

CARE TANZANIA

INSTITUTIONAL, POLICY & LIVELIHOODS ANALYSIS OF COMMUNITIES ADJACENT TO ULUGURU MOUNTAINS CATCHMENT RESERCE EASTERN ARC MOUNTAINS

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1. EXECUTIVE SUMMARY

- 1) The objective of the future project is essentially about improving governance of the forest resources of the Uluguru Mountains.
- 2) Presently the wider policy framework appears to be generally supportive, but the project will be implemented in a policy environment that is continually evolving in relation to natural resource management. In addition to the forest sector, land, water and agricultural sector policies are critical.
- 3) The project is likely to require access to legal advice in relation to land legislation, competing national and local interests and the establishment of any financial mechanisms or modalities (including the proposed trust fund for the Eastern Arc).
- 4) Support to the agricultural sector through the project requires careful scrutiny to ensure that project inputs result in complementary agricultural and conservation outputs leading to improved biodiversity status of the catchment. An integrated and holistic approach should be taken to balance project interventions.
- 5) Priority must be given to achieving the national livelihood objectives (i.e. water management) over any local livelihood issues and this will demand careful site selection for project interventions as well as careful choice of intervention to ensure that project activities aimed at improving local livelihoods do not compromise achieving these national objectives.
- 6) The new forest policy and its implications are not well understood within the forest sector, therefore, the project needs to put a substantial support package in place to develop this capacity within the sector.
- 7) A balanced approach to both traditional and modern institutions existing at village level will be required to achieve this projects aims and objectives. Importantly, each village appears to be different while changes to the policy framework (land and local government) are also likely to affect village institutional dynamics. Careful participatory research carried out on a village-by-village basis will be required.
- 8) Failure to develop a suitable partnership structure for project management and implementation would represent a serious threat to a project of this complexity; there is a diverse group of stakeholders with conflicting sets of interests. Project design must address this issue. Additionally project design will need to facilitate the proper involvement of all government stakeholders and support their roles, as defined within scope of the policy framework.

- 9) The study found evidence that the village livelihoods in the three study sites are dependent on forest resources. Moreover, that there is no single livelihoods practice that is not somehow linked to the forest or its resources.
- 10) Dependence on forest resources was greatest in the more rural sites and relatively low dependence in peri-urban sites. Access to off-farm activities in peri-urban areas provides opportunity to diversify income sources. However, current levels of dependence on forest resources are unsustainable in the longer term.
- 11) Market opportunities resulting from a growing demand for fruits and vegetables together with improvement in transport between Dar es Salaam and Morogoro have increased the demand for land for cultivation in this area. Forest land, which is considered vacant, provides the best opportunity for land searching communities.
- 12) None of the villages included in the study appeared to be impoverished according to standard CARE indicators. Lack of access to amenities in the more remote villages can be attributed to the level of development rather than impoverishment.
- 13) Neither lack of food security nor serious income security was evident, but the forest and its resources play a major role in underpinning peoples' livelihoods
- 14) A key issue for the project is to what extent project interventions are likely to impact negatively on local livelihoods. Negative local perceptions of project on livelihoods will have implications for participation and reduce the potential for mitigating any impacts. It is likely that this project will need to consider strategies to mitigate the impact of project interventions.

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Acronyms

CBFM	Community-based Forest Management
CBO	Community-based Organisation
CFR	Community Forest Reserve
DED	District Executive Director
DFO	District Forestry Officer
FBD	Forest & Beekeeping Division, Ministry Natural Resources & Tourism
FR	Forest Reserve
GDP	Gross Domestic Product
GEF	Global Environment Facility
ICD	Integrated Conservation and Development
ILFEMP	Institutional & Legal Framework for Environmental Project
JFM	Joint Forest Management
MNRT	Ministry Natural Resources & Tourism
NFP	National Forest Policy
NGO	Non Governmental Organisation
PA	Protected Area
PRA	Participatory Rapid Appraisal
RNRO	Regional Natural Resources Officer
UMADEP	Uluguru Mountain Agriculture Development Project
UMBCP	Uluguru Mountains Biodiversity Conservation Project
USPP	Uluguru Slopes Planning Project
VFMA	Village Forest Management Area
VLFR	Village Land Forest Reserve
WCST	Wildlife Conservation Society of Tanzania

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2. Introduction

The studies documented in this report contribute to a situation analysis for the Uluguru Mountains of Tanzania aimed at informing the design process for the development of a Global Environment Facility (GEF) Project in the Ulugurus (Annex 1). The time available for the fieldwork was limited (Annex 2) and therefore this report should not be interpreted as a comprehensive or all-encompassing analysis, but rather it is the product of a rapid appraisal. The objective of the report is to highlight institutional, policy and livelihood issues that the project design needs to address, either directly, or through flagging the issues and building inputs into the project such that implementation will address them. In short, it identifies institutional, policy and livelihoods issues that are likely to be significant for the project design process.

The Ulugurus represent part of the Eastern Arc chain of Mountains, which are widely considered to be rich in biodiversity and to display high levels of endemism: these forests are classified as a biodiversity hot spot of global significance. In reality there are numerous forest patches and areas within the Ulugurus, but the studies comprising this report focused on the two Forest Catchment Reserves of the Uluguru North and Uluguru South only. This decision was taken because the forests of Uluguru North and South represent the highest category of protected area (PA) in the locality, containing many of the rare and endemic species characteristic of the Eastern Arc, yet despite this protected status they are coming under pressure from encroachment by the local *Waluguru* population, a situation which is threatening their long term future. Significantly, these particular forests perform a vital water catchment function in representing the catchment area for the Ruvu River that is the main water supply for the urban areas of Morogoro and Dar es Salaam. Failure to adequately protect this essential role is therefore of significant national importance.

The conservation problem of the Ulugurus can be summarised as a conflict between the national interests for water management, which largely coincides with international interests to protect global biodiversity values, versus the local interest and dependence on using both the land and resources comprising these forests. The future GEF project needs to place reconciliation of these conflicting demands at its centre with the implications being that the project will essentially be about governance as applied to the remaining forest areas in the mountains.

This combined study concentrated on 3 reserve-adjacent villages. The villages were selected to draw out similarities and differences between community institutional processes and *Waluguru* livelihoods according to factors such as location (peri-urban or rural) and the level of isolation from social services and transport facilities. The result of the approach was that the geographical scope of the study was limited and, therefore, this report should be read in conjunction with Hymas (2000) a consultancy report that conducted a wider survey of the proposed study area, but with a focus on the environmental pressures.

The specific aims of this report are threefold:

- i) To present a current, situation analysis of the relevant institutional and policy frameworks affecting conservation in the Uluguru Mountains;
- ii) To present an overview of people's livelihood strategies in the Uluguru Mountains paying particular attention to the role of natural resources within those strategies; and
- iii) To use this information to make an assessment as to the potential impacts and implications of establishing a biodiversity conservation project that seeks to work with the local communities to conserve the environment of the Ulugurus.

In addressing these aims the report raises issues such as:

- i) Which sets of conservation and livelihood objectives and values are of greatest importance and how might any conflicting objectives be approached?
- ii) What inputs should the project design contain to reach those objectives and maintain important conservation values?
- iii) How can a multi-stakeholder project be established such that the objectives can be reached?
- iv) How can a consortium of partner organisations (drawn from Central Government, Local Government and Non-governmental agencies) work effectively to manage what will be a complex project?
- v) What are the likely constraints to project implementation?
- vi) How might constraints and/ or potential negative impacts from project implementation be mitigated?

The layout of the report is unusual in that the two studies need to be presented as stand alone sections, notwithstanding the fact that they were the product of a single PRA input involving considerable iterative discussion in the field resulting in the overall findings. Therefore, following this Introduction (Section 2), Section 3 provides an overview of the methods, which because of the nature of the studies and the time factors involved, required careful planning and execution. Section 4 presents the consultancy assessment of the institutional and policy issues and section 5 the equivalent assessment for the livelihoods analysis. Each of these two section ends with a summary box of key points. Where original data is considered as adding to the analyses it is presented in the form of Annexes at the end of the report.

3. METHODS

The two studies were planned from the outset such that the various participatory tools could be triangulated to verify the information, thereby improving its overall quality and feeding into both studies. The empirical information was then placed within the context of relevant existing studies and policy documents available to the consultants (see References).

3.1 Data Collection

The fieldwork was carried out by the consultants in conjunction with a field team of six people from relevant disciplines (Annex 2). Prior to leaving Dar es Salaam the two consultants and the CARE staff member met to discuss and agree upon methods and approach. On arrival in Morogoro an initial planning session was held with the field team to discuss field logistics, use of the tools and assign data collection responsibilities according to skill sets. The planning session also provided an opportunity for the team to begin getting to know one another. In the field, the field process involved daily debriefing and crosschecking to identify gaps in data collection and to recognise emerging issues for further probing.

The tools used in the villages were:

- Livelihood analysis case studies (Annex 3);
- Focus group discussions to examine trends in resource use at each site (note that women and men were separated to draw-out any gender differences);
- Preference ranking of resources identified by the trends analysis.
- Village Government institutional discussions (note that these discussions were conducted simultaneous with the focus groups to reduce potential bias from village elites in the trends data);
- Semi-structured interviews with individuals and small groups to follow up on any key issues identified.

During the first day a review of Venn diagrams that had been produced by the Uluguru Slopes Planning Project (USPP) was used to try to stimulate discussion with the Village Government Group about the local institutions in Lanzi village and this led to the group preparing their own Venn diagram for Lanzi. However, there was insufficient time to do the activity properly and approach using earlier Venn diagrams to initiate discussion failed to draw out the institutional issues adequately. Consequently, the team agreed to drop the activity and concentrate on using semi-structured interview techniques to assess the institutional issues. It is worth noting that the use of Venn diagrams is often poorly understood by both facilitators and villagers: the USPP diagrams focused largely on village infrastructure (e.g. schools, shops and maize machines) rather than the institutions associated with them, which is a common output of generalized Venn diagrams, produced in short time periods, where the facilitators have failed to convey the purpose of the diagram fully. As the present study was more concerned to get to the root of institutional relations between traditional and modern village systems in each study village applying and using this tool was abandoned.

Additional data collection specific to the policy and institutional study involved:

- A mini-workshop (Annex 4) carried out with foresters from central government, local government and the Wildlife Conservation Society Tanzania (working on forestry issues of the Ulugurus) to assess foresters roles, responsibilities, perceptions and concerns related to the National Forest Policy (1998) and related policy issues; and
- Key person interviews in Morogoro and Dar es Salaam

3.2 Comparison with Other Studies

Secondary data from the Uluguru Slopes Planning Project (USPP) was suitable for general comparison with the data from this study and it had been reviewed as part of the study preparations. The conclusions and recommendations of the USPP (1996) are consequently re-evaluated in this report where appropriate. USPP data from two villages, Nyandira and Bigwa, is compared more specifically with the present study because of the location of these villages within the same wards as two of the villages surveyed during this study (Table 1.1). Nevertheless, one conclusion of this study, supported by the observations made by Hymas (2000), is that individual Uluguru villages are sufficiently distinct and different to require individual assessment as part of the planning process and lead in to any interventions. Acting on the basis of generalisations is likely to present a particular problem for work in the Ulugurus: the history of the *Waluguru* people (see Section 3.2.1) combined with isolated living conditions in many villages has resulted in radically different institutional dynamics existing, even between villages that are geographically very close to one another, which might have been expected to show a high degree of homogeneity.

Table 2.1 Villages selected for this study and villages surveyed during the USPP (1996) study from the same Ward. The 1988 population census data is shown in parenthesis () while the current population estimates from UMBCP (2000) are shown in square brackets [] where available.

VILLAGES		WARD DETAILS
This Study	USPP (1996)	
Lanzi (1,158) [1,497]	-	Kibungu Ward, Matombo Division (6,068) [7,844]
Ng'ungulu (1,268) [1,639]	Nyandira (2,692) [3,480]	Tchenzema Ward, Mgeta Division (9,201) [11,894]
Lukuyu	Bigwa (1,757)	Morogoro Municipal Formerly Kingolwira Ward, Kingolwira Division, Morogoro Urban (19,753)

3.3 Implications of Demographic Growth Patterns

Although Table 2.1 contains population data these numbers must be interpreted carefully. The most recent national census statistics available date from 1988. However, changes to administrative boundaries have affected the status of one of the settlements included in the present study and these changes drew attention to the importance of demography of the wider area and the implications for the proposed project. In 1988 Lukuyu was a considered a sub-village of Bigwa falling within Kingolwira Ward, which was then considered part of Morogoro Urban District. Comparing the 1978 and 1988 census data available for Morogoro Urban and Rural

Districts shows that the rate of increase of the population in the urban area was much greater than that in the rural area (Table 2.2). Moreover, settlements such as Bigwa (including Lukuyu) have continued to grow disproportionately due to in-migration and because of their prime location close to Morogoro. In the last 10 years Morogoro has rapidly developed and it is now a substantial urban area with a developed agricultural economy based on the marketing of fresh fruit, vegetables (and forest products) both locally and in Dar es Salaam. Recently Bigwa and Lukuyu have been incorporated into the municipality. The implications for the present studies, but more particularly for the proposed project, are that not only do livelihood needs and ecological pressures linked to rural communities have to be considered in relation to conservation of the Ulugurus, but also those of peri-urban communities.

Table 2.2 Comparison of population data for Morogoro Rural and Urban Districts 1978 and 1988.

District	Census Data		Relative Rate of Increase
	1978	1988	
Morogoro Rural	344,083	428,702	1.24
Morogoro Urban	74,114	117,509	1.59

4. INSTITUTIONAL & POLICY ASSESSMENT

The ToR for the institutional and policy assessment (Annex 1) highlighted the following two outputs from the study:

- 1 To understand the community level institutional dynamics (both government and CBO) in relation to joint management of the Uluguru forest resources of the Ulugurus.
- 2 To assess the roles and functions of the statutory and customary institutions involved in natural resource management at the different levels of local government, the relationships between these institutions and the policies that guide their actions.

