFM and WMAs are being implemented almost across all the zones relatively successfully, and remain in high demand. However, it was reported during the consultative workshops that apart from an enabling policy and legal environment providing strong incentives for local participation, and a vibrant timber market that had the potential to generate significant economic benefits at the local level, it was evident that these apparent opportunities had not yet been translated into substantial economic benefits for forest dependent communities.

Some of the explanations given by the workshop participants and confirmed by literature for this paradox were institutional failures and governance shortfalls in the forest sector (Blomley and Iddi, 2009; Vyamana *et al.*, 2008; Milledge *et al.*, 2007; Mustalahti, 2007; Akida and Blomley, 2006). It was reported, for example, that there was limited capacity at local government level in terms of human and operational resources, limited knowledge and understanding of the legal provisions at village level and misinformation regarding CBFM procedures, legal requirements, steps and delegation of powers.

These weaknesses were compounded by more conservative views of community involvement in forest management that led to delays and/or obstruction of progress. Other explanations mentioned included concerns over loss of forest revenues to District Councils and conservation agencies' focus on conservation and protection rather than sustainable utilisation of forest and/or wildlife resources.

Another institutional weakness pointed out by various members of discussion groups during the workshops was poor information flow between the VNRC that carried the overall management responsibilities, the village government and the wider community. Poor information flow had resulted in an appropriation of forest management benefits by the VNRC at the expense, especially, of the poorer members of the community who had previously been highly dependent on open-access harvesting of charcoal, fuel wood, building poles, et cetera.

In particular, they identified several constraints that either consolidated the position of richer and more influential members of the community, or conversely resulted in increased marginalisation of poorer members. It was particularly noted that due to poor facilitation, and a tendency to focus districts' and NGOs' extension efforts primarily on the VNRC without attention to the wider community to whom the committee was ultimately accountable, there was a common tendency towards "elite capture" of benefits to the detriment of other community members through monopoly over benefits and manipulation of benefit flows (Blomley and Iddi, 2009; Pfliegner and Moshi, 2007).

2.5 Policy and Legal Framework

From the group discussions, the policy and legal framework for sharing of forest management costs and benefits with regard to CBFM is based on the Village Land Act No. 5 (1999), the Local Government Act No.7 (1982) and the Forest Act No. 14 (2002). Together they provide the legal basis for villages to own and manage forest resources on village land. The Forest Act further provides tangible incentives to rural communities to

“reserve” large areas of unprotected *miombo* and coastal woodlands, including waiving State royalties on forest products; retaining 100% of revenue from sale of the products; and levying and retaining fines levied on village land in respect of VLFRs or CFRs as described in “Approved Village By-laws” (Blomley and Iddi, 2009).

Other incentives mentioned by the groups and confirmed by literature included exemption from the “reserved tree species list” of commercially important or endangered tree species on unreserved land, and entrusting their management to the village government, and confiscation of forest produce harvested illegally and equipment used in the process. Any forest produce or equipment used to illegally harvest in a VLFR may be confiscated and sold by the “forest reserve manager”, which in this case is the Village Council and proceeds thereof are used to the benefit of the village.

As a result of these policy incentives, demand for CBFM appears to be growing and has now surpassed JFM in terms of both area and number of participating communities. It was noted with concern, however, that the legal status regarding the sharing of costs and benefits was not clear. The Forest Act (2002) does not provide guidance on how the benefits arising from forest management under JFM are to be shared or the preferred mechanism for doing so. The result of this policy omission has meant that the progress of negotiating and signing JMAs has slowed and currently the MNRT is reluctant to move forward with approving further agreements until this issue is resolved and formal guidelines issued (Blomley and Iddi, 2009).

It was further pointed out that some sectoral policies and legislations were in conflict with the National Forest Policy (NFP). Examples given of such NFP conflicting policies included the Mining Policy and the policy on agricultural development. Some policies and/or legislations within the same sector were also reportedly uncoordinated. An interesting example given was within the MNRT itself. It was pointed out that despite the fact that both the Forest and Beekeeping Division and the Wildlife Division were all under the same ministry, the Forest Act No. 14 (2002), the Wildlife Act No. 12 (1974) and the new Wildlife Act (2009) were not properly coordinated.

2.6 Contribution to Poverty Alleviation

In addition to improving the overall management of forests in Tanzania, a key policy objective of PFM has been to improve the livelihoods and wellbeing of poor rural communities who live close to, or inside forests and woodland areas. Although the availability of research on linkages between PFM and livelihoods is fairly limited and that its actual contribution has never been adequately quantified³, from the group discussions it was obvious that forest resources played a fundamental role in the economy and peoples’ livelihoods in all zones.

This potential has been confirmed by all of the few studies done in Tanzania so far. One area that has provided useful results is Iringa District where CBFM models were piloted in the late 1990s, before the enactment of the Forest Act in 2002. Fourteen villages were assisted by a Danida-funded project, MEMA, to reserve small to medium sized areas of *miombo* woodlands averaging 2,600 ha on their village land. An assessment of village forest incomes showed annual revenues of around USD\$540 per year in 2002, rising to around USD\$720 per year by 2005 (Blomley and Iddi, 2009).

