STANDARD JOINT PROGRAMME DOCUMENT

Cover Page
Country: **Tanzania**
Programme Title: **UN-REDD Programme – Tanzania Quick Start Initiative**

Joint Programme Outcomes:
Outcome 1: National governance framework and institutional capacities strengthened for REDD
Outcome 2: Increased capacity for capturing REDD elements within National Monitoring, Assessment, Reporting and Verification Systems
Outcome 3: Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels
Outcome 4: Broad based stakeholder support for REDD in Tanzania

Programme Duration: 12 months Anticipated start/end dates: 1 March 2009/ 31 March 2010 Fund Management Option(s): Pass-Through Managing or Administrative Agent: UNDP	Total estimated budget*: 4,200,000 US$ Out of which: 1. Funded Budget: 4,200,000 US$ 2. Unfunded budget: _____ * Total estimated budget includes both programme costs and indirect support costs
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Names and signatures of (sub) national counterparts and participating UN organizations

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Table of Contents

Section 2 : Executive Summary 3
Section 3. Situation Analysis: Tanzania 4
Deforestation and Forest Degradation 4
Key Issues for REDD 4
UN-REDD Programme 7
ONE-UN approach 8
Background on Tanzania 9
Geography and Climate 9
Socio-economic Context 9
Land Use 10
Wildlife Management 10
Forest Cover and Forest Types 11
Biodiversity Values 12
Goods and Services Provided by Tanzanian Forests 14
Forest Management in Tanzania 15
Forest Management Administration 16
Forest Management Approaches 19
Reserved Lands (Protected Areas and other kinds of reserves) 19
Participatory Forest Management 19
Community Based Natural Resource Management (CBNRM) 20
Problem Analysis for REDD in Tanzania 20
Context 20
Underlying Causes of Deforestation and Forest Degradation 22
Developing a UN REDD programme for Tanzania 25
Stakeholder consultation 25
Civil Society Organization Consultation 25
Sustainability 27
National REDD Production Chain 27
Quadrant 1 - Sustainable Forest Management at Field Level 28
Quadrant 2 - Regulation and Governance 30
Quadrant 3 - Market access at international level 32
Quadrant 4 - Funds transfer and management 33
Section 4. Proposed UN-REDD Joint Programme for Tanzania 35
Outcome 1. National governance framework and institutional capacities strengthened for REDD 35
Outcome 2. Increased capacity for capturing REDD elements within national Monitoring, Assessment, Reporting and Verification (MARV) systems 36
Outcome 3: Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels 37
Outcome 4: Broad based stakeholder support for REDD in Tanzania 37
Barriers to Implementing REDD in Tanzania 37
Outcome 1. National governance framework and institutional capacities strengthened for REDD 38
Outcome 2. Increased capacity for capturing REDD elements within national Monitoring, Assessment, Reporting and Verification (MARV) systems 38
Outcome 3. Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels 38
Outcome 4. Broad based stakeholder support for REDD in Tanzania 38
Section 5. Results Framework 39
Section 6. Management and Coordination Arrangements 44
Section 7. Fund Management Arrangements 45
Section 8. Monitoring, Evaluation, Reporting 48
Monitoring 48
Evaluation 48
Reporting 48
Section 9. Legal Context or Basis of Relationship 52
Section 10. Work plans and budgets 53
Section 11. Bibliography 53
Appendix 1: Implementation Plan – Tanzania UN REDD Programme 2009-2010 55

Section 2 : Executive Summary

Deforestation and forest degradation contribute close to twenty per cent of anthropogenic greenhouse gas emissions globally. Negotiations are underway within the auspices of The United Nations Framework Convention on Climate Change (UNFCCC) with a view to reducing emissions from these sources (Reducing Emissions from Deforestation and Forest Degradation or REDD). To facilitate REDD, efforts are urgently needed to adapt forest management systems, and establish financing systems and associated monitoring and verification systems attuned to country needs. These systems need to address concerns relating to the cost-effectiveness of REDD approaches, leakage, additionality, and the rights and responsibilities of local communities, amongst other issues. The UN-REDD Programme was established in 2008 as a partnership between FAO, UNDP and UNEP, financed through a multi-donor trust fund, to assist countries to address these needs. Tanzania comprises one of nine countries receiving support through the UN REDD Programme, with funding provided by Norway.

The Quick-Start Initiative will strengthen Tanzania's readiness for REDD as a component of the Government's evolving REDD Strategy, and is integrated with other REDD activities in the country. Interventions are planned over a period of 12 months, laying the ground work for activities in later years. The Initiative is an integral part of the ONE-UN Programme in Tanzania and the Joint Programme on Environment, which has the objective of 'Increasing Funding for Environment Management from International Environment Funding Mechanisms with a focus on Climate Change and natural resource management'. The programme will have the following outcomes:

Outcome 1: National governance framework and institutional capacities strengthened for REDD (led by UNDP)

Outcome 2: Increased capacity for capturing REDD elements within National Monitoring, Assessment, Reporting and Verification Systems (led by FAO and UNEP)

Outcome 3: Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels (led by UNDP)

Outcome 4: Broad based stakeholder support for REDD in Tanzania (led by UNEP and UNDP)

These outcomes are aligned to the draft National strategy for REDD in Tanzania. The initial year of investment will prepare the ground for the decisions that will be made at the Copenhagen meeting of the UNFCCC. At that point decisions will need to be made on the activities and implementation modalities for ongoing UN REDD support to Tanzania. It is therefore expected that the existing programme of support will also help deliver a longer term package of assistance, linked to the goals of UN REDD and fully harmonized with the Tanzanian REDD Strategy and framework documents, and the donor assistance being provided by other countries.

Section 3. Situation Analysis: Tanzania

Deforestation and Forest Degradation

Above and below-ground forest biomass has been calculated to contain some 2,050 gigatons of carbon , or about 20% of the world's terrestrial carbon stock (Campbell *et al.* 2008a; Kapos et al., 2008). Forests contain the highest density of stored carbon in their biomass (Gullison et al., 2007). According to FAO about 3,950 million ha, or around 30% of the global land area, was covered in forest in 2005 (FAO 2006). Of this around 1,250 million ha was tropical forest and woodland types in developing countries (Schmitt et al., 2008).

Deforestation over the past decade has occurred globally at a rate of around 1% of the remaining resource, or about 13 million hectares per annum (Achard et al., 2002). Most of this deforestation has occurred in the tropical developing countries. Degradation also affects large swathes of forest, particularly in the tropical areas, and also has significant impacts on the ability of forests to store carbon.

The Intergovernmental Panel on Climate Change (IPCC) estimates that land use change, primarily forest loss and degradation, now contributes close to 20 per cent of the overall anthropogenic greenhouse gas emissions into the atmosphere (IPCC 2007). This is equivalent to around 1.5-1.6 Gigatons of carbon per year. As these emissions constitute the second largest contributor to global warming (IPCC 2007), there is broad agreement within the scientific community that emissions from the loss of natural habitat, particularly from forests in the developing countries, need to be reduced as a matter of priority.

The Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) began to address this matter: known as REDD (Reducing Emissions from Deforestation and Degradation) at COP 11, held in Montreal, Canada, in December 2005. Broad agreement was subsequently reached on the need to address REDD at COP 13, held in Bali, Indonesia, and a road map for developing a REDD framework, that compensates forest nations for the costs of reducing forest loss and degradation was set out in the Bali Action Plan (2007) and in Decision 2/CP.13[1] on 'reducing emissions from deforestation in developing countries: approaches to stimulate action' and Decision 1/CP.13 on possible financial incentives for forest based climate change mitigation actions in developing countries. A framework for REDD is in the process of being negotiated, with a view to including REDD within the post Kyoto climate change Framework that will be approved in 2009. REDD may play a significant role in climate change mitigation and adaptation, can yield significant sustainable development benefits, and may generate a new financing stream for sustainable forest management. If cost-efficient carbon benefits can be achieved through REDD, increases in atmospheric CO_2 concentrations could be slowed, effectively buying much needed time for countries to move to lower emissions technologies.

Key Issues for REDD

A number of technical, political and social challenges will need to be addressed if REDD is to be made a reality, and market or fund based REDD payment schemes are to be introduced under the post Kyoto Framework. Approaches will need to prove the following:

- **Additionality** (that reduced deforestation or reduced degradation will not otherwise have occurred)
- **Leakage** (that efforts to avoid deforestation and forest degradation in one area do not simply displace the problem, and result in forest loss and degradation in other areas)
- **Reference emissions levels** (uncertainty over forest loss and degradation and the trajectories used, as a basis for calculating emissions reductions)
- **Measurement** (the methodologies and data used to measure human-induced emissions reductions),

[1] The Bali Action Plan, adopted by UNFCCC at the thirteenth session of its Conference of the Parties (COP-13) held in Bali in December 2007, mandates Parties to negotiate a post 2012 instrument, including possible financial incentives for forest-based climate change mitigation actions in developing countries. COP-13 also adopted a decision on "Reducing emissions from deforestation in developing countries: approaches to stimulate action". This decision encourages Parties to explore a range of actions, identify options and undertake efforts to address the drivers of deforestation. It also encourages all Parties in a position to do so, to support capacity-building, provide technical assistance, facilitate the transfer of technology and address the institutional needs of developing countries to estimate and reduce emissions from deforestation and degradation. Furthermore, it lays out a process under the Subsidiary Body for Scientific and Technological Affairs (SBSTA) to address the methodological issues related to REDD emissions reporting.

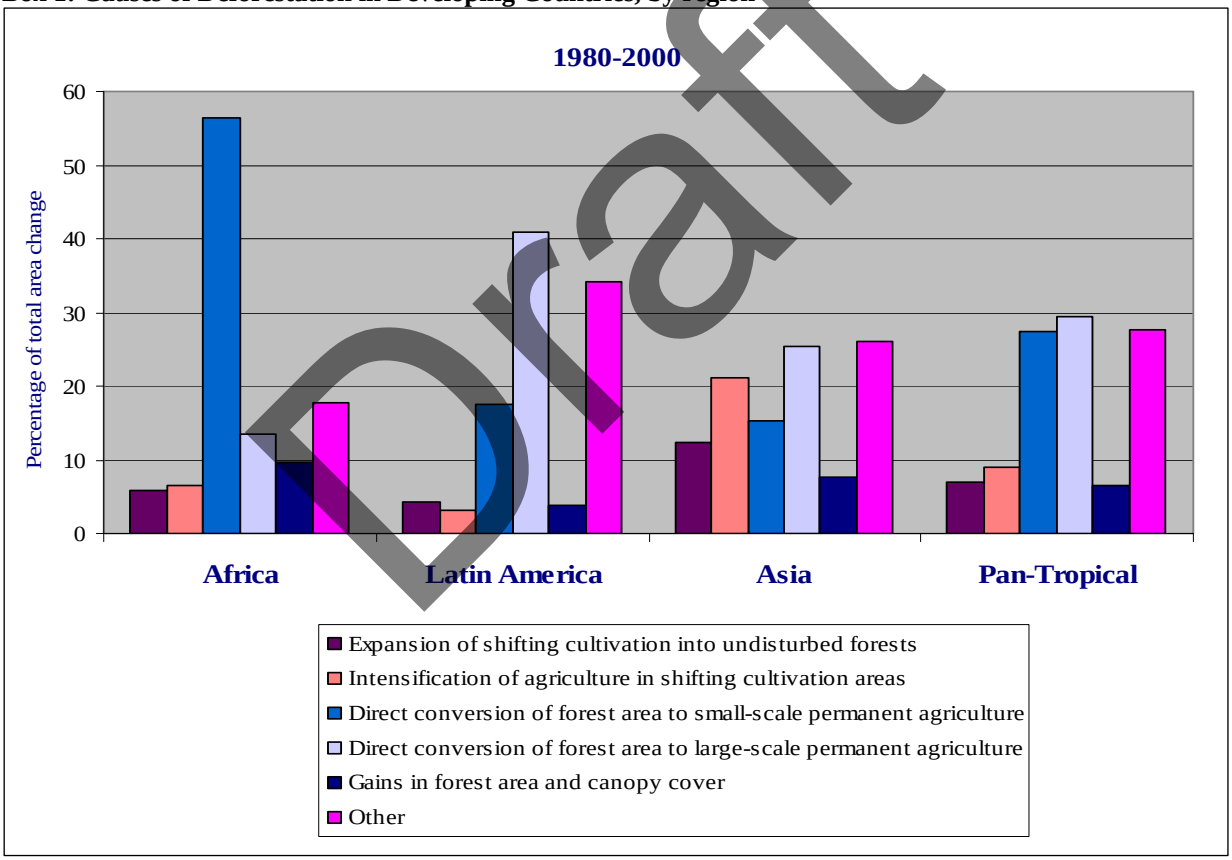
- **Cost effectiveness** (that approaches ensure the greatest reduction in emissions possible, per unit of investment)
- **Conservation** (ensuring that countries that have traditionally protected their forests are not compromised under the framework) and;
- **Social concerns**, including the rights, roles and responsibilities of indigenous and local communities under the REDD Framework.

The challenge remains of demonstrating practical and effective approaches to addressing these concerns, and building national capacities to manage the REDD framework.

Causes of Deforestation and Forest Degradation

The underlying causes of deforestation vary from country to country and even within a country and are often complex. Box 1 below shows the results of an FAO study that highlights general regional differences across the world. In Africa deforestation is mainly caused by conversion of forests to small scale permanent agriculture while degradation typically occurs as a result of energy use (the consumption of fuel wood and production of charcoal). In other tropical regions the conversion of forest to large scale commercial plantations is a more important cause of deforestation, while degradation is caused by extraction of useful forest products for local use, or by selective logging for timber.

Box 1: Causes of Deforestation in Developing Countries, by region



The underlying causes of forest loss are more intractable than the direct threats, and range from weak or corrupt governance structures, expanding human populations and a need for additional farmland, weak land tenure systems and law enforcement, expanding markets for forest products, eroded cultural values of forests, the lack of land ownership or land use rights for the indigenous and local communities, weak or lacking benefit sharing mechanisms, high poverty levels and a lack of alternative livelihoods, or government policies and food production imperatives. As a result, solutions need to be tailor-made to the environmental and socio-economic conditions and to the institutional frameworks of different countries.

Risks related to delivering REDD benefits

Concerted efforts have been made by developing countries with support from the international community to reduce unplanned deforestation, and stem forest degradation. Despite some successes, the challenges have proven to be considerable. Delivering emission reductions adds a significant layer of complexity and risk. If there are doubts about the ability to deliver actual, lasting, achievable, reliable and measurable emission reductions, REDD investors will remain risk adverse. They will seek to invest in countries that can provide the lowest risk for their carbon investment and thus to transfer the risks by making carbon payments to REDD countries ex-post, or "on-delivery". The logic is that this creates a stronger incentive for REDD countries to successfully implement their REDD programmes and reduce emissions. However, it is not clear whether the incentive of payment-on-delivery will be sufficient to achieving lasting change in forest-use practices, or whether it will create perverse outcomes. For example: On-delivery payments have the effect of making REDD countries bear all the delivery risk, thus limiting the incentive for countries to invest in time-consuming (and expensive) participatory, community-based measures, or complex (and expensive) methodologies to establish carbon baselines. Having to pre-fund the implementation of REDD programmes may also reduce the incentive to equitably distribute the proceeds from REDD transactions to forest-dependent stakeholders whose livelihoods may be impacted by the measures taken. This in turn, may affect the sustainability of REDD interventions and thus compromise the permanence of REDD carbon savings

Technical and Institutional Capacity

The technical and methodological issues that need to be addressed in order to deliver emission reductions have been identified under a process of the UNFCCC's Subsidiary Body for Scientific and Technological Affairs (SBSTA) since 2005. Some of the issues are currently being addressed, but others will require new approaches. Insufficient technical capacity and resources (i.e. for establishing national reference scenarios against which to assess REDD emissions reductions; for monitoring and assessment of changes in forest carbon, and for developing and implementing REDD strategies and field activities) is a barrier to REDD (Holmgren *et al.*, 2007). Many developing countries may need assistance to set up systems to assess carbon emissions and removals on forest land, using methodologies recognized by IPCC (IPCC Good Practice Guidance) so that future results could be demonstrable, transparent, verifiable, and estimated consistently over time.

Co-Benefits

Meetings of the IPCC, including most recently at the December 2008 meeting in Poznan (Poland) have highlighted the interest of many governments, indigenous peoples groups, and non-government organizations in the potential of REDD implementation to deliver further benefits in addition to the storage of carbon and consequent mitigation of climate change. The main co-benefits are:

Social. In terms of social benefits, REDD programmes have the potential to achieve significant sustainable development benefits from ecosystem services for millions of people worldwide. Intact forests also provide a range of cultural services relating to traditional values. An estimated 60 million indigenous people are completely dependent on forests, while 350 million people are highly dependent, and 1.2 billion have some dependence on forests for their livelihoods. However there are also potential social costs of REDD; fears have been raised that REDD payment systems could amplify many of the concerns levelled against payment for ecosystem services (PES) in general (Griffiths 2007): (i) REDD will lock-up forests by decoupling conservation from development; (ii) Asymmetric power distribution will enable powerful REDD consortia to deprive communities of their legitimate land-development aspirations; (iii) Hard-fought gains in forest management practices will be wasted; (iv) Commercial REDD may erode culturally rooted not-for-profit conservation values.

Biodiversity. Forests contain as much as 90% of terrestrial biodiversity, with tropical forests being particularly important in terms of both species richness and their concentration of endemic species (Brooks *et al.* 2006). As such there is a strong opportunity to provide the co-benefit of enhanced biodiversity conservation by using REDD payments as a forest conservation mechanism.

Natural Resource Management REDD activities could also serve to enhance soil and water conservation efforts, help ensure sustained supplies of timber and non-timber forest products, and provide areas for hunting and ecotourism.

It is possible that an additional payment premium within REDD schemes may be negotiable for forest conservation schemes that generate co-benefits in addition to reducing carbon emissions. However, it is also possible that REDD benefits in some circumstances may have to be traded off against other social, economic or environmental benefits. The linkages between deforestation, development and poverty are complex and context-specific. Weak governance and institutional capacity in some countries, as well as inadequate mechanisms for effective participation of local communities in land use decisions, could seriously compromise the delivery of

both local and global benefits and the long-term sustainability of REDD investments. If REDD programmes are not carefully designed, they could marginalize the landless and those with informal usufruct and communal use-rights.

UN-REDD Programme

The UN-REDD Programme was established as a partnership between FAO, UNDP and UNEP, financed through a multi-donor trust fund in July 2008 that allows donors to pool resources and provides funding for countries to test and adapt REDD approaches, and build national capacities in readiness for REDD. The UN-REDD Programme grew out of requests from the three agencies respective governing bodies and rainforest countries to ensure that these needs are reflected in the future negotiation of REDD.

FAO, UNDP and UNEP are well positioned to provide the critical assurances necessary to establish a REDD regime. As neutral bodies, the agencies can work as "honest brokers" to support country-led development programmes and to facilitate the informed participation of national stakeholders, particularly forest-dependent local communities. They will also use their convening power to bring together other organizations, experts and scientists to develop global and national monitoring, assessment, verification and financial components.

The application of FAO, UNDP and UNEP rights-based and participatory approaches will help ensure the rights of indigenous and forest-dwelling people are protected as well as the active involvement of local communities and relevant institutions in the design and implementation of REDD plans and methodologies. Using existing cooperation models, UN-REDD Joint country Programmes will enable rapid initiation of programme implementation and channelling of funds for REDD efforts in pilot countries. It will also encourage coordinated and collaborative UN support to countries, thus maximizing efficiencies and effectiveness of the organizations' collective input. The UN agencies' regional and in-country presence represents a crucial support structure for countries, and the organizations' governing bodies, expert networks, and convening capacity provide invaluable mechanisms for information exchange, for access to technical and scientific expertise, and for capacity strengthening.

The UN-REDD Programme is consistent with the "One UN" approach advocated by UN members. It builds on existing initiatives and networks and is guided by the importance of avoiding parallel structures and facilitating effective implementation at national level. The three agencies will work together with other REDD actors such as the UNFCCC Secretariat, the World Bank, regional development banks, bilateral donors, research institutions, NGOs and potential REDD investors thus maximizing the effectiveness of the organizations' input.

At the core of the Programme are the five inter-related principles of the UN Development Group (UNDG): Human-rights-based approach to programming (including indigenous peoples); gender equality, environmental sustainability; results-based management; and capacity development. The overall objective of the UN-REDD Programme is to ensure international coherence and provide support to developing countries in building capacity to design and implement REDD measures. The four Programme outcomes are:

i) International and multi-sectoral coherence on key technical and operational issues (e.g. Monitoring and Verification, links to payment structures)
ii) Negotiators & other stakeholders informed on REDD issues (in collaboration with the UNFCCC Secretariat)
iii) Key institutions & stakeholders in pilot countries have the capacity to develop and implement participatory and equitable systems of M&V and payment structures; and
iv) Developing countries are able to reduce risks and maximize benefits associated with generating verifiable and permanent emissions reductions

"Quick Start" actions will be implemented during the run up to the UNFCCC COP 15, to be held in Copenhagen, Denmark, in December 2009. "Quick Start" action takes two forms: (i) assisting developing countries prepare and implement national REDD strategies and mechanisms, focusing on the needs and priorities expressed by a set of pilot countries; and, (ii) supporting the development of normative solutions and standardized approaches based on sound science for a REDD instrument linked with the UNFCCC.