This section of the report begins by setting out the current policy setting as this establishes both the context in which the GEF project is being developed as well as defining its potential scope. It then considers the institutional issues organising the information under three headings: (i) Village; (ii) Government (examining both local and central government roles); and (iii) Civil Society. It examines the implications of the existing institutional dynamics for the project.

4.1 Policy Framework

Following the introduction of the concept of sustainable development and the initiation of community approaches to natural resource management in the 1990s, the policy and legislative framework relating to the environment and natural resources has changed substantially in Tanzania. New policies have been developed and are now in place for many sectors relevant to a conservation project in the Uluguru Mountains (e.g. forest and wildlife) while supporting legislation is imminent. This policy and legislative framework provides the context for implementation of the future project.

4.1.1 Natural Resources: Forests

Within the forest sector specifically, the National Forest Policy (MNRT, 1998) has set a new overall goal to “enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations”. As part of this new direction the policy introduces the concept of Joint Forest Management (JFM), which it defines as meaning the “involvement of local communities or non-governmental organisations in the management and conservation of forests and forest land with appropriate user rights as incentives”. This is a key concept for this project, but, importantly, it is also a concept that many of Tanzania’s foresters are neither comfortable with nor fully conversant with yet (see section 3.2). New legislation in support of the 1998 policy is imminent; at the time of this study the legislation was in the form of the Bill for a Forest Act (4th Draft, 2000).

The draft Bill specifies four categories of forested land when private¹ land is included, and five types of Forest Reserve that the future project could find itself working with or developing in association with the Uluguru communities. Different roles are envisaged for the different sets of stakeholders in forest management depending on the category

¹ Private Forests occur on either general or village land when a right of occupancy or lease has been granted or where a customary right of occupancy exists

of forest, which is determined by a forests strategic importance and designated function. The level of authority and responsibility that can be devolved down to a community hinges on the forest management options available, which are determined by the category of the forest. Table 3.1 outlines the management options that will involve communities for each forest category.

Table 3.1 Classification of Forest and the community management options under the National Forest Policy (1998) and new Forest Act (Draft August, 2000)

CATEGORY OF FOREST	SUB-CATEGORIES	MANAGEMENT OPTIONS FOR COMMUNITIES
National Forest Principle functions: production, protection or nature forest reserve of national and international significance	Designated Forest Reserve	Village Forest Management Area (VLMA)
	Designated Nature Forest Reserve	Specified area of a national forest is placed under the management of a village under the terms of a Joint Management Agreement
	Forests on general land not occupied, on village land, reserved, or leased to a person or body	
Local Authority Forest Principle functions: sustainable production of timber and other forest resources, watershed protection;	Designated Local Authority Reserve	Village Forest Management Area (VLMA)
	Forests on general land not occupied, on village land, or leased where management is through local authority	As above except with reference to forested land under the jurisdiction of a local authority
Village Forest Forests that are on village land	Declared or gazetted Village Land Forest Reserves	Village Land Forest Reserve (VLFR) Forest declared on common village land and managed by a Village Forest Management Committee elected by the Village Assembly and approved by the Village Council
	Community Forest Reserves	Community Forest Reserves (CFR) Forest area set aside for use by a community group on land over which they have a recognised "ownership" - the area can be part of a VLFR
	Forests that are not reserved but which are on village land	No management recognised by authorities, but option for village to declare a VLFR if the land is communal, or to manage as a CFR or private forest if appropriate

Foresters consulted during this study raised four major concerns about the impact of the policy and legislative changes (Annex 4), these were:

- Loss of their regulatory powers and authority over areas under their jurisdiction;
- Threats to their future employment prospects and the role of the traditional forester becoming redundant. These issues were raised along side the fear of not being able to respond to demands of new jobs and the need to acquire new skill sets;
- Erosion of the value of technical expertise and the increasing dominance of administrative control in relation to natural resources management; and
- Concerns about the capacity and ability of communities to play the full-role designated for them as primary stakeholders by the new policy

The first three concerns are associated with future role of the forestry professional and they should not be taken lightly when considering the project design process because the full support of foresters will be required if a successful project is to result (see section 3.2. for further discussion).

The final concern links to a related issue, which was consistently raised throughout this study, that the implementation of the new policy framework could result in forests of significant national importance, such as Uluguru North and South, being handed over to communities and that the consequences of such an action would be greater threat to the future of those forests. Essentially, people raising such concerns are wary of the ability of communities to manage a resource of national and international significance adequately and the highlight the need for safeguards. It is therefore necessary to explore the concept of JFM in the context of Tanzania, the policy framework and the future project in greater detail.

What does Joint Forest Management mean in Tanzania?

The greatest progress towards, firstly implementing JFM in Tanzania and secondly demonstrating that it can be successful has been made by the Community-based Forest Management (CBFM) initiatives in Duru-Haitemba, Babati District, and Mgori in Singida District. These areas comprise *miombo* woodlands that in the early 1990s were under government control and management, but which were in a serious state of decline due to encroachment, excessive timber and charcoal harvesting and uncontrolled grazing. Following the establishment of community forestry schemes in 1994, which included developing management plans and zoning the areas for use and identifying village jurisdictions, the forest adjacent communities began to manage and conserve the areas. Duru-Haitemba is now under the full management control of eight villages, while five villages in collaboration with District authorities manage Mgori. The level of devolvement of responsibility and authority to the villagers means that these schemes are genuinely community-based.

One difficulty for many Tanzanian foresters is that the widely reported success of these two specific cases means that the term JFM is increasingly defined as community-based forest management, while few of Tanzania's foresters have direct experience of working with successful community projects and, therefore, they are naturally sceptical. However, we should highlight that neither of these forests is of strategic importance nationally nor are they of international biodiversity value, rather they are *miombo* woodland that are principally of direct use value to the forest adjacent communities. Essentially, handing the Duru-Haitemba and Mgori forests to the communities resulted in giving the stakeholder with the largest stake in conservation of the forest resources the greater level of control over forest management, which is an entirely sound principle in modern conservation. Unfortunately, there exists a danger that there will be negative reactions to the concept

of JFM because of the misconception that these two case studies define JFM for Tanzania (Annex 4). This is an especially important perception when people feel strongly that government should retain the authority, for whatever reasons, over forests of national and international importance such as the Uluguru Catchment Forest Reserves.

There are two key issues to be clarified at this stage:

- (i) What does JFM actually mean as defined by the policy and draft bill; and
- (ii) How does JFM as defined by the policy (and not pilot examples) apply to the forests in the Uluguru Mountains?

Under the new policy local communities are perceived as likely to:

- Establish, conserve and manage Village Land Forest Reserves;
- Participate in joint management of Forest Reserves; and
- Produce forest products for subsistence uses (e.g. fuelwood and poles).

There are forest areas in the Ulugurus situated inside village lands, which will undoubtedly be suitable for establishment as either Village Land Forest Reserves or Community Forest Reserves. Villagers or community groups either have an existing, or can establish a clear, right of “ownership” (see section 3.1.4) and, therefore, for VLFR areas the CBFM model with maximum devolvement to community (producer) level is appropriate in these cases.

Forests falling under local authority or national authority jurisdiction are different however, because the owner of the resource is either the nation, with the President as the trustee, or the District Council as trustee acting on behalf of a District. This ownership will not change as a result of the changes to the policy and legislative framework. In the strictest sense, therefore, JFM that takes place within designated FRs cannot be truly community-based because the communities cannot “own” the land. Nevertheless, there can be and indeed there are exceptions e.g. Duru-Haitemba. The implication is that a user right can be granted, which as in the case of Duru-Haitemba can be made to approximate to “ownership”². It is worth noting that there are many advantages to devolving the maximum authority and responsibility to communities: current evidence suggests that community-based initiatives engender substantially greater levels of participation and promote greater benefits including an increased likelihood of a positive conservation outcome. However they also involve taking greater risks with the resource, so the level of devolvement of authority that is appropriate is dependent on a range of factors such as stakeholder viewpoints; stakeholder capacities; strategic importance and designated function of the forest. The specific roles of the different stakeholders within the agreement should be negotiated around factors (or criteria) of this type.

The central point and answer to question (i) is that within the Tanzanian policy framework, which is very flexible, what constitutes Joint Forest Management at a specific location is to be negotiated for that site. Critically JFM is not a pre-determined blueprint, but a process and it must not be approached or thought of as a *fait accompli*.

In relation to application of the policy, question (ii), in general there are excellent reasons to promote maximum levels of community involvement and ownership. Moreover, this is best achieved through a high level of devolvement of authority and responsibility, but this may not be appropriate to all situations so the risk factors must, therefore, be considered in negotiating all agreements. The final agreement needs to reflect a balance of the factors for that site. Fortunately, the Tanzanian policy

² Note that Mgori villagers collaborate with District in contrast to Duru-Haitemba villagers who are described as having full control.

framework appears to be sufficiently flexible to permit both complex agreements that promote CBFM together with relatively simple agreements that seek to legitimate existing, but technically “illegal”, use of specific resources (e.g. dry firewood collection or herb gathering) that have negligible impact on the integrity and function of the forest.

In summary, through JFM, villagers will be recognised as partners in the forest sector and they will be actively encouraged to conserve and manage forests in their own land while contributing to and potentially benefiting from conservation of local authority and national forests. The details of all joint management agreements will be negotiated on a site-by site basis and they will involve all relevant stakeholders. Significantly, the Forest and Beekeeping Division retains management of “strategic forests”, including catchment FRs such as Uluguru North and South. Therefore, substantial levels of responsibility and authority over such “strategic forests” could only be assigned to communities if the FBD considered this to be the best way of conserving and protecting these important national assets. The main issue for the forest sector and the project is to develop the understanding among foresters that the policy framework is flexible and ensuring that staff have are comfortable with applying the policy. Institutional resistance would block policy implementation and this would increase the risk of project failure.

4.1.2 Natural Resources: Wildlife

The Wildlife Policy of Tanzania was completed in March 1998 and there are many parallels with the development of the NFP (1998). The wildlife policy also emphasises protected area conservation while promoting people’s participation in conservation through a form of collaborative management, which is termed community-based conservation. A key difference between the sectors, however, is that the levels of conflict that existed between the communities and the government were undoubtedly greater in relation to the wildlife sector. Communities had been progressively alienated from wildlife throughout the course of the Twentieth Century while the methods used to address the poaching problems of the 1970s and 1980s were draconian in contrast to the forest sector, which has tended to be more tolerant of resource use from reserved areas with the exception of illegal timber extraction.

The wildlife policy development process emerged from national planning in combination with pilot schemes involving both the high category wildlife PAs, such as national parks and game reserves, and village lands lying adjacent to PAs that contributed to supporting the integrity of the wildlife populations. In common with the NFP (1998) different levels of devolvement of authority to communities have been granted depending on the land category and type of PA involved. One clear lesson that has materialised from more than 10 years of pilot implementation is that the more paternalistic schemes are increasingly seen to be less successful. Greater levels of paternalism tend to result in less participation with fewer positive impacts for conservation. Typically, paternalism stems from the implementing agencies (including NGOs and donors) exercising too much control over the processes and in practice being reluctant to relinquish their powers (refer to Annex 4). Importantly the Wildlife Policy stresses the importance of other sectors and the need to work in a unified manner. The aims and objectives of the Wildlife Policy are essentially compatible with the National Forest Policy and the overall direction to promote sustainable natural resources management within the MNRT.

4.1.3 Tourism Sector

The National Tourism Policy (1997) raised the profile of tourism in Tanzania by conferring the status of an industry on tourism. Tourism based on Tanzania’s rich

array of natural resources now contributes substantially to the country's economy (estimated at approximately 30% of the GDP in 1996). Additionally it is generally considered as compatible with sound environmental and cultural development.

Although the Ulugurus are a renowned international bird watching site, they are not a major tourism destination in Tanzania. Realistically they are unlikely to become one in the immediate future although developing ecotourism at specified locations in the mountains could generate additional income locally. The National Tourism Policy can be used to lend weight to establishing tourism where viable but is unlikely to provide a major rationale for conserving the area.

4.1.4 Land Sector

The National Land Policy was prepared in 1995 with the objective of securing a land tenure system that would encourage optimal land use by facilitating broad-based social and economic development while at the same time maintaining the ecological balance of the environment. Subsequent to policy development Tanzania now has new land legislation in the form of the Land Act 1999 and its supporting legislation, the Village Land Act 1999. Both documents are now awaiting translation and publication in the gazette. We should note that the new legislation places greater emphasis on customary land tenure by giving customary rights full legitimacy under national law. The acts have been thoroughly reviewed by Wily (1998) while they were in the form of Bills and, as it appears that there have been no subsequent changes to the legislation following that review the following points, which are relevant to this project, are summarised from Wily (1998):

- The law seeks to secure existing rights in land and to facilitate equitable access and distribution of the land. Citizens "own" an interest in rights in land and not the soil itself for the land remains in trust to the nation, but these rights may exist in perpetuity and be disposed of in the same way as full titles;
- The law brings customary land law into a working role in national law such that traditional ways of holding land (e.g. through family, clan and group as well as individual) will not only continue to operate but be strengthened. The law encourages the identification and protection of common lands (as if it were private corporate property);
- Local level authority will be vested in the hands of the villagers through the elected village councils, which embeds in law the right of the community to control its own land. It restores the rightful tenorial relationship between the village government and villagers with the council managing but the people holding the rights in land;
- There is a contradiction at the village level, however, in that, although the rightful tenorial relationship is established between the villagers and village government, the authority is vested in the village councils with the council required to only "report" its decisions to the village assembly every two months;
- The law provides for customary rights in "reserved" land to be recognised providing for the possibility of reserved property to be transferred to the village in some cases and guardianship or managerial responsibilities over reserved land in others;
- Urban and peri-urban residents living on land that is absorbed into towns are given the opportunity and right to have their tenure confirmed as customary rights of occupancy or residential licenses depending on the situation. Eviction of any urban dweller requires procedures to be followed and payment in compensation.