Furthermore, a 2005 assessment of the impact of the community based conservation project *Hifadhi Ardhi Shinyanga* (HASHI) that worked in Shinyanga Region with the objective of restoring “*ngitili*” enclosures, a traditional system of reserving pasturelands and dry season grazing areas by Sukuma pastoralists resulted not only in the regeneration and re-establishment of large numbers of small acacia woodland patches of between 378,000 and 472,000 ha of degraded land across the region, it also showed further that the total

³ Ostensibly due to difficulties in predicting the growth potential of the forestry sector, as the knowledge about the abundance, value, and current exploitation of resources is limited (Blomley and Iddi, 2009).

monthly value of benefits from the re-establishment of “*ngitili*” per person was USD\$11.7, a figure higher than the average consumption per person of USD\$7.1 per month in the rural areas of Tanzania at that time (Blomley and Iddi, 2009).

In addition to cash returns from the sale of forest products such as grazing rights, firewood and poles, “*ngitili*” restoration had significant gains in reduced efforts in the collection of fuel wood, thatch grass, poles, fodder and water. The monetary value per household per day for the reduced effort in collecting various “*ngitili*” products was found to be USD\$0.7 for firewood collection, USD\$0.5 for collecting poles, USD\$0.8 for collecting fodder, USD\$0.55 for thatch materials collection, USD\$0.3 for collecting withies, USD\$0.3 and USD\$0.34 for domestic and livestock use of water, respectively. The assessment further showed that the proportion of households whose economic wellbeing at the family level had increased and improved as a consequence of values of benefits from “*ngitili*” were as high as 64%.

A third example comes from a JFM project in Ruvu North Forest Reserve. Nshubemuki (2009) investigated the impact of JFM in the reserve on the livelihoods of participating communities, who were allocated plots in the degraded part of the forest where they practiced agroforestry aimed at reducing pressure on forests in the relatively less degraded part of the reserve. Results showed that each household in the four villages around the reserve earned a total of Tsh310,329/- in 2007 from selling charcoal, firewood, poles, agricultural crops and tree seedlings from JFM plots. This income contributed significantly to the total household income. It was, however, widely felt during the workshops and in literature that contributions to the country’s development from PFM and such other initiatives could be larger and benefit more people if forest resources were managed in a more sustainable and equitable manner, building on principles of good governance and releasing their full potential for poverty reduction (Milledge, *et al.* 2007). Given the fact that CBFM management approaches emphasised on full delegation of management rights, responsibilities and returns to village level institutions and below, it was expected that CBFM and WMAs would provide greatest opportunities for generating tangible and sustainable livelihood impacts.

Concerns were, nevertheless, raised that forest areas managed by communities to date tended to be rather small, with long lead times needed before sustainable use could be considered and, consequently, the revenue generation potential from harvesting remained rather low. It was argued that there were still vast areas of unreserved woodlands, with significant timber values that could be transferred to village management with the potential for generating important local revenue streams in areas where other forms of economically productive activities may be severely limited (Blomley and Iddi, 2009).

2.7 Contribution to Environmental Goods and Services

Although surprisingly few studies have attempted to independently assess the impact of PFM, especially its contribution to environmental goods and services under different conditions, testimony from the group discussions during the consultative workshops confirmed that forest resources played a fundamental role in the provision of environmental goods and services such as conservation of water sources and as biodiversity conservation hotspots and carbon sinks in all zones. Discussions with the Village Environmental Committee at Ayasanda clearly testify to this assertion. (Box 1).

Box 1: Participatory Forest Management in Duru-Haitemba Forest Reserve, Ayasanda Ward

Eight villages have joined to manage two forest reserves, Warimb and Haytemba, under PFM. The Environmental Committee members in Ayasanda Village reported that before independence, the area was surrounded by thick forests. Due to increase in population pressure in the area the forest resources got depleted, and thus arose the need to conserve the remaining forest resources. The village leaders started the initiative to conserve the two forests in 1992. After a series of meetings the area was officially gazetted as a community-based Forest Reserve in 1994. The villagers have agreed upon several guidelines towards conservation and sustainable utilisation of the forest resources. The regulations include legal & free usage areas, permit to use areas with restricted utilisation of building poles, logs for burning bricks, stones for construction, use of timber by schools and religious institutions, and the strictly prohibited core areas.

The Environmental Committee has 12 members, out of which 6 are men and 6 women. The Committee has several responsibilities including demarcating the forest area, protecting the forest against illegal uses in collaboration with the village government, documentation and keeping of important records, regular monitoring of the forest resources, supervision of patrols in the forest, and supervision to ensure sustainable utilisation of forest resources.

Each village has 10 forest guards who are responsible for the regular patrols (three times a day). Despite having these guards, every member of the village has a responsibility of ensuring that the forest resources are well protected. They should inform responsible authorities in case of any suspicious moves. They have by-laws, which guide utilisation of forest resources and spell out restrictions and penalties involved for lawbreakers. These include fines ranging from Tsh15,000/- to Tsh50,000/-, depending on the nature and frequency of the offence.