National actions will be identified and led by the host government and supported by the UN Country team. Host governments determine the scope of activities and the roles of the participating international organizations. A primary objective of national actions will be to facilitate and broker the challenging participatory whole-of-government processes and responses in which REDD actions are defined and agreed. National level actions are designed flexible enough to harmonize with other REDD initiatives within country. In support of national efforts and the UNFCCC negotiations, the UN-REDD Programme, coordinating with other partners will

undertake support functions at the international level to ensure consistency in national approaches and economies of scale in the development of science, knowledge management and monitoring and reporting.

REDD is a huge undertaking and the challenges inherent in its operationalization are not likely to be met by any one initiative alone. The critical factor is to ensure all approaches are complementary, do not burden forested developing countries with duplicative demands, and contribute to the final UNFCCC negotiations on a post-2012 framework. For this reason the UN-REDD Programme cooperating closely with the World Bank's Forest Carbon Partnership Facility (FCPF) and the GEF Tropical Forest Account as GEF Implementing and Executing Agencies, as well with Australia's International Forest Carbon Initiative (IFCI) and are working with other members in the Collaborative Partnership on Forests to support progress toward sustainable forest management. In Tanzania there is further collaboration with the bilateral funding (US$100 million) that has been agreed by Norway to assist REDD-related activities in the country, and funding provided by Germany (US$3 million) to improve the management of Nature Reserves and thus reverse degradation and enhance carbon sequestration in these reserves.

In response to a request from the Government of Tanzania, and the commitment of funding from the Government of Norway, a Quick Start Initiative is proposed herein to support country actions in Tanzania. UN-REDD has committed to provide US$ 4.2 million for the initiative, the objective of which is to strengthen the capacity of the Government of Tanzania, NGOs and local communities to develop a comprehensive national REDD Framework, and to implement, monitor and adapt interventions in support of the Strategy, to improve their efficacy. The aim is to ensure actual, lasting, achievable, reliable and measurable emission reductions in a cost effective manner through nationally and locally appropriate approaches. It also seeks to contribute to the reduction of poverty maintain and improve the other ecosystem services that forests provide, including biodiversity.

ONE-UN approach

The Joint programme will use existing modalities for the Joint Programmes and on-going activities in Tanzania to enable rapid initiation of programme implementation and channelling of funds for REDD efforts. The joint programme is part of the Tanzanian Joint Programme on Environment with a focus on Climate Change, land degradation, desertification and natural resource management and is consistent with the "One UN" approach advocated by UN members. Building on existing initiatives and networks in Tanzania will encourage coordinated and collaborative UN support to Tanzania, thus maximizing efficiencies and effectiveness of the organizations' collective input.

The programme will be guided by the five inter-related principles of the UN Development Group (UNDG):

- Human-rights-based approach to programming, with particular reference to the UNDG Guidelines on Indigenous Peoples' Issues
- Gender equality
- Environmental sustainability
- Results-based management
- Capacity development

In addition, each UN Organization will:

- Build on its comparative strengths
- Facilitate partnerships, drawing on expertise from a range of national and international organizations acting as executing agencies to ensure well coordinated and timely action
- Actively contribute to coordination and mainstreaming in-country, while avoiding duplication of effort with other REDD initiatives

A number of additional principles will guide the activities of the UN REDD collaboration and the way in which its country-level interventions will be designed:

i) First, in line with the Paris Declaration, the UN-REDD Programme Fund seeks to support programmes anchored in national priorities
ii) Second, the Fund seeks to ensure the sustainability of its investments.
iii) Third, the Fund seeks to apply the highest standards in quality of programme formulation, monitoring and evaluation within a management framework oriented towards results and accountability.

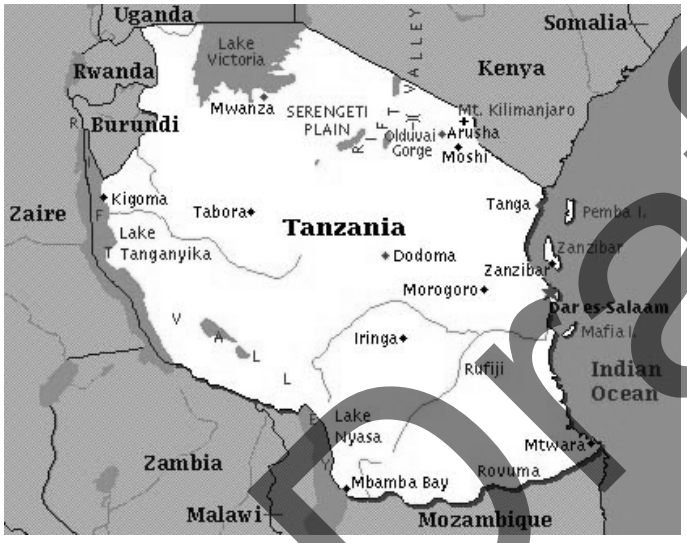
iv) Fourth, the Fund seeks to consolidate inter-agency planning and management systems at the country level.
v) Fifth, the Fund seeks to minimize the transaction costs associated with administering the Fund.

Background on Tanzania

Geography and Climate

The United Republic of Tanzania is located on the eastern side of the African continental mainland, just south of the equator. The country consists of the islands of Zanzibar (240,000 ha) and the Tanzania mainland (94,260,000 ha), which have largely separate administrative and legal frameworks. Geographically the mainland includes a large central plateau of ancient and heavily eroded landforms dating back millions of years, which support various types of woodland habitats. Rising out of this plateau are a series of mountain ranges, each with different histories, but all supporting natural forest, grassland and 'heath' vegetation types. In the far west of the country the Mahale Mountains and associated smaller ranges occupy the margins of the Albertine Rift system that has resulted in the deep depressions of Lake Tanganyika.

In the north a series of large volcanoes arise from the plains, including Kilimanjaro and Meru. Further to the east, in a broad Arc from Kilimanjaro to south-western Tanzania there are a series of uplifted blocks of ancient rocks that form the Eastern Arc and associated Southern Rift Mountains. Along the eastern seaboard of the country is a lower lying coastal plain that is comprised of more recent marine and fluviatile sediments that have been submerged and uplifted over the past 30 million years due to tectonic events associated with the Rifting further west. This coastal margin supports a mosaic of different habitats, ranging from lowland forest to woodland habitat types. In marine influenced areas, mangrove forests are also found – particularly in the Rufiji delta. Zanzibar consists of the island of Unguja – which is an uplifted area of coral reef and marine sediments of low overall relief, and Pemba – which is a block of ancient metamorphic rock with overlain uplifted coral and marine sediments – again with low overall relief. Both formerly supported tropical forest habitats, but have been heavily deforested over millennia.



The climate of the mainland ranges from seasonal tropical, to temperate climates on the larger mountain massifs, and even to Afroalpine on the highest parts of Kilimanjaro. Zanzibar has a tropical moist climate, with the rainfall on Pemba being over 2,000 mm per annum. Across the mainland, most of the country is tropical, with climate influenced by the north and south annual movements of the Inter-Tropical Convergence Zone. This brings rainfall, which varies temporally and spatially according to the location in the country. In some regions there are two rainy seasons (long and short rains), whereas in others there is one rainy season and a nine month long dry season. In the mountain areas and along the coast rain can fall in all seasons, with some areas being regarded as 'perhumid' or permanently wet.

Socio-economic Context

Tanzania is currently home to over 40.2 million people (CIA, 2008). Over 80% of the population lives in rural areas, in more than 8,000 villages. The urban population is about five million, growing rapidly at seven to eight percent a year against the national average of about 2.8 percent a year. Forests and woodlands are crucial resources for hundreds of thousands of households across Tanzania. Officially, they provide employment for one million mainly rural people and un-officially provide part time occupations for 5 to 10 times more.

Tanzania had a per capita GDP of US$210 in 1997 which was low compared with the average of US$503 for African countries at the time. Since then the economy has improved dramatically, largely driven by exploitation of mineral wealth and tourism, and Tanzanian per capita (PPP) GDP stood at $1,400 in 2008, with real growth rates at 7.1% that year (CIA, 2008).

Despite its natural wealth, Tanzania is one of the poorest countries in the world. The economy depends heavily on agriculture, which accounts for more than 42% of GDP, provides 85% of exports, and employs 80% of the work force. Topography and climatic conditions, however, limit cash crop cultivation to less than 10% of the land area (CIA, 2008). Furthermore, whilst the majority of the population are engaged in agriculture most is only at a subsistence level. Plantation agriculture is uncommon and where it occurs usually lies within the private sector where it is a source of employment to local people, especially in sisal, coffee and tea. The main agricultural products country wide are coffee, sisal, tea, cotton, pyrethrum, cashew nuts, tobacco, cloves, corn, wheat, cassava, bananas, fruits and vegetables. Subsistence level animal husbandry is also common, with cattle, sheep and goats commonly kept.

Silviculture and other forms of forest management are relatively unpractised by the majority of Tanzanians, although that situation is slowly changing as a process of government decentralisation is giving communities greater access to and ownership of forest resources.

As a net importer of oil, electricity and natural gas, Tanzania has to rely on foreign exchange and donor remittances to meet a growing demand for energy. Power cuts are a regular occurrence. As part of its investigation into improving energy supplies the country has been exploring offshore gas potential and has begun to utilise natural reserves. Increased interest in biofuel production has opened the country up to speculation. However there is concern that inadequate legislation may leave agricultural and forested areas unprotected from significant land use change.

Tourism is of crucial importance to Tanzania and represented 17.5% of Gross Domestic Product (GDP) in 2006. Tourism earnings were US $862 million in 2006, an increase of 16% from 2004.

Land Use

About half of the land area of Tanzania is in the form of natural and near-natural habitats, and an approximately equal area is agricultural land of various types. The natural habitat areas are used by semi-nomadic pastoralists such as the Masaai and the Sukuma for extensive grazing by cattle, for hunting of wild animals, and contain an extensive network of reserves of various types. The agricultural lands consist of a mixture of farming systems, depending on the environmental conditions. The vast majority of the farmland is small-holder subsistence agriculture, often involving several crops in a tight mosaic and (where climate is suitable) several crops in a single year. In drier areas only one crop per annum is possible. A smaller part of the farmland area consists of estate agriculture of various types – ranging from tree crops (conifer, teak, eucalyptus), to sugar cane and rice in lowland wet areas, to wheat and sisal in drier regions, and coffee, tea, and pyrethrum in mountain regions.

Wildlife Management

In terms of the future management of African wildlife, Tanzania has a unique position in the continent because of its relatively moist seasonal climate, comparatively low population density in relation to fertile land area, and political stability. Furthermore Tanzania is unique in the high value that it places on wildlife and on the care given to the protection of its natural resources: some 27% of its land surface is currently protected (Murray *et al.*, 2008).

The wildlife sector in Tanzania is managed principally by the State, in a range of levels of protection, starting from National Park (managed by TANAPA), to Game Reserves, Game Controlled Areas and Open Areas managed by the Wildlife Division (WD). Villages have legal rights and a responsibility of land management but do not have rights over wildlife which remains under the management remit of the WD throughout Tanzania.

The Wildlife Policy of 1998 provided legislation to devolve management rights and responsibilities through the Convention on Biological Diversity. This legislation provided the early framework for the creation of Wildlife Management Areas (WMAs), the regulations for which were ratified in 2002. Since that time, the WD has supported the creation of 16 pilot WMAs in association with local government, communities and, in some cases, with the support of NGOs. The government identified WMAs in wildlife-rich areas adjacent to Protected Areas (PAs) in order to devolve management tenure, share wildlife benefits, create a PA buffer and institute more control over wildlife policy. Of the original 16, currently 10 have been gazetted (Murray *et al.*, 2008).

Forest Cover and Forest Types

In terms of forest cover, Tanzania has a total of 33.5 million hectares of forests and woodlands according to the Forest Policy document (MNRT 1998). The total area is divided into a number of different forest types, which are summarized in Table 1, and described below.

Table 1. Forest Area in Tanzania

Forest type	Historical Area	Area 2000
Miombo Woodlands	40% of land area (rough estimate)	Only partial data
Acacia Savanna	No data	No data
Eastern Arc Mountains [2]	1,799,200 ha	353,100 ha
Kenya/Tanzania Mountains	No data	No data
Eastern African Coastal Forests[3]	13,637,900 ha	684,100 ha
Guinea-Congolian forests[4]	Below 1,000,000	670,000 ha
Mangrove forests[5]	No data	108,100 ha
Albertine Rift forests	No data	No data
Southern Rift forests	No data	No data
Itigi Thicket	No data	No data

1- Estimated from landcover maps for Tanzania
2 – (FBD 2005) *Forest Area assessment for the Eastern Arc Mountains*. Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism, Dar es Salaam. www.easternarc.or.tz
3 – Tabor, Mbilinyi, Kashigali and Burgess (in prep). Forest area assessment for the coastal forests (this assumes that all this ecoregion was originally forested)
4 – GEF Cross Borders Project
5 – Wang *et al* 2003. Remote Sensing of Mangrove Change Along the Tanzania Coast. Marine Geodesy, 26:35–48, 2003

Forest types in Tanzania

Tanzania contains a number of different forest and woodland types. These are outlined below, based on the descriptions in Burgess *et al*. (2004a). An indication of their biological values is also provided, and is summarized in Table 2.

Wet Lowland Forest
Moist lowland forest, of the Guinea Congolian Forest type, is found primarily around the shores of Lake Victoria. It forms a part of a larger forest mosaic ecoregion, which covers much of southern and central Uganda. The number of endemic species is not particularly high, although species richness is high for all groups (see Table 2). Biologically the most important parts in Tanzania are the *Podocarpus* swamp forests and associated habitat mosaics of the Minziro area of the western Lake Victoria. Here species more typical of the West and Central African forest zones reach their easternmost limits.

Wet Montane Forests
The wet montane forests encompass parts of four different ecoregions with differing species composition, carbon density, and biological values(Burgess et al., 2004a); the Eastern Arc Mountains, Albertine Rift Mountains, the Kenya-Tanzania volcanic mountains and the southern Tanzania-Malawi Mountains.

The Eastern Arc Mountains run from the North Pare Mountains in northern Tanzania, through South Pare, West and East Usambaras, Nguru, Uluguru, Ukaguru, Rubeho and Udzungwa ranges further south. The biodiversity value of the Eastern Arc, in terms of the total number of endemic species, and the density of these endemics, is exceptional in world terms (Burgess et al., 2007; Table 1). The majority of the endemic species are montane forest specialists, although a few are species of open grasslands and bushlands at higher altitudes.

In Tanzania the Albertine Rift ecoregion is only found as outliers in the Mahale mountains and Mount Kungwe in the far west of the country, close to Lake Tanganyika. The biodiversity importance of the Albertine Rift as a whole is very high in world terms, although the portions of this ecoregion found in Tanzania are not as rich as other parts (see Table 1).

The Kenya-Tanzania volcanic mountains ecoregion includes the highland areas of Ngorongoro, Mountains Meru and Kilimanjaro of northern Tanzania, and Hanang further south. Similar volcanic mountains exist in Kenya. These mountains are only a few million years old and contain fewer endemic species than Eastern Arc or Albertine Rift mountains (Table 1).

The Southern Rift ecoregion is similar to the Eastern Arc, but separated geographically and climatically. There are a number of endemic species (Table 1), which are found in both the montane forests, and the montane grasslands of the ecoregion. The most important areas include Mt Rungwe, the Southern Highlands and the Livingstone Mountains.

Seasonal Coastal Forest and Thicket
Most of this zone is found in the coastal region, where it is termed Eastern African Coastal Forest Mosaic. Here a mosaic of forest and other habitats ranges from northern to southern Tanzania, including the Zanzibar islands. The number of endemic species is exceptional in world terms (Burgess and Clarke, 2000; Burgess et al., 2004b). Biologically, the most important habitats within the ecoregion are the remnant patches of lowland forest, often on raised hills where they can receive slightly higher rainfall. However, there are also endemic species in the grassland and bushland habitats of the ecoregion (Table 1).

Seasonal Miombo Woodland
The vast Miombo woodlands of southern and eastern Tanzania are dominated by trees in the genera *Brachystegia* and *Julbernadia*. There are few endemic species confined to smaller portions of this vast area, although throughout the Miombo woodlands several hundred species of plants area endemic and there are also endemic animals (mainly south of Tanzania) (see Table 1). The main biological importance is the density of large mammals.

Seasonal Acacia Savanna
Savanna habitats are found in from east of Kilimanjaro to coastal Tanga, and along the border with Kenya. An elongate tongue of this habitat also extends as an arid corridor as far southwest as Ruaha National Park through the central part of Tanzania. There are relatively few endemic species in this ecoregion (see Table 1), but these habitats support a high density of large mammals.

Forest Monitoring Capacity in Tanzania

Tanzania has some capacity to monitor forests extent and condition, and there are groups working on these issues already. Foremost amongst these are the Sokoine Univesity of Agriculture (Department of Forestry and Nature Conservation and the GIS and Remote Sensing Laboratory), and the University of Dar es Salaam (Institute of Resource Assessment). Both places have GIS and remote sensing capacity and have been involved in efforts to monitor changes in forest cover over time. Both have also been involved with projects that have been collecting field data on forests and especially the condition of forest habitats. This provides a good basis for implementing the technical elements of the REDD programme in Tanzania.

Biodiversity Values

Tanzania is a globally recognized storehouse of forest biodiversity. At the large scale, the country includes parts of two distinct *forest-based* global biodiversity "hotspots". These are the Eastern Afromontane Hotspot – and three of its constituent components; a) Eastern Arc Forests (95% in Tanzania), b) Albertine Rift Forests (5% in Tanzania), c) Kenya / Tanzania Highlands (20% in Tanzania) and the Coastal Forests Hotspot – that is shared with Kenya and Mozambique (40% in Tanzania) (Mittermeier *et al*., 2004; Mittermeier *et al.*, 2005). The Miombo and Acacia woodlands of Tanzania are also parts of high biodiversity wilderness areas supporting some of the most intact assemblages of megafauna on the planet. These large animals which define the African landscape and which require intact ecosystems for their conservation can be defined as:

- large herbivores (e.g. elephant, rhino, hippo, giraffe, buffalo);
- migratory plains game (e.g. zebra, wildebeest, eland, gazelle);
- large predators (e.g. felids, canids, hyaenids, crocodile, python);
- large/migratory avifauna (e.g. vultures, raptors, ostrich, bustards, cranes, storks).

The biological values of the different forest ecoregions in Tanzania are summarized in Table 2, using data derived from Burgess et al. (2004a). This shows that all these forest types contain high species richness for major vertebrate and plant groups, but that endemism is concentrated in the mountain and coastal forest habitats, whereas the majority of the values for large mammals are found in the miombo and acacia woodland habitats.

Table 2. Species richness and species endemism in the main forest ecoregions found in Tanzania (from Burgess et al. 2004).

Ecoregion Name	Bird Richness	Bird Endemics	Amphibian Richness	Amphibian Endemics	Reptile Richness	Reptile Endemics	Mammal Richness	Mammal Endemics	Invertebrate Richness **	Invertebrate Endemism **	Plant Richness **	Plant Endemism **	Vertebrate Richness	Vertebrate Endemism	Migratory Phenomena	Notes
Albertine Rift Montane Forest	700	30	65	33	130	11	220	25	H	H	H	H	1100	99		A
Kenya-Tanzania Montane Forest	600	4	17	2	62	10	180	8	H	VH	M	L	850	24		B
Eastern Arc Forest	540	15	80	25	85	27	160	6	H	VH	VH	VH	860	73		C
Southern Rift Forest / grassland mosaic	485	15	48	5	46	14	159	4	L	H	H	M	738	38		D
Coastal Forest Mosaic	550	11	55	3	192	40	170	8	H	H	VH	H	970	60		E
Guinea-Congolian Forest Mosaic	600	1	30	2	110	3	210	3	H	M	H	L	960	9		F
Acacia Savanna	590	2	17	0	90	3	180	0	H	L	H	H	880	5	GO	G
Miombo Woodland	690	2	85	13	190	19	230	2	M	L	M	H	1200	36	GO	H

** VH=very high; H=high; M=medium; L=low; GO=Globally important for migrations.
A = Most of the endemics for this ecoregion are found in Uganda, Rwanda, Burundi and DRC. Only around 10% of the species are found in Tanzania.
B = Some of the endemics for this ecoregion are found in Kenya (Mt Kenya) and Uganda (Mt Elgon). Around 50% of the species are found in Tanzania.
C = Almost all of these endemics are found in Tanzania (only few in Taita Hills of Kenya). Around 95% of the species are found in Tanzania.
D= Some of the species in this ecoregion are found into Malawi
E = Some of these endemics are also found in Southern Kenya coastal area. Around 90% of the species are found in Tanzania.
F = Some of the few endemics in this ecoregion are found in Uganda. Around 90% of the species are found in Tanzania.
G = These endemics are all found in Tanzania.
H= Most of the endemic species are found outside Tanzania as this is a huge ecoregion

Goods and Services Provided by Tanzanian Forests

Whilst forests and woodlands cover around 40% of the total land area they support the livelihoods of 87% of the rural poor (Milledge *et al.* 2007). With such levels of engagement in forests by rural people, Tanzanian forests provide a variety of goods and services.

Timber for construction and export

Approximately 75% of construction material used in Tanzania derives from forests (Milledge *et al.* 2007), and the construction industry has been the fastest growing sector of the national economy in recent years. Construction of local furniture, doors, window frames, and other household items is largely based on the use of pitsawn hardwood timber from natural forests. Much of this timber comes from forest and (especially) woodland areas on village lands; some of this exploitation is legal according to official licenses (Milledge & Elibariki, 2005). The natural forest in almost all Tanzanian Forest Reserves are also being exploited either legally (if they are production reserves), or illegally (if they are protection reserves). Some timber harvesting is also reported to be taking place in other forms of protected area, for example in remote areas of some Game Reserves or even National Parks. A controversial expansion of export of round wood of native hardwoods in the early 2000s provided a rush to log areas within reach of a deep water port, and generated significant economic benefits for a few, but this form of export has now been banned (FBD, pers comm.). Industrial plantations, covering around 90,000 ha, are increasingly important as sources of treated softwood that is used for local construction and for export. Further expansion of the plantation forest estate is underway.