- The Village Land Act also makes provision for communities to secure jurisdiction over un-used estates outside of their currently-designated village areas;
- The law is described as inaccessible to the general public, bureaucratic and over-prescriptive meaning that it will not be easy to understand or use in practice;
- The post of the Commissioner of Lands remains very powerful, so although there is a clear devolution of authority from local government to village government there is no equivalent redistribution of power from the central government; and
- Resolution of land disputes remains an issue for the courts to decide with dedicated land courts to be set up.

There are 5 key issues here for the future project:

- (i) The strengthening of customary rights is significant for the Uluguru Mountains, which is an area that has retained so much of its traditional customs and practices. This means that in villages adhering to the traditional patterns of inheritance of land through the clans these traditions will be underpinned by the full power of the law.
- (ii) The new legislation shifts the balance of power between local government, village government and the villagers in relation to land, but this will only be effective if everyone understands how this balance has been affected in law. It is likely that power contests within villages will be exacerbated by these shifts in power.
- (iii) The legislation provides for recognition of customary rights over reserved land to be recognised, which will be an important issue for negotiating a JFM agreements in relation to Forest Reserves. Communities that recognise an area as part of their communal inheritance are more likely to have an interest in participating in the management of the area. However, the existence of customary rights over forest does not necessarily mean that common property resource management regimes (Box 1) will have evolved in relation to the resources comprising the forest.
- (iv) There are villages and sub-villages within the project area that are in the process of being absorbed into Morogoro Municipal. The changes in land status will affect the residents of these areas and presently there is some instability over land ownership and what it means (see sections 2.3 and 4.) that potentially could undermine attempts at JFM in those areas.
- (v) The significance of land issues for JFM together with the difficulty of interpreting and applying the new laws, mean that the skills of a professional lawyer should probably be enlisted to advise the project, at least in the short term.

Box 1 KEY DEFINITIONS FOR UNDERSTANDING PROPERTY REGIMES

Property regimes represent a legally and socially sanctioned ability to exclude and prohibit non-owners from using a resource and they develop when resources are perceived to be either valuable or scarce.

There are 3 fundamental types of property regime:

1) State property: falls under the jurisdiction of a central authority or public agency.

Typically, legislation exists governing resource utilisation and licences are required for individuals to use the resources. The illegal use and deterioration of resources managed in this way tends to be associated with the managing institution's ability to:

- set appropriate off-take levels;
- monitor resource use;
- enforce regulations; and
- sanction rule breakers reliably.

The high costs of administration are an overlooked and critical factor.

2) Private property: is owned by an individual or company with a legal title.

The owners are more successful at excluding non-owners from resource use because they have social and legal sanction, but the resource has to be suitable for privatisation. It is possible for resources to become too small (atomised) and lose their economic viability. Private property regimes cannot accommodate increased population without excluding many individuals.

3) Common property: is "owned" by a collective or group.

There may be legislation and a legal title in place or not, but the appropriators can generally demonstrate a legal claim. Importantly, a set of rules relating to access and use always exists. Such rules are well understood by the co-owners of the resource – even if they attempt to break them (free rider problem). Enforcement is shared by all appropriators and may be supported by external agents. Common property regimes are advantageous in situations of environmental variability, low resource productivity and where it is not possible to draw a clear boundary around a resource. Resource deterioration tends to stem from institutional problems that leave the collective less successful at excluding and maintaining resource use within sustainable limits. The central issue is effective group management.

Resources managed under a common property regime are termed **Common Pool Resources** for they contribute to livelihoods but they are not privately owned. When common pool resources are not controlled or managed, but are used opportunistically, they are described as being **Open Access**. Open access means that no property rights have been established. The consequence of no recognised property rights is that the resources are available to all who desire them and there are no regulations pertaining to their use.

An important difference between common pool resources and public goods is that once a user consumes (or appropriates) the resource it is no longer available to other potential users.

(Bromley, 1992; Ostrom, 1990 and Ostrom 1992)

4.1.5 Agriculture Sector

The Agricultural and Livestock Policy (1997) prioritises self-sufficiency in food and aims to improve the well being of people whose livelihood is based on agriculture. Its overall focus is to “*commercialise agriculture so as to increase income levels*”. The policy emphasises integrated and sustainable use of natural resources (soil, water, land and vegetation) and makes reference to the linkages between agriculture and other sectors. However, recognising the importance of other sectors does not automatically lead to complementary policy implementation by the different sectors. Observations from this study indicate that agricultural development in the Mgeta area for example, is very successful but our conclusions were that in Ng’ungulu village this success was probably at the expense of the Forest Reserve (see section 4.). Hymas (2000) refers to the agricultural practice of banana planting in Kinole Ward another very successful agricultural practice, which has resulted in degradation of the public forest in the Kitundu Hills area. Clearly there is the potential for conflicting interests to arise depending on how the project prioritises the Agricultural and Livestock Policy *vis-à-vis* the National Forest Policy.

An advantage to the project is that one of the prospective partners in the project, the Uluguru Mountain Agriculture Development Project (UMADEP) (see section 3.2), works with small-scale farmers to improve their agriculture. Good coordination with UMADEP has the potential to tailor the project such that agricultural inputs in the project area complement and strengthen the conservation focus of the project.

4.1.6 Water Sector

The National Water Resources Management Policy (Draft for Discussion, 1999) reflects the increased emphasis on water management in Tanzania.

A Key statements from the draft policy is:

“In recognition of the importance and necessity of economic growth in reducing poverty the government’s current emphasis is on economic growth with equity. Water can be one of the major agents towards poverty alleviation. However, being scarce and vulnerable, it imposes strong interactions and conflicts between users and the environment, and if measures are not taken can hamper efforts towards poverty alleviation. This policy seeks to redress the situation, so that water resources management plays a key role.”

This is an important sectoral document for the project because the Uluguru Mountains represent a significant water catchment³ while protection of the national interest in the catchment function is the strongest rationale for conservation of the area.

The Sustainable Management of the Usangu Wetlands and its Catchment (SMUWC) project based in Mbeya (a DFID supported project) is presently tackling a comparable sets of issues in an area of strategic national importance for water management, the Usangu wetland. This project, initiated in 1998, has been by working through the process of trying to prioritise uses of the wetland and its water resources while addressing conflicting stakeholder interests in the area. Undoubtedly useful lessons

³ Lovett (1993) states that the catchment values of the Uluguru North and South FRs “very high as the area has one of the highest rainfalls in Tanzania without a marked dry season”. He elaborates that on the eastern side the reserves are part of the Ruvu river catchment, and supply Dar es Salaam with water. On the western side they supply Morogoro town and villages on the mountain slopes noting that Uluguru South is the origin of the Mgeta River.

could be learnt from this project's experiences of beginning to work with issues that the National Water Resources Management Policy will seek to address.

4.1.7 Environment

The overall goal of the National Environmental Policy (1997) is conservation and protection of the environment, and the rational and effective use of natural resources. Its aim is to balance economic development with proper environmental management. A framework for environmental legislation has been prepared by the Institutional and Legal Framework for Environmental Project (ILFEMP) based in the Vice President's Office, but the documentation was still awaiting endorsement at the time of this study. The major objective of ILFEMP is to pull the various sectoral policy developments (see above) together under the umbrella of strong and cohesive legal framework to ensure long-term sustainable development.

4.2 Institutional Analysis

Underpinning the idea that the Uluguru Mountains can be managed sustainably – the principle objective of the proposed project - is the need to promote institutional sustainability (Box 2). Essentially the project will be working on issues of governance as applied to the Tanzanian forest sector and specifically the Ulugurus. This section of the report, therefore, presents an overview of:

- Village institutional issues, because the forest adjacent communities are primary stakeholders in the project (Box 2);
- Government institutional issues, for different arms of government have different levels of jurisdiction over the Uluguru forests (e.g. Morogoro Rural District and Catchment Project of FBD) and are therefore also primary stakeholders; and
- Relevant civil society organisations, including the NGOs that are likely to participate in the implementation of the project.

In general, the project can be considered from the perspective of the development concept of Livelihoods or from the conservation concept of Integrated Conservation and Development, but neither contemporary concept should be confused with the ideas of Integrated Rural Development promoted during the 1970s (Table 3.2).

4.2.1 Village Level

Waluguru, Kinship and Land

Traditionally the *Waluguru* are a matrilineal society meaning that kinship, inheritance and decision-making are all defined through the female (or mother) line. An important aspect of matrilineality is that women have a higher status when compared with women from patrilineal groups, although their influence is typically expressed through their male relatives (father, uncles, brothers and sons) rather than directly. In many Uluguru villages it has also been common for matrilocality to be practiced in conjunction with the matrilineal kinship system: matrilocality involves the husband moving to live with his wife and in-laws on land owned by the wife's clan. Matrilocality is relatively unusual occurring only when women's labour is central to the economy. It strengthens the position of women within the village while placing men under pressure because they are living among in-laws; it can result in men being placed in an insecure position within the village (Ng'ungulu is a good example).

Box 2 KEY DEFINITIONS UNDERPINNING INSTITUTIONAL ANALYSIS FOR LIVELIHOODS APPROACHES TO CONSERVATION

Sustainability:

Sustainable systems are dependent on creating a situation in which livelihoods and communities or national economies accumulate stocks of assets increasing the capital base over time as opposed to depleting capital through “spending” assets as if they were income, and so leaving less for future generations. The forests of the Uluguru Mountains represent a natural asset.

Institutional Sustainability:

Achieving institutional sustainability depends upon having:

- well-defined laws in place;
- participatory policy-making processes, and
- effective public and private sector organisations.

Stakeholders:

Stakeholders can be sub-divided into **Primary Stakeholders**, those who will directly benefit or sustain a loss as a result of an intervention, and **Secondary Stakeholders**, those who will indirectly benefit or loose.

Definitions of Governance:

UNDP: The exercise of economic, political and administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their obligations and mediate their differences.

World Bank: The manner in which power is exercised in the management of a country’s economic and social resources for development. Good governance is synonymous with sound development management. Governments play a key role in the provision of public goods.

There is evidence in this study, however, of matrilineality breaking down in some Uluguru villages and there are increasing reports of patrilineal land inheritance or of both matrilineal and patrilineal inheritance being practiced side by side (USPP, 1996; and Hymas, 2000). In general, three factors appear to be pushing *Waluguru* inheritance patterns towards inheritance through the father’s line:

- The role of the village government in allocating land in post-colonial Tanzania following *Ujamaa*;
- Islamic religious influence; and
- The extent to which a settlement has become cosmopolitan and is influenced by commercial factors and the extent to which individuals use the courts, which have tended to be arbitrary in their rulings, to settle land disputes.

In this study Lanzi and Ng’ungulu, both of which are relatively remote sites, were found to be strongly matrilineal (see also section 4.7) while Lukuyu respondents reported both patrilineal and matrilineal land inheritance patterns. The USPP (1996) reported

matrilineal inheritance at Nyandira village, and bilineality⁴ together with some land purchase at Bigwa, which are findings consistent with the present study.

Table 3.2 A Comparison of Integrated Rural Development Approaches of the 1970s with Contemporary Livelihoods Approaches.

	Integrated Rural Development	Livelihoods Approaches
Sectoral scope	Multi-sectoral, single plan Sector involvement established at outset	Multi-sectoral, many plans Small number of entry points Sectoral involvement evolves with project
Level of operation	Local, area-based	Both policy and field level, clear links between the two
Partner organisation	National and local governments	Local and national governments NGOs, civil society organisations, private sector
Sustainability	Not explicitly considered	Multiple dimensions Core concern

Care needs to be exercised, however, when assessing the implications of inheritance patterns and kinship for the future project. Firstly kinship is not just about patterns of land inheritance: rather land is a resource the inheritance of which is affected by kinship and therefore land inheritance patterns indicate the type of indicator of kinship practiced. Kinship on the other hand is essentially an ideology of how a particular society functions and it therefore, has wider implications including, and especially, the power relations of that society. Secondly, it has always been the case that children, who find themselves landless because their own clan (determined by the mother's) is unable to provide them with land, retain the right to approach their father's clan to ask for farming land. Therefore, we might expect to see more children farming land owned by their father's clan in situations of increasing land shortage as exists in the Uluguru. In the customary system, however, the rights of the child over land belonging to their father's clan is not equivalent to their claim over land inherited through their own clan and while their own children can also inherit this land the inheritance is temporary and eventually the land returns to clan ownership. It is possible that some of the "patrilineality" observed by USPP (1996) and Hymas (2000) falls into this category⁵, but careful interviewing would be required to separate this category of land from that acquired through true patrilineal inheritance. Thirdly, van Donge (1993) reports various cases where land has transferred between clans and inheritance is from the father – possibly because the elders have died who would have reclaimed land on a temporary inheritance such as that described above. He postulates that while the *Waluguru* adhere to the ideology of matrilineality, which remains a strong concept in *Waluguru* self-perception; the ideology does not necessarily correspond to behaviour. Moreover, that the critical issue in bringing land disputes to a close seems to be

⁴ Bilineality meaning that both forms of kinship are expressed

⁵ See Young and Fosbrook (1960) and van Donge (1993a) and (1993b) for in-depth discussion of these issues.

membership of a corporate group (clan or lineage group) that is supportive of the individuals "ownership" of the plot whether acquired via the father or the mother's side.

Nevertheless, in this study much of the land that was inherited through a non-matrilineal system, and which may subsequently have been sold⁶, appeared to be land that had been allocated to a household by a village government and, therefore, clan ownership was irrelevant for the plot was effectively privatised (Box 2) with recognition of individual and not corporate tenure. Clearly, implementation of the new Village Land Act (1999) (see section 3.1.4) is going to have an effect on the current balance of power between village governments and the clans and, therefore, the project will need to approach land issues carefully. The legislation makes provision for individual ownership of land as well as strengthening traditional communal claims. It is not improbable that land claims will arise: van Donge (1993) found them to be common in Mgeta. However because customary rights are strengthened by the new legislation and the legislative changes are likely affect rulings in court this may result in also strengthening the desire of clans to exert any corporate claim over questionable land parcels.