The revenues from the forest come from fines against offenders and taxes from collecting logs. Visitors to the village forests also pay a fee of up to Tsh20,000/-. Funds exceeding Tsh200,000/- are used to support village development activities.

The villagers in Ayasanda reported that they had also benefitted several times from their engagement in PFM. The benefits include the revival of water sources, increase in soil fertility through reduced surface runoff, and also the fact the forest has regenerated and has changed the micro-climate; as a result they reported to have good rains. More so, the revenue obtained has been very instrumental in supporting village development activities, such as building classrooms and providing desks to local schools. Some of these benefits, especially the ecological ones, may sound like textbook material, but the local people believe they are happening in their community because of forest conservation.

The villagers reported that they were aware of the global REDD related initiative as they had been involved in the programme **'Think Globally & Act Locally'** since 2007. This was after they assessed their forest resources through the support from Sokoine University of Agriculture (SUA). Four members of the Environmental Committee were trained in taking appropriate measurements and monitoring. They currently have about 68 plots, which are measured once per annum. The measurements are sent to SUA for analysis for carbon.

The village has already benefited from carbon trade. In 2008, the calculations indicated that from 550ha they obtained 1,830 tons of carbon, which was sold at Tsh1,394/- per ton. Hence, in

total they received about Tsh2.5 million. From these funds they were able to help build toilets in one school and two classrooms in another. The funds obtained from the REDD initiative further helped in improving water supply in the village.

The challenge is how to increase this revenue portfolio so as to directly benefit individual households. Villagers in Ayasanda are also having a number of challenges from surrounding villages not involved with PFM. They commented that while they are responsible for the protection of the forest, their neighbours are destroying the forest from various activities such as charcoal making, which are illegal in their area.

Source: Consultative Meeting Discussions, Ayasanda Village, August 3, 2009.

The few studies undertaken so far also show some interesting and indicative results. For example, a total of 13 forests sampled out showed increases in basal area and volume in sites managed under both joint and community-based forest management, and declines for both of these variables in forests under government or open access management (Kajembe *et al.*, 2009; Pfliegner and Moshi, 2007). There were also declines in number of stems per ha in forests managed under CBFM, and increases in JFM areas and forests under exclusive State management. In addition, encounters with wildlife were reported to occur more frequently, which may indicate a change in behaviour by the wildlife through a reduction in hunting activities (Topp-Jørgensen, 2005).

Although the data comes from different areas of Tanzania and different ecological conditions, they tend to suggest that forest areas managed under JFM and CBFM are recovering compared with forests managed by government alone, or under open access regimes. Overall, the evidence would suggest that when forest management responsibilities are fully devolved (as with CBFM), there are substantial improvements in forest condition and reduced forest disturbance (Blomley and Iddi, 2009); hence also increasing the capacity to provide the expected environmental goods and services.

The discussions from the consultative workshops and conclusions from the studies reviewed above are, however, less clear regarding the effectiveness of forestry co-management in terms of delivering the impacts of improved forest management on neighbouring forest areas, whether reserved or open access. In their review of the impacts of PFM in the Eastern Arc Mountains forests of eastern Tanzania, Vyamana *et al.*, (2008) established that by-laws established for JFM in one village in Morogoro District appear to have been applied within the forest area under joint management but not into other neighbouring forests on village land. The net result of this has been a displacement of harvesting from one area of forest to another and hence also facilitating leakage of forest carbon. This will have important ramifications for the planned REDD projects in government managed forest reserves (Blomley and Iddi, 2009). With regard to CBFM, Vyamana *et al.*, (2008)

found that the problems of leakage were less significant as by-laws developed for a given area of forest within the VLFR were generally applicable to other areas of forest on village lands.

2.8 Available Forest Resources

Except for areas like Monduli District where a sizeable amount of data is readily available, lack of reliable databases on the extent of forest resources, their tenure and use was reportedly a common phenomenon in all the zones visited. The most common scenario from the zones was one of natural forests and trees remaining dispersed in an agricultural landscape with no single, distinct forest frontier. The extent of remaining natural forest may, therefore, most likely be an overestimation as the deforestation rate is unknown. Lack of reliable data which can be used to estimate present carbon stock and the historic reduction rate cannot form a

baseline for REDD. In any case, the scattered nature of distribution of closed canopy forests and trees on farmland cannot be the basis to establish direct transfer payment schemes with individual cultivators, because the transaction and monitoring costs will most likely be prohibitive.

A basic requirement for Tanzania to benefit from REDD would, therefore, be to establish a reliable baseline, probably based on the analysis of high-resolution imagery, coupled with some ground truthing. This would need to be linked to an analysis of older high-resolution imagery in order to establish a reliable historical carbon stock reduction rate.

In other districts such as Mufindi, Njombe, Mbeya Rural, et cetera, the landscape was reportedly characterised by extensive individual or corporate plantation forests. In the island of Pemba and the southern regions of Lindi and Mtwara, clove and cashew nut plantations reportedly dominated the landscape, respectively. In the dry lands of Kongwa District the very definition of a "forest" was questionable. All of these cases present additional and very special challenges for REDD implementation in Tanzania.