Non-timber forest products

A wealth of non-timber forest products are also extracted from the Tanzanian forests, including a huge trade in charcoal burned from woodland and coastal forest habitats and transported to towns for use as a cooking fuel, and the collection of fire wood and building poles from woodlands and forests to provide fuel for cooking and house construction materials in the rural areas. As an example of their importance, forests in Tanzania are estimated to provide over 90% of the overall national energy supply through fuel wood and charcoal (Milledge et al. 2007), with the amount of wood fuel collected being estimated as over 30 million m^3 per year (Government of Tanzania National Bureau of Statistics). Moderately good data are available on the scale of the charcoal trade and its impacts on woodlands and forests, and there is also more patchy information on timber trade, pitsawing, firewood collection and building pole collection. Much of the available data comes from the eastern part of the country, within 200 km of Dar es Salaam, which is a major centre of demand for woody products. However, similar demands are known across the border to Kenya, and within large cities such as Mwanza, Arusha and Moshi.

Water Supply

A non-use benefit of some types of Tanzanian forests is their role in smoothing annual water flows, and even capturing additional moisture from clouds that augments rainfall. These primarily high mountain forests provide a source of reliable running water which flows throughout the year, even in the long dry season. This is an important ecological service in a dry country like Tanzania. Other types of forest (miombo woodlands, acacia savanna, coastal forests, lowland wet forests) generally use more water in evapo-transpiration than they supply back into the system; although this is less important in the woodland habitats as the trees drop their leaves and become dormant in the dry season. The important role of the mountain forests in providing a reliable source of clean water supply is utilized by both the hydroelectrical power industry, and by many major towns and their population and industries. For example, nearly 70% of the power supply in Tanzania is derived from hydropower (Mwalavanda pers comm.), and the dry season flows maintaining power delivery were derived from mountain forest areas. In addition, up to 20% of the 40.2 million people in the country also get their dry season water supply from rivers maintained by run off from forested highland areas. The situation is similar for the major industries, water bottling companies and brewing companies in Dar es Salaam, Morogoro, Moshi, Arusha, Iringa, Mbeya and Tanga.

Carbon storage

Tanzanian forests also store carbon in their biomass, and in their soils and leaf litter. The different forest types contain highly variable quantities of carbon based on variables such as size and density of trees, the density of the wood, the degree of degradation and the amount of elevation. The available knowledge on Tanzanian forest carbon is summarised later in this proposal as it forms the crux of the REDD framework.

Other services

Forests also provide a diversity of other non-use products, or ecosystem services. These range from provision of areas where tourists can see a diversity of animals and plants, including rare and endemic species. Forests also provide a wide range of cultural services and traditional values. Some of the key issues on the role of forests in rural livelihoods are summarised in Byron & Arnold (1997), of which three key elements are summarised as follows (Harrison, 2006).

With regards to the importance of forests to livelihoods:

> *For millions of people living in forest environments, the forest forms such a dominant part of their physical, material, economic and spiritual lives that its importance is not most appropriately described and assessed in terms of the individual products or services that the forest provides.*

On the use of forests and forest products to supplement nutritional and medicinal needs:

> *Forests and forest trees are the sources of a variety of foods, that supplement and complement what is obtained from agriculture, of fuels with which to cook food, and of a wide range of medicines and other products that contribute to health and hygiene.*

With regards to the use of forest products to meet seasonal food shortages:

> *Forest foods are most extensively used to help meet dietary shortfalls during particular seasons in the year. Many agricultural communities suffer from seasonal food shortages, which commonly occur at the time of year when stored food supplies have dwindled and harvest of new crops is only just beginning.*

Forest Management in Tanzania

The management of Tanzanian forests dates back to the German and British colonial periods where they were mainly focused on the establishment of reserves and the planting and management of plantations of exotic tree species. Forest Policy and laws were developed by the Colonial administrations and remained in force into the 1980s. Since the early 1990s the Tanzanian government with the assistance of the international community has modernized its entire legislative framework with respect to forest conservation and management, seeking to reduce unplanned deforestation, stem forest degradation and implement sustainable forest management.

The first National Forest Policy of Tanzania was established in 1953 and reviewed in 1963. The Government of Tanzania then formulated a new national forest policy in 1998. It accommodated community involvement in conservation, such as through policy statement 39:

> *'Local communities will be encouraged to participate in forest activities. Clearly defined forest land and tree tenure rights will be instituted for local communities, including both men and women.'*

Several major policies to support Forest Management in Tanzania have been put in place in the past decade. A list of the relevant policies is presented below. Foremost amongst these has been the Forestry Policy (1998), which was operationalised through the Forest Act No. 14 (2002) and the National Forest Programme (2001). These policy and legal documents have been accompanied by regulations and guidelines, including a major effort to involve communities in forest management through the promotion of Participatory Forest Management across both Forest Reserves and forest on village lands.

In addition to changes in the policies, laws, programmes, regulations and guidelines relating to the forest sector - there has also been a significant modernization of all other elements of the Tanzanian legal framework. Broadly these changes have promoted a market economy and decentralisation to the District as the operational unit of government and to the village for the actual implementation on the ground. There has also been a strong thrust to reduce poverty at all levels, culminating in the operationalisation of the Tanzanian Strategy for Economic Growth and the Reduction of Poverty (MKUKUTA).

The policies and relevant Acts that pertain to forest management and the operationalisation of REDD in Tanzania are as follows;

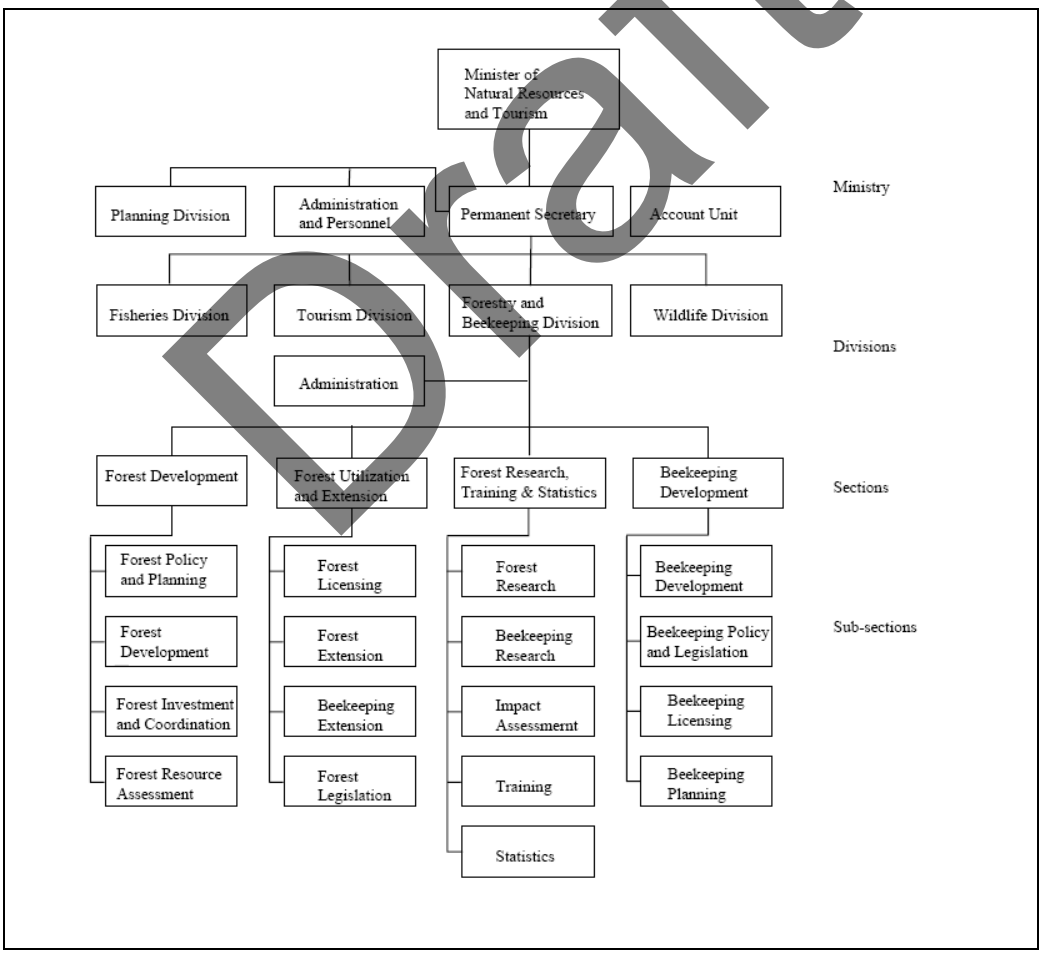
- Forest Policy 1998 (under review) and the Forest Act No. 14 of 2002;
- Beekeeping Policy 1998 and Beekeeping Act No. 15 of 2002;
- Land Policy 1999
- Environmental Policy 1997
- National Development Vision 2025
- National Forest Programme, 2001

- National Beekeeping programme, 2001
- National Land use plan and Village land-use Plans;
- Poverty and Business Formalization Programme (MUKURABITA)
- The National Strategy for Growth and Reduction of Poverty (NSGRP) MUKUKUTA
- Agriculture and Food Security Policies;
- Livestock Policy and Legislation;
- Water and Irrigation Policies;
- Village Land Policy (1999) and Village Land Act (1999);
- Wildlife Policy (revised 2008) and Wildlife Act (under review)
- Energy Policy and legislation;
- Mining Policy and Legislation;
- The Road policy and Legislation;
- The National Investments Policy;
- Eastern Arc Mountain forests Conservation Strategy (2008);
- Tourism Policy (2008) and Tourism Act (2008).

Forest Management Administration

Tanzania has two separate administrations for forest conservation and management, namely mainland Tanzania and the Zanzibar Islands. The systems of forest management in these two administrations are described below.

Figure 2: Diagram Illustrating Structure of the Ministry of Natural Resources and Tourism



Source: Milledge et al, 2007

Tanzania Mainland

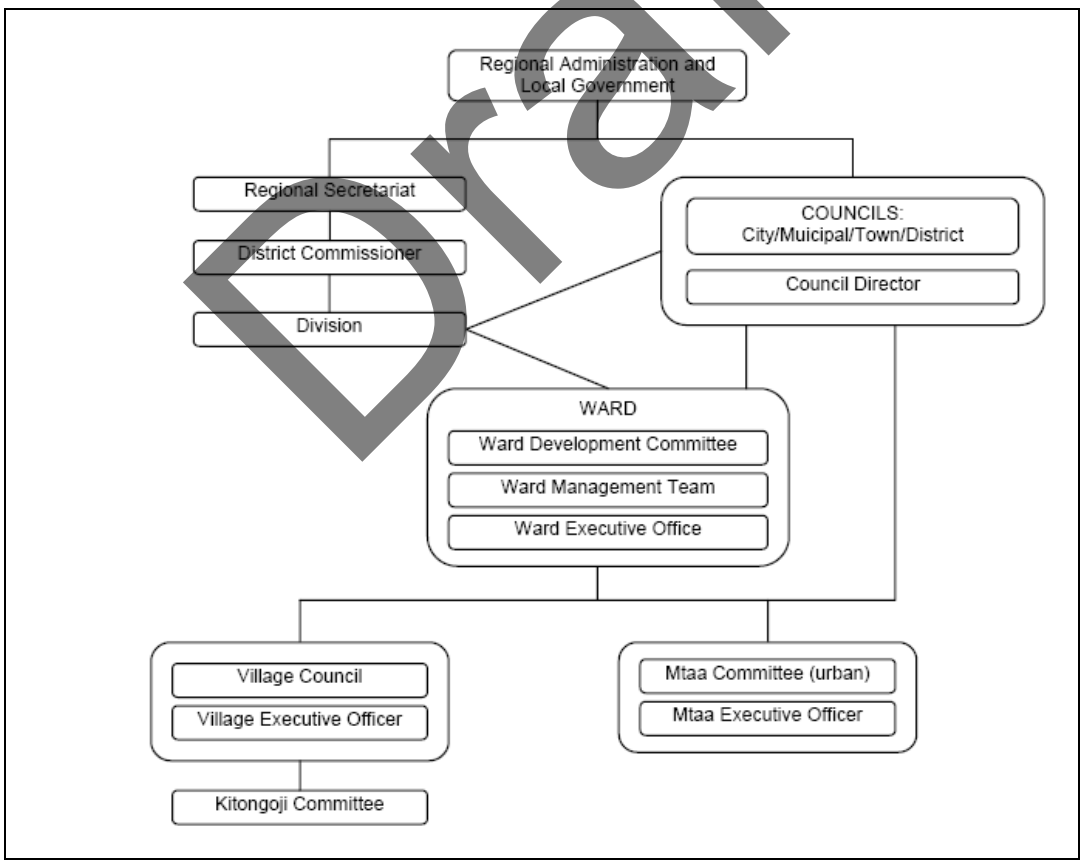
Within the mainland there are two parallel systems for forest management. One is primarily concerned with the protection of habitat and species; the other is primarily concerned with forest production. In total around 27% of the land area of Tanzania (almost 28 million ha) is within some form of protected area. The total area of

forest in the country is 33 million ha. Further detail on the distribution of this forest within and outside reserved lands is provided below.

Central Government. The central government owns and manages a network of protected areas and other reserves, for the purposes of species and habitat conservation and the provision of ecosystem services (timber, non-timber, water). The gazetted reserve network includes around 650 national sites in several management categories operating under different institutional jurisdictions. The categories are (in declining order of conservation focus): National Parks, Forest Nature Reserves, Game Reserves, the Ngorongoro Conservation Area and Forest Reserves[2].

The Forestry and Bee-keeping Division of the Ministry of Natural Resources and Tourism, is responsible for managing for conservation 4 Forest Nature Reserves and 250 'Catchment' Forest Reserves, which cover about 1.6 million ha of mainly mountain forest. An increasing proportion of these reserves are managed in collaboration with surrounding communities. A further 90,000 ha of land in 10 Forest Reserves are managed by FBD as industrial plantations of exotic tree species. The Wildlife Division of the Ministry of Natural Resources and Tourism manages 32 Game Reserves that cover 11.5 million ha of Tanzania. Most of these support miombo or acacia woodland habitats. The Tanzania National Parks Agency (TANAPA), a parastatal, manages forest and woodland within its 14 National Parks that cover 1.8 million ha of land. The Ngoronogoro Conservation Area manages a single reserve covering 829,000 ha. Around 100 of the protection reserves meet the IUCN definition of a protected area (National Parks, Game Reserves, Nature Reserves and some of the mountain 'Catchment' Forest Reserves), but others have not yet been assessed against the IUCN protected area categories and their assignation as 'protected areas' is problematic. The management structure of the central government reserve system is outlined in Figure 1 (from Milledge *et al*. 2007).

Figure 3: Diagram Illustrating Structure of Regional and Local Government



Source: Milledge et al, 2007

[2] The security afforded to natural resources varies between reserve categories. At the better protection level: National Parks require an Act of Parliament to degazette, and permit no extractive use. Forest Nature Reserves require notification in Parliament before the Minister can degazette, and allow no extractive use. Game Reserve denotification needs noting in Parliament; tourist hunting is permissible. At the lower end: Forest Reserves can allow any forest practice from complete protection to clearance of natural forest and replanting with exotic tree species in plantations, and may be degazetted by the Minister of Natural Resources and Tourism. Forest Reserves are administratively categorized into protective or productive reserves; many are managed by Districts on behalf of the central Government.

Local Government. The Regional and Local governments of Tanzania fall under the Prime Ministers Office for Regional and Local Government, which is entirely separate to the government structure for managing central government reserves. Beyond the appointed figurehead of the District Commissioner, district government is managed by the District Executive Director (DED), part of the Executive branch of government that stretches down to village level. Under the DED are specific departments under which the business of district government is divided. Each department is manned by officials who specialise in the field of operation. Each of the departments has their work and targets scrutinised by the District Council which comprises of individual councillors, each of whom is voted in by the electorate to manage individual wards. Each ward governs typically two to four villages. Of most relevance to the REDD framework is the District Natural Resources Office which is usually divided into District Forestry, Fisheries and Wildlife offices, each with an officer at their respective helms (Figure 3).

The districts also manage a network of Forest Reserves. In 1977, former central government Forest Reserves that were considered to have no significant national catchment or timber values were passed to district administrations to manage as part of Tanzania's decentralization process. Other Forest Reserves gazetted as Local Authority Forest Reserves have always been intended for district management. In total these district-managed Forest Reserves cover around 11 million ha of land in about 400 Forest Reserves. District authorities also issue timber harvesting licenses for non-reserved forests and woodlands within their district, potentially across a total of around 20 million ha of forest lands. There is also an increasing number of Village Forest Reserves, with 2006 data indicating that these management approaches cover 3.6 million ha of forest land distributed across 1788 villages nationally. Village based Wildlife Management Areas are also expanding and cover extensive areas of forest land. Village governments increasingly take control over the management of the forest resources within their boundaries, displacing the control of the Regional and Local authorities, as a further element in the Tanzanian decentralization process.

Zanzibar

Zanzibar has a separate Forest Agency: "The Department of Commercial Crops, Fruits and Forestry" with its own policy, legislative and funding processes. Whilst responsible for administering terrestrial National Parks, the Department does not function as a Protected Area Authority *per se* and lacks the mandate/capacity to administer new Protected Areas effectively.

There are three main forest reserves in Zanzibar including Jozani (5,000ha), recently promoted to a National Park, and Kiwengwa (3,000 ha) which is under the process of gazettement. The forest reserves in Pemba include: Ngezi Nature Reserve (2,900 ha) and Msitu Mkuu Forest Reserve (200ha). There are also other patches of forests such as Muyuni, Ufufuma, Ras Kiuyu which are community managed. In addition to natural forests there are about 20,000 ha of mangroves, chiefly found at Chwaka bay, Kisakasaka, Mkokotoni and Mpiga Duri (Unguja Island) and Michweni, Mkoani and Chake Chake on Pemba Island. Outside of these reserves there is little natural forest habitat remaining as most land is either used for farming, tree cropping, human settlement or is rocky.

The Department of Commercial Crops Fruits and Forestry has the following stated responsibilities[3]:

- To protect, conserve and develop forest resources for the social, economic and environmental benefits of present and future generations of the people of Zanzibar.
- To encourage the farmers to produce enough and good quality crops especially fruits and spices for home consumption and export.
- To protect and conserve the germplasm of Zanzibar.

The Department is composed by the following notable sections: Administration and Good Governance; Planning; Nurseries & Seedlings Production; Resources Management and Marketing; Forests & Rubber Plantations (The Department owns six forest plantations in Unguja and Pemba with the total area of 8,623 ha., and there are 1,270 ha of rubber plantations in the isles which are currently leased to a private company); Commercial Crops & Fruits (eight plantations plus a number of small plots for commercial crops); and Conservation and Development.

The Conservation and Development section is responsible for the protection of the remaining natural forests in Zanzibar and for protecting all wildlife species and their habitats with emphasis on endemic and endangered species by promoting community participation in the management of forest resources.

[3] http://www.dccff.com/index.html

Forest Management Approaches

Reserved Lands (Protected Areas and other kinds of reserves)

At the simplest level, the national government and the private sector owns and manages a network of reserves and estates that contain large areas of forest and forest carbon, but deforestation rates are typically low in these areas of land (although degradation can be significant). Table 3 outlines the various types of reserves (and non-reserved lands) in Tanzania, many of which do have potential for REDD interventions.

Table 3: Forest Management Categories in Tanzania. Source: Harrison, 2006.

Forest Categories	Description
National Park, Game Reserve	Protected areas typically established for wildlife conservation, but often containing large areas of forest and woodland habitats.
Nature Reserves	The highest category of forest protected area (new category), does not currently allow human consumptive activities, may have joint agreements (Government and Communities), can have some zonations for special purposes (e.g. traditional or sacred)
Central Government Forest Reserve	Forest Reserve under the mandate of the central government and can be managed jointly under JFM, forms the major category of Productive and catchment forests, some are managed by District councils with guidance from FBD, others are major forest biodiversity reserves.
Local Authority Forest Reserve	Under the mandate of local government (e.g. District councils), can be production or catchment and may have joint agreements with communities under JFM
Private Forests	Forest under lease and management by a private company, may be a licensed plantation, may harvest exotic species
Village Land Forest Reserve	Found within village land, managed by village government and a natural resources committee. It can be a productive or protective forest, and is managed under the process of CBFM instigated by the FBD.
Village land	This is land under village government (Village land act 1999 section 7), Can have an approved land use plan which may have multiple uses such as grazing, agriculture, schools, living areas and so forth. In reality many villages do not yet have approved land use plans

Participatory Forest Management

Tanzania has been a leader of community forestry in Africa (Blomley, 2006). Since its inclusion in the National Forest Policy in 1998 and the Forest Act of 2002 and subsequent regulations, Participatory Forest Management (PFM) has become a central part of the country's approach to forest management. The PFM programme which began in the mid nineteen nineties with a handful of pilot projects, is now operational in 53 districts in mainland Tanzania, out of a total of 126 (Blomley et al. 2008).