Finally, people identify strongly with having been born in an area and describe themselves as belonging "*mimi ni mzaliwa hapa*". Individuals born into an area exercise a greater level of influence than outsiders who have moved into the area. This further highlights the importance of territoriality and claims on the land being a defining characteristic for the *Waluguru*.

How the project approaches land issues could be important in terms of promoting Village Land Forest Reserves and Community Forests. Additionally, given the close ties between *Waluguru* livelihoods and the forest (see section 4), the continued degradation of agricultural land close to the forest must also be a primary concern of the project. We should note that land inheritance patterns that result in land fragmentation are a root cause of much of the land degradation.

Waluguru Power Structures: Elders, Rainmakers & Chiefs

The *Luguru* are often described in anthropological literature as segmented or acephalous meaning that the tribe does not recognise any individual as a chief or headman. Segmentation is the consequence of colonisation, which in the case of the *Waluguru* is relatively recent having started in the 18th century and continued throughout the 19th century. It is believed that the settlers originated from several Bantu tribes including the *Bena*. *Waluguru* social structure is organised according to clans and lineage groups that are led by groups of elders who make the decisions for the areas within their territorial jurisdiction, hence the significance of a particular clan's land holdings. Essentially, *Luguru* society has many loci of power and while an individual can become eminent in his own locality he is unlikely to be recognised elsewhere in the Ulugurus. The position of the *Kingalu* is a good example for *Kingalu* is recognised in the villages around North Uluguru and his home settlement of Kinole, but not recognised in the villagers around the South Uluguru.

During the colonial times structures such as headman (*akida*: German period) and chiefs (*mndewa*: British period) were imposed by the colonial authorities, but it appears that such roles were not entirely accepted or institutionalised by the *Waluguru*. The abolition of the position of chiefs in 1968 has subsequently resulted in eroding this concept. Notably many "chiefs" were significant elders and where they have retained influence it appears to be linked to their personal integrity and the

⁶ It is very difficult to sell clan land. One respondent described it as impossible! Renting, however, is a real possibility but this option typically leads to land degradation (see section 4.6.1)

respect that they naturally command. However, *Waluguru* continue to have a strong belief in rainmakers and traditional healers although many such individuals holding these offices are now reported as having “lost their power” because of a perceived lack of personal integrity and/ or lack of belief in them by the younger generation. Significant elders, rainmakers and herbalists represent a resource of traditional knowledge and beliefs that the project may be able to harness, and which it should explore, but modern ideas and the growing generation gap (see below) mean that it is a resource with a declining power base in many places.

Modern Institutional Structures: Village Government:

In general, the concept of a village government authority has not been entirely accepted by the *Waluguru*. Where urban and religious influences e.g. Islam, are stronger the village governments are stronger, but elders can remain influential. The situation is dynamic with tensions between the traditional and the modern being played out in most village power plays. Notably young men with economic independence have acquired significant positions within village governments and sit alongside elders. It should be noted that such economic independence is often incurred at the expense of the forest (section 4) and this represents a significant vested interest in opposing this project’s objectives unless these individuals are somehow “brought on board”.

At the time of this study traditional values were being re-exerted strongly in Lanzi with the election of a highly respected elder to the post of Ward Councillor (*diwani*). In contrast, exposure to external modern influences appears to have widened the generation gap, diminished the authority of the elders and permanently altered traditional dynamics between men and women in Lukuyu. The authority of the Village Government as the organ of governance is not questioned in Lukuyu.

Working with the Uluguru Villages & Applying the Concept of Common Property Management Regimes

Importantly each village is different and village institutional issues will need careful participatory research to assess the institutional balance within each village. Village institutional arrangements should not be guessed at but will have to be investigated over time so that each village’s operational structure emerges. Good village institutional assessment will be especially important in situations where collective action is to be promoted, for example in villages where JFM Agreements for Village Forest Management Areas as well as Village Land Forest Reserves are to be negotiated.

Box 1 defines common property, which is based on collective management, and Box 3 outlines the difficulties associated with the commons together with the standard policy responses to the “*Tragedy of the Commons*”. It is important to remember that the reason for developing a new policy framework (see section 3.1.1), which promotes co-management of forests in Tanzania, is because the state “leviathan” approach has not proved effective in the past. Equally, critics of common property management regimes rarely recognise that many apparent “commons” situations are not commons at all, but rather they are examples of open access use of common pool resources. This is an important distinction, and one that the proposed project needs to be fully aware of, for forest resource use in Tanzania is largely treated as open access now, and it is likely to have been an open access common pool prior to the colonial period. The institutional rules for managing a commons (membership, regulations and mechanisms for controlling use of resources) evolve when the resource is scarce not plentiful. While the forest and its resources are undoubtedly part of the *Waluguru* domain, these forests have not been considered a scarce resource in the past (although there is evidence that they are beginning to be viewed in this way). This is

in direct contrast to *Waluguru* management of their agricultural land, which has strong regulations pertaining to tenurial and user rights (despite some irregularities). There may be specific rules for selected species among specific user groups such as herbalists and healers; such rules will be linked to ritual and while they are of interest they are unlikely to represent a common property management regime of application to the current situation.

BOX3 THE TRAGEDY OF THE COMMONS: A KEY MODEL OF RESOURCE DEGRADATION

The tragedy of the commons (Hardin, 1968) is used to describe a scenario in which degradation of the environment occurs because many individuals use a scarce resource in common (the pasture). Essentially the direct benefits accrued to the individuals using the resource outweigh the delayed costs incurred from the deterioration of the resource itself. Individual motivations dominate and the appropriators of the resource are shown to take more of the resource (put more livestock onto the range) to maximise personal benefits.

Hardin's preferred policy solution is to recommend privatisation (Hardin, 1978), which remains one of the most popular policy solutions today.

Variations on this model are the *prisoner's dilemma* (Dawes, 1973) and *the logic of collective action* (Olsen, 1965). The latter highlights the need for a "leviathan" or an authority, which is usually the state, to ensure that the individuals act in the common interest instead of self-interest. The policy approach of having a central body to control and regulate natural resources use (grazing, forests, fisheries and wildlife) has been widely implemented especially in developing countries and it the most widely accepted alternative to the privatisation solution.

Source: Ostrom (1990)

In summary therefore, the project cannot assume that community-based agreements founded on the principles of common property management regimes will be intuitive to the *Waluguru* in relation to the Uluguru Forests, although all of the required building blocks are probably present in *Waluguru* ideology. Careful assessment of each village and any specific user groups will be important as some communities and groups will require greater levels of institution building before they can properly undertake an effective co-management role.

4.2.2 The Role of Government: the Forestry & Beekeeping Division and District Authorities

The Forestry and Beekeeping Division (FBD), Ministry of Natural Resources & Tourism (MNRT) is headed by a Director, who is accountable to the Permanent Secretary, and it comprises the following four sections:

- Forestry Development;
- Research, Training & Statistics;
- Forestry Utilisation & Extension; and
- Beekeeping Development.

The mandate of the FBD is to:

- Develop policy (also technical guidelines and manuals);

- Regulate the forest sector; and
- Monitor and evaluate the sector.

Specifically, the NFP (1998) and the Draft Bill for a Forest Act (see section 3.1.1) have been developed by the FBD in response to the need to address the problems with regard to promoting sustainable use of the forest estate and its resources.

The Catchment Forest Project, which manages the Uluguru North and South Catchment Reserves, falls under the direct jurisdiction of the central government because of the national importance of these forests.

Until the 1998 amendments to the Local Government Act, which devolved more authority to the District level, District Forest Officers (DFO) operated under a dual authority such that they were accountable to both the Director of FBD (through the Regional Forestry Officers) as well as to their District through the District Natural Resources Office. We should note that the role of the Regions had been redefined in as advisory in 1996, nevertheless the influence of regional technical staff continues to be important because of their seniority. Following this decentralisation process the District Forestry Officer (DFO) became formally accountable only to the District Council⁷ thus weakening the link to their technical Ministry. However, in the short-term this change has had the effect of creating confusion rather than clarity over accountability: the local government employed foresters participating in the mini-workshop for this study (Annex 4) listed the Regional Natural Resources Officer and the Director of FBK, together with the District Councillors and the DED (or Municipal Director) as individuals they were accountable to directly. Importantly, the group also stressed the tenuous position DFOs felt themselves to be in as a result of the weakened linkages back to the parent Ministry.

While the foresters that are presently working with WCST on the UMBCP and those employed by the FBD were fairly clear about accountability issues, in common with the Local Government Group, they raised various concerns that illustrated both confusion and fears in relation to, firstly, the changing role of the professional forester; and secondly, what the new policy framework means will mean in practice (Annex 4).

One conclusion is that the future project needs to support the FBD to provide the required guidance and training to foresters at all levels to ensure the successful transition to the future roles of professional foresters. A project of this type is contingent on the support and understanding of the profession and any lack of clarity about the roles of foresters (authority, duties, responsibility and accountability) or a failure to properly equip foresters with the appropriate skill sets and knowledge base to adapt to the new policy environment is certain to have a negative impact on the forthcoming project. For example, the forest areas suitable for VLFR, CF and any areas of District Forest Reserve suitable for CBFM and the more devolved forms of JFM, fall under the jurisdiction of District or Municipal employed Officers. If these officers do not understand, do not agree with or do not have the capacity to implement the new policy then practical co-management arrangements are unlikely to be reached. Considerable investment needs to put into assisting the forestry sector to undergo the necessary change process for the sector if JFM is to be realised. Community approaches involve taking risks and badly implemented interventions are typically worse in terms of outcome than not attempting participation would have been.

A further issue that should be highlighted here is the role of government as a stakeholder. In this instance the FBD is both the manager of the Catchment Reserves and the body also seeking to promote co-management. Likewise the District Government is the manager of District Forest Reserve. Essentially the issue is can

⁷ Through the District Natural Resources Office and the District Executive Director

government be perceived as a neutral facilitator while having a vested interest in the Forest area in question? Various options exist such as creating a team of foresters trained to be neutral facilitators of agreements meaning that the foresters charged with management responsibilities can participate in the negotiation as proper representatives of their respective central or local government authority. An alternative would be to have the NGO partners in the project fulfilling this role or some combination of the two. The point is that any blurring of stakeholder and facilitator roles in negotiations is likely to prejudice or may be perceived as prejudicing the outcome with potential consequences for partnership and ownership at the community level. This issue need not be determined at this stage of project design, on the contrary it is one that will be better discussed by the project partners during the inception phase of the project, rather the point is that it needs to be recognised and highlighted so that it is addressed during the inception phase.

4.2.3 Other Stakeholders: Non Governmental Organisations, Community-based Organisations and Projects

Non Governmental Organisations (NGOs)

Conservation NGOs' appear to have become interested in the Ulugurus following a biodiversity survey in 1993/1994 when the area was recognised as an Important Bird Area (IBA). Funds were subsequently secured for the Uluguru Slopes Planning Project (USPP), which was a joint venture between the Government of Tanzania and Birdlife International that was implemented through this NGO's UK partners, the Royal Society for the Protection of Birds. CARE International became involved through participating in the Project Steering Committee for the USPP. Following the end of the USPP in 1996, Birdlife International maintained its interest in the area and the Uluguru Mountain Biodiversity Conservation Project (UMBCP) is implemented by Birdlife International partners from Denmark, the Danish Ornithological Foundation, and Tanzania, the WCST.

The consortium of NGOs described above is presently contributing to the design process of the proposed project. NGOs have been increasingly important as agents of change in Tanzania and an issue that is often raised in relation to joint NGO Government ventures is: "what is the proper role of the NGOs"? Clearly the terms of partnership between the FBD, which is a government agency, and other government institutions on the one hand, and the different NGOs and UMADEP (see below) on the other requires careful thought. The project institutional arrangements should seek to capitalise on the strengths of the multiple partners such that the consortium creates a very strong support project to the Government of Tanzania. Consequently it is of critical importance that the institutional structure of the project and the roles of the various partners are well defined and focussed on optimising the strengths of each partner organisation while protecting the proper role of Government as outlined in the NFP 1998.

CBOs

In Tanzania, as elsewhere, Community-based Organisations (CBOs) are a largely neglected aspect of governance and civil society. During this study we saw no evidence of CBOs at village level beyond the familiar women's groups or parents associations linked to the ruling party, *Chama Cha Mapinduzi* (CCM). In general groups with strong party political affiliations are not the best organs to work with at village level for a project of this type. The time constraints of the fieldwork did not permit a follow-up on possible Morogoro-based organisations referred to during the

mini-workshop for foresters (Annex 4). Although these organisations were described as local NGOs, it is possible that some of them may have been better categorised as CBOs. In any event the perspective of the foresters was that these organisations were very weak.

The significance of this observation for the project is that it is unlikely to find institutions in the participatory/ collective action sector with the exception of those already active in the political sphere. This means that institution building would be required to establish CBOs as opposed to strengthening the capacity of existing organisations. The danger lies in building institutions that have no natural constituency within the community for the institutions become project driven entities, and this has implications for sustainability - at least within short to medium timeframes that are determined by project cycles. Sustainable institutions are institutions that meet people's needs and expectations while sustainable natural resource management can only be founded on sustainable institutions. Therefore, institutions created to further the ends of a project intervention typically crumble once the project ceases to exist. Therefore, any decision to undertake institution building of CBOs should not be taken lightly and if it is to be attempted it must be based on values that emerge from community interest as opposed to a project interest.