Another important issue raised during the workshops is about the recognition of stewardship of forest resources through conservation forestry. Since the beginning of the 20th Century Tanzania has been conserving forests for the global common good. More than 20% of the country's lands are currently under protected area status. How does the world reward these efforts that have since been sequestering sizeable amounts of carbon? It was, therefore, argued at the workshops that implementation of a REDD strategy in the country would need not only to consider rewarding the country on these historical efforts, but also interactions with possible future CDM projects in reforestation or forest regeneration to prevent double counting.



Figure 1: A fine stand of miombo woodland in Nduta ex-refugee camp, 25km South-East of Kibondo Town. This is one of the areas which are relatively less disturbed by human activities. How can REDD reward such stewardship?

3.0 SWOT ANALYSIS OF THE REDD INITIATIVE IN TANZANIA

3.1 SWOT Analysis of the REDD Initiative at Regional and District Levels

During the consultative Workshops SWOT analyses of the establishment and implementation of the REDD Initiative in the Tanzania was done by the participants who were split into discussion groups. A summary of the results of the analyses are as presented in Table 2 below.

Table 2: SWOT Analysis of the REDD Initiative at Regional and District Levels

Strengths	Weaknesses	Opportunities	Threats
Existence of some expertise at the district level on issues of forestry conservation	Unsatisfactory enforcement of existing laws and by-laws against forest degradation	Possibility to learn from countries that have successfully adopted and implemented REDD	Programme's donor dependence
Existing policy and legal environment conducive to establishment and implementation of REDD	Inadequate capacity of district councils to manage existing CFRs	Increased importance of conservation related economic activities, such as eco-tourism and beekeeping	Insecurity of land tenure due to difficult registration processes
Willingness of some developed countries to participate in carbon trade	National Forest Policy and related legal framework not well known to local communities	Improvements in the management of land and forest resources	Forest deforestation and degradation by livestock, elephants and other wildlife
Existence of considerable awareness of environmental issues among the people	Lack of reliable data base on climate and extent of forest resources, their tenure and use	Expressed need for formulation of policy/legislation/regulations specific to REDD	Forest degradation by wild fires
Existence of NGOs such as AWF, Farm Africa, Friends in Development, TAF, etc, promoting environmental management in the zones	Few officials in the forest sector knowledgeable about REDD	Possibility of reforms in land tenure and use in favour of forest resources conservation	Forest stewardship not qualifying for REDD rewards (esp. catchment forests and other gazetted forest reserves)
Existence of extensive forest resources as reserves or in public land	Many villages do not have land use plans in support of CBFM	Development and implementation of human resource capacity building for REDD and forest resources management programmes	Lack of cheap and appropriate alternative sources of energy to wood biomass
Considerable experience of communities in participating in PFM and WMA activities	Entrenched corrupt practices and lack of good governance in the forest sector and elsewhere	Opening up of blocked wildlife corridors and restoration of habitats	Wide spread poverty in all zones and increasing dependence of communities in forest resources
Some villages already have land use plans incorporating areas for forest conservation	Lack of political will due to conflicting sector interests in forest and other natural resources use	-	Increased human-wildlife conflicts
-	Conflicting interests between conservationists and politicians	-	Carbon measurement and monitoring technology too sophisticated for most people to fruitfully make the assessments participatory
-	Very few people in the communities are aware of REDD and the available opportunities	-	-
-	Contribution of the forest sector to poverty reduction not clearly visible	-	-

Source: Field Data, August 2009

3.2 SWOT Analysis at Local Level

After the Village Environmental/Natural Resources Committees in the selected villages discussed a number of lessons learnt based on their involvement in PFM and/or WMA REDD related initiatives which could guide smooth implementation of future REDD initiatives, they were requested to do a SWOT analysis of the REDD Initiative in their communities. The results of those analyses are summarised in Table 3 below.