Enabling legislation for the new policy was passed with the new Forest Act of 2002. This provides the legislative foundation for the implementation of Participatory Forest Management (PFM) in Tanzania (MNRT, 2001). This act "provides a clear legal basis for communities, groups or individuals across mainland Tanzania to own, manage or co-manage forests under a wide range of conditions." (FBD, 2006)

The objective of PFM is sustainable forest management through management or co-management of forest and woodland resources by the communities living adjacent or amongst the forest (Harrison, 2006). PFM may be applied to forests that require full protection, typically catchment forests, or to forests that can be productive under a sustainable harvesting regime, or a combination of the two with management zones. The Tanzanian Government has adopted a definition of PFM based on work undertaken by the FAO, namely:

> *"The arrangements for management that are negotiated by multiple stakeholders and are based on a set of rights and privileges recognized by the government and widely accepted by resource users; and the process for sharing power among stakeholders to make decisions and exercise control over resource use"*

Tanzanian law recognises two categories of PFM:

Joint Forest Management (JFM)

JFM allows communities to sign joint forest management agreements with government and other forest owners (FBD, 2006). JFM is applicable where there is a pre-existing local or central government forest reserve. In this instance the forest adjacent communities enter into a Joint Management Agreement with the appropriate reservation authority to share management responsibility and benefits accruing. JFM allows greater governmental control over the resource, for instance of there is a lack of capacity within a community to manage the resource alone. It is criticized for not offering sufficient benefit-sharing to the communities involved (Harrison, 2006). Revenues are reported to be negligible, as they are only made from penalties taken from those caught carrying out unauthorized activities in the forest, which requires management, patrolling and admission of guilt. Typically, JFM has been promoted in Central Government 'catchment forests' ahead of CBFM because of the high level of biodiversity within these forests and the oft-perceived greater risks of deforestation and risk to and water catchments where communities are sole managers.

Community-Based Forest Management (CBFM)

CBFM enables local communities to declare and gazette village, group or private forest reserves (FBD, 2006). CBFM is used to refer to cases where there is no pre-existing forest reserve which must be taken into account. Here communities decide to reserve a part of their village lands as a VFLR. Upon provision of an acceptable Village Forest Management Plan (VFMP) including following the implementation of byelaws and a resource assessment, control and ownership of all the forest resources within is devolved to the village government. In practice the process is slow. A lack of perceived financial incentives for individual community members, both short and long term is blamed for the slow implementation of CBFM, as well as delays in bringing donor funding to an implementation level (Harrison, 2006).

Community Based Natural Resource Management (CBNRM)

In Africa, conservation practitioners have long been aware that problems faced by wildlife and forest managers are more related to socio-economic issues than biological ones (Murray *et al*., 2008). In Tanzania the Wildlife Policy of 1998 provided legislation to devolve management rights and responsibilities through CBC. This legislation provided the early framework for the creation of Wildlife Management Areas (WMAs). However, the development of WMAs has been slow and with limited successes to date. The Forest Policy of 1998 led to participatory Forest Management which has yielded a more effective and collaborative response than its wildlife equivalent, and has lead to a significant development of various forms of participatory forest management.

Problem Analysis for REDD in Tanzania

Context

The area of forest is declining in Tanzania. The latest estimation of the deforestation rate nationally is 91,200 ha per annum (FAO 2007). More detailed deforestation rates are available for some specific forest types in Tanzania; for example in the Eastern Arc Mountains and the lowland Coastal Forests, where rates of deforestation have been calculated from 1990-2000, and are currently being updated to 2005 (Table 4). In general the closed canopy forest habitats declined quite slowly (-1 to -7%) over the period 1990-2000, whereas miombo woodlands declined more rapidly (-13%). To some extent the slower rate of decline in the former is because most such areas have either been cleared already, or are protected in reserves. More miombo is unprotected and hence rates of loss are higher. Several forest types in Tanzania have no reliable estimate of their area, or rate of loss of area. This is clearly an important additional piece of knowledge to be acquired to support the REDD process in Tanzania.

In terms of degradation, it is estimated that over 500,000 hectares of forests and woodlands especially in general lands are degraded annually (National Forest Programme 2001). Various studies have also been conducted in the levels of degradation to Eastern Arc and lowland Coastal Forests, resulting in a database of 2,800 forest plots and 500 km of disturbance transects from over 50 sites; these data are in the process of being analysed to assess levels of forest degradation and to develop a model of degradation for eastern Tanzania. Considerable further effort is required to develop a proper understanding of the level of degradation to the woodland and forest resources of Tanzania, and the impacts of that degradation on carbon storage. Such work is included within this UN REDD project.

Table 4. Rates of forest loss in the main forest types of Tanzania 1990-2000 (where known)

Forest type	Area 1990	Area 2000	Percentage loss (%)
Miombo Woodlands[1]	Only partial data	Only partial data	-13%
Acacia Savanna	No data	No data	
Eastern Arc Mountains [2]	355,000 ha	353,100 ha	-1 %
Kenya/Tanzania Mountains	No data	No data	
Eastern African Coastal Forests[3]	704,200 ha	684,100 ha	- 7 %
Guinea-Congolian forests	No data	670,000 ha	
Mangrove forests[4]	109,500 ha	108,100 ha	-2 %
Albertine Rift forests	No data	No data	
Southern Rift forests	No data	No data	
Itigi Thicket	No data	No data	

1- Data from a partial sample of miombo in Eastern Tanzania (FBD 2005) *Forest Area assessment for the Eastern Arc Mountains.*. Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism, Dar es Salaam. www.easternarc.or.tz

2 – FBD 2005 (ibid)

3 – Tabor, Mbilinyi and Kashigali (in prep). Forest area assessment for the coastal forests (this assumes that all this ecoregion was originally forested)

4 – Wang *et al*. 2003. Remote sensing of mangrove change along the Tanzania coast. Marine Geodesy, 26:35–48, 2003

Carbon Storage

The amounts of carbon stored in the various forest types in Tanzania are partly known, and are the subject of a number of ongoing research projects, mainly working from the Sokoine University of Agriculture (SUA). Examples of the mean values of tons of carbon per hectare of habitat from the available studies are as follows: Miombo woodlands; 87 tons carbon per hectare, Eastern Arc Mountain forest; 306 tons carbon per hectare, East African coastal forests; 157 tons carbon per hectare. Estimates are not available for *Acacia* savanna, Kenya/Tanzania volcanic mountain forests, Guinea-Congolian forests, Albertine Rift foreests, Southern Rift forests, Itigi Thicket or Mangrove forest.

Carbon loss through deforestation

Tanzania does not have the data to allow carbon loss through deforestation to be calculated for each of its various forest types. Only one of the main forest types has been analysed sufficiently to make such and estimation, which is a clear knowledge gap that needs to be addressed.

In the Eastern Arc mountains remote sensing of forest loss tied to estimates of carbon content for various forest types, shows that deforestation over the past 20 years has resulted in the loss of 34 million tons of carbon from these mountains (FBD 2007). Much of this loss was from the unprotected woodlands and forests outside the network of protected areas; rates of deforestation within the reserves being insignificant. Some similar calculations are possible for the coastal lowland forests where deforestation rates are known (Table 5) and estimates of carbon stored in different tree species are available.

Carbon loss through degradation

There is not much data across Tanzania on the impacts of disturbance on carbon storage. This is a clear knowledge gap that needs to be addressed. Detailed assessments of levels of degradation and some of the likely

impacts on carbon storage are available for the Eastern Arc Mountains and lowland coastal forests, and for a few areas of miombo woodland (Table 5). These indicate that degradation processes in the Eastern Arc forests, for example, can reduce the carbon storage from 300 tons per hectare in pristine forest, to under 100 tons per hectare in degraded forest (FBD 2007). Across the Eastern Arc Mountains this equates to a potential loss of 66 million tons of carbon from reserves, which might be regained, if the reserves were better managed. Degradation reduces carbon storage in coastal forests from 157 to 33 tons per hectare (FBD 2007), and in woodlands from 87 to 33 tons per hectare (FBD 2007). For some other forest types there are no available data on the impacts of degradation on the carbon storage.

Table 5. Impacts of degradation on the carbon stored in Tanzanian forests (stem, branches, and roots – not soil carbon).

Forest type	Carbon in pristine forest (tons/ha)	Carbon in heavily degraded forest (tons/ha)	Loss through degradation (tons/ha)
Miombo Woodlands	87	33	54
Acacia Savanna	No estimates available	No estimates available	-
Eastern Arc Mountains	306	83	223
Kenya/Tanzania Mountains	No estimates available	No estimates available	-
Eastern African Coastal Forests (Dar to Rufiji)	157	33	124
Guinea-Congolian forests	No estimates available	No estimates available	-
Mangrove forests	No estimates available	No estimates available	-
Albertine Rift Forests	No estimates available	No estimates available	-
Southern Rift forests	No estimates available	No estimates available	-
Itigi thicket	No estimates available	No estimates available	-

All data from: FBD, 2007. *Carbon Ecological Services*. Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism, Dar es Salaam. www.easternarc.or.tz

Carbon gains through sequestration

The rate of sequestration of carbon by the various forested habitats in Tanzania is not well known. However, studies are being undertaken within the miombo woodlands and Eastern Arc Mountains (by SUA), to assess rates of carbon sequestration in these different habitats, at different altitudes, and under various climatic regimes. Preliminary results will be available during 2009. Other work has shown that Agroforestry has the potential to sequester 2 to 5 tons Carbon per hectare per year, while the rehabilitation of degraded land can sequester 0.25 to 0.9 tons Carbon per hectare per year. A new study across the forests of Africa calculates an overall increase of 0.29Pg C/ha/yr, but it may be slightly lower in the Eastern Arc Mountains (Lewis et al., 2009; Marshall, pers com).

Carbon in reserves

An unpublished study by the Valuing the Arc Progamme (www.valuingthearc.org) suggests that about 35% of the carbon in the eastern half of Tanzania is found within protected areas and other forms of reserves. The highest carbon density is found in Forest Reserves and Forest Nature Reserves that are managed by FBD. The same work indicates that carbon storage in reserves has been significantly lowered by degradation, and hence that the reserve network could sequester large amounts of additional carbon if there was better management effectiveness in place.

A more detailed assessment within a single forest type shows that across the Eastern Arc mountains, around 91.7 million tons (of a total 151.7 million tons of carbon) are found in the existing reserves (FBD 2007). As some proposed Forest Reserves that are *de facto* protected were not included, a more plausible estimate is that >100 million tons of carbon are stored within the reserve network of the Eastern Arc (60 % of total carbon stock).

Against this general background of incomplete knowledge and a lack of compiled data from existing studies, there is an urgent need to conduct further detailed assessments on the current carbon stocks and the potential of Tanzania's forests to participating in the carbon trade and to benefit the country's economy.

Underlying Causes of Deforestation and Forest Degradation

The underlying causes of deforestation in Tanzania are mainly related to the needs of an expanding human population that remains poor and dependant on natural resources, and the national needs to earn foreign

exchange to fund national development and debt repayments. The root cause threats for deforestation and degradation have been assessed and are outlined below (Table 6).

Table 6. Root causes of deforestation and degradation in Tanzania

Root Cause Threat categories	Scope and Scale of threat
Smallholder agricultural expansion	Small holder agriculture covers up to 50% of the country, and is expanding in line with human population growth. Forest land is cleared for agriculture by hand and fire is used to clear cut woody material, and crop residues. These fires often spread into natural habitats, increasing fire incidence above background levels, impacting on forest and woodland areas.
Energy needs	Urban people primarily cook using charcoal burned from miombo woodlands and coastal forest habitats. This is a major deforestation and degradation driver in the regions around major towns. In the rural areas people cook (and where necessary keep warm) using firewood cut from natural forest. This is another major sources of degrading pressure on remaining forests. The hydroelectical power companies are also somewhat dependant on the clean water flowing from intact mountain forests. Deforestation causes water to become muddy (which is bad for turbines) and seasonal (which is bad for reliable supply).
Plantation development	As the private sector becomes more established in Tanzania, and international investors find ways to operate in the country, plantation agriculture is being rehabilitated and is expanding. Major plantations of sisal, rice, wheat, and (especially) biofuel crops are underway. Many of these plantations remove existing high carbon natural vegetation and replace it with low carbon crops. An exception is the private tree plantations that are emerging in some areas, but these are not relevant to the REDD mechanism as that only addresses natural forest areas.
Building materials	Wood is used extensively as a building material in Tanzania. Timber and building poles in particular are extracted from forests and woodlands, and often transported to urban areas – or even out of Tanzania. Both uses, if undertaken unsustainably, degrade natural forest areas and reduce standing biomass and hence carbon content of the forest.

Underlying these root cause are more intractable issues, ranging from weak and corrupt governance structures, complex and insecure land tenure systems, poorly developed costs and benefit sharing mechanisms, and deeply rooted poverty and lack of opportunities out of poverty and the reliance on exploiting natural resources to survive.

Main Areas of Deforestation and Degradation

There is no national assessment of the main areas of deforestation and degradation in Tanzania. However, the combined field experience of the UN Team developing this proposal can make the following observations based on some level of certainty:

Tanzania is experiencing deforestation into habitats on good to moderate soils with reasonable rainfall patterns and where there is a good potential for agriculture. In the Eastern part of the country at least there is a systematic movement of people from already heavily populated areas (such as the mountains) to some of the more suitable lowland areas. For example people are being encouraged to move to Handeni District, Rufiji and Kilwa District in the coastal area. This includes people aiming to establish small scale subsistence farms, and also people setting up large plantations. Whether this holds true for the entire country is unknown, although similar trends are seen around Moshi and Arusha in the north.

It is likely that past, present and future trends in forest loss can be modelled as a function of population expansion, soils, rainfall, existing agriculture, and accessibility.

Main Forest Types Suffering Deforestation and Degradation

Examples are provided below on the threats and drivers of deforestation and degradation in Tanzania's main forest types, starting from those which have been most thoroughly investigated.

Eastern Arc Mountains. In the Eastern Arc detailed planning processes have determined the major threats to thee forests to be uncontrolled fire, conversion of natural habitats to agriculture, illegal logging, unsustainable collection of firewood and building materials, inappropriate mining practices, illegal grazing and invasive plant species (FBD 2008). These threats have resulted in the loss of forest from almost all areas outside reserves. The underlying drivers of these threats are assessed as issues of natural resources and land governance (including corruption), population growth, poverty, and a lack of alternatives to subsistence use of natural resources. Climate change is an emerging threat that may radically affect the forests and biodiversity of the Eastern Arc mountains region, by pushing habitats to increasing altitudes. The same threats and underlying causes affect the Albertine Rift Mountains, Southern Rift Mountains and the Kenya-Tanzania Mountains forest types.

Coastal Forests of Eastern Africa. Another planning process for the coastal forests has identified the following as the most important threats to the habitat: conversion to agriculture, increased demand for fuelwood (charcoal, firewood), infrastructure development, unsustainable logging (timber, poles), uncontrolled fire, over-harvesting of wood for carving, conversion for salt pans, aquaculture, mining, adverse climate change (WWF EARPO 2006). The underlying causes of these threats are the same as for the Eastern Arc Mountains. An emerging threat in the coastal forests is the clearance of large areas of habitat to establish biofuel plantations of *Jatropha* and in wetter areas – sugar cane for ethanol production. This threat has developed rapidly in the past few years and large areas of habitat are being cleared in Kilwa District of Tanzania (for example) for this use. It is believed that the situation is broadly similar for the Guinea-Congolian forests in the north-western corner of the country.

Miombo woodlands. Similar direct threats to the Eastern Arc and Coastal Forests are affecting the miombo woodlands, although here fire is less of a problem in this fire adapted system (WWF SARPO 2003). Instead, the clearance of woodland for agriculture and for the production of charcoal are the two major threats. The underlying cause of the massive clearance for charcoal production is the high price of alternative cooking fuels in major cities in Tanzania, and the need for new agricultural land to provide for an expanding human population dependant on the land for food and other resources. Large areas of miombo woodland are, however, well protected in National Parks, Game Reserves and Forest Reserves scattered across the country.

Acacia Savanna. The Acacia savanna is a dry woodland habitat type that is not very suitable for conversion to agriculture. As such the primarily impacts are from degradation caused by livestock grazing, and wild fires that are sometimes natural and more often set by people. These impacts tend to only become serious in areas where there is a high stocking density and for much of the habitat the impacts are fairly minor and there is an extensive network of protected areas in this habitat type, which provides a high degree of protection.

Mangrove. All Tanzanian mangroves are protected as reserves where exploitation should be managed. Nevertheless there has been some loss of habitat to rice farming in the Rufiji delta and various large scale farming schemes (including aquaculture) have been proposed for the same area. Most of the mangroves suffer from degradation as they supply building poles to Tanzania and some parts of the middle East.

Impacts of Forest Management Administration

As outlined below the forest resources in Tanzania are managed under a different administrative structures. Although there is little quantified data to measure the success of these approaches in terms of protecting forests and the carbon they store, some research material is available, and there is also a good deal of field experience to draw upon. We outline the main issues according the primary administrations of forest land in Tanzania.

Central Government. The central government controls 15.7 million ha of land, much of it forested, in Tanzania. This is in the form of National Parks, Game Reserves and central government Nature Reserves and Forest Reserves. Most of the high carbon habitats are actually found in central government reserves. Deforestation rates are practically nil in National Parks and Game Reserves, but may occur in Forest Reserves. Rates of degradation are also very low in National Parks and Game Reserves, but can be considerable in Forest Reserves. Improving management of Forest Reserves in particular might be an effective strategy to enhance sequestration and prevent further carbon loss in Tanzania. It is also administratively simple.

Local Government. The local government has a network of Local Area Forest Reserves under their control, totalling around 11 million ha or land, primarily in habitats that contain moderate (but not the highest) amounts of carbon. These reserves tend to be weakly managed and often have agricultural encroachment and heavy degradation. Better management of these reserves would certainly have a positive impact on carbon storage

across a large area of the country. Each district is administratively distinct and there are at least 126 such districts in Tanzania.

Village Government. More than 1,800 villages in Tanzania control the largest proportion of remaining forest land across the country, some 20 million hectares, primarily of low to moderate carbon storage. Villages can establish reserved areas under their management, and the total area under village management of one type or another reaches 3.6 million hectares. Villages can also manage the forest and woodland habitats on their land for timber production or other productive uses. Over much of the country village forested land is being converted to agriculture, or degraded by logging and charcoal burning. This represents the land type with the greatest amount of deforestation and degradation, but is also the most administratively complex to address.

Private Land. There are relatively few private forest areas in Tanzania. Those which do exist are either quite well conserved, or are generally plantations of trees of crops. The private section may, however, be able to respond quite rapidly to the opportunities of REDD.

Developing a UN REDD programme for Tanzania

Stakeholder consultation

The UN-REDD Programme Tanzania Country Actions grew out of requests from the Government of Tanzania and the UNFCCC COP13 decision to create lessons learnt on REDD. A pre-scoping mission was held in September 2008, a planning mission in November 2008 and a final consultation mission in January 2009.

The missions identified key stakeholders, operators and partners within the Tanzanian forest and development sector with a focus on forests, climate change and REDD.

In September 2008 the mission attended the Eastern And Southern African Katoomba Group meeting in Dar es Salaam. Key informal meetings were held with the Director of Forestry and Beekeeping, Head of the Vice Presidents Office (Environment), UNDP Tanzania, the Norwegian Ambassador, and members of the NGO sector.

In the November 2008 mission the team formally with the REDD focal points for Tanzania, and members of the Government, UN, NGO and development partners. A solid basis for the proposal was laid and the National REDD Production Chain for Tanzania was agreed (Figure 4).

In January 2009 the team met again with the key stakeholders, attended the initial Tanzanian REDD strategy meeting organized by the REDD focal point in the government, and held a series of meetings with a Norwegian Mission, the World Bank, UN leadership and NGOs. The existing REDD related initiatives were identified at that time (Table 7).

Tanzania has prepared and submitted an R-PIN to the WB- FCPF, forming the basis of an application to join the FCPF. The R-PIN was prepared in close consultation with the UN REDD Programme mission to Tanzania.

The immediate objective of the missions was to develop a Joint Programme to support Tanzania with the first phase of achieving readiness to ensure *actual*, *lasting*, *achievable*, *reliable* and *measurable* emission reductions and identifying capacity and knowledge gaps in the National REDD Production Chain (Figure 4).

The Joint programme will be implemented in close coordination with REDD activities financed by the Government of Norway through bilateral channels, and with the activities of the World Bank and other partners, using established mechanisms for coordinating REDD activities in Tanzania.

Civil Society Organization Consultation

During the process of developing the UN REDD proposal for Tanzania a number of nationally based organisations have been consulted. These include the Tanzania Forest Conservation Group and their network of over 150 forest management CSO organisations called MJUMITA (Tanzanian Community Forest Conservation Network); these are community groups involved in participatory forest management. MJUMITA has been supported by TFCG since 2000 and is now an independent NGO. It mainly operates in the eastern part of Tanzania.

The consultation process also involved meeting with the representative of the Indigenous peoples of Tanzania. At the same time conservations were held with the Tanzania Natural Resources Forum (based in Arusha), who provide a networking function for local people, NGOs and CSOs involved with wildlife conservation in Tanzania. The Tanzania Natural Resources Forum mainly operates in the northern part of Tanzania.

Finally, UNDP Tanzania invited 4 CSO to attend the PAC meeting of the 24th February, where the proposal would be presented and discussed in the Tanzanian context. A meeting of around 50 CSO organisations is also planned to be organised, providing a further opportunity to discuss the opportunities and challenges posed by REDD. This will provide initial input to the design of the stakeholder participation plan, which will be developed in the course of year 1 (as part of the REDD Strategy).