The Uluguru Mountains Agricultural Development Project

The Uluguru Mountains Agriculture Development Project (UMADEP) is a project that operated out of the Sokoine University of Agriculture, Morogoro (SUA). The goals of UMADEP are to:

- Improve the productivity of the labour of small-scale farmers in the Uluguru Mountains in a sustainable way.
- Associate, through long term communication process, SUA to the rural communities in order to promote the emergence of a small scale farmers' movement
- To train change agents (farmers, students and professionals) to develop a methodology that constantly links action to reflection.

The project's geographical focus is the Mgeta and Mkuyuni areas of the Ulugurus where they have been supporting activities such as saving and credit groups, improvements in livestock keeping, assistance to women's groups and improved mountain agriculture. Like the conservation NGOs discussed above, UMADEP is a likely project partner in the proposed project.

4.3 Summary

- This project is effectively about improving the governance of the forest resource of the Uluguru Mountains;
- The policy environment for the future project is still evolving, but the wider policy framework appears generally supportive;
- The new land policy, which strengthens customary claims over land, is likely to have considerable impact in the project area given existing dynamics between customary and non-customary land inheritances. The project will need to consider how it approaches land issues carefully;
- The developing water sector policy should be both significant and supportive of the project's objectives in terms of prioritising water catchment protection;

- The project is likely to require access to legal advice in relation to land legislation, competing national and local interests and the establishment of any financial mechanisms or modalities (including the proposed trust fund for the Eastern Arc);
- The project will need to consider how it approaches support to the agricultural sector carefully. One project partner already supports agricultural development in the area while it is some importance that agricultural inputs are included given the need for a holistic approach and the need to address local livelihoods issues. However, there is the potential for uncoordinated and conflicting outputs if the project's conservation and livelihood objectives are not properly balanced.
- The project should prioritise achieving the national livelihood objectives (i.e. water management) over any local livelihood issues. This will require careful site selection for project interventions as well as careful choice of intervention to ensure that project activities aimed at improving local livelihoods do not compromise achieving these national objectives.
- Project inception should establish a set of criteria that will be used to prioritise project interventions and targeting of interventions such that the project will contribute optimally to achieving the national objectives that are viewed as being of critical importance. These criteria should also help to assess where any strategies are required to mitigate the impact of project interventions;
- The new forest policy and its implications are not well understood within the forest sector and if the project is to achieve it's objectives it will need to put a substantial support package in place to develop this capacity.
- Communities are unlikely to participate and JFM agreements are unlikely to be reached or implemented if a balanced approach to both the traditional and modern institutions is not achieved. Importantly, each village appears to be different and the wider situation dynamic demanding that careful participatory research is carried out on a village-by-village basis.
- Failure to develop a suitable partnership for project management and implementation would represent a serious threat to a project of this complexity, because there is a diverse group of stakeholders with conflicting sets of interests. Project design must address this issue.
- Specifically project design will need to facilitates the proper involvement of all government stakeholders (including Morogoro Municipal) and support their roles may as defined within scope of the policy framework (e.g. Catchment/ District – licensing/ who's role to facilitate/ negotiate/ represent government interests in discussions with communities)

5. LIVELIHOODS ANALYSIS

This analysis aims to document a rapid livelihood study, which focuses on the positive and negative impacts of reserve adjacent communities' livelihoods on the Uluguru Forests. This information is considered within the context of the livelihood system of the communities as a whole, and its objective is to provide information for the design of an integrated conservation and development project for the Uluguru Mountains. This section begins with a comparison of the three study villages before assessing forest resource use patterns, land use patterns and gender issues.

5.1 VILLAGE PROFILES

This section summarises important contextual variables for each of the three sites. Table x provides a profile of the three sites. This information helps us to better understand how these factors impact on forest resource dependent livelihoods in each one of the study areas.

5.1.1 Population

Populations of all the three sites are rapidly growing. The importance of factors for this growth differs from one village to another. In both Lanzi and Ng'ungulu population growth is attributable to natural increase (high fertility rates) than in migration. As highlighted in both focus group discussions and case study households rapid population growth in Lanzi and Ng'ungulu has been one of the major factors for land shortage and consequently stress on forest land.

An emerging pattern in both Lanzi and Ng'ungulu is for the indigenous people who had once moved to town coming back to their place of origin. These returnees bring with them different approaches to social organization and livelihoods activities some of which put on pressure into the forest resources. In both Lanzi and Ng'ungulu, leadership of the village governments has been taken by returnees who tend to be young relatively doing well in cash crop farming due to the capital they acquired in town. Information obtained from neighbourhood walkabout suggests that some of these returnees are engaged in timber logging and sowing activities.

Increasingly urban type strategies against income insecurity are being introduced in the two villages by returnees. In both Lanzi and Ng'ungulu organized groups specifically for local brew making have been introduced to pursue economic interests of their members. These groups not only control entry into the local brew market, they also provide safety nets against income insecurity of its members. There are at least 3 organized social groups engaged in local brew making in Ng'ungulu. Each of the groups has not less than twenty-five members. While local brew making sustains livelihoods of its members, its extensive reliance on fuel wood adds pressure on forest resources.

Unlike the two areas, population growth in Lukuyu is mainly attributed to both in migration and natural increase. It was indicated from focus group discussion that at least more than 57 households (average 4.5 persons per household) migrated to Lukuyu between 1995 and 2000. In-migrants to Lukuyu have included people from different tribes/regions as *Waluguru* and other tribes like *Nyamwezi*, *Sukuma*, *Nyakyusa*, *Hehe*, *Haya*. Rapid population growth in Lukuyu has only contributed to land shortage and consequently deforestation resulting from clearance of forest land. Also in migration has brought in into the street/village people of different culture and

Table 4.1: Summary Profile of the Study Villages

Contextual Factor	Lanzi	Ng'ungulu	Lukuyu
Distance from Forest Reserve	2 kilometres	1 kilometre	3 kilometres
Population	Growing	Growing	High growth
In migration	Low	Low	Very High
Out-migration (to other parts of Morogoro or elsewhere)	Low	Low	Medium
Forest Resource Dependent Cash Crops	Banana; Spices	Cowpeas; Spices	Paddy/rice
General Outlook (Developed; Backward)	Moderate	Developed	Developed (piped water)
Food Crops	Maize, Cassava		Maize; paddy beans, coco yams, mushrooms
Agriculture & Farming System	Intercropping		
Livestock	Chicken	Pig, chicken, rabbit	Chicken, rabbit
Trees		Plums, peaches, timber	Timber, fruit-mangoes
Habitat/housing/environmental health (toilets)	Mud and pole walls; grass thatched (only 3 houses with iron sheet roof) each has a pit latrine	Mud bricks; iron sheets roof; each has pit latrine	Burnt bricks, iron sheet roofs; each has pit latrine
Health Services	Hospital Kibungo 1 and 1/2 hours walk; Traditional Birth Attendants (TBA), present; traditional healers	Hospital-Tchenzema 1 and 1/2 hours walk; TBAs; traditional healers	Hospital, drug shop-Mgolole 15 minutes walk; TBAs, traditional healers
Accessible roads	Poor	Poor	Good
Educational Services (primary School)	One primary school	One primary school	3 primary schools in 15 minutes walk distance
Land Problems-shortage	Present	Present	Present

Contextual Factor	Lanzi	Ng'ungulu	Lukuyu
Land disputes	Few disputes between clan members, Disputes between clans and village government	Few between clan members, Disputes between clans and village government	Many disputes between community members and in-migrants
Women's Livelihood Activities	Local brew making; Agriculture food & cash crops; Casual labour (farming, fetching water; fuelwood)	Local brew making; Agriculture food & cash crops; Casual labour (farming);	Local brew making; Agriculture (food & cash crops); Domestic servants; Casual labour (farming, stone quarrying, fetching fuelwood and water)
Men's Livelihood Activities	Farming cash & food crops; Timber logging and sawing, Casual labour (farming)	Agriculture food and cash crops Timber sawing and logging, Casual labour (farming & mining, house construction)	Agriculture (food & cash crops); Petty trading; Casual labor (farming, domestic servants, fetching fuelwood, water, stone quarrying),
Youth Livelihood Activities	Carrying crops and timber to the market (2 hours walking distance)	Carrying crops to the market 2 hours walk; Selling poles for cowpeas	Petty trading (second hand cloth, vegetable selling) at Mwanzo Mgumu; Prostitution for young women; Petty thieving; Marijuana growing and selling
Organized Social Groups	None	3 groups (U.W.T, Youth and Parents) women dominated - Branches of ruling party <i>Chama Cha Mapinduzi</i> with economic interest (local brew making)	Present 2 women-based revolving funds others are organized groups of local brew makers
Copping Strategies	Uphill farming of banana as a fall back crop for food shortage	Use of income as a supplement to buy food; shifting cultivation and use of forest land (cowpeas, banana, cannabis?)	Uphill farming and diversification of income

values towards forest resources. For example, the *Walugurus'* values towards protection of Kingalu (rain maker forest) seem to be in conflict with *Wahehes'* (tribe from Iringa) values towards timber logging and sawing. The *Wahehes'* values associated with destruction of the Kingalu's (rain maker) forest. Unavailability of rainfall experienced by Lukuyu villager is perceived to be a reaction of the Kingalu's gods towards misdeeds of the *Wahehe'* loggers.

5.1.2 Distance from the forest reserve and forest resource dependence

Information from the three sites indicates that livelihoods dependence on the forest resource is influenced by villages' closeness to the forest reserve. In both Lanzi and N'gungulu, where the forest reserve is very close, livelihoods of the communities in the areas depend very much on the forest reserve. This close proximity though an asset to these communities, it is also a threat to their livelihoods because is destructive to the forests. Table provides a summary of the profiles of the three sites.

Table 4.2: Study Area Distance from Forest Resources and Extent of FR Depletion

Study Area	Distance from Forest Reserve (Km)	Woody Forest Resource Dependence	Extent of Forest Reserve Resource Depletion
Lanzi	2	High	High
Ng'ungulu	1	High	High
Lukuyu	3	Medium	Not known

5.1.3 Habitat and Environmental Health

Traditional housing in Lanzi is of poor quality because is built by poles, mud bricks and grass thatch. These materials cannot stand adverse weather conditions such as heavy rains and floods. With regard to forest resources, housing in Lanzi uses substantial amount of forest products.

Housing in Ng'ungulu uses mud bricks and is of better quality. Information from both focus group discussions and case study households suggests that the shift from use of forest resource building materials in the area was prompted by lack of access to these resources.

Housing in Lukuyu is of good quality mainly burnt bricks walls, concrete floor and iron sheet roofs. Preference on burnt bricks puts pressure on forest resources (fuel wood).

In all the three sites each house has its own latrine and density use is not more than 5 people per pit latrine. Despite marked differences the environmental health of each of the three sites does not pose any health risks.

5.1.4 Social Amenities

There is a marked difference between the three sites with regard to available social amenities. This has necessitated that each area develop different pattern of coping strategies against different types of livelihood insecurity. Differences in availability of social amenities in the three sites, though a result of many factors is mainly attributable to agriculture and farming systems adopted by each. Ng'ungulu, which enjoys greater productivity of cash crops (cowpeas and fruits) throughout the year,

seems to be more developed gauged by different wealth indicators such type of habitat present, assets and major sources of income available in the area. The relatively high level of development obtained in Ng'ungulu is associated with intensive use of irrigation, ridge/contour and shifting farming systems. However, both Ng'ungulu and Lanzi have much less access to poor road access and no health facilities within the village. Use of traditional healers and medicinal plants from the forest reserve are the major coping strategies for health security in the area.

Lanzi, which relies on traditional farming with no irrigation and mono cash crops, seems to be more backward represented by poor habitat, as well as fewer assets and lesser-diversified income sources. Relatively good access to all social amenities at Lukuyu is a result of its peri-urban location (close proximity to Morogoro town and major cash crop market outlets). The site looks more advanced in terms of well being indicators (habitat, environmental health and easy access-distance of basic social services, social capital). The strategic location of Lukuyu allows community members to diversify their livelihoods activities and be less dependent on agriculture.

5.2 Patterns in Use of Woody Forest Resources

Both focus group discussions and the household case studies highlighted that woody forest resources constitute an important asset supporting the livelihoods of the, approximately 6000, people living in the 3-study villages (Lanzi, Lukuyu and Ng'ungulu). Table 4.3 summarizes information on where woody forest resources can be found by land category or forest type.

Use of woody forest resources in the areas, are of major two but related categories:

(1) direct consumption [from the forests people in these villages obtain fuel wood; and housing construction materials]; and

(2) income generation [from sell of forest resources including timber and fuel wood.

Uses relating to direct consumption include

- Fuel wood, charcoal-Energy sources
- Timber and poles-Building materials
- Wood for brick burning
- Medicinal trees-barks, roots, leaves of these resources (Health)

Uses relating to income generation

- Stone quarrying
- Fuel wood for brick burning
- Fuel wood for banana smoking
- Fuel wood local brew making
- Poles for holding cowpeas plants
- Health (medicinal trees-barks, roots, leaves of these resources.

Table 4.3 Uses of Woody Forest Resources by Land Category or Forest Type. * Indicates a preferred species

RESOURCE-SPECIES	LOCATION WHERE AVAILABLE			
	Lowland	Public Forest	Edge of Forest Reserve	Forest Reserve
FUELWOOD				
Mdahani				X
Mnguti				X
Kiyangeyange*		X		X
Mbembeni *		X	X	X
Mgana*			X	X
Mvumba	X	X	X	X
Mzona				X
Mbugi				X
Mwiza				X
TIMBER & POLES (House Construction)				
Msunguti				X
Msumba				X
Mhavi	X			X
Mkenge	X			X
Mbemben		X	X	X
Mkongolo	X			X
Mtunu	X			X
Mzona*				X
Mbugi*				X
Mkani*				X
TIMBER (Logging)				
Mkani*				X
Mseli*				X
Mnyaweza				X

Although we do not have evidence of the amount of household income from woody forest resources, respondents indicated that buying fuel wood and charcoal for energy and timber for house construction were the major forms of accessing such resources. This clearly suggests that, there is a section of the population in these three sites whose major source of income is dependent on supplying [through selling] woody forest resources and that denial of access to the forest reserve by any conservation project will have adverse impact on them.