Table 3: SWOT Analysis of the REDD Initiative at Local Level

Strengths	Weaknesses	Opportunities	Threats
Some villages have been involved in CDM activities such as the use of energy saving stoves as supported by LAMP project	Unsatisfactory enforcement of existing by-laws against forest degradation	Possibility to learn from countries that have successfully adopted and implemented REDD	REDD's donor dependence
Some villages have by-laws which are appropriate for ensuring forest conservation	Low level of environmental education that could help extend protection of forest resources to neighbouring communities	REDD initiative will give local communities some financial and further technical assistance to manage the reserves	Challenges from surrounding villages not involved with PFM
They have committed members of environmental committees with great support from fellow villagers	National Forest Policy and related legal framework not well known to local communities	Increased importance of conservation related economic activities, such as eco-tourism and beekeeping	Forest deforestation and degradation by livestock, elephants and other wildlife
They have supporting and well committed village governments and non-governmental organizations in PFM matters	Lack of reliable data base on climate and extent of forest resources, their tenure and use	Improvements in the management of land and forest resources	Forest degradation by wild fires
Existence of several NGOs and institutions in some villages researching and promoting forest and wildlife conservation issues	Few officials at the local level are knowledgeable about REDD	Expressed need for formulation of policy/legislation/regulations specific to REDD	Forest stewardship not qualifying for REDD rewards (esp. catchment forests and other gazetted forest reserves)
Environmental committees have shown the willingness and enthusiasm to participate in REDD activities	Very few people in the communities are aware of REDD and the available opportunities	Possibility of reforms in land tenure and use in favour of forest resources conservation	Carbon measurement and monitoring technology too sophisticated for most people to fruitfully make the assessments participatory
FBD gives the committees some technical support	Entrenched corrupt practices and lack of good governance in some local communities	Development and implementation of human resource capacity building for REDD and forest resources management programmes	Widespread poverty and increasing dependence of communities in forest resources
Existence of extensive forest resources which they own communally	Conflicting interests between conservationists and politicians	Opening up of blocked wildlife corridors and restoration of habitats	Increased human-wildlife conflicts
Existing policy and legal environment conducive to establishment and implementation of REDD	The technical definition of the forest as scientifically applied in REDD does not quite fit the conditions of dryland "Forests"	-	-
Considerable experience of communities in participating in PFM and/or WMA activities	Very few people in the communities are aware of REDD and the available opportunities	-	-
Some villages already have land use plans incorporating areas for forest conservation	Insecurity of land tenure due to difficult registration processes	-	-

Many villages have land that can be turned into a forest reserves can be used for REDD activities	Many villages do not have land use plans in support of CBFM	-	-
Some villages are being encouraged to plant at least 5 indigenous trees per family per year	Contribution of the forest sector to poverty reduction not clearly visible	-	-
Most of the villagers abide to the by-laws they were involved in formulating	-	-	-
Many villages have some land that can be turned into village forest reserves	-	-	-

Source: Field Data, August 2009

4.0 EMERGING ISSUES

4.1. *Introduction*

From the discussions in the consultative Workshops and the SWOT analyses done in the eight zones, it was clear that if well developed and implemented, the REDD programme had opportunities and potentials to contribute to national forex, to promotion of rural development and to efforts of reducing poverty. The programme also had great potential for biodiversity conservation and ecosystems stability. The programme can support sustainable forest management, assist in conserving water sources, and hence mitigate challenges of climate change.

As discussed above, there are several issues of concern that must be considered in developing the National REDD strategy in Tanzania. These issues present a number of challenges which pose numerous questions that need to be addressed in order to develop an implementable REDD strategy in Tanzania, a strategy that will lead to the achievement of REDD programme goals after its initiation.

4.2 *The Challenges*

4.2.1 Strong linkages between social and ecological systems

From the SWOT analysis at both the regional, district and local levels, it was clear that heavy dependence on the natural resource base for livelihood sustenance and economic development was an issue that needed serious consideration for its solution. Tanzania's land area is covered by unique ecosystems in the form of forests on public (open access forest areas) land, forest reserves, national parks and game reserves. The country is famous for its rich variety and abundance of wildlife, particularly big game.

At national level, the economic value of Tanzanian forests is high due to the high potential for royalties, export, and tourism earnings. The actual contribution of the forest sector to the national economy is usually under estimated because of the unrecorded consumption of wood fuels, bee products and other products, such as poles. It is estimated that the sector contributes over 3% of the Gross Domestic Product (GDP) and over 10% of the country's registered export. National parks are managed for non-consumptive purposes.

These are ideal for REDD programme. Game and Forest Reserves are protected areas where restricted consumptive or non-consumptive use of resources is permitted. These are not ideal for REDD programme because forests under REDD programme are supposed to be kept intact. Therefore, the government will have to decide which forested areas will fall under REDD programme and which forests will remain for community use as a result of new demands posed by REDD programme on natural resource base.

At the local community level, communities depend on forest products for their livelihoods. They use forests as sources of fuel wood and charcoal for sale and/or for home consumption. They get building materials, e.g. poles, medicine, honey, wax, fruits, mushrooms, etc. If these forests are put under REDD programme, alternative sources of these items must be found because these forests will no longer be accessible. One alternative is to put aside some forest areas for securing or harvesting these forest products.

4.2.2 Attachment of cultural and traditional values to forestry resources

Some communities make use of forests for cultural and traditional activities, e.g. worshipping, rituals, etc. If these forests are put under REDD programme these activities will no longer be allowed to take place in these forest areas. There are two options for solving this problem. One option is to allow communities to continue using these areas for their cultural and traditional activities since these activities are not harmful or destructive to forest resources. The other option is to set aside portions of existing forests for such activities.

4.2.3 REDD based land use system changes and food security

Without land resources there is no agriculture and when rules for the use of this basic resource change, those of agriculture must follow suit. The overall aim is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad-based social and economic development without upsetting or endangering the ecological balance of the environment.

Any land use system change like the REDD based land use system changes must aim at ensuring basic food security for the nation and to improve national standards of nutrition by increasing output, quality and availability of food commodities. In order to achieve this, production growth rates of food crops and livestock products will have to grow drastically. Food crops production will be increased through productivity by introducing new technologies which increase the productivity of labour and land.