Key principles for implementation

It is recognized that REDD is a huge undertaking and time is extremely limited. The challenge is not likely to be met by any one initiative and a key message that has been incorporated in the project design is close collaboration with and between national authorities, research institutes and civil society. The Joint Programme has and will recommend and advocate for the establishment of a national coordination mechanism that brings together the various stakeholders and organizations as recommended by the National Forest Programme.

As the Government of Norway has pledged US$100 million (for 5 years), and several activities and a process to develop a Tanzanian REDD framework has already started, it is critical to ensure all approaches are complementary, with the same overall objective, do not burden the government with duplicative demands, and can contribute to both the final UNFCCC negotiations on a post-2012 framework and to Tanzania's participation in a potential market or fund based approach.

The Joint Programme also recognizes the role of REDD in the wider development context and advocates the importance of treating REDD as one of many potential income tools for sustainable forest management.

Table 7. Existing REDD related initiatives in Tanzania

Initiative	Partners	Relevance to UN REDD
NAFOBEDA	FBD and development partners	Database of forest resources in Tanzania
Forest Inventory	FAO and FBD with support from MFA Finland and UN REDD	Forest inventory for Tanzanian forests
Co-managed and community managed forest areas	FBD PFM component	Accurate data on Joint Forest and Community Based forest management areas in Tanzania
Reserves mapping	FBD Survey and Mapping, TANAPA, Wildlife Division (UNEP-WCMC WDPA)	Accurate map of the protected areas of Tanzania
Establishment of carbon baselines	Clinton Foundation using Australian methodologies	Baseline carbon estimate for Tanzania using methodologies developed in Australia
Community carbon monitoring	Sokoine University, Twente University (Netherlands) and NORDECO/Copenhagen University (Denmark)	Methodologies for forest condition and carbon monitoring by communities
Carbon storage	FBD, Sokoine University of Agriculture, Valuing the Arc Programme	Spatial dataset of forest plots and carbon storage allowing development of a carbon model in GIS
Forest disturbance and carbon impacts	Valuing the Arc Programme and KITE project (UK)	Impacts of degradation on forest carbon storage and building a model in GIS
Forest Change Analysis	FAO, Sokoine University, Conservation International	Forest area and forest change in Eastern Arc and Coastal Forests 1990-2007
Policy analysis	WWF TZ / WWF US / Forest Trends / Katoomba Group	Analysis of Tanzanian policies related to the implementation of REDD
Ecosystem Service mapping	Valuing the Arc / Natural Capital Project (InVEST programme)	Spatial tool in GIS that maps ecosystem services, including carbon now and under future scenarios
Better Nature Reserve management	German Government / FBD	Improved forest management results in the capture of forest carbon
Policy and Implementation on the ground	Norwegian Embassy (applications already under consideration from TFCG and Forest Trends)	Improvements to policy framework and implementation of REDD pilot interventions on the ground
Capacity within Universities	Norwegian Embassy	Enhanced scientific capacity on issues related to REDD

Sustainability

The UN REDD programme for Tanzania aims to support the work of the REDD national authority- the Forestry and Beekeeping Division. As such the programme aims to be entirely embedded within the national REDD strategy and framework, and delivering work on the behalf of FBD. Over the course of the first year of implementation the programme will define its working mechanism for future years of UN REDD support, most likely through mainstreaming the work within the work of the FBD and the National REDD strategy and framework.

National REDD Production Chain

The National REDD programme for Tanzania has been designed around a REDD Production Chain (see below), which identifies key elements at field, national and international level that needs to be in place for a transparent, robust, equitable and reliable delivery of carbon credits from REDD.

The delivery of REDD carbon credit starts at the field level and bases on strong information of spatial carbon pools, village and district governance (e.g., tenure/usufruct rights, legal entities, management planning) and private sector participation. Field level supply of carbon credits are supported by national cross-sectoral coordination, monitoring/reporting and appropriate legislation providing transparency at national and international level. As with any market transaction a product has to be brought to the attention of potential buyers and packaged in an attractive way through e.g., guarantees, insurance, pricing and even certification.

Before any payments for the product (carbon credit) can be made, a contract has to be negotiated stipulating terms. Returning to the national and field level the payments have to be received by the original service providers through a transparent and fair mechanism. For the payments to further contribute to sustainable development and potentially more carbon credits, business plans, reporting and re-investment opportunities are needed at the field level.

The success and potential of a country to participate and benefit from REDD carbon credit transactions is as strong as the weakest link in the production chain. If there are doubts about the national ability to deliver *actual*, *lasting*, *achievable*, *reliable* and *measurable* emission reductions, REDD investors will remain risk adverse. They will seek to invest in countries that can provide the lowest risk for their carbon investment. At best they will transfer the risks by making carbon payments to REDD countries *ex-post*, or "on-delivery".

The National REDD Production Chain identifies key elements at field, national and international level for the delivery of actual, lasting, achievable, reliable and measurable emission reductions (ERs) from deforestation and forest degradation in Tanzania. At the international level there are issues relating to marketing, contract negotiations, funds transfer and fund management, broadly classified into 'markets' and 'benefits'. At the national level there are issues of regulation and governance and sustainable forest management. At the national level there are also issues of insufficient technical capacity and resources (i.e. for institutional arrangements; establishing national reference scenarios against which to assess REDD emissions reductions; for monitoring and assessment of changes in forest carbon, and for developing and implementing REDD strategies and field activities). These will all need attention in Tanzania.

The National Production Chain (Figure 1) has been divided up on four quadrants that each have specific elements key to a successful delivery of REDD emissions reductions. As in any chain, the national REDD production chain will be as strong as its weakest link. Failure to address the various elements in each quadrant will affect the final quality of the REDD ERs and thereby also their marketability and price.

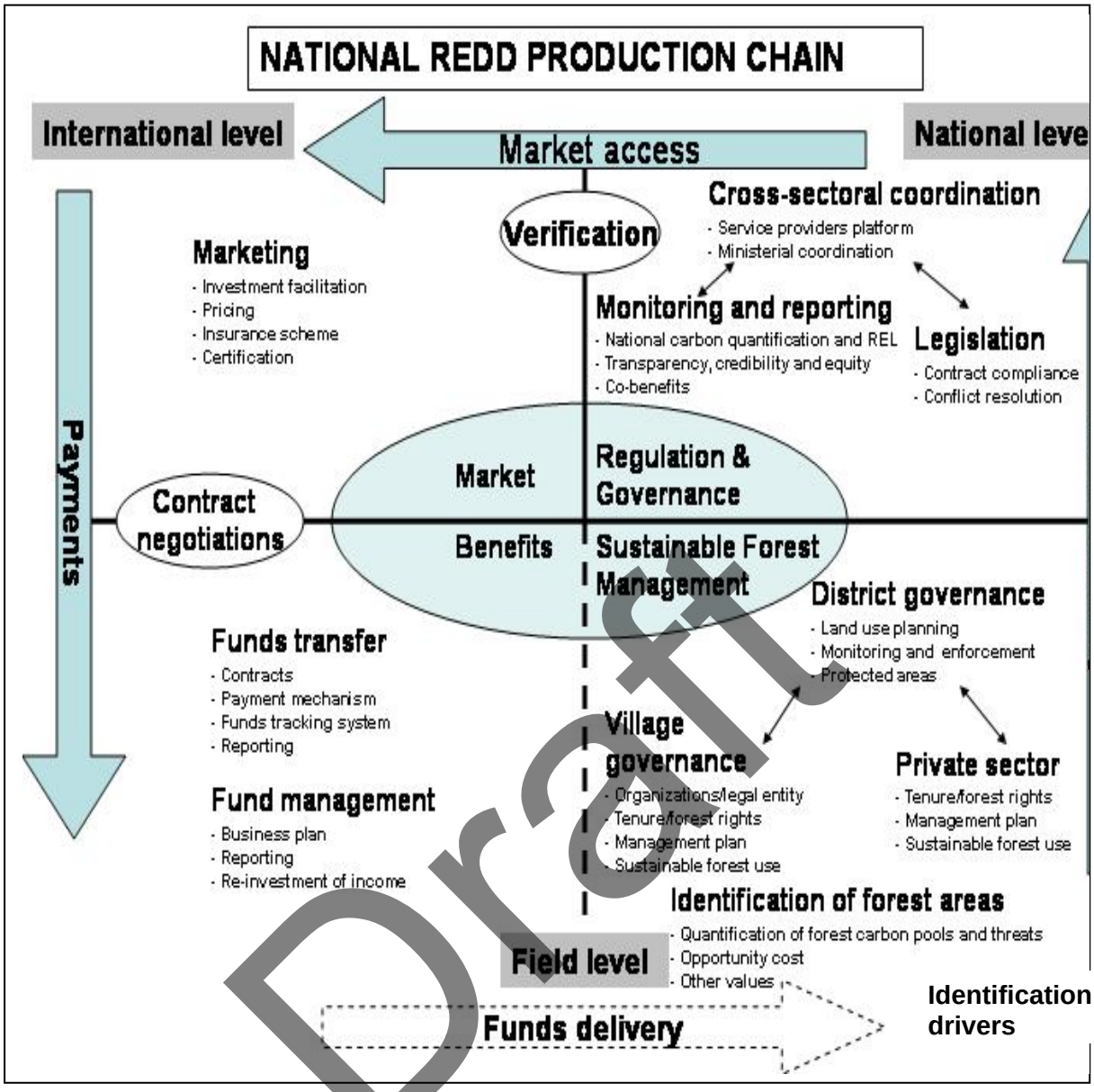


Figure 4: National REDD Production Chain

Quadrant 1 - Sustainable Forest Management at Field Level

Conceptual Background

There are a number of important conceptual issues within the broader category of Sustainable Forest Management (SFM) that relate to the implementation of REDD in Tanzania. For example, it is necessary to identify forest areas and quantify carbon pools. It is also necessary to have detailed knowledge of land ownership and governance at the District, Village and Private sector levels. In Tanzania, a country where the land allocation is in slow transition from a traditional African communal ownership system to a more modern land ownership pattern with defined ownership of different parcels of land, issues of ownership and governance are not straightforward in many cases.

Implementation of SFM within the national REDD production chain has to be supported by Local Level Governance (regional and district) support through political support, land-use planning and advisory services. The delivery of advisory services to forest adjacent communities and land owners also requires capacity, financial and logistical resources which currently are very limited and are even restricting the current efforts to implement SFM.

Identification of Forest Areas

In the Tanzanian Context, the applicability of REDD is likely to fall across a range of forest management types. These may include nature reserves, government forest reserves, local authority forest reserves, private forests, village land forest reserves and village land in general.

For the REDD framework, the first step will be to identify forest areas with REDD potential from the perspective of the forest areas appearing to offer sufficient biomass to be appropriate to the scheme. Quantification of forest carbon pools and threats follows. A range of factors will need to be considered at this stage through assessment of the threats to the forest area, across different sample points. Levels of biodiversity and biomass need to be established.

Willingness of Stakeholders

A stakeholder analysis will be required. Close and participatory collaboration with stakeholders will then be required to ensure there is sufficient will and interest amongst the stakeholders to go forward with REDD, both initially to research the viability and fully, as and when the area is regarded as viable for REDD over other land and forest use.

Understanding Context and Values

The economic, social and cultural context needs to be understood, and crucially, the type of resource and land ownership and whether that land is formally registered to a particular protected area type, community group or individual. Social, cultural, ecological, (including biodiversity) economic and aesthetic values of the forest to its owners and forest dependent or adjacent communities will need to be established. A study of values should also include a documented understanding of the various uses of the forest, both timber and non timber forest products to the stakeholders that would be involved.

Assessment of Opportunity Costs

REDD may or may not be the favoured option for forest management for a particular forested area. As well as understanding the values and uses of the forest area and its resources to the stakeholders a study of the opportunity costs of various different forestry and other land management activities should be carried out. For example, it may be that a VLFR under CBFM may be better placed to be used to utilise hardwood timber to meet international market demands in terms of comparable opportunity costs. Or, an assessment of the opportunity costs of deforesting an area and planting biofuel crops may lead that option being seen as more viable.

Local Governance Issues

Existing analyses of the current policies indicates that the policy framework in Tanzania is broadly sufficient to address issues of REDD implementation, but the main challenges are seeing the policies and laws translated down to operational practices at the District and village levels. Very often the existing policies and laws are not well known or even available at the operational levels, which severely constrain actual implementation. In many areas project assistance through government or NGOs provides operational levels of government and villages with access and understanding required to turn the policies into action on the ground.

Supporting District Governance

The process of decentralisation in Tanzania has already provided much of the institutional governance system requirements at district level that will be crucial to making REDD function at district level. Capacity at both the Executive and Legislative branches of district governments has been boosted by the decentralisation process. Most relevant to the forestry sector is the attention that has been focused on the institutional processes to make the PFM programme operational in over fifty of Tanzania's districts.

Developing the Decentralisation Process

District governments in Tanzania have become familiar with taking on complex programmes and delivering them at ward and village level. Whilst there are a great many lessons still to learn, the decentralisation process has paved the way for an increasing district role in supporting Tanzanian development activities. By extension, more empowered district governments have in turn been able to support capacity building and improved governance on a village level through increasingly closer ties and a greater programme of extension activities. In fact this greater attention has deliberately weakened the role of district government is areas such as PFM development as many village governments have taken on the role of managing their own forest areas themselves. This background will be crucial to the working of a REDD framework.

Boosting capacity and systems at District Level

Developing SFM to support REDD at the District level will need to build upon the knowledge and capacity of district officials to provide advisory services to communities and to implement programmes of work. A successful REDD framework at district level might decide to build upon financial and logistical management systems set up under programmes such as PFM to ensure REDD activities can be managed in a timely, accountable and an effective manner. Financial and logistical resources will need to be maintained at a sufficient level to ensure momentum.

Village Governance

At village government level a great deal of work has been done across Tanzania to improve village governance systems. In the forestry sector the implementation of the PFM programme, especially for those under CBFM processes, has seen villages take considerable leaps on governance issues. This has included the setting up and institutionalising of specialist committees to deal with the management of village land forest reserves, usually called Village Natural Resource Committees (VNRC). Similarly, the use of Wildlife Management Area (WMA) legislation for forested areas with significant wildlife numbers will also simplify the process of developing a framework for REDD.

Land Use and Management Planning

As well as creating and strengthening VNRCs, the PFM process has by the nature of setting aside forest areas brought about land use planning procedures into village government activities. Many forest adjacent villages in Tanzania now have or are undergoing village land use planning which has allowed them to clearly demark areas of forest for protection, areas that will be cultivated and areas for social services, living and carrying out daily social activities. The REDD framework will therefore be able to build upon and improve land use planning processes.

Community Empowerment and Involvement

Enhanced capacity to existing frameworks of village governance for sustainable forest management will include addressing legal rights to forest resources and the empowerment of village community members and environmental mediation to support their involvement in the environment. The framework will also develop established programmes in villages that have been supported by district government and civil society organisations to improve levels of capacity and the financial resources to effectively manage land and forest resources at village level.

Private sector Involvement

Sustainable forest management guidelines will need to form an essential part of any agreement the private sector creates with forest management bodies including an understanding of any rights of ownership, rights of access as appropriate and a clear agreement from community stakeholders. The degree of technical and financial input from the private sector should be clearly agreed in order to ensure a minimum level of investment, both intellectual and economic and thus reduce the risk of a lack of continuity. The private sector agreement will need to thus define the exact roles each party will take as well as the costs, benefits and responsibilities expected from either party. For example, a private sector party mat be called in to manage a forest area under REDD in entirety or only to provide specific verifiable services, such as monitoring and documentation of changes in emissions. Whichever role is agreed, clear management guidelines and plans will be agreed and stuck to with independent monitoring of the investor incorporated.

On a wider, national level, regulation should be in place to ensure government is in a position to manage the activities of private sector investors without reducing either the incentive for investment including profitability of the company involved or the competitiveness of Tanzania in marketing its REDD productivity.

Quadrant 2 - Regulation and Governance

Conceptual Background

The second quadrant focuses on the national level regulations and governance structures that provide the overall credibility, sustainability and scale of economics in support of potential REDD interventions.

As REDD is a new concept, as yet not supported by an international agreement, the REDD regulatory and governance frameworks have not been designed and operationalized. The key elements within the quadrant are:

- Cross-sectoral coordination on delivery of REDD to avoid competing land-use investments and un-coordinated land-use planning

- Provision of the legal framework for carbon and emission reduction ownership and payment distribution with credible contract and conflict resolution legislation developed
- Provision of cost efficient Monitoring, Assessment, Reporting and Verification (MARV) solutions in response to REDD needs for potential UNFCCC negotiation outcomes

Existing Institutional Framework

Tanzania has a well defined institutional framework at the national and local levels, through the local government reform process, for implementation of forest and other natural resources programmes. At the national level, The Vice President's Office (VPO), Department of Environment (DoE) is responsible for coordination and harmonisation of environmental issues and carbon. The DoE is the Designated National Authority (DNA) for implementation of the Kyoto Protocol, more specifically the Clean Development Mechanism (CDM). The coordination of issues relating to REDD fall under the Forestry and Beekeeping Division of the Minsitry of Natural Resources and Tourism.

Monitoring and Reporting

Monitoring and reporting for REDD entails developing the Monitoring, Assessment, Reporting and Verification (MARV) system for Tanzania. The monitoring system is required to understand carbon and biomass related data such as carbon stocks, REL, expansion factors, potential REDD areas, forest cover changes, basis for payment distribution, evidence of emission reduction. However, monitoring is also essential for keeping track of co-benefits and the degrees of equity in managing resources under REDD, including changes over time as the frameworks mature and settle.

A key part of the monitoring will be to develop an assessment of Reference Emissions Levels (REL) for Tanzania. Work to develop the REL will involve a combination of remote sensing, ground truthing and local level resource assessments. Capacity will also be required at the national level to assess the specific forest areas under REDD that need to be monitored and the results reported upon. In terms of monitoring and reporting, Tanzania needs enhanced capacity and this proposal, combined with work by other players, should provide that capacity and deliver the required data.

Technical Capacity Building for MARV

Consistent technical support and training will be created if MARV processes are to be sustainable and consistently verifiable, at national, district and local community levels (Otsyina *et al.* 2008). On a national level, training of ministry staff in forest inventories and assessments including the use of GIS, satellite image analysis, remote sensing, forest inventories, mapping and database development and management. This training would be done through short and long courses conducted at the national and foreign universities. Training and capacity development in collection and assessment of socio-economic information will be required as will support for the development of physical infrastructure in the form of computers, data loggers, GPS equipment, databases, aerial and topographical maps and weather monitoring equipment.

On a district level training will be required of local government foresters and planners in the use of simple techniques for forest and natural resources inventories and assessments, the use of GPS and other inventory tools, data entry techniques, and database management. Training in participatory forest and natural recourses management techniques will be essential for those who do not have adequate knowledge. Training and capacity development in collection and assessment of socio-economic information will be required as will support the districts with physical infrastructure in the form of computers, data loggers, precision GPS equipment, databases and weather monitoring equipment and training as to effectively use them.

On a community level, training of selected community members in the use of simple techniques for forest and natural resources inventories and assessments will be required. Also, the use of GPS and other inventory tools, data recording, monitoring and evaluation of resources is needed at the community level. Also important will be training in the collection and assessment of social and development information such as population changes and recording most significant changes. The development of skills in group organisation, facilitation, bookkeeping and simple accounting as well as leadership and governance skills is likely to need enhancing. For those communities without prior exposure, training in participatory forest and natural recourses management techniques will be crucial where they are to take a management role.

Cross-sectoral coordination

Tanzania is making progress with issues of coordination and has established a cross sectoral committee for REDD coordination, chaired by the Director of Forestry and Beekeeping Division. Mutually supportive policy frameworks will be crucial to ovoid overlap and to ward of potential conflicts of interest. These will need to

include cross-ministerial coordination on delivery of REDD to avoid competing land-use investments, national level land-use planning and cross-sectoral governmental support to payment distribution and potential up-front investments. Attention will be required to ensure conflicts are avoided between ministries on land use, such as one department supporting biofuels whilst another supports REDD.

For the REDD programme, due to its foreseen magnitude and involvement of various stakeholders, an institutional structure and mechanism which will allow transparency, efficient response to issues and challenges at all levels, effective technical support and swift decision making is required. This will require close collaboration between the FBD as overall coordinator at the national level as principal custodians of the forest resources. The FBD is likely to be in the best position to facilitate all technical implementation of the REDD programme through the established institutional framework of the Tanzania Forest Programme. To address specific REDD related issues effectively, a REDD technical subcommittee is in development at government level. This sub-committee will be responsible for facilitation and coordination of all technical implementation issues at all levels. It will advise the DNA Steering committee.

Policy Framework and Legislation

Tanzania has a strong policy framework that will support REDD. Nevertheless there will inevitably be gaps because of the new nature of REDD. The legislation of Tanzania is being reviewed to assess where there are gaps and areas that need addressing to make it appropriate for the implementation of REDD and will need to continue being assessed after the negotiations at COP 15 in Copenhagen have passed.

The policies and laws that govern forest management in Tanzania are some of the most modern in Sub-Saharan Africa and the current review of the Forest Policy (in prep) provides a further opportunity to include issues relating to REDD. As the Tanzanian government is discovering with the influx of biofuels companies into Tanzania, keeping on top of legislation in changing economic circumstances and in time with the birth of new markets is essential (Gordon-Maclean *et al.* 2008).

The potential involvement of the private sector and the realities of a complex product arising from a successful REDD process means that regulations and agreements will be important tools. These will ensure that the private sector plays a positive and effective role without bringing conflict or leading to high transaction costs, reduced rights and increased poverty in local communities.