Despite variation between men and women with regard to commonly used resources as well ranking of preferred species, there are similarities in terms of their dependence on forest resources.

The study further shows that livelihoods dependence on forest resources in these three areas is not sustainable, because of over utilization of these resources, which has made increasingly hard to find. As indicated in Table 4.3 the most preferred woody forest species, which support livelihoods in the three sites, are high forest, endangered and increasingly hard to find and if available can only be obtained further down in the forest reserve. This makes these woody forest species more vulnerable not only to excessive use but also to extinction. Note that ranking of preferred species of woody forest resources in all the three areas does not show differences between them. The extent to which dependence on forest resources for livelihoods of communities in the three sites is unsustainable is presented in Figure 4.1.

Although respondents in all the three sites species indicate that some of the most preferred species such as *Mbembeni*, and *Kiyangeyange* were available in public forests. With the exception of Lanzi, the other two study areas (Ng'ungulu and Lukuyu) had no public forests remaining because all had been depleted through extensive land clearance and logging. Information from key informants suggests that only a very small portion of public forest exist in Lanzi.

Sustainable use of most preferred woody forest species at the three sites is a challenge for any conservation project because these species seem to provide greater use value than the non-preferred ones (see Table 4.4). This clearly shows a need for a cooperative effort to realign communities' preference to less endangered species.

5.3 Patterns in Use of Non-Woody Forest Resources

Non-woody forest resources are also identified as major source of livelihoods in the three survey sites. While respondents in all the three sites made efforts, to conceal the importance of non-woody forest resources in supporting their livelihoods, there is ample evidence to suggest that in two rural based sites of Lanzi and Ng'ungulu, specific categories of non-woody forest species constituted an important element to seasonal stress in livelihoods. Table 4.4 presents a summary of the patterns of use of non-woody forest resources by land category or forest type.

Uses of non-woody forest resources are mainly of two types (1) direct consumption and (2) income generation. Non-woody forest species commonly used for direct consumption and income generation include:

- Forest vegetables
- Forest bush meat
- Forest medicinal plants

Figure 4.1: Flow Diagram of Forest Resources Utilization and Livelihoods Sustainability

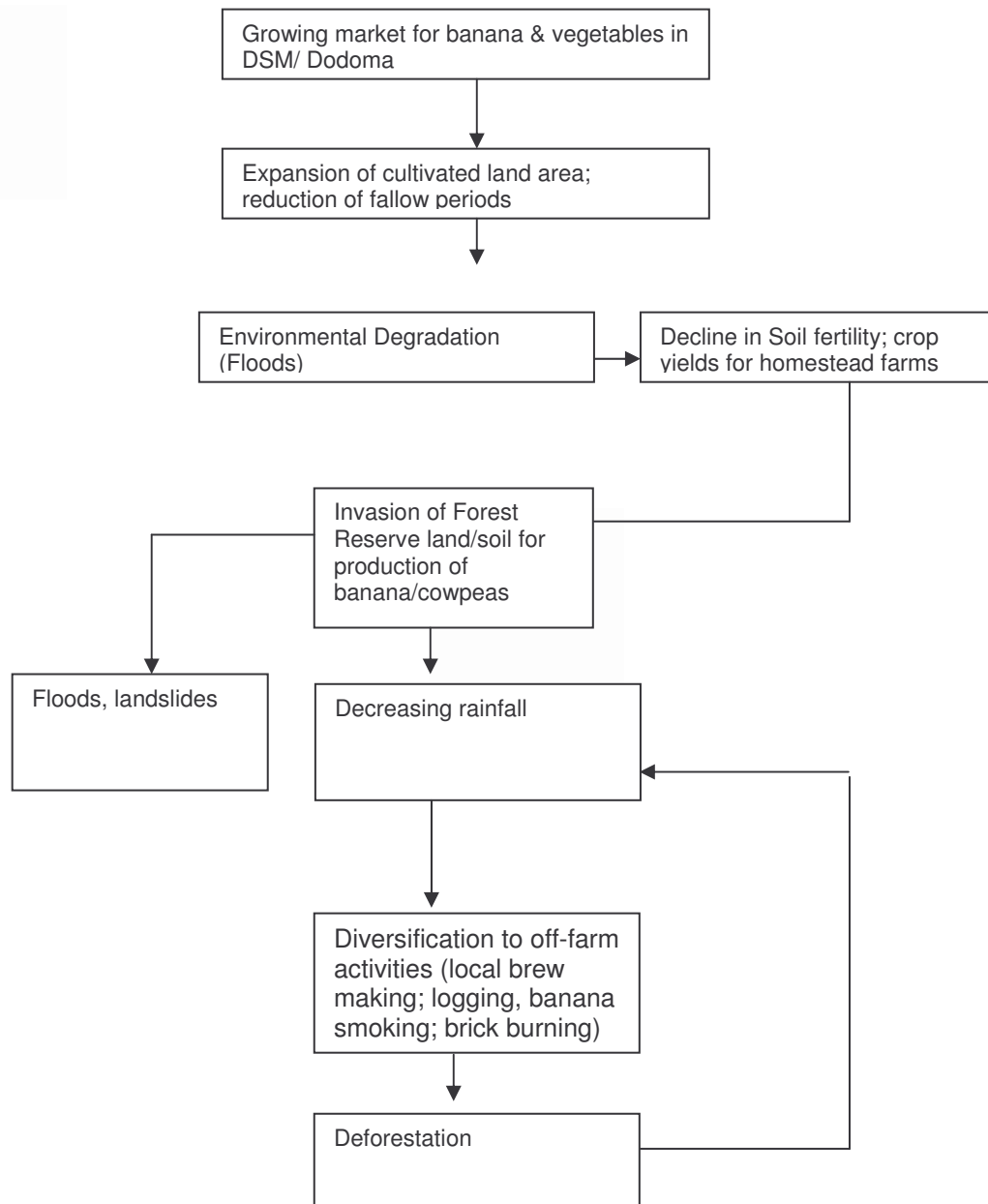


Table 4.4. Uses of Non-Woody Forest Resources by Land Category or Forest Type.
*Indicates highly preferred species

RESOURCE-SPECIES	LOCATION WHERE AVAILABLE			
	Lowland	Public Forest	Edge of Forest Reserve	Forest Reserve
TWINE/ ROPES (House Construction)				
Lugalazigwa	X			X
Mideu				X
Kalagazwa*				X
Kitomvutomvu*				X
Mwanamalamba*				X
Kiyangeyange		X		X
Mitolange				X
FOREST VEGETABLES				
Black mushrooms				X
Mnavu*			X	X
Delega*			X	X
Konge*			X	X
Supu-supu			X	X
BUSHMEAT				
Hyrax <i>Pimbi</i>			X	X
Vimala*			X	X
Wild pig*	X		X	X
Ndezi*			X	X
Sesi		X		X
Fungo		X		X
Sengw'a		X		X
Minde		X		X
Mbega				X
Melele*			X	X

Table 4.5 Reasons for Preference of some species

PREFERRED SPECIES	REASONS
FUELWOOD	
6. Mbembeni	<ul style="list-style-type: none"> • Used in all seasons (dry/wet) - burns when wet • Charcoal good/heavy lasts long
5. Mgana	<ul style="list-style-type: none"> • Charcoal good/heavy lasts long
4. Kiyangeyange	<ul style="list-style-type: none"> • Used in all seasons (dry/wet) - burns when wet • Charcoal good/heavy lasts long • Its charcoal burns for a long while if lights today evening, will burn until morning following day
3. Mzona	<ul style="list-style-type: none"> • Fuelwood light to carry • Easy to dry • Lights easily
2. Mvumba	<ul style="list-style-type: none"> • Lights easily
1. Mbugi	<ul style="list-style-type: none"> • Lights easily • Too heavy and not available
TIMBER (Commercial Logging)	
5. Mseli	<ul style="list-style-type: none"> • Heavy and expensive (can only be cut by pit sawing), for roofing window/door frame • Durable cannot be attacked by mchwa
4. Mkani	<ul style="list-style-type: none"> • Not as heavy as Mseli (cut by axe) but still durable compared to other species • Compared to Mseli its found inside the forest making it difficult to transport to the edge of the forest where it can be cut
TIMBER (House Construction)	
5. Mkani	<ul style="list-style-type: none"> • Does wear easily • Durable for foundation (cannot be attacked by mchwa)
4. Mbugi	<ul style="list-style-type: none"> • Durable for foundation as its heavy does not wear easily • One tree can build three houses
3. Mzona	<ul style="list-style-type: none"> • Not heavy can easily wear
TWINE/ ROPE (House Construction)	
5. Mwanamalamba	<ul style="list-style-type: none"> • Does not tear • Durable cannot be attacked by mchwa • Fetches good money as its not easily available
4. Kitomvutomvu	<ul style="list-style-type: none"> • Durable • Easily available
3. Kalagaziwa	<ul style="list-style-type: none"> • Easily available • Not durable
2. Mideu	<ul style="list-style-type: none"> • Not durable

5.3.1 Forest Vegetables, Roots and Tubers

There are variations between sites with regard to importance attached to the two types of uses. In Lanzi for example, species of forest vegetables such as *mnavu* are grown in the forest reserve and provide major source of income to the growers [we could not obtain more information on the market systems for the forest vegetables). Also forest vegetables are major coping strategy during periods of food shortages. In Ng'ungulu for example, roots and tubers were considered important during periods of food shortage,

5.3.2 Forest Bushmeat

Similarly, bushmeat is the major source of protein in Lanzi where there is no other type of meat available. Respondents' knowledge of prices of various bushmeat species in Lanzi was a clear evidence of the use of bushmeat. As indicated a piece of *sesi*, *ndezi* fetched up to between Tshs 50/= and Tshs 100/=. Forest bush meat was not shown to be a major source of meat protein in Ng'ungulu on the pretext that pig keeping was considered as an important source of meat protein in the area. We obtained no information or evidence to suggest otherwise. Since we could not obtain information on the nutritional status of households of the three sites it is difficult to say with certainty that nutritional status/security of households from these areas is dependent on forest bushmeat.

In Lukuyu, although respondents in focus group discussions downplayed the importance of forest bushmeat as a source of meat protein in the area, information obtained from case study households suggests that bushfires are mainly caused by people searching for bush animals such as *Sesi* mainly preferred as relish.

5.3.3 Forest Medicinal Plants

In all the three sites medicinal plants provide a major coping strategy for health insecure households: the exception is Lukuyu Street, which was closer to a nearby health facility (Bigwa dispensary is 5km and Mgolole mission hospital 15 km away), the two other areas (Lanzi and Ng'ungulu) do not have modern health facilities neither do they have drug shops. As such, forest resources have been relied on to provide requisite medicines to the communities. Access to forest medicinal plants is mainly through purchase from traditional healers and at times traditional birth attendants. This clearly indicates that medicinal plants from the forest are not only important for direct consumption but also provide income to some sections of the communities.

5.4 Forest Land & Water

5.4.1 Forest Land

In all the three sites, land in forest reserve and public forest (Lanzi) constitute the most important support for land shortages experienced by many households. While the matrilineal land tenure system in Lanzi and Ng'ungulu provide opportunity for family members to access land, the available land is inadequate to cater for the rapidly growing population in the area. Population pressure as well as growing markets for banana (Lanzi) and cowpeas (Ng'ungulu) has resulted into over utilization of land near homes and in the lowland. As such land in the public forest has been cleared for farming since it is the only vacant land available in the area. At times clearance of

land in the public forest has extended into forest reserve (Lanzi and Ng'ungulu) where there is growing commercial farming of banana and cowpeas.

The presence of absentee landowners mainly clans residing outside from where their land is in both Lanzi and Ng'ungulu complicates the problems of land management in the two areas. In Ng'ungulu two clans owning land in the area reside in Tchenzema, which is 2 hours walking distance from Ng'ungulu. Interviews with key informants showed that these absentee landowners are not aware of any village institutions neither do they think that the institutions are responsible for deciding on any issues concerning their land. This undermines the authority of village government as well as traditional institutions in Ng'ungulu. Apart from disguising the problems of land shortage in Ng'ungulu, the presence of absentee landowners, individuals residing outside the area contribute to inadequate care of land and consequently loss of soil fertility. Among others, uncontrolled bushfires are associated with the tendency of absentee landowners to light fires when attending their farms and leaving the burning fires un-supervised.

Unlike the other two study sites, in Lukuyu the forest land provides an alternative coping strategy to the ever-growing land insecure households. In the past, rapid population growth compelled successive village governments to allocate land in public forest as a coping strategy to landless households. However, recent government decision to change the status of Bigwa ward from rural to urban has created panic and fear among community in the area who have resorted into selling their low land and invading forest reserve land for agriculture and other livelihoods activities.

5.4.2 Forest Water

The forest catchment provide major source of water for all the three sites. In Ng'ungulu irrigation farming which is the major source of income security relies on water originating from the forest reserve. While trends in resource use in Ng'ungulu did not show any change in water flow resulting from increasing deforestation, there is enough evidence to suggest that the present water flow will eventually decline due to extensive deforestation resulting from growing need of forest soil to take advantage of expanding markets for vegetables and banana. Also intensive logging and farming in the site, were mentioned as major causes of water pollution in the area.

Lanzi is dependent on several streams including *Mfizigoo A*, *Molo*, *Senziwe*, and *Mfizigo B* for water and while these streams provide adequate water for domestic use, increasing deforestation uphill has reduced the flow of water into the area. At the moment water availability in Lanzi is seasonal. Seasonality of availability of water was cited by respondents in focus group discussions, as one of the major reasons for not practicing irrigation farming in the area. Availability of clean water is an issue. Mining of ruby and gold currently going on up the mountain, farming as well as logging activities tend to wash away down the stream chemicals and other dirty materials posing health risks to the communities using such water.