Introduction of REDD with its requirement of having the land permanently under non-food crop vegetation cover and by devoting more land for growing biofuel crops (e.g. *Jatropha* plants) means less land for food production. Currently, there is rapid expansion of land for biofuel production as a substitute for conventional fossil fuels (petrol and diesel). As far as food security is concerned, there are both negative and positive effects in implementing these ventures (REDD programme and cultivation of crops for energy).

This is not a unique situation. The important thing is to develop well founded information upon which Tanzania's government and investors can assess and evaluate advantages and disadvantages of various options and make transparent decisions on the development paths that they (government and investors) decide to take. It is important to ensure that there is increased income and improved food security to the communities involved in REDD initiative and in growing or cultivation of biofuel plants. One option is to use land that is unsuitable for food crop production for the REDD programme and for growing biofuels. This would not only eliminate or minimise competition, but it would also ensure sustainability of the REDD based activities and income.

4.2.4 Policy environment

Some conservative individuals try to deny the fact that there are sectoral policy overlaps and conflicts. The truth is that there are overlaps and conflicts between and within sectors and/or sectoral ministries. The situation is made more serious by poor law-enforcement, poor allocation of resources and manpower. The case of sectoral "conflicts" and overlaps within the MNRT has already been highlighted in the foregoing paragraphs. There is, therefore, a great need for harmonisation or for reforms of policies in order to accommodate changes in natural resources use systems and, in particular, the new demands that will be posed by the REDD initiative.

4.2.5 Quality of databases

Nobody knows for sure the current status (quantity and quality) of our natural resources such as natural forests and even some plantation forests. Outdated figures are still being quoted today en mass. No current

surveys or research work have been done to get the most up-to-date information on these resources. There is a need for allocating more resources in terms of manpower, finance and equipment, as well as motivation for the workers in terms of salaries and working conditions. In addition to isolated institutions or ministries keeping data, there should also be a central place that should serve as a custodian of all natural resource data from research institutions and ministries. This will simplify acquisition of data by any institution or office seeking for data because this can be found in one central place. More important than anything else is the strengthening of existing research centres (such as TANRIC at IRA) in terms of manpower, financial resources, transport equipment, motivation, etc.

The REDD programme will require regular or up-to-date, reliable and accurate data on forests for computing baselines and future emissions and absorption of CO₂. Lack of quality databases affects the establishment of regular and efficient monitoring systems for accurate quantification of carbon stock.

4.2.6 Issues of governance

In discharging its duties, the government has divided its mandates into central and local government. The central government includes ministries, executive agencies and independent departments, while the local government includes district councils, wards and village councils. The government has been undertaking various reforms aimed at ensuring proper and efficient discharge of services to the public by both central and local governments. The REDD programme will require a clear and coordinated institutional framework at all levels for its efficient and effective performance.

The present organisational structure has some shortcomings in its implementation, especially as far as natural resources management is concerned. For example, currently there is no clear mechanism for ensuring equal cost-benefit sharing in participatory conservation programmes such as PFM, WMAs and CBFM between the centre, the local and other stakeholders. Hence, agreements between concerned parties cannot be signed in order to effect equal benefit sharing between small and large stakeholders with respect to such programmes. More important is the fact that presently there are no mechanisms to improve transparency and addressing issues of corruption. These are issues that should be adequately addressed by the REDD implementation strategy.

4.2.7 Response from the local level

Many local communities in Tanzania have a bad experience with natural resources conservation programme initiated from above. This is not only because of the "fine and fence" policies of earlier programmes, but also failed initiatives. The problems brought about by the current faltering global economic problems and failures of other sectors to benefit from various global market opportunities, such as coffee and cotton production, do not auger well for REDD. Most farmers have decided to do away with cash crops because they are not adequately paying in the world market. If not well regulated carbon trade may take the same trend. This means that care should be taken when introducing REDD programme in the country. Proper awareness creation on REDD activities and on what the local people should expect is an imperative component in the REDD implementation strategy.

4.2.8 "Indigenous people" and/or forest dependent communities

In Tanzania there are few communities that can rightly be called "indigenous" people like the Red Indians of the USA, the Aborigines of Australia or the Bambuti pigmies of Congo forests. The only people who could be described as "indigenous" would be the Hadzabe people of Lake Eyasi who are heavily dependent on forest resources for their livelihoods. We, however, have many forest dependent communities in the country,

including the pastoralists and people living adjacent to forest reserves. It is important, therefore, that the interests of these people be considered in the REDD implementation strategy. These groups should be involved in the consultative process of preparing the national strategy for implementing REDD initiative. In the past there were rare chances for their participation or involvement in decision making on issues that concern them, e.g. on the location of schools, dispensaries or livestock watering points. Sometimes their knowledge, practices and experiences would have helped or would have led to the success of the programme to be undertaken.

4.2.9 Land grabbing and marginalisation of the poor

Land grabbing has been going on all the time but at a low pace. The situation is likely to be aggravated upon the initiation of REDD programme, because the value of land will go up. Already people have started approaching village councils for purchasing of large tracts of potential farmland for growing of biofuels and/or afforestation and forest conservation for carbon trading. According to the Village Land Policy there is a limit of land size that the Village Council can authorise or offer for sale to an investor.