In terms of legalities, research must explore whether the legal framework in Tanzania supports the delivery of a REDD carbon product and if so how is ownership of carbon stock and emission reductions managed and how will payment distribution be organised are key questions that need to be addressed.

Quadrant 3 - Market access at international level

Conceptual Background

The third quadrant contains the key elements for positioning Tanzania on a potential international REDD market or as a credible recipient of funds from a potential REDD Fund.

It is likely that a potential market or fund will place requirements on REDD emission reductions and providers will have to compete for buyers or funding. As with any market transaction a product has to be brought to the attention of potential buyers and packaged in an attractive way through such as through guarantees, insurance, pricing and even certification. In an emerging market past demonstration of transparency, efficiency and ability to produce quality products are also likely to influence the confidence of REDD emission reductions buyers.

Positioning Tanzania for REDD Readiness

Positioning of Tanzania as a credible provider of REDD emission reductions can take place through several means where the sum of the means will strengthen the position further. Positioning of Tanzania and increasing its market access, irrespective of the UNFCCC negotiations outcome, may include:

- Tanzania acting as a key negotiator on REDD within UNFCCC
- Defining the selling and contracting organization
- Pricing strategies
- Insurance schemes (e.g., through national bundling of REDD emission reductions where part of emission reductions are kept as buffer against fires, pests etc)
- Certification and third party verification (e.g., adhering to voluntary schemes)

In-depth knowledge of the market or fund requirements and the full cost of delivering REDD emission reductions will help with establishing a price and negotiating the price with potential REDD emission reductions buyers and help Tanzania to capture the full potential of REDD.

Investment Facilitation

In order to be seen as a credible and attractive player on the REDD market Tanzania is going to have to ensure it pays an appropriate amount of attention to investment facilitation. Tanzania will need to be able to show to its potential clients, whether donor countries or private investors that the REDD framework it operates is sound, verifiable and able to offer attractive investment yields.

Tanzania's government will need to have a clear understanding and faith in what the country is able to offer and the skills to communicate that offer if the country is going to able to compete successfully against other countries. Market research and knowledge is crucial for Tanzania to be able to successfully engage in this portion of the REDD framework.

Pricing Strategies

Pricing strategies will also be crucial. The pricing framework must ensure that equitable yields are brought all the stakeholders involved in the supply chain and the rights of each assured according to the level of investment, financial or in kind, that has been provided by each stakeholder group. Pricing strategies must take into account the need to be competitive in the REDD market and the outcome will need to be the establishing and negotiating of a Tanzanian REDD carbon price.

Further, a clear policy on payments must be established, particularly whether the forest manager, whether community, government or private sector, or a mixture, is to receive funds in advance (on anticipated reductions in emissions) or after the fact (on actual changes in emissions). The distinction is a crucial one as some forest managers, particularly communities but also government and private sector will not have the capital required to set aside forest areas without some form of upfront payment or compensation. However, advance payments may lead to all manner of risks of not collecting a return on initial capital outlays by the buyer.

Insuring against Risk

These parameters need to be discussed and formally agreed. One way of minimising risk may be the use of insurance schemes managed through bundling of REDD areas (e.g., 20% of emission reductions kept as buffer against fires, pests etc).

Certification Schemes

The verification of emission reductions by a credible third party is crucial to this process. Tanzania needs to be party to discussions on voluntary or enforced certification. Certification by voluntary schemes e.g., CCB, VVS may be the likely initial solution with required schemes to be assessed as REDD activities develop.

Quadrant 4 - Funds transfer and management

Conceptual Background

The fourth quadrant highlights the key elements for contracting, funds transfer, equitable payment distribution and funds management. Different solutions for contracting can be taken depending on the set up of the National REDD Framework and if a national versus sub-national approach has been set up.

REDD emissions reductions may be sold by national level operators (private or governmental), that have bundled emissions reductions, or directly by the producers of REDD emissions reductions, depending on what is agreed in forthcoming negotiations.

Irrespective of the contracting solution, it is assumed that any benefits or payments have to reach forest adjacent communities or the legal forest stewards and owners for further reinforcement of any desired land-use behaviour change.

Once the mechanism for benefit sharing or payment has been designed and implemented recommendations are suggested to be in place for fund management to ensure sustainability, improved livelihoods and optimum reinforcement of land-use behaviour change. Fund management can take the form of direct payments, social or infrastructure services, direct employment, community development grants or microcredit loans and an optimum solution is likely to be location specific.

To maintain the sovereignty and freedom of choice of benefit or payment receivers, decisions on fund management should be discussed through a participatory process and remain at recommendations or guidelines level.

Tanzanian Context

In Tanzania examples for contracting can be sought from the Participatory Forest Management (PFM) process through which considerable attention has been paid to village level financial management systems and fund transaction processes. For fund management there are a number of potential mechanisms in place that can be built upon including small loans and credit schemes that have been tested over several years both by government, nongovernmental organisations and consultants.

Fund Transaction

Key Issues when assessing the funds transfer process include the need for contracts, for a transparent and functional payment mechanism, for funds tracking system and a transparent and accessible reporting process.

Who will sell the REDD carbon will need to be established, depending on the forest area and the kind of ownership involved. For national government managed forest, funds are likely to go direct to the Treasury, earmarked for the Forestry and Beekeeping Division of the Ministry of Natural Resources. For district managed forests, district governments will be the recipients once monies have passed though central government. For communities, monies are likely to be facilitated through national and district government and passed to community fund management schemes.

Careful attention will need to be addressed to the question of who enters into contracts (for example, government, REDD carbon seller or a legal entity representing them?), what mechanisms are needed to ensure payments reach the real forest steward and forest adjacent communities, including to ensure that national and district governments to not take an unreasonable transaction fee and to clarify how reporting will be carried out if it is needed and agreeing who is responsible for producing these reports.

Fund Management

An optimal process for the utilization of REDD funds must be sought. This should question and establish how it will be possible to ensure that funds will re-enforce further behaviour change to reduce emissions from deforestation and forest degradation. The payment method, such as for work input or usage of the forest for REDD activities must be established and the manner in which funds are distributed, such as through small loans or credit schemes and whether through direct payments out through dividends into infrastructure and other social services in the case of community forestry. Lessons from experiences in fund management through the PFM and in Payments for Environmental Services (PES) will be invaluable in creating these systems.

In the case of national and district forests, payments to forest management schemes must be carefully instigated to ensure that a sufficient majority of the funds are reaching the forest management itself rather than taking heavy transaction costs at Treasury or FBD level. In particular, all operational costs and salaries must be paid for in full through this process to ensure the integrity of a particular areas scheme.

Section 4. Proposed UN-REDD Joint Programme for Tanzania

The global overall objective of the UN-REDD Programme is "an international mechanism to provide incentives for REDD is included in a post Kyoto regime" and the Country objective for Tanzania is "Increased Funding for Environment Management from International Environment Funding Mechanisms" which is also outcome 4 under the UN Tanzania Joint Programme on Environment with a focus on Climate Change, land degradation, desertification and natural resource management.

The UN-REDD Programme in Tanzania works within the priorities set by the Government of Tanzania and supports the roadmap towards a country REDD strategy development and implementation developed by FBD and other stakeholders at the national REDD strategy development workshop in Kibaha (January 26th to 30th 2009).

The UN-REDD Programme in Tanzania also seeks to support the agreed elements of the Tanzanian National Forest Programme (2001-2010), which contains four programmes that aim to put in place sustainable forest management in the country:

1) *Forest Resources Conservation and Management Programme* which aims at promoting gender balanced stakeholder participation in the management of forest resources prioritizing ecosystem conservation, catchment areas and sustainable utilization of forest resources.
2) *Institutions and Human Resources Development Programme* aiming at strengthening institutional set up, coordination, establishing sustainable forest sector funding and improving research, extension services and capacity building of human resources.
3) *Legal and Regulatory Framework Programme* focusing on the development of regulatory issues such as the Forest Act, rules, regulations, and guidelines to facilitate operations of participatory management and the private sector.
4) *Forestry Based Industries and Sustainable Livelihoods Programme* enhancing forest industry development through private sector investment, improved productivity and efficiency and by seizing income generating opportunities by non wood forest products.

The overlaps with the National REDD Production Chain are obvious and lay the foundation for implementing REDD successfully in Tanzania without the need for establishment of completely new mechanisms but rather to overlay REDD elements on existing structures and efforts to reach sustainable forest management.

The Joint Programme support to Tanzania will be directed through four outcomes, which aim to be fully aligned with the National Forest Programme and build upon existing in-country capacity with government, research institutes, non-governmental organizations and donor community while bringing in additional long-term international technical assistance:

Outcome 1. National governance framework and institutional capacities strengthened for REDD

The outputs and activities under this component will provide capacity building support to central and zonal forest sector governance to shape a national REDD framework and to clarify roles, structures and social safeguards for effective implementation of REDD in Tanzania. The component will also provide capacity building on the elements of the REDD production chain including financial and legal aspects.

Total outcome budget: US$1,650,000

Output 1.1: A Policy Framework for REDD is in place.

Support to development of a National REDD Framework covering all aspects of the REDD Production Chain, including a social safeguards framework and clarifying the roles and responsibilities of different actors. Policy papers commissioned on a) what has worked in the forest management arena in addressing threats and deforestation drivers (Participatory Forest Management, protected areas, fire management, tree growers organizations, tenure, conservation agriculture), b) Economic analysis of forest goods and services in select forest landscapes, and barriers to triggering sustainable forest management from unsustainable forest resource use, c) Economic analysis of nature based adaptation options in forest landscapes to reduce vulnerability to human-induceds climate change.

Output 1.2: Cross-sectoral institutional and individual capacities built to deliver the REDD production chain.

Delivery of a training programme on (a) carbon markets including REDD methodologies (Carbon Stock Approach; dual markets approach, Stock-Flow Approach) (b) EIA/ SEA; and (c) social safeguards, and a train the trainers scheme targeting Forestry Officers (covering sustainable use oversight, enforcement, policing, reporting, survey/ monitoring work, participatory management).

Output 1.3: FBD has greater capacity to develop and implement the national REDD Strategy in collaboration with other partners

Support provided to FBD to better understand its own capacity with regard to implementing
REDD, have access to required equipment. International technical assistance provided to further assist FBD to be prepared to implement REDD supply chain, following decisions at the Copenhagen UNFCCC conference.

Output 1.4: Cost curves for REDD in Tanzania established

Establish a technical group and build their capacity to participate in the development of REDD cost curves for Tanzania, which assess emissions reduction potential against costs for different land uses (protected areas, production forests, village lands, etc). This activity will be undertaken in partnership with the World Bank.

Outcome 2. Increased capacity for capturing REDD elements within national Monitoring, Assessment, Reporting and Verification (MARV) systems

The outputs and activities under outcome 2 will support Tanzania by increasing data and knowledge creation and management. It will provide a basis for accounting for carbon stocks and fluxes and develop knowledge about carbon and biodiversity concentrations, but also generate feedback to the policy processes tasked to realize verifiable emission reductions within a broader sustainable rural development context. It will also provide capacity building on REDD MARV in the form of training on remote sensing, GIS, IPCC Good Practice Guidance, and will link to the Tanzanian National Forest Inventory work.

Total outcome budget: US$1,400,000

Output 2.1: A system for REDD information synthesis and sharing established at FBD and linked to NAFOBEDA.

Development of an FBD clearing house through collection of all REDD related studies, consultancy reports and findings and conducting a feasibility study for the development of an integrated early warning and monitoring system for detection of changes in forest cover. Provide options to Tanzania in terms of developing a national carbon accounting system for the country.

Output 2.2: Training provided to forest staff on monitoring, assessment, reporting and verification (MARV)

Development and delivery of training modules on remote sensing, GIS, data interpretation and IPCC good practice guidance.

Output 2.3: Forest degradation indices provided for forest landscapes

Assess levels of degradation in sample areas of the National Forest Inventory, and develop
information on the impact of degradation on forest carbon. Use these data to add degradation overlays to the forest inventory in pilot districts, and provide relevant training.

Output 2.4: National maps inform delivery of the REDD Framework

Development of set of maps and associated data on carbon storage and changes in carbon stocks based on available GIS data, modelling and compiled field inventories, including training of National Staff in the work. Companion maps developed on biodiversity, water supply, opportunity costs, and most suitable areas for REDD based on current knowledge, for the entire country.

Outcome 3: Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels

This component builds the capacity of the decentralized forest sector governance to support the REDD production chain. It will integrate the REDD production chain, within the current policy and legislative framework, into district level governance, planning and support systems. The component will also integrate REDD into Protect Area policy, management and make the business case for REDD within PA management.

Total outcome budget: US$550,000

Output 3.1: Decentralized REDD Governance Framework developed and tested in pilot districts

Propose the options for operational REDD systems at district and village level detailing and costing the roles, responsibilities and defining implementation mechanisms. These should build upon systems already in place. Assess how proposed REDD management strategies could be integrated with district land use plans.

Output 3.2: Payment distribution system outlined

Business case developed for PAs to access climate finance and training provided to PA management staff to enable them to deliver ecosystem services. Propose options for REDD payments in Tanzania (taking consideration of timing).

Output 3.3: REDD payments combined with payments for non-carbon services

Support to the development of a strategy for combining REDD finance with other finance for climate mitigation and adaptation and a strategy for REDD market facilitation.

Outcome 4: Broad based stakeholder support for REDD in Tanzania

This component and its outputs and activities will generate knowledge on successful implementation of elements within the REDD production chain which can provide a tool for Tanzania to promote their capacity to reduce emissions from deforestation and forest degradation while creating additional benefits/trade-offs associated with REDD. In parallel the potential and complexity of REDD will be communicated to stakeholders in Tanzania to allow a multi-sectoral approach to the development and implementation of the national REDD framework.

Total outcome budget: US$400,000

Output 4.1: Improved awareness of REDD at national level

Delivery of REDD awareness raising campaign targeting ministries, FBD, forest adjacent communities and the general public. Facilitation of information exchange between the UN-REDD programme 9 pilot countries and joint presentation of national level experience at international high level event.

Output 4.2: Broad consensus built with forest communities regarding the REDD Framework
Facilitation of national forest communities dialogue with regard to their potential involvement in the REDD governance framework. Gathering input to the options for implementing REDD at the community level.

In addition there is an allocation of $200,000 to support the UN oversight on the project

Barriers to Implementing REDD in Tanzania

The REDD production chain diagram and the accompanying descriptive text outlines what needs to be done in Tanzania to implement a successful REDD programme. An analysis of the main root causes of forests loss and degradation in Tanzania has also been provided. Here we identify the main barriers to successful implementation of REDD in Tanzania, that the UN REDD and other programmes supporting REDD will need to overcome. This analysis of barriers is presented against the four outcomes of the UN REDD proposal.

Outcome 1. National governance framework and institutional capacities strengthened for REDD

Past work has indicated that a major barrier to all forms of sustainable forest management in Tanzania is weak governance of the excellent policy, laws and regulations that exist. Past experience also shows that a further barrier to successful forest management is the weak capacity of FBD, and of the district government natural resources departments to manage forestry activities.

These barriers are highly relevant to the implementation of REDD at national and local scales. Overcoming them is a challenge faced by all forestry related projects, but is something where progress has been made at both national and local levels in recent years. UN-REDD will continue to support reforms of governance and the enhancement of capacity to overcome these two linked barriers.

Outcome 2. Increased capacity for capturing REDD elements within national Monitoring, Assessment, Reporting and Verification (MARV) systems

A major barrier for implementing REDD in Tanzania is the technical demands of the MARV. Currently there is a lack of a suitable national system for measuring and monitoring forest cover, forest condition and carbon stocks across the country. Patchy data exists for many locations, but is only partly compiled. A further barrier is the weak state of the current survey and inventory section at FBD, and the lack of remote sensing or analysis capacity within the REDD focal point institution, or in Tanzania in general.

These barriers are a significant concern for the implementation of REDD in Tanzania. This UN-REDD proposal contains a significant element of capacity building and training on MARV, and also provides co-financing to a national forest inventory that through a grid of permanent systematic sample sites aims to provide the baseline data on the status of forests in Tanzania, and the trends in deforestation and degradation over time.

Outcome 3. Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels

A further barrier for implementing REDD in Tanzania is the ability to channel funds from a national level carbon accounting system, down to the operational level for forest management, and feedback results on changes in forest area and forest condition to the national level. Two parallel forest management systems operate in Tanzania; one directly from central government (FBD, TANAPA, Wildlife Division) to forest areas on the ground (reserves of various types), and the other through Regional and Local Government to the district or village governments and their management of reserves and non-reserved forest lands.

In addition, whilst a balance of national and regional forest management programmes has been managed to a workable level to date, the influx of high levels of finance that is considered likely from a successful implementation of the REDD framework brings with it risks of conflict over forest management. Where high levels of funds are found, the risk of one system attempting to dominate the other (such as national over regional, district over community) grows considerably unless clear agreements are put in place.

This UN REDD proposal seeks to explore existing (working) systems of fund transfer to the local implementation levels, in particular the experience provided by the Participatory Forest Management Programme of FBD and PMORALG, and local systems of data collection that might be suitable for verification purposes. These experiences will be relevant the removal of remaining barriers in this element of work and thus assist implementation of all REDD programmes in Tanzania.

Outcome 4. Broad based stakeholder support for REDD in Tanzania

A final major barrier to the implementation of REDD programmes in Tanzania is the lack of understanding of what REDD might be at the national, district and village levels. Linked to this barrier is the lack of clarity emerging from the UNFCCC Poznan on how a REDD mechanism might be structured.

This UN REDD proposal seeks to build as broader understanding of REDD amongst key national and local stakeholders, and also gather opinions from local people on how REDD might be operationalised at their level. This enhanced understanding and ability to engage in the debate will be critical as Tanzania enters the discussions and debates of the Copenhagen UNFCCC COP15 in Copenhagen in December 2009.

Section 5. Results Framework

The results framework for this UN REDD programme in Tanzania is outlined below

UN-REDD Programme – Tanzania Country Action, Pilot phase
Goal: A national REDD framework, that has the confidence of all stakeholders from international buyers of emissions reductions to local communities, generates additional and lasting emissions reductions while avoiding leakage.
One-UN Programme Objective: Increased Funding for Environment Management from International Environment Funding Mechanisms (also outcome 4 and output 4 of the ONE-UN Tanzania Joint Programme on Environment with a focus on Climate Change, land degradation, desertification and natural resource management)
Participating UN organization corporate priority FAO: a) Reduction of the absolute number of people suffering from hunger, progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life, b) Elimination of poverty and the driving forward of economic and social progress for all with increased food production, enhanced rural development and sustainable livelihoods, c) Sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources, for the benefit of present and future generations. UNDP: a) Supporting countries in formulating, implementing and monitoring MDG-based national development strategies centred on inclusive growth and gender equality to ensure equitable, broad-based human development, b) Helping countries strengthen their - electoral and legislative systems, improve access to justice and public administration, and develop a greater capacity to deliver, c) Sharing innovative approaches to crisis prevention, early warning and conflict resolution, d) Strengthen national capacity to manage the environment in a sustainable manner while ensuring adequate protection of the poor. UNEP: a) Support governments and the international community with scientifically rigorous assessments, products and services in support of decision making for improved recognition of the value of environment for sustainable development and through identification of emerging issues, b) Provide governments coordination, guidance and technical assistance for environmental policy consensus, development and implementation at international and regional levels for the management and utilization of natural resources c) Raise awareness of private sector and the general public of the importance of ecosystems services in sustainable development.
Budget **Total budget** : $4,200,000 (includes $200,000 for programme oversight embedded within UNDP budget) **UNEP**: $200,000 **UNDP**: $2,400,000 **FAO**: $1,600,000

JP Outputs	UN Agency	Implementing Partner	Indicative activities for each Output	Resource allocation and indicative time frame* US$			
				Category	[redacted]	12 months	Total
Outcome1. National governance framework and institutional capacities strengthened for REDD							
1.1. A Policy Framework for REDD is in place.	**UNDP**	**VPO** **FBD**	1.1.1 Assess what has worked in the forest management arena in addressing threats and deforestation drivers (Participatory Forest Management, Protected Areas, fire management, tree growers organizations, conservation agriculture) 1.1.2. Support FBD to develop the National REDD Framework covering all aspects of the REDD Production Chain and clarifying the roles and responsibilities of different actors 1.1.3. Support National REDD task force to clarify and provide recommendations on the ownership of carbon and emissions reductions under Tanzanian law 1.1.4 Develop a stakeholder participation plan that defines how stakeholders will participate in the REDD process, building on existing policies on participatory forest management. 1.1.5 Provide Technical Assistance for Tanzania to conduct an options analysis for marketing REDD, covering different market scenarios (voluntary, retail or fund-based approaches) 1.1.6. Support FBD to finalise, print and distribute the new Forest Policy incorporating issues relating to the implementation of REDD	Personnel(staff, consultants &Travel)	[redacted]	130,000	
				Contracts		90,000	
				Training of counter parts		40,000	
				Other direct costs		40,000	
				Total		300,000	300,000
1.2: Cross-sectoral institutional and individual capacities built to deliver the REDD production chain.	**UNDP**	**FBD** **IRA** **VPO;** **Agriculture** **Energy and Minerals;** **PMO-RALG**	1.2.1 Delivery of a training programme that covers (a) potential REDD methodologies proposed to SBSTA (Carbon Stock Approach; dual markets approach, Stock-Flow Approach, etc.), (b) EIA/ SEA; and (c) social and biodiversity safeguards 1.2.2 Train the trainers materials developed to enhance capacity of Forestry Officers at national and district levels (covering REDD business and contract models, sustainable use oversight, enforcement, policing, reporting, survey/ monitoring work, participatory management)	Personnel(staff,consultants& travel)	[redacted]	150,000	
				Contracts		110,000	
				Training of counter parts		50,000	
				Other direct costs		40,000	
				Total		350,000	350,000
1.3 FBD has greater capacity to develop and implement the national REDD Strategy in collaboration with other partners	**UNDP**	**FBD**	1.3.1. Assess capacity of FBD to undertake REDD functions in Tanzania (planning, monitoring and enforcement). 1.3.2. Technical assistance/ advisory services provided to FBD pertaining to the REDD Production chain (planning, monitoring, assessment, verification and enforcement) 1.3.3. Supply of Essential Equipments and Software 1.3.4. One UN support provided to Tanzania REDD programme	Personnel(staff,consultants& travel)	[redacted]	500,000	
				Contracts		70,000	
				Training of counter parts		50,000	
				Other direct costsl		80,000	
				Total		700,000	700,000
1.4 Cost curves for REDD in Tanzania	**UNDP**	**IRA** **UNDP**	1.4.1. Establish an independent group to advise on the methodologies to be followed to calculate the costs of REDD.	Personnel(staff,consultants& travel)	[redacted]	20,000	