In Lukuyu, trends in water resource use indicate less change in pattern of water flow. Availability of water from river Lukuyu (a major source of water in the area) is changing with dry seasons becoming longer as the river now runs dry for almost throughout the year. Villagers linked this reduced access to loss of the forest and weather patterns. Weather patterns are in turn related to the forest and loss of traditions (see section 3.). Individuals migrating to Lukuyu have made efforts to pipe water into the area by harvesting it from the forest resource; these efforts may not be sustainable in a long while when the water sources continue to dry due to continued deforestation. Key informants noted that whereas twenty years ago water harvesting involved placing baobab pipes not very far from where the street is, at present water harvesting require

these pipes to be placed further up the mountain past the forest reserve boundary for water flow to increase.

5.5 Agricultural Land Use Patterns & Farming Systems

In all the three sites, land scarcity has led to fields being cultivated continually without fallow. In the areas of Lukuyu and Lanzi flat cultivation is the common practice. Despite presence of several streams in Lanzi, irrigated farming is not a common practice. Terracing or ridging is a common practice and preferred for horticultural crops such as cowpeas in Ng'ungulu. The cultivation system obtained in Ng'ungulu ensures continuous harvest of cash crops throughout the year.

Different agriculture and farming systems are practiced by each of the three sites (See Table 4.6). The importance for livelihoods of each of the agriculture and farming systems differs from one site to another.

Table 4.6 Agriculture and Farming Systems practiced in different areas

Agricultural Systems	Lanzi	Ng'ungulu	Lukuyu
Home Gardens	Intercropping-bananas, multi purpose trees, cassava, maize, beans, livestock, plums peaches, sugar cane	Cow peas, maize, sweet potatoes and beans, plums and peaches, sugar cane	Intensive agro-forestry trees, intercropping cassava, beans, maize
Valley Bottoms	Maize, rice, beans and bananas, sugarcane	Maize, beans, irrigated vegetables	
Lower Plain Fields	Fish ponds	Early maturing maize, cowpeas	Sugarcane, multipurpose trees
Hilly Forest Fields	Bananas, vegetables,	Cowpeas, vegetables	Rice relay

5.5.1 Hilly Forest

Hilly forest fields are more important for cash crop dependent economies of Lanzi and Ng'ungulu. In Lanzi, hilly forest fields are used for extensive banana growing mainly for commercial purposes. High altitudes and fertile soils in the hilly forest provide good yields throughout the year. Banana trees are intercropped with variety of vegetables and legumes. Extensive cowpeas growing in Ng'ungulu is common in the hilly forest fields where fertile forest soils as well closeness to the poles makes it easier for the farmers. Lukuyu is less dependent on hilly forest fields for farming because its livelihoods specifically food and income is less dependent on cash crops. Small-scale rice relay mainly for subsistence is practiced on hilly forest fields in Lukuyu.

5.5.2 Home Gardens

Home gardens found near areas of habitation and play an important role for agro forestry and fruit trees in all the three sites. Home gardens provide easy access (particularly during the rainy seasons) to the various resources the communities need regularly such as food, fuel wood, fodder and medicines throughout the year. In Ng'ungulu plum and peaches trees mainly grown in-home gardens were cited as major

sources of income security by almost the households interviewed. Home gardens and use of irrigation farming commonly practiced in Ng'ungulu enables production of horticulture vegetables such as cowpeas possible throughout the year.

In Lanzi banana growing in home gardens adds up to the stock of banana plantations relied on by communities for income and general livelihoods security. Information is not available to compare the quantity of banana harvested from home gardens with that produced from hilly forest. Livestock and in some cases fishponds are obtained in home gardens. There is also small scale spice growing (cardamom) in home gardens

In Lukuyu home gardens are mainly used for multipurpose trees and shrubs are intercropped with annual crops (maize, beans, cassava and coco yams) in several layers. The size and number of home gardens in the area is declining due to rapid in-migration and consequently change of land use from gardens to house construction.

The importance of home gardens to livelihoods of the communities in the three sites is declining due to loss of soil fertility resulting from reduced or non-existence of fallow periods. This is again related to land shortage problems experienced by the three sites. For example, interviews from all the three sites show that communities are forced to buy maize imported from Kilosa and other parts of Morogoro to supplement local production.

5.5.3 Valley Bottoms

Valley bottoms are used for production of annual and perennial crops in mainly hilly mountainous areas of Lanzi and Ng'ungulu. Maize, rice, beans and bananas are produced during rainy season in Lanzi and Ng'ungulu. However, irrigation farming in Ng'ungulu has made valley bottom fields more useful for production of vegetables, maize and beans in dry season. Maize, rice relay and agro forestry is made possible during short rains in Lukuyu.

5.5.4 Forest Soil Dependent Crops

The growing importance of cash crop farming in both Ng'ungulu and Lanzi is very much dependent on forest soils. Whereas intensive farming of cowpeas in hilly forest in Ng'ungulu has direct adverse impact on forest resources (deforestation), cowpeas production in home gardens also impacts indirectly on forest resources, Growing demand for poles needed to hold cowpeas plants has intensified demand for certain pole species (mnyaweza, kiyangageyange, mbembeni) only available from the forest reserve. At times these poles can only be available through felling of some of the tree species. In both Lanzi and Ng'ungulu hilly forest fields have emerged from cleared forest land.

The importance of hilly forest fields on cash and food crop production in the three sites is considered not be sustainable in the long run. Already signs of stress on forest land is showing with declining yields per acre in case of cowpeas production in Ng'ungulu.

5.6 Poverty and Vulnerability Indicators

There is diversity in assets important for livelihoods in the three sites. Table 4.7 summarizes different assets available in each study area.

Table 4.7 The Use of Household Assets Observed at each study site

ASSETS	Lanzi	Ng'ungulu	Lukuyu
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Land	Cash and food crop farming and land rent (<i>Ngoto</i>)	Cash and food crop farming; income and land rent (<i>Ngoto</i>)	Income through sale and renting
Multipurpose trees	Fuel wood and income	Fuel wood	Fuel wood and income
Fruit trees	Income and food security	Income and food security	Food
Household labour (young boys)	Income	Income	Income
House	Habitat security	Habitat security	Habitat and income (renting)
Livestock	Food and income	Income	Food and income

5.6.1 Land

Land is the major asset identified in all three-study areas. In Lanzi and Ng'ungulu land is an asset because it enables households grow cash and food crops, which are the major source of livelihoods security in these two areas. Land is also an asset in the area because by renting land some households can their supplement their food requirements through receiving '*Ngoto*' (a proportion of harvest paid to landowner) from the tenant. Moreover, in Ng'ungulu land as an asset provides another source of income to households and individuals selling land to an emerging land market comprising young men. These young men a purchasing land to break out of the matrilineal system breaking out of the matrilineal system through economic independence.

In Lanzi and Ng'ungulu land is 'inherited' principally through the matrilineal system. This ensures that all households have access to land. However, land holdings are increasingly small because of population growth. Coping strategies against land insecurity has households renting land to access more land to increase household production. Renting as a coping strategy has its limitations in that it demands that land is not planted with permanent crops and probably means land is not well looked after. Sale of land is very difficult under these conditions because of the desire of the clan to retain its land holding. In Ng'ungulu where sale of land is emerging, the land involved is that which is inherited through a patrilineal inheritance. There was indication in Lanzi too that the village government was involved in selling land that had been declared village land under the villagisation programme in 1975.

In Lukuyu land is an asset because it is mainly sold to in-migrants. Rapid urbanization of Lukuyu has made its land attractive to the people in Morogoro town as well as others from neighbouring regions. In Lukuyu land was acquired through allocation by the village government in 1975. During *Ujamaa*, households were each allocated approximately five-acre plots. Moreover, in Lukuyu land is inherited through a patrilineal system founded and legal, religious principles. Rapid urbanization is a pressure and it is undermining people's long-term investment in the land causing may people to sell land in the lowland area and purchase uphill land via the Village Government. This is creating encroachment on the Forest Reserve boundary and has already resulted in the loss of the Public Forest in this area.

5.6.2 Multipurpose trees

In all the three sites, multipurpose trees are a major source of fuel wood. To a very large extent, owners have used multipurpose trees as a source of income (sale of fuelwood) in periods of financial stress. In Lanzi and Ng'ungulu (i.e. villages that are predominantly matrilineal), women have good access to multipurpose trees, which they can own meaning they can sell and purchase. Women's rights over trees are more limited in Lukuyu.

5.6.3 Fruit Trees

Fruit trees are the first and second most important source of income in Lanzi and Ng'ungulu respectively. A large proportion of household incomes in Lanzi are dependent on banana as well as peaches and plum trees. In Ng'ungulu peaches and plum trees constitute the second source of income from cash crops. In both Ng'ungulu and Lanzi fruit trees are also a major source of vitamins. In the contribution of fruit trees to households' income is insignificant although it is significant for nutritional security. Fruit trees available in Lukuyu include, mangoes, coconuts, bananas, pineapples, pears, avocados and sugarcane.

5.6.4 Household Labour

Young boys and girls are another asset relied on for supplementing household income in all the three sites. In Lanzi and Ng'ungulu young boys aged between nine and fifteen years supplement household income through waged employment as porters (carrying banana and timber at Lanzi and cowpeas at Ng'ungulu). In Lukuyu young girls and boys supplement household income by taking up waged employment as domestic servants in Morogoro town and other neighbouring regions.

5.6.5 Livestock

Small stock such as chickens are kept at all the three sites and are considered important assets for income as well as food security. In Ng'ungulu however, pig keeping and rabbit rearing are an alternative major source of income. Pig keeping has the advantage of providing manure for extensive vegetable growing in the area.

5.7 Gendered Dimensions of Livelihoods

In all the three sites there exist clear distinction between men and women with regard to decisions made on different aspects of livelihoods. This distinction is also reflected in division of labour across the sexes (Table 4.8). As highlighted in all the three-sites, control of land is the major factor influencing decisions on land use, for example where and what to plant in any piece of household land.

In both Lanzi and Ng'ungulu, the matrilineal kinship system gives women the upper hand in decision making over land use. Also, single (un-married) women headed most households in these two sites. Thus women in Lanzi and Ng'ungulu have considerable economic independence and the ability to use of forest resources both in terms of cash crop farming and off-farm activities. As a consequence the status of men in Lanzi and Ng'ungulu was low. This gender inequality is attributable to the *Waluguru* adhering to their traditional matrilineal kinship together with the dominance of matrilocality (see section 3.2.1).

Table 4.8 Labour Divisions Across the Sexes

Activity	Lanzi	Ng'ungulu	Lukuyu
Timber Harvesting	Men	Men	Men
Logging and pit sawing	Men	Men	Men
Hunting-bush animals	Men	Men	Men
Gathering Forest foods (vegetables, leaves, and tubers)	Women	Women	Women
Collecting Fuelwood	Men*	Women	Both
Local Brew Making	Women	Women	Women
Charcoal making	None	None	Men
Stone quarrying/sand mining	None	None	Both
Mineral mining	Men	None	None
Rain making	Men	Men	Men
Brick burning	None	None	Men
Marketing	Men	Men	Men
Planting, weeding and harvesting			

* In Lanzi, fuel wood is accessed through purchase from collectors who are men. Women are unable to collect fuel wood, as it is no longer available in public forest except in forest reserve, which is a two and half hours walking distance from the village.

Different gender relations exist in Lukuyu, which is predominantly guided by a patriarchal system. In this community women had a lower status in decision-making related to land use and household assets, additionally they had less opportunity to be economically independent and the majority were in married situations. Un-married women in Lukuyu tended to be young and still living with their parents, but with children and practicing a “modern” lifestyle that can be linked to peri-urban living. It was highlighted in case study households that HIV-AIDS was a health risk to young adult women engaged in petty business in Mwanzomgumu, a commercial and market centre only 15 minutes walking distance from Lukuyu.

5.8 . SUMMARY

- This study provides evidence that the livelihoods of the population at the three study sites are dependent on forest resources. There is no single livelihood practice at these sites that is not somehow linked to the forest or its resources.
- This dependence differs depending on the site's location with heavy dependence evident in the more rural and relatively low dependence in peri-urban sites.
- Access to off-farm activities by the population of the peri-urban site, offers them the potential for diversifying income sources from those based on forest resources.

- Opportunities for diversification to off-farm livelihood activities could possibly realign the rural communities dependence on forest resources.
- Dependence on forest resources for the livelihoods of the population of these sites is unsustainable in the longer term.
- Risks to livelihood security as well as strategies for coping with such risks are associated with forest resources
- Depletion of forest resources as well as adverse environmental effects resulting from livelihoods activities are posing threats to the well being of the communities in the three study sites.
- Contextual variables shape the pattern of livelihoods dependence on forest resources in each of the three study sites: two related factors land shortage and population growth are significant in these sites where they are largely responsible for unsustainable use of forest resources
- Livelihoods activities as well as dependence on forest resources are gendered in all the three sites.
- Market opportunities resulting from a growing demand for vegetables such as cowpeas and fruits, specifically bananas in Dar es Salaam and Dodoma, together with the improvement of the Dar es Salaam-Mbeya highway, have increased demand for land for cultivation. Forest land, which is considered vacant, provides the best opportunity for land searching communities.
- None of these villages appeared to be impoverished using CARE indicators. Differences between Lukuyu and the other two villages in terms of access to amenities can be attributed to the level of development rather than impoverishment.
- Neither lack of food security nor serious income security was evident, but the forest and its resources play a major role in underpinning peoples' livelihoods

KEY ISSUE:

The issue for the project is to what extent the project's intervention is likely to impact negatively on local livelihoods, people's own perception about whether it will impact on their livelihood (with implications for participation) and the potential options for mitigating any impacts.