The same situation applies to the District Council. If the investor wants more land than what the Village Council or the District Council can authorise, then the request together with the recommendations from the relevant authority is forwarded to the Ministry of Lands for a final decision. There are conditions for granting permission to buy land. This is one of the stages at which the process of transaction on land can be arrested in order to control land grabbing. Warning signs or notices on land grabbing should be given to authorities at village, district and at ministerial or national levels. At the same time genuine cases should be treated accordingly.

4.2.10 Gender relations upon transforming trees as cash crops through REDD

Gender relations are likely to be affected or disrupted as is the case with other cash crops. The situation is slightly under control now because gender issues these days form the topic of the day. Female voices are heard and echoed in every corner. Nevertheless, something ought to be done to make sure that equal rights on claims to land are secured for the spouses as required by the land policy and law. This issue of equal rights to land was overlooked a few years ago. When equal land rights between husband and wife are secured the household livelihoods will also remain stable.

4.2.11 Concept of participation

There is a big difference between participation/involvement and active participation/involvement. The later is preferred for obvious reasons. One can participate by sheer physical presence without getting an opportunity to share the discussions and making decisions. This is what is also called passive participation. What is required is active participation/involvement of local communities in developing, implementing and monitoring REDD activities. This is the only way of inculcating a sense of ownership of the REDD programme. The zonal consultation process reported in this communication has been one way of stakeholders' active participation. More needs to be done to involve other stakeholders, particularly at local community level in other regions as well. Careful choices of the right stakeholders should be made including NGOs, CBOs, FBOs, forest dependent communities, private sector, etc. All these should actively participate at all stages of development of REDD activities. Local communities should be made aware of the REDD initiative.

Stakeholders who attended zonal consultations should be assisted and given the assignment of conducting similar awareness exercises in their districts. This will create or result into a multiplier effect of the exercise.

These consultations should be oriented to give stakeholders free and prior informed concern so that they get prepared for what is to come.

4.2.12 Conflicting interests among various stakeholders

Conflicting interests among and within government bodies e.g. sector or ministries and between administrative units or levels, e.g. village councils vs District Councils, District Councils vs Central Government, are likely to arise with respect to decision making powers and also in terms of needs when developing and implementing REDD activities. One good example is the implementation of agreement on cost-benefit sharing with respects to PFM, WMAs and CBFM. There are also likely to be conflicting interests between politicians who are seeking for votes from the people and natural resources conservationists. Directives and decisions on these issues need to be clearly spelled out by the office responsible for environmental matters.

4.2.13 Exclusion of perennial crops and forest plantations from REDD initiative

So far, the REDD programme is concerned with natural forests. Perennial food and cash crops such as cashew nuts, palm trees, cloves, et cetera, and forest plantations of exotic species of trees are not involved despite the fact that they form very good canopy and can perform very well as carbon sinks just like the natural forests. There is a great need for re-visiting this issue with the aim of including perennial food and cash crops and forest plantations in the REDD programme. This is an issue for negotiation with the funding agencies.

4.2.14 Addressing drivers of deforestation and forest degradation Discouraging shifting cultivation and enhancement of productivity per unit area:

One of the major causes of deforestation and environmental degradation is shifting cultivation. Shifting cultivation process involves clearing of forest to get room for agricultural production. The process is repeated on a new piece of land every after two or three years depending on soil fertility. This is the reason for it being called shifting cultivation. The reason is that after two to three years soil fertility gets depleted if no additional fertiliser is applied. Productivity of the land goes down or is drastically reduced, so the farmer is forced to move to a virgin land or new piece of land repeating the same process of forest clearing. This is particularly serious in the case of tobacco farming as practiced in western Tanzania.

The remedy to shifting cultivation would be agricultural intensification. Agricultural intensification will discourage shifting cultivation and at the same time enhance productivity per unit area. Under agricultural intensification the farmer continues cultivating the same piece of land without shifting.

There is great scope of increasing productivity and production or yields of both traditional industrial/cash and food crops. What is required is more investment in research to produce high yielding varieties, improved extension services to impart modern crop husbandry, provision of the right quantity and quality of farm inputs (fertilizers, pesticides, etc.), offering the right incentives at the opportune time, applying quality farm management practices and financial control. With these in place shifting cultivation will largely stop. Some investments from revenues accruing from REDD activities should be directed towards these efforts.

Reducing dependence on fuel wood and charcoal as major sources of energy: As mentioned before, under communities' heavy dependence on natural resources for their livelihoods, fuel wood and charcoal will remain the dominant source of energy for cooking for the urban households sector for the foreseeable future. Nevertheless, something should be done to at least reduce consumption of fuel wood and charcoal by using alternative sources of energy, which includes electricity, kerosene, natural gas and carbonised briquettes.

The use of fuel wood and charcoal as major sources of energy is another cause of deforestation and environmental degradation, which eventually leads to climate change. There must be ways and means of reducing this dependence on fuel wood and charcoal as major sources of energy. The government and REDD programme must do something about the situation. Prices of electricity, kerosene, natural gas and carbonised briquettes should be re-examined and scaled down so that they become affordable to most common people. This means tackling drivers of deforestation and environmental degradation. The extent of use of these alternative fuels should be left to the market forces with appropriate incentives and regulations in place to determining their economic viability and social acceptability.