JP Outputs	UN Agency	Implementing Partner	Indicative activities for each Output	Resource allocation and indicative time frame* US$			
				Category		12 months	Total
established		**WB**	1.4.2. Establish and agree categories of REDD costs in Tanzania and assess the distribution of costs and benefits (social, private, budget, etc). 1.4.3. Build capacity of stakeholders to understand the methodology and participate in the costs and benefits analysis 1.4.4. Develop a REDD cost curve for Tanzania plotting abatement costs against abatement potential for different land uses (protected areas, production forests, village lands, etc), and deforestation drivers	contracts Training of counter parts Other direct costs Total		250,000 20,000 10,000 300,000	 300,000
Outcome 2: Increased capacity for capturing REDD elements within National Monitoring, Assessment, Reporting and Verification Systems							
2.1: A system for REDD information synthesis and sharing established at FBD and linked to NAFOBEDA.	**FAO**	**FBD**	2.1.1. Development of a FBD clearing house through collection of all REDD related studies consultancy reports/ findings 2.1.2. Identify and assess needs and feasibility of alternative MARV options at the various levels of the REDD supply chain including direct linkages with National Forest Inventories/ Assessments and FRA 2.1.3. Study to collect and analyse the existing methodologies and options for carbon accounting for Tanzania	Personnel(staff,consultants & travel) Contracts Training of counter parts Other direct costs Total		30,000 100,000 50,000 20,000 200,000	 200,000
2.2 Training provided to forest staff on monitoring, reporting and verification (MRV)	**FAO**	**FBD** **SUA**	2.2.1 Development of training modules on remote sensing, GIS,data compilation, storage, analysis, data interpretation, and modelling. 2.2.2 Delivery of training on remote sensing, GIS and data interpretation 2.2.3 Delivery of training on IPCC good practice guidance	Personnel(Staff,consultants& travel) Contracts Training of counter parts Other direct costs Total		30,000 100,000 50,000 20,000 200,000	 200,000
2.3 Forest and other landuse degradation assessment on-going and strengthened	**FAO**	**FBD** **SUA**	2.3.1 Assess forest degradation on the ground linked to remote sensing data in a FRA 2010 RSS sample tile 2.3.2. Assess impact of degradation on carbon storage across the land cover types of Tanzania 2.3..3. Assess complete carbon stocks for various land cover types 2.3.4. Overlays of impacts of degradation on forest carbon added to the forest inventory in pilot districts. 2.3.5. Purchase equipment 2.3.6. Training provided on degradation assessment methodology	Personnel (staff,consultants & travel) Contracts Training of counter parts Other Direct costs Total		300,000 100,000 50,000 150,000 600,000	 600,000

JP Outputs	UN Agency	Implementing Partner	Indicative activities for each Output	Resource allocation and indicative time frame* US$			
				Category		12 months	Total
2.4 Mapping of co-benefits (overlay biodiversity, poverty)	**FAO**	**UNEP-WCMC, IRA, FBD, SUA**	2.4.1 Development of a set of geographical, political and infrastructure basemaps for Tanzania that can be used in REDD related mapping products 2.4.2 Spatial overlay of carbon, with co-benfits such as biodiversity and social factors for the entire country 2.4.3. Outline of methodology and preliminary results of impacts of scenarios on future carbon distribution under climate change and development scenarios. 2.4.4. Workshop, ground truthing opportunities and training provided by UNEP-WCMC and Tanzanian collaborators	Personnel(staff,consultants& travel)		30,000	
				Contracts		300,000	
				Training of counter parts		20,000	
				Other Direct costs		50,000	
				Total		400,000	400,000
Outcome 3. Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels							
3.1 Decentralized REDD Governance Framework developed and tested in pilot districts	**UNDP**	**Districts**	3.1.1 Undertake participatory process that defines how districts can best deploy financial and human resources to manage REDD (funds, staff, equipment) 3.1.2 Assess best practice in existing village governance systems as potential mechanisms for implementing REDD 3.1.3. Assess where REDD management strategies would fit into District and Village Land Use planning	Personnel(staff,consultants& travel)		60,000	
				Contracts		120,000	
				Training of counter parts		100,000	
				Other direct costs		20,000	
				Total		300,000	300,000
3.2 Payment distribution system outlined	**UNDP**	**District FBD**	3.2.1 Identify and assess the efficacy of different payment distribution options (governance, accountability, costs, likely effectiveness) 3.2.2. Propose options for REDD payments in Tanzania (taking consideration of timing)	Personnel(staff,consultants& travel)		30,000	
				Contracts		50,000	
				Training of counter parts		10,000	
				Other direct costs		10,000	
				Total		100,000	100,000
3.3 REDD payments combined with payments for non-carbon services	**UNDP**	**District FBD**	3.3.1 Undertake a study of opportunities and challenges to realize the economic values of non-carbon services that can be linked to the carbon value to produce premium REDD credits (Payments for Water provision, climate adaptation, biodiversity) 3.3.2 Develop an action plan for combining REDD finance with other sources of carbon markets (e.g. CDM, adaptation) and non-carbon finance (i.e. water) in two pilot landscapes (Uluguru, East Usambara).	Personnel(staff,consultants& travel)		30,000	
				Contracts		60,000	
				Training of counter parts		50,000	
				Other direct costs		10,000	
				Total		150,000	150,000

JP Outputs	UN Agency	Implementing Partner	Indicative activities for each Output	Resource allocation and indicative time frame* US$			
				Category	[redacted]	12 months	Total
Outcome 4. Broad based stakeholder support for REDD in Tanzania							
4.1. Improved awareness of REDD at national level	**UNEP**	**FBD/ TFCG**	4.2.1 Awareness raising campaign at national level on the potential for REDD and how it might reduce carbon emissions 4.2.2 Connecting experiences from the 9 pilot countries (information exchange)	Personnel(staff,consultants& travel)	[redacted]	50,000	
				Contracts		80,000	
				Training of counter parts		60,000	
				Other direct costs		10,000	
				Total		200,000	200,000
4.2. Broad consensus built with forest communities regarding the REDD Framework	**UNDP**	**FBD**	4.1.1 National and Regional workshop(s) where Ward and Village representatives from selected Districts provide stakeholder feedback on the potential for REDD. 4.1.2 Pilot rural appraisal to establish community opinions on the potential for REDD	Personnel(staff,consultants& travel)		60,000	
				Contracts		50,000	
				Training of counter parts		80,000	
				Other direct costs		10,000	
				Total		200,000	200,000

FAO	Programme Cost **	1,495,350	1,495,350
	Indirect Support Cost**	104,674.5	104,674.5
UNDP	Programme Cost	2,429,910	2,429,910
	Indirect Support Cost	170,065	170,065
UNEP	Programme Cost	186,916	186,916
	Indirect Support Cost	13,084.12	13,084.12
Total	Programme Cost	4,112,176	4,112,176
	Indirect Support Cost	287,824	287,824

Section 6. Management and Coordination Arrangements

Policy Board

The UN-REDD Policy Board provides overall leadership and sets the strategic direction of the UN-REDD Programme. It decides on Programme financial allocations, in line with the budget parameters set out in the UN-REDD Framework Document, and develops monitoring mechanisms, with a view to ensuring Fund-wide success. The UN-REDD Policy Body will ensure coordination with REDD actors at a global scale, such as the World Bank's FCPF participants' committee. The Terms of Reference and Rules of Procedure for the UN-REDD Policy Board will be made available on the UN-REDD Programme website www.un-redd.net

Technical Secretariat

The UN-REDD Technical Secretariat serves the Policy Board, using the capacities of the participating UN organizations, research institutions and recognized experts. It ensures policies and strategies decided by the Policy Board are implemented and adhered to. The Secretariat will manage the national joint programme review process. It will also manage the UN-REDD's overall monitoring and evaluation function which includes *inter alia* monitoring allocations to and delivery by the country joint programmes, and tracking Programme-wide progress and ensuring that monitoring mechanisms are applied.
The Secretariat's main roles can be summarised as follows:

- Policy Board support
- Partner and external relations
- Quality assurance and oversight of national joint programmes
- Quality assurance and oversight of the International Support Functions described in the Global Joint Programme (hereafter referred to as the "Global Joint Programme")
- Monitoring and knowledge management

Participating UN Organizations' Coordination Group

The Participating UN Organizations' Coordination Group consists of representatives of the three UN agencies: FAO, UNDP, and UNEP. The Coordination Group will have the main function in ensuring active, participatory and well-coordinated engagement by the agencies to implement the goals and objectives of the overall UN-REDD Programme, as well as to provide oversight of the Secretariat consistent with the strategic directions and decisions provided by the Policy Board.

Administrative Agent

The UNDP Multi-Donor Trust Fund (MDTF) Office is the Administrative Agent of the UN-REDD Fund. The MDTF Office manages the distribution of resources and serves as the administrative interface with donors. UNDP's accountability as the Administrative Agent is set out in the policy "UNDP's Accountability when acting as Administrative Agent in MDTFs and/or UN Joint Programmes using the pass-through fund management modality".
The MDTF Office as AA will is responsible for:

- Receipt, administration and management of contributions from donors;
- Disbursement of funds to the Participating UN Organization, in accordance with the instructions of the UN-REDD Policy Board;
- Provide support to FAO, UNDP and UNEP in their reporting functions;
- Compilation of consolidated narrative and financial reports to the Policy Board through the Technical Secretariat, national steering committees and to donors.

The Administrative Agent may undertake additional functions at the request of the Participating UN Organizations. The Administrative Agent will charge a one time fee of 1 per cent for fund administration and fiduciary responsibilities which will be provided in advance on the basis of Programme Documents budgets approved by the Policy Board.

UN Resident Coordinators

The UN-REDD Programme will be supported by UN Resident Coordinators in their strategic leadership of the UN Country Team and relationships with national authorities. The UN Resident Coordinator will provide

ongoing oversight to the joint programme at the national level, ensuring the participating UN organizations are meeting their obligations. The Resident Coordinator is entrusted with supporting the overall programme design under the government's leadership, ongoing programmatic oversight of the UN-REDD activities and UN coordination with the National REDD Office where such exist. The Resident Coordinator also facilitates ongoing monitoring and evaluation of UN-REDD activities in conformity with UN standards. On receipt of consolidated country level reports, the Resident Coordinator will provide an overall assessment of the programme's progress and results. He/she will also facilitate ongoing monitoring and evaluation of Fund-supported activities in conformity with UN standards and any guidance provided by the UN-REDD Technical Secretariat or Policy Board.

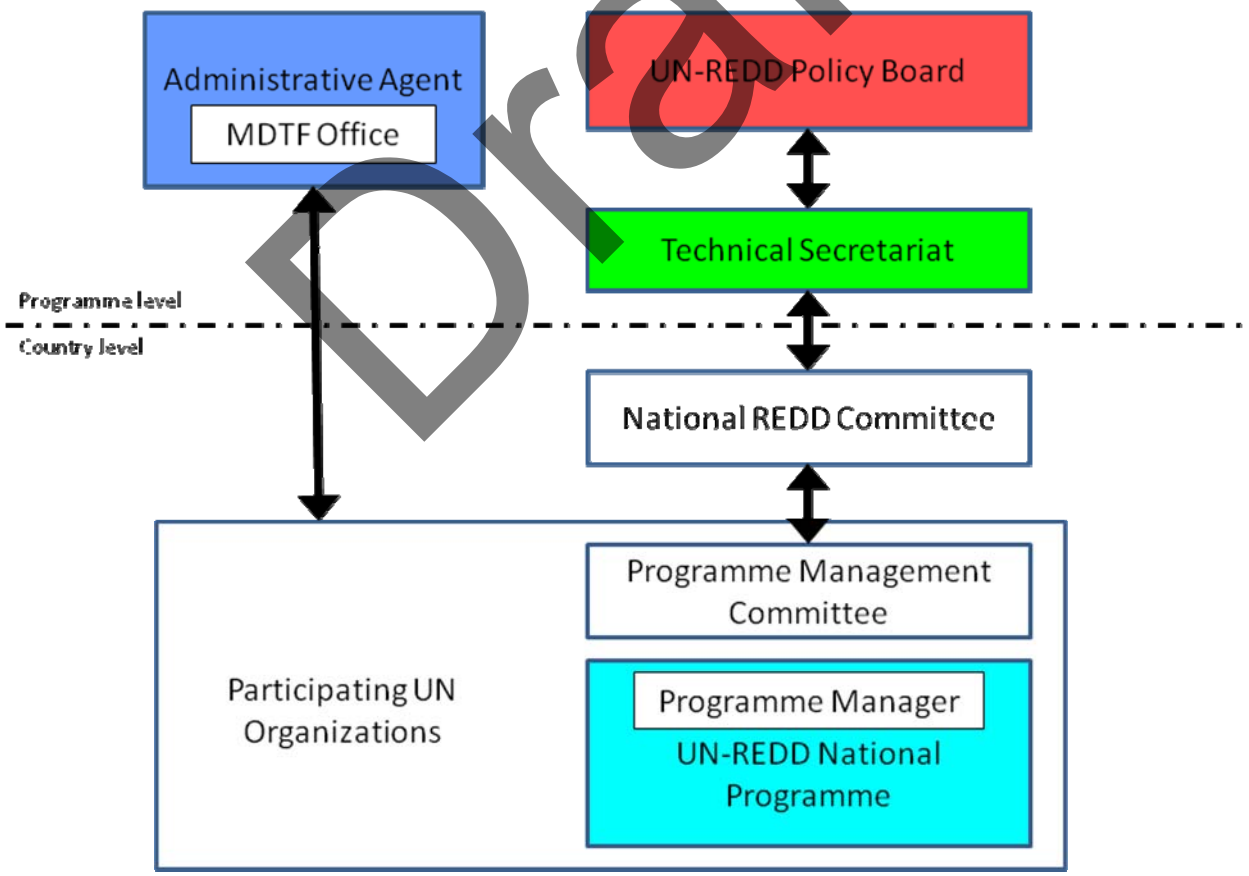
National REDD Committee

A National REDD Steering Committee mechanism will be established to provide operational coordination to the Joint Programme and integration under the UNDAF thematic structures in place at the country level. The establishment of a country-led National REDD Office will be encouraged to provide day-to-day management of the Joint Programme, coordinate national REDD activities, ensure whole-of-government responses, and integrate REDD into national development planning processes.

Resident Coordinators are encouraged to keep Country Team members fully-informed on UN-REDD activities. Involvement of the Government in the deliberations concerning the Fund-related activities in the country is also crucial. The UN-REDD Programme also looks to Resident Coordinators to reach out to NGOs, CSOs, national governments and non-resident UN agencies, where appropriate.

Activities supported by UN-REDD at the country level are expected to take the form of Joint UN Programmes whereby multiple UN organizations collaborate around a common programmatic goal. Funds will be channelled to individual organizations to meet their commitments to the Joint Programme, through the Administrative Agent.

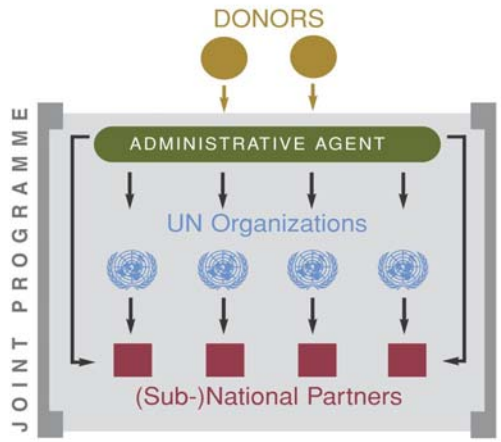
Figure 1: UN-REDD National Management Arrangements



Section 7. Fund Management Arrangements

The UN-REDD Collaborative Programme utilizes the 'pass-through' modality for fund management (see below graphic illustration). Participating UN organizations, in this case FAO, UNDP and UNEP, assume full programmatic and financial accountability for the funds received from the Administrative Agent.

Graphic illustration of fund management for a Joint Programme with Pass-Through Funding



Each Participating UN Organization shall decide on the execution process with its partners and counterparts following the organization's own regulation and rules. National governments, Regional Development Banks and NGOs can receive funding through a Participating UN Organization and act as executing agencies. Participating UN Organizations shall be entitled to deduct their indirect costs on contributions received according to their own regulations and rules, taking into account the size and complexity of the particular programme. Any indirect costs will be reflected in the Joint Programme submitted to the Technical Secretariat. Indirect costs will not exceed 7 per cent of the project budget. These costs cover general oversight, management, and quality control, in accordance with its financial regulations and rules. Specialized service delivery costs for programme and project implementation may be recovered directly, in accordance with the respective Participating UN Organizations' policies.

Each Participating UN Organization will use the funds disbursed to it by the Administrative Agent from the UN-REDD Programme MDTF to carry out the activities for which it is responsible as set out in this document as well as for its indirect costs. The Participating UN Organizations will commence and continue to conduct operations for the UN-REDD Programme as set out in the UN-REDD MOU or as instructed by the UN-REDD Policy Board. The Participating UN Organizations will not make any commitments above the approved budgets, as amended from time to time by the Policy Board. If there is a need to exceed the budgeted amounts, the Participating UN Organization concerned will submit a supplementary budget request to the UN-REDD Policy Board, through the Technical Secretariat.

The Administrative Agent will ensure consistency of the approved Joint Programme with the applicable provisions of the Standard Administrative Arrangements (SAA) entered between donors and the Administrative Agent, and the MOU between the Participating UN Organizations and the Administrative Agent.

Funds will be released in accordance with the UN-REDD Programme Rules of Procedure. These procedures require the Technical Secretariat to submit the following to the Administrative Agent:

- Copy of the signed NJP document with the approved budget
- Submission Form, signed by the Chair of the Policy Board.

Where approved NJPs have an expected duration of more than two years, or where otherwise agreed with the UN Resident Coordinator, funds shall be released on an annual installment basis. Where approved NJPs have an expected duration of less than two years, funds may be released as a single installment.

For the first installment, the funds shall be transferred on the basis of the first year annual workplan attached to the signed NJP document, presented by the respective UN Resident Coordinator.

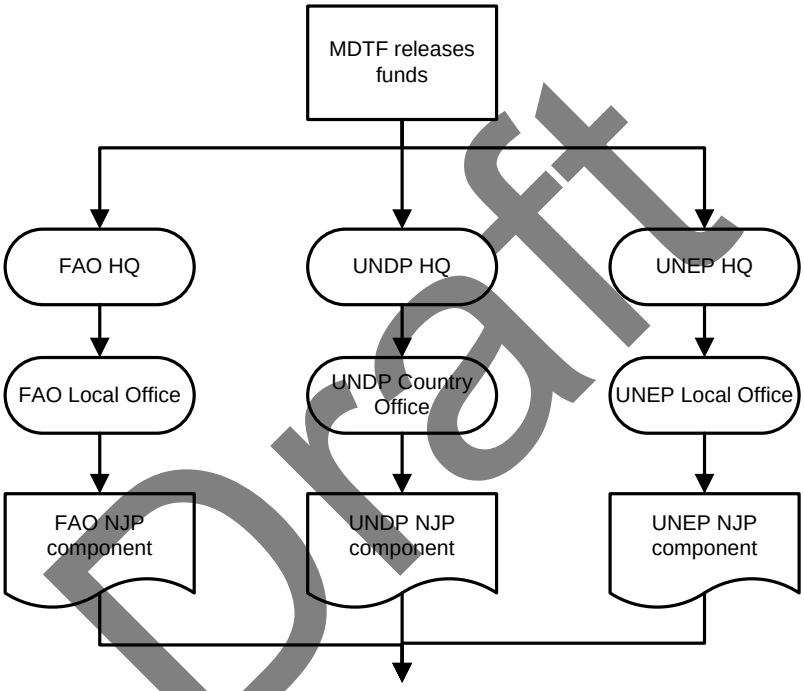
Subsequent annual installments shall be released on instruction from the respective UN Resident Coordinator, on the basis of the following:

- Receipt of the next annual workplan approved by the Programme's National REDD Steering Committee (or equivalent mechanism); and

- Evidence that a formal review of the Programme's progress has been undertaken not more than three months earlier, either in the form of an annual progress report (if the timing coincides) or through the minutes of the National REDD Steering Committee (or equivalent mechanism) where this has been discussed; and
- Only when the combined commitments against the existing advance have exceeded 70%.