The issues of use of charcoal and firewood as a source of energy should be seriously considered. Charcoal and firewood will remain the dominant sources of energy for the foreseeable future. Felling of trees for charcoal production and for firewood is a driving force for deforestation. One of the solutions is to scale-up establishment of woodlots using fast growing indigenous and exotic species of trees in villages.

Present traditional charcoal production kilns are very inefficient (8-12 percent). Charcoal producers should be trained on sustainable and improved charcoal production skills. Energy efficiency initiatives need to be more promoted. Initial steps include raising awareness on energy efficiency. Energy efficiency has both economic and environmental benefits. With regard to fuel switch, different fuels have different contribution and emission characteristics. Fuel switch to renewable resources of energy like solar, wind, biomass, geothermal contribute to reduction of green house gases.

In short, policy reforms aimed at promoting climate change adaptation technologies such as biomass cogeneration, small hydropower plants, fuel switch need to be developed. The Tanzania economic growth sectors, including energy, are linked to climatic conditions. Climate change is a cross-sectoral concern and, therefore, affects development.

The question of acquiring building materials and materials for furniture making can be addressed or solved by elevating the rate of planting of both exotic and indigenous tree species. There should be possibilities of loosening up some REDD regulations in order to allow certain activities to be undertaken in forest conserved areas or forest under REDD programmes but with certain conditions. These activities may include allowing people to get into the forest reserves for rituals, worshipping, and for collecting medicines or mushrooms, etc.

5. RECOMMENDATIONS:

5.1 AT REGIONAL AND DISTRICT LEVELS

5.1.1 The modalities of establishing and operationalising National REDD Trust Fund

According to the current forest management regimes, forests in Tanzania can be divided into three types of ownership and management. These categories include: forests belonging to the Central Government and managed by the Forestry and Beekeeping Division of the Ministry of Natural Resources and Tourism; forests belonging to districts and villages, and those owned by the private sector. Due to these diverse regimes of forest tenure, participants proposed that:

- Forests suitable for REDD be identified and their ownership status established;
- A meeting between relevant stakeholders be arranged in which a constitution could be drawn to guide the establishment and operationalisation of the Trust Fund;
- The Trust should then be registered
 - An autonomous trust fund be established under MNRT, because the ministry is the custodian of all forests on which REDD will be operated;
 - This should follow existing government structures but taking into account of the REDD trust fund to be established;
 - The trust fund should be linked to PMO-LARG to ensure proper linkage and flow to district and communities;
 - The existing Eastern Arc Endowment Fund under MNRT may provide the basis for the administrative set up of the Trust Fund.

5.1.2 Role of REDD in rural development

The REDD Initiative could promote rural development and contribute to poverty reduction efforts among the majority of rural communities through the following:

- Increase in rural income generation through the facilitation of forest related projects, such as beekeeping, ecotourism, employment, etc.
- Catchment and water sources conservation to enhance the integrity of ecosystems' goods and services.
 - Improvement of infrastructure to facilitate physical access to market, inputs and other social services
 - Financing better land management practices to increase land productivity (food security and income)
 - Promote afforestation
 - Financing forest management activities
 - Capacity building on development management at all levels

5.1.3 Land tenure system and forest resources user rights

- Initiate discourse on the harmonisation of conflicting policies and legislation of the two sectors;
- Facilitate the planning and use of forest resources transcending village and district boundaries;
- Institute and enforce laws against bush fires and other forest degrading activities;
- Facilitate land use planning for forest resources conservation;
- Create awareness against corruption and institute effective anti-corruption measures.

5.1.4 Information, knowledge and research on REDD

- Research results on REDD be packaged in formats and language that could be easily accessed by a majority of the stakeholders;
- Establish and maintain an updated website for REDD;
- Establish a national information exchange network on REDD issues;
- Facilitate the designing of a special logo for REDD;
- Effective utilisation of the media to disseminate information for REDD and related issues:
 - Use of the media to disseminate REDD information (radios, newspapers, TV, etc)
 - Should be done by research institutions but with a mechanism to ensuring active participation of practitioners.

5.1.5 Issues of leakage

- Institute constant Environmental Audits;
- Introduce and promote alternative income generating activities;
- Raise awareness of various stakeholders within and outside the project areas on issues of leakages;
- Institute and enforce laws against leakages and other forest degrading activities;
- To harmonise natural resources related policies nationally and cross boundary where appropriate;

5.2 Recommendations at the Local Level

As a way forward the villagers recommended and expressed the following needs:

- A need for further training, seminars and exchange visits to successful environmental conservation programmes;
- A need to involve local communities in awareness raising campaigns on issues related to REDD to ensure greater impact;
- Need to have integrated efforts with neighbouring communities, to ensure sustainability in conservation of the surrounding forest resources;
- Finally, villagers were of the opinion that REDD activities would not succeed without ensuring the effectiveness of PFM in the respective areas.

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