Upon receipt of the necessary documentation, the Administrative Agent shall release funds to the Participating UN Organizations as set out in Section II of the Memorandum of Understanding for the Multi-Donor Trust Fund (available at www.undp.org/mdtf/UN-REDD/overview.shtml). The Administrative Agent shall notify the Participating UN Organizations and the UN Resident Coordinator when the funds have been transferred. Each Participating UN Organization shall establish a separate ledger account for the receipt and administration of the funds disbursed to it by the Administrative Agent.

Figure 2: Flow of Funds for National Joint Programmes



The specific cash transfer modalities for the Participating UN Organizations are:

- **FAO**: the FAO local office will transfer funds to the relevant national partners on a reimbursement basis. Funds will be managed according to FAO financial rules and regulations
- **UNDP**: funds will be transferred from UNDP/BDP/EEG to the UNDP Country Office. Fund utilization will be according to the UN Harmonized Approach to Cash Transfers. The payment will take the form of "direct cash transfer", "direct payment" or "reimbursement". Funds will be managed in accordance with UNDP financial rules and regulations
- **UNEP**: the [*insert appropriate UNEP office, or UNDP Country Office*] shall manage its programme funds in accordance with UNEP's financial rules and regulations. Accountable advances will be transferred to the selected partners in this Joint Programme, following the designated modalities outlined in the agreements and/or subcontracts with UNEP.

Section 8. Monitoring, Evaluation, Reporting

Monitoring

Activities carried out by the Participating UN Organization shall be subject to internal and external audit as articulated in their applicable Financial Regulations and Rules. In addition, the Technical Secretariat will consult with the Participating UN Organizations on any additional specific audits or reviews that may be required, subject to the respective Financial Regulations and Rules of the Participating UN Organizations. Participating UN Organizations will provide a summary of their internal audit key findings and recommendations for consolidation by the MDTF Office and submission to the Policy Board and National REDD Committee as applicable.
The Government, particularly the Executing Agency. or Lead Implementing Partner, and the Participating UN Organizations, shall jointly conduct scheduled/annual planning and review meetings for all activities covered in the results framework, monitoring and evaluation plan and work plans covered by this Joint Programme. This will include an assessment of the risks and assumptions to determine whether they are still holding.

Evaluation

The Technical Secretariat will establish an Evaluation Plan which ensures that all programmes supported by the UN-REDD Programme will undertake a final evaluation, which will assess the relevance and effectiveness of the intervention, and measure the development impact of the results achieved, on the basis of the initial analysis and indicators described at the time of programme formulation. Furthermore, the Technical Secretariat from time to time shall lead reviews for programmes as necessary.

Reporting

At the national level, the Participating UN Organizations are required to provide narrative reports on results achieved, lessons learned and the contributions made to the Joint Programme. The information shall be consolidated by the Programme Manager into a narrative report every 6 months. The Technical Secretariat shall provide the Policy Board updates on the implementation progress of the Joint Programme every 6 months, based on information received from the Programme Manager. The UN Resident Coordinator will assist in ensuring the Participating UN Organizations at the country level provide the necessary information. The UN-REDD Coordination Group shall also follow-up with the relevant officers and representatives of the Participating UN Organizations.
The Administrative Agent will provide regular updates on the financial status of the MDTF to the Policy Board, for review and action as appropriate.
Participating UN Organizations in receipt of UN-REDD resources will be required to provide the Administrative Agent with the following statements and reports:

- Narrative progress reports for each twelve-month period ending 31 December, to be provided no later than two months after the end of the applicable reporting period;
- Annual financial reports as of 31 December each year with respect to the funds disbursed to it from the Joint Programme Account, to be provided no later than three months after the end of the applicable reporting period;
- A final narrative report and financial report, after the completion of all Joint Programme activities financed from the UN-REDD MDTF, to be provided no later than 30 April of the year following the financial closing of Joint Programme activities;
- A final certified financial statement, to be provided no later than 30 June of the year following the financial closing of Project activities.

The Administrative Agent shall prepare consolidated narrative progress and financial reports consisting of the reports referred to above submitted by each Participating UN Organization, and shall provide those consolidated reports to the respective Resident Coordinators and subsequently to the UN-REDD Policy Board through the Technical Secretariat.
Subsequently, in accordance with the MOU and the SAA, the Administrative Agent will submit consolidated narrative and financial reports to all UN-REDD Programme donors. Agreed standard UNDG financial and progress reporting formats will be utilised. The Administrative Agent will also submit to donors a certified annual financial statement (Source and Use of Funds).

Information given to the press, to the beneficiaries of the UN-REDD Programme, all related publicity material, official notices, reports and publications, shall acknowledge the role of the UN-REDD donors, the UN Agencies, and any other relevant parties.
Whenever possible and to the extent that it does not jeopardize the privileges and immunities of UN Agencies, and the safety and security of their staff, UN Agencies will promote donor visibility on information, project materials and at project sites, in accordance with their respective regulations, rules, policies and procedures.

Table 7. Joint Programming Monitoring Framework (JPMF)

Tanzania –Country Action						
Expected Outcomes	**Expected Outputs**	**Indicators**	**Means of Verification**	**Collection Method**	**Responsibilities (Lead Agency)**	**Risk and Assumptions**
1. National governance framework and institutional capacities strengthened for REDD						
	1.1 A Policy Framework for REDD is in place.	Agreed Policy Framework exists; REDD Framework incorporated into Policy	Results of Stakeholder engagement; Production of new Forest Policy	Assess Stakeholder Participation Plan; Assessment of new Policy	UNDP	Strong stakeholder participation and technical assistance required
	1.2 Cross-sectoral institutional and individual capacities built to deliver the REDD production chain	Training Programme Produced; Training of Trainers provided	Level of capacity in REDD methodologies increased	Assess training materials; assess level of understanding of trainees	UNDP	Complex training methodologies required; risks of limited understanding
	1.3 FBD has greater capacity to develop and implement the national REDD Strategy in collaboration with other partners	Capacity of FBD to undertake REDD increased	Technical Assistance provided; equipment provided	Assess outputs of Technical Advisor; Inventory of Equipment	UNDP	Technical Advisor operating at sufficient capacity
	1.4 Cost curves for REDD in Tanzania established	Stakeholders understand and produce cost curves methodologies	Group established; cost benefit categories agreed	Assess outputs of cost curves group; assess stakeholder capacity	UNDP	Complex economic training required on cost curves
2. Increased capacity for capturing REDD elements within National Monitoring, Assessment, Reporting and Verification Systems						
	2.1: A system for REDD information synthesis and sharing established at FBD and linked to NAFOBEDA.	REDD related studies collated and analysed; system created	Clearing house of REDD studies exists	Database of REDD studies; methodologies understood	FAO	Thorough collection and analysis of REDD studies required
	2.2 Training provided to forest staff on monitoring, reporting and verification (MRV)	Training modules developed and delivered	Level of understanding of MARV increased	Assess level of understanding on MARV in trainees	FAO	Precise training methods and training are delivered
	2.3 Forest degradation indices provided for forest landscapes	Forest degradation impacts assessed and equipment available	Impacts of forest degradation incorporated into forest inventories in pilot districts	Assessment of forest inventories; assess equipment in use	FAO	Complex training on forest degradation indices required
	2.4 Mapping of co-benefits (overlay biodiversity, poverty)	Availability of maps of co-benefits and	Maps referred to in national REDD framework	Copies of REDD framework documentation	FAO	Strong coordination with the various initiatives for

Tanzania –Country Action						
Expected Outcomes	**Expected Outputs**	**Indicators**	**Means of Verification**	**Collection Method**	**Responsibilities (Lead Agency)**	**Risk and Assumptions**
		available carbon data	documentation and utilized within capacity building			establishing national carbon stocks
3. Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels						
	3.1 Decentralized REDD Governance Framework developed and tested in pilot districts	Participatory process on resource management practices completed	District officials understand and agree on best practices in resource management and governance	Assess capacity of district officials in understanding governance framework	UNDP	Participatory process required in bringing up levels of capacity in district officials
	3.2 Payment distribution system outlined	REDD payment options identified and proposed	REDD Payment distribution scheme exists and is agreed upon	Assess documentation on REDD payment options	UNDP	Strong participation required in identifying payment options
	3.3 REDD payments combined with payments for non-carbon services	Economic values of non-carbon services are understood and incorporated	Payment scheme action plan exists detailing REDD and non carbon services	Assess documentation; challenges and opportunities understood by stakeholders	UNDP	Clear training provided on linking REDD payment scheme with non carbon services
4. Broad based stakeholder support for REDD in Tanzania						
	4.1. Improved awareness of REDD at national level	National awareness raising campaign carried out	Widespread increased awareness of REDD countrywide	Analysis of media, government and NGO responses	UNEP	Effective campaign strategy delivered in practice
	4.2. Broad consensus built with forest communities regarding the REDD Framework	National and regional workshops provided; community opinions gathered	Workshop minutes assessed; information provided on pilot community opinions towards REDD	National, regional and community documentation of consensus building approaches assessed	UNEP	Participation of national regional and community level stakeholders is essential; elite capture avoided

Section 9. Legal Context or Basis of Relationship

The Participating UN Organizations (FAO, UNDP and UNEP) have signed a Memorandum of Understanding (MOU) to implement the UN-REDD Collaborative Programme, which came into effect on 20th June 2008 and ends 20th June 2012.

This Joint Programme document is consistent with the cooperation/assistance agreements signed by the lead UN agencies involved in this programme with the Government of [*insert country*]. For the UNDP, this Document is pursuant to the Country Programme Action Plan and the Standard Basic Assistance Agreement (SBAA) it signed with the Government of the [*insert country*]. All provisions in the SBAA therefore apply to this document. Consistent with Article III of the SBAA, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP‟s property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and
- assume all risks and liabilities related to the implementing partner‟s security, and the full implementation of the security plan.

The **UNDP** reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

On the part of the **FAO**, this document is consistent with the basic agreement with Government of [*insert country*] as indicated in the exchange of letters between the Government of [*insert country*] and FAO on [*insert date(s)*].

The FAO Representative shall represent the Organization in [*insert country*], and shall be responsible within the limits of the authority delegated to him/her, for all aspects of the Organization's activities in the country. In the effective performance of his/her functions, the FAO representative shall have access to appropriate policy and planning levels of Government in the agriculture, fishery and forestry sectors of the economy, as well as, to central planning authorities. He/she shall maintain close liaison with the Government's coordinating agency for external assistance and thereby serve to keep all the appropriate Government agencies fully informed on all aspects of the policies and procedures of FAO‟s programme in [*insert country*].

For **UNEP**, in line with its position as a non-resident agency with a global mandate for technical cooperation and capacity building, the signed Joint Programme document shall be the legal basis of UNEP's relation with the Government of [*insert country*] within the context of this programme. UNEP will work in close coordination with the programme management team.

The Participating UN Organizations agree to undertake all reasonable efforts to ensure that none of the funds received pursuant to UN-REDD are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by Participating UN Organizations do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this programme document.

Section 10. Work plans and budgets

The Policy Board may approve national Joint Programmes with budgets that identify the allocation of the programme and indirect costs to each Participating UN Organization. However, before funds may be released each Joint Programme must include a budget using the 2006 UNDG harmonized budget categories for each Participating UN Organization's portion of the programme.
The work plan and budget of this Joint Programme have been developed jointly by the three Participating UN Organizations and the Government of [*insert country*]. The work plan details the expected outcomes, outputs and activities to be carried out within the programme, the implementing partners, timeframes and planned inputs from the Participating UN Organizations. An annual work plan and budget will be produced each year for each Participating UN Organization, subsequent to the decisions of the annual/regular reviews. Each work plan will be approved by the UN-REDD Technical Secretariat.

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Appendix 1: Implementation Plan – Tanzania UN REDD Programme 2009-2010

JP Outputs	UN Agency	Partner	Indicative activities for each Output	Resource allocation and indicative time frame* US$		
				Timeframe	Category	Cost
Outcome1. National governance framework and institutional capacities strengthened for REDD						
1.1. A Policy Framework for REDD is in place.	UNDP	VPO FBD	1.1.1 Assess what has worked in the forest management arena in addressing threats and deforestation drivers (Participatory Forest Management, Protected Areas, fire management, tree growers organizations, conservation agriculture) 1.1.2. Support FBD to develop the National REDD Framework covering all aspects of the REDD Production Chain and clarifying the roles and responsibilities of different actors 1.1.3. Support National REDD task force to clarify and provide recommendations on the ownership of carbon and emissions reductions under Tanzanian law 1.1.4 Develop a stakeholder participation plan that defines how stakeholders will participate in the REDD process, building on existing policies on participatory forest management. 1.1.5 Provide Technical Assistance for Tanzania to conduct an options analysis for marketing REDD, covering different market scenarios (voluntary, retail or fund-based approaches) 1.1.6. Support FBD to finalise, print and distribute the new Forest Policy incorporating issues relating to the implementation of REDD	Mar 09 to Nov 09	Personnel(staff, consultants & travel)	$120,000
				Jun 09 to Nov 09	Contracts	$90,000
				Oct 09 to Nov 09	Training of counterparts	$40,000
				Aug 09 to Dec 09	Other direct costs \	$40,000
				Feb 2010 to Mar 2010	**Total**	**$300,000**
1.2: Cross-sectoral institutional and individual capacities built to deliver the REDD production chain.	UNDP	FBD IRA VPO; Agriculture Energy and Minerals; PMORALG	1.2.1 Delivery of a training programme that covers (a) potential REDD methodologies proposed to SBSTA (Carbon Stock Approach; dual markets approach, Stock-Flow Approach, etc.), (b) EIA/ SEA; and (c) social and biodiversity safeguards 1.2.2 Train the trainers materials developed to enhance capacity of Forestry Officers at national and district levels (covering REDD business and contract models, sustainable use oversight, enforcement, policing, reporting, survey/ monitoring work, participatory management)	Aug 09 to Mar 2010	Personnel(staff,consultants & travel)	$150,000
					Contracts	$110,000
					Training of counterparts	$50,000
					Other direct costs	$40,000
					Total	**$350,000**
1.3 FBD has		FBD	1.3.1. Assess capacity of FBD to undertake REDD functions in Tanzania	Mar 09 to Mar	Personnel (staff, consultants &	$500,000

greater capacity to develop and implement the national REDD Strategy in collaboration with other partners	UNDP		(planning, monitoring and enforcement). 1.3.2. Technical assistance/ advisory services provided to FBD pertaining to the REDD Production chain (planning, monitoring, enforcement) 1.3.3 Essential equipment supplied 1.3.4 One UN support provided to Tanzania REDD programme	2010	travel) Contracts Training of counterparts Other direct costs **Total**	 $70,000 $50,000 $80,000 **$700,000**
1.4 Cost curves for REDD in Tanzania established	UNEP, UNDP	IRA UNDP WB	1.4.1. Establish an independent group to advise on the methodologies to be followed to calculate the costs of REDD. 1.4.2. Establish and agree categories of REDD costs in Tanzania and assess the distribution of costs and benefits (social, private, budget, etc). 1.4.3. Build capacity of stakeholders to understand the methodology and participate in the costs and benefits analysis 1.4.4. Develop a REDD cost curve for Tanzania plotting abatement costs against abatement potential for different land uses (protected areas, production forests, village lands, etc), and deforestation drivers	Apr-09 to Dec 09 May 09 to Jul 09 Jan 10 to Mar 10	Personnel (staff, consultants & travel) Contracts Training of counterparts Other direct costs **Total**	$25,000 $245,000 $20,000 $10,000 **$300,000**
Outcome 2: Increased capacity for capturing REDD elements within National Monitoring, Assessment, Reporting and Verification Systems						
2.1: A system for REDD information synthesis and sharing established at FBD and linked to NAFOBEDA.	FAO	FBD	2.1.1. Development of a FBD clearing house through collection of all REDD related studies consultancy reports/ findings 2.1.2. Identify and assess the needs and feasibility for MARV at the various levels of the REDD supply chain 2.1.3. Study to collect and analyse the existing methodologies and options for carbon accounting for Tanzania	April 09 to Sep 09	Staff Contracts Training of counterparts Other direct costs **Total**	$30,000 $100,000 $50,000 $20,000 **$200,000**
2.2 Training provided to forest staff on monitoring, reporting and verification (MRV)	FAO	FBD, SUA	2.2.1 Development of training modules on remote sensing, GIS and data interpretation 2.2.2 Delivery of training on remote sensing, GIS and data interpretation 2.2.3 Delivery of training on IPCC good practice guidance	April 09 to Sep 09 Jul to Sep 09 Oct 09 to Nov 09	Personnel (staff, consultants & travel) Contracts Training of counterparts Other Direct costs **Total**	$30,000 $100,000 $50,000 $20,000 **$200,000**

2.3 Forest degradation indices provided for forest landscapes	FAO	FBD, SUA	2.3.1 Assess forest degradation on the ground linked to remote sensing data in a FRA 2010 RSS sample tile 2.3.2. Assess impact of degradation on carbon storage across the land cover types of Tanzania 2.3..3. Assess complete carbon stocks for various land cover types 2.3.4. Overlays of impacts of degradation on forest carbon added to the forest inventory in pilot districts. 2.3.5. Purchase equipment 2.3.6. Training provided on degradation assessment methodology	Apr 09 to Dec 09	Personnel (staff, consultants & travel)	$300,000
				Aug 09 to Oct 09	Contracts	$100,000
				Nov 09 to Dec 09	Training of counterparts	$50,000
				Apr-09	Other direct costs	$150,000
				Nov 09 to Dec 09	**Total**	**$600,000**
2.4 Mapping of co-benefits (overlay biodiversity, poverty)	FAO	UNEP-WCMC IRA FBD SUA	2.4.1 Development of a set of geographical, political and infrastructure basemaps for Tanzania that can be used in REDD related mapping products 2.4.2 Spatial overlay of carbon, with co-benfits such as biodiversity and social factors for the entire country 2.4.3. Outline of methodology and preliminary results of impacts of scenarios on future carbon distribution under climate change and development scenarios. 2.4.4. Workshop, ground truthing opportunities and training provided by UNEP-WCMC and Tanzanian collaborators	Aug 09 to Mar 2010	Personnel (staff, consultants & travel)	$30,000
					Contracts	$300,000
				Jan 10 to Mar 10	Training of counterparts	$20,000
				Feb 10 to Mar 10	Other direct costs	$50,000
					Total	**$400,000**
Outcome 3. Improved capacity to manage REDD and provide other forest ecosystem services at district and local levels						
3.1 Decentralized REDD Governance Framework developed and tested in pilot districts	UNDP	Districts	3.1.1 Undertake participatory process that defines how districts can best deploy financial and human resources to manage REDD (funds, staff, equipment) 3.1.2 Assess best practice in existing village governance systems as potential mechanisms for implementing REDD 3.1.3. Assess where REDD management strategies would fit into District and Village Land Use planning	Apr 09 to Aug 09	Personnel (staff, consultants & travel)	$60,000
					Contracts	$120,000
				Jun 09 to Aug 09	Training of counterparts	$100,000
				Oct 09 to Nov 09	Other direct costs	$20,000
					Total	**$300,000**
3.2 Payment distribution system outlined	UNDP	District, FBD	3.2.1 Identify and assess the efficacy of different payment distribution options (governance, accountability, costs, likely effectiveness) 3.2.2. Propose options for REDD payments in Tanzania (taking consideration of timing)	Apr 09 to Jul 09	Personnel (staff, consultants & travel)	$30,000
					Contracts	$50,000
					Training of counterparts	$10,000
					Other direct costs	$10,000

					Total	**$100,000**
3.3 REDD payments combined with payments for non-carbon services	UNDP	District, FBD	3.3.1 Undertake a study of opportunities and challenges to realize the economic values of non-carbon services that can be linked to the carbon value to produce premium REDD credits (Payments for Water provision, climate adaptation, biodiversity) 3.3.2 Develop an action plan for combining REDD finance with other sources of carbon markets (e.g. CDM, adaptation) and non-carbon finance (i.e. water) in two pilot landscapes (Uluguru, East Usambara).	May 09 to Jan 2010	Personnel (staff, consultants & travel)	$30,000
					Contracts	$60,000
					Training of counterparts	$50,000
					Other direct costs	$10,000
					Total	**$150,000**
Outcome 4. Broad based stakeholder support for REDD in Tanzania						
4.1. Improved awareness of REDD at national level	UNEP/ FBD/ TFCG	IRA	4.2.1 Awareness raising campaign at national level on the potential for REDD and how it might reduce carbon emissions 4.2.2 Connecting experiences from the 9 pilot countries (information exchange)	May 09 to Aug 09	Personnel (staff, consultants & travel)	$50,000
					Contracts	$80,000
					Training of counterparts	$60,000
					Other direct costs	$10,000
					Total	**$200,000**
4.2. Broad consensus built with forest communities regarding the REDD Framework	UNDP	IRA, FBD	4.2.1 National and Regional workshop(s) where Ward and Village representatives from selected Districts provide stakeholder feedback on the potential for REDD. 4.2.2 Pilot rural appraisal to establish community opinions on the potential for REDD	Aug 09 to Dec 09	Personnel (staff, consultants & travel)	$60,000
					Contracts	$50,000
					Training of counterparts	$80,000
					Other direct costs	$10,000
					Total	**$200,000**
5. UNDP Management Oversight						
5.1 UNDP Management Oversight	UNDP	FBD	Management Oversight (administration, oversight and project monitoring)	Mar 09 to Mar 10	Personnel (staff, consultants & travel)	$90,000
					Supplies, commodities, equipment & transport	$50,000
					Other direct costs	$60,000
					Total	**$200,000**