Annex 1 Scope of Work for Studies

ICD INSTITUTIONAL AND POLICY ANALYSIS OF COMMUNITIES ADJACENT TO THE EASTERN ARC MOUNTAINS AND COORDINATION OF THIS ANALYSIS WITH A LIVELIHOOD ASSESSMENT IN THE SAME COMMUNITIES

SOW PREPARED BY: Babu Matunda, Rob Wild and Phil Franks

DATE PREPARED: October 05 2000

BACKGROUND:

The Uluguru Mountains Catchment Reserve is important both to local people as well as people further a field, notably in Dar es Salaam, which draws most of its water from the Uluguru Mountains. To local people the Catchment Reserve is becoming an important area in which to collect firewood and wood for buildings such as poles. Its importance is increasing due to the disappearance of forests on the public lands, making it harder to find these essential materials. The forest also has a regulatory role on water supply, and there have been observations of river drying up in the short dry season, making women's work harder as they have to go further to fetch water.

The Uluguru Mountains form part of the Eastern Arc chain of mountains and as with other Eastern Arc mountains it contains many endemic species including three bird species, two mammal species, three reptile species, six amphibian species, one hundred and ninety six invertebrate species and a hundred species of plants. As a consequence the Uluguru Mountains are one of the most important sites for biodiversity conservation in Tanzania. Changes in thinking regarding the management of natural resources now emphasises the vital role of local communities into forest management. Studies into common property resource management emphasise the importance of relevant institutions to community based forest management (CBFM), and the attribute that these institutions need to have to make them effective at such management.

Under the proposed Eastern Arc Forest Management and Conservation project to be funded by GEF there is provision for a site-based integrated conservation and development project (ICDP) to support forest conservation in the Uluguru Mountains. As with any ICDP it is important that the selection of project interventions is based on a good understanding of the nature of local community institutions and the degree to which they are capable of entering into partnership with government agencies that are responsible for management

A consultant is being sought to lead a team of two (including one CARE Tanzania Staff) to conduct a rapid study on ICD institutional and policy analysis of communities adjacent to the Eastern Arc Mountains.

OBJECTIVE:

The objective of this consultancy is therefore:

- 1 To understand the community level institutional dynamics (both government and CBO) in relation to joint management of the Uluguru forest resources of the Ulugurus.
- 2 To assess the roles and functions of the statutory and customary institutions involved in natural resource management at the different levels of local government, the relationships between these institutions and the policies that guide their actions.
- 3 To act as the overall co-ordinator of two studies: Institutional analysis and livelihood security assessment.

Given the limited resources available the study will be brief and based on PRA methodologies. Efforts will be made to understand how representative the data is to the mountain communities as a whole.

In parallel with the institutional assessment two other studies are planned as part of the overall situation analysis. Firstly a rapid livelihoods assessment in four to six villages to characterise the range of different livelihood strategies in the Uluguru mountains. Secondly, an environmental study assess forest and on farm environmental degradation in the Uluguru Mountains

ACTIVITIES:

1. Discuss with CARE Tanzania staff and agree on the SOW and proposed output.
2. Review documents, which are related to this consultancy, such as existing PRA and project reports especially those of the Uluguru Mountains Planning Project and other PRA reports of the Uluguru. Review of the relevant policies and legislation.
3. Work with Dr Suma Kaare (The Livelihood Assessment Consultant) to review and finalise the livelihood study design and plan for an overall coordination of the 2 studies
4. Meet with District staff for courtesy calls
5. Meet with players in the Uluguru Mountains to gain insights into the existing community level institutions
6. Carry out PRA survey in three communities within the Eastern Arc Mountains
7. Make a presentation to Uluguru stakeholders to confirm the key findings of the three villagers. Ascertain the applicability of these findings to the Uluguru as a whole.
8. Debrief CARE Tanzania
9. Submit a draft report to CARE, Phil Frank and Rob Wild for review
10. Based on feedback produce a final report laying out the findings and their implications for the design of an Uluguru Mountains ICDP

OUTPUTS

The report will be based on a short PRA activity within three Uluguru communities. Communities will be selected based on proximity/ remoteness to infrastructure and the influence of district structures, extension services, projects etc. Additional selection factors will be taken into account where possible including, geographical location and religious grouping.

A report outlining the common property related institutional arrangements of sample Uluguru Mountain Communities, including both community and government structures, as a key input into the design of an ICDP for the Uluguru Mountains. Including:

Description of key and relevant community and government institutions within the communities, at different levels of government within the Ulugurus

An assessment of the impact that these communities have on the community level management of resources of the Uluguru Forests

An indication of the capacity for NRM and community confidence in these institutions

The kinds of capacity building requirement that these institutions would need to improve their effectiveness at CBNRM

The relationship of community institutions to the relevant NRM and land policies

The implications of these findings for a project design.

TIME FRAME

The total time for the consultant will be 17 days.

1 Day preparatory reading

14 Days in country made up of

2 days Background reading, and meetings in Dar and Morogoro

1 day discussions with rapid Livelihood Assessment Consultant

7days fieldwork

1 day discussion with district officials

1 day presentation at project design workshop

1 days local travel Dar-Morogoro (1/2 for one trip

1 day debriefing at CARE Office

2 day write up in UK.

Note

This is a working Scope of Work and it will be finalised together with the consultant on the first day of assignment in Dar es Salaam.

ICD RAPID LIVELIHOOD ANALYSIS OF COMMUNITIES ADJACENT TO THE EASTERN ARC MOUNTAINS

SOW PREPARED BY: Rob Wild

DATE PREPARED: October 04 2000

BACKGROUND

Increasing human poverty and the losses of biodiversity are two of the critical issues of our time. Despite determined efforts poverty in Tanzania, as in many developing countries remains a serious problem. Globally the extinction rate of animal and plant species (biodiversity) is estimated to be well in excess of fifty species per day. Tanzania is especially rich in biodiversity and is one of a small number of 'mega biodiversity countries'. Recently the Eastern Arc Mountains have been recognised as a major part of one of the 25 most important biodiversity hotspots in the globe. A hotspot is an area of particularly high concentrations of the number of species of animals and plants. The Eastern Arc and Coastal Forest Centre of Species Endemism, has in fact the highest number of endemic species per unit area of land of any place on earth. The high species diversity of the Eastern Arc Mountains is a result of the long undisturbed climatic conditions of the mountains.

In addition to allowing the development of exceptional species diversity the mountains have provided a relatively disease free environment with highly productive soils. This has allowed the development of high human population densities, which in some places are in excess of 300 people per square kilometre. With an expected doubling of the human population in Tanzania over the next 18 years the challenges to meet our moral obligations to both the human populations and to other parts of creation are immense. For people this is in terms of survival, poverty alleviation and the quality of life and for other animal and plant species this is in terms of ensure their continued existence.

The Uluguru Mountains Catchment Reserve, one of the key mountain blocks of the Eastern Arc, is important to local people as well as those in Dar es Salaam, which draws most of its water from the Uluguru Mountains. To local people the Catchment Reserve is becoming an important area in which to collect firewood and wood for buildings such as poles. Its importance is increasing due to the disappearance of forests on the public lands, making it harder to find these essential materials. The forest also has a regulatory role on water supply, and there have been observations of river drying up in the short dry season, making women's work harder as they have to go further to fetch water. This is impacting on livelihoods

The Uluguru Mountains contain many endemic species including three bird species, two mammal species, three reptile species, six amphibian species, one hundred and ninety six invertebrate species and a hundred species of plants. As a consequence the Uluguru Mountains are one of the most important sites for biodiversity conservation in Tanzania. Changes in thinking regarding the management of natural resources now emphasises the vital role of local communities into forest management. Studies into common property resource management emphasise the importance of relevant institutions to community based forest management (CBFM), and the attribute that these institutions need to have to make them effective at such management.

Under the proposed Eastern Arc Forest Management and Conservation project to be funded by GEF there is provision for a site-based integrated conservation and development project (ICDP) to support forest conservation in the Uluguru Mountains. As with any ICDP it is important that the selection of project interventions is based on a good understanding of the livelihoods of the local peoples and how this is affected by forest conservation.

Given the limited resources available the study will be brief and based on RRA methodologies. Efforts will be made to understand the level to which the data represents the mountain communities as a whole. In parallel with this assessment two other studies are planned as part of the overall situation analysis. Firstly a rapid institutional study rapid livelihoods assessment in four to six villages to characterise the range of different livelihood strategies in the Uluguru Mountains. Secondly, an environmental study to assess forest and on farm environmental degradation in the Uluguru Mountains

A livelihood assessment consultant is being sought to participate in a combined institutional and livelihood study in the Uluguru Mountains.

The focus of the study

While it will be important to understand the overall livelihood system of the Uluguru Mountain Communities in general, the focus of the study is to understand the critical positive and negative links between the livelihoods of adjacent communities and the forests and their individual animal and plant species.

Forests and biodiversity represent both a livelihood assets and livelihood threats to communities that live next to protected areas. They are assets in the sense that forest products support livelihoods providing a host of important products, including building material, food, water, medicine and soil. Community redemption of these productive assets occurs in both destructive and sustainable patterns. I.e. limited use of medicinal plants (sustainable) or forest clearance to access forest soils for agriculture (destructive). Forests present threats to community livelihoods by damage caused by elements of biodiversity (wildlife crop damage) and being locked up (forest closing) by government agencies. Both of these threats bring conflict between government and communities, as does forest destruction by communities.

This study will develop, using rapid methodologies, a picture of these critical livelihood interactions relevant for the project design and identifying potential interventions and future work for the proposed project

OBJECTIVE

To plan, execute, analyse and document a rapid livelihood study which focuses on the positive and negative impacts of the Uluguru Forests on the livelihood system of the adjacent communities, viewed within the context of the livelihood system of the communities as a whole, and to provide information critical to design an integrated conservation and development project for the Uluguru Mountains.

ACTIVITIES

The consultant identified will undertake the following activities:

In Dar es Salaam carry out preliminary reading and secondary data review

Work with the Institutional Consultant to refine the design of the combined study

Travel to Morogoro to undertake the following:

Courtesy and initial Meetings

Fieldwork and data collection in three villages

Present preliminary findings in a debriefing for the Uluguru Design Working Group

Document the findings as a main section in the final combined report

OUTPUTS

The consultant will present preliminary findings at a debriefing session and provide a document, which contains the following:

Summary of the livelihoods study

Objectives and methods

Analysis and findings

Recommendations for consideration in the Uluguru project design

The document will be presented in both hard copy and on diskette.

TIME FRAME

The total time frame for the consultancy is a maximum of 14 days, from October 27th until 5th December 2000, with concentrated work between 27 Oct to 10th Nov, 2000.

1 day prior reading day

27th, 28th Preparation of unified study with team

29th Day off (Election)

30th Continued preparation of the unified study

31st Am travel to Morogoro, p.m. courtesy calls with district staff

1st – 7th Nov Fieldwork

8th Debriefing of fieldwork to Uluguru Working group

9th-10th Return DSM & write up

1 day later writing day

Report submitted by the Early December

NB This is a rapid survey. The consultant will be collecting, entering and analysing own data. The consultant will be assisted by three Field Officers.

At least one of the target villages will be remote and the consultant should be prepared for 3-4 hours walking in difficult terrain before starting work. Recommended is the following equipment:

- walking shoes
- rain coat
- water bottle
- small day bag
- food and water
- compass?
- torch
- jumper (it gets cold in the night higher up and they might go up to 2200m and it might be raining)
- small pocket knife

Porters will be hired for any equipment needed.

Annex 2 **Field Schedule and Staff**

Annex 3 **Case Studies**

Annex 4 **Foresters Workshop**

The TASK

The Foresters were asked to break into three groups:

- a) Foresters employed by the Forest and Beekeeping Division
- b) Foresters employed by a District
- c) Foresters working with NGOs.

Each of these 3 groups plays a role in managing forest resources in Morogoro and the exercise aims to examine those roles together with forester perceptions as to how these roles might change following introduction of the new Forest Policy.

- 1) Outline the role of your group in forestry in Morogoro. Focus on: how you perceive the role of your group, its responsibilities; identify the tasks undertaken; identify authority, jurisdictions and accountable to whom
- 2) Following changes in Local Government Act; introduction of the new Forest Policy (1998) and the draft Bill for a new Forestry Act (forthcoming). Identify how the group thinks its roles and responsibilities are likely to change (you may think they will not change).
- 3) Within your group highlight any opportunities you see to do your job better under the new working arrangements and then identify any weaknesses (difficulties and/ or problems) you think may occur.
- 4) Present and Discuss.

The Boxes illustrate the flipcharts each of the groups produced in the workshop.

FLIP CHART 1: NGO GROUP

ROLES

- 1) To conserve the biodiversity of the Ulugurus
- 2) To improve the living standard of the surrounding communities

TASKS/ RESPONSIBILITIES

- (i) Awareness creating
- (ii) Assessment of boundary of forest reserves
- (iii) Promoting conservation of the Uluguru Forests (Public and Reserves):
 - Management of tree nurseries
 - Afforestation
 - JFM/ CBO
- (iv) Assist development of sustainable agricultural systems to reduce future agricultural pressure on Uluguru forests (UMADEP)

AUTHORITY & JURISDICTION

- As an NGO, the UMBCP, our authority is WCST (Morogoro)
- UMBCP jurisdiction is the Ulugurus and areas close to them
- Accountable to WCST (Dar es Salaam)
- Some staff are seconded from MNRT

IMPACT OF CHANGES IN POLICY & LEGISLATION

- Roles and responsibilities change according to:
- Need to involve communities
- Use of multi-disciplinary approaches
- Create “property ownership rights”
- Bottom-up approach to planning (not top-down)
- Involvement of decision makers in planning process
- Consideration of gender issues

OPPORTUNITIES RESULTING FROM THE CHANGES IN POLICY & LEGISLATION

- People become aware and involved
- Project goals are achieved
- Reduction of conflicts through multidisciplinary approach
- Increased efficiency in performance

Flip Chart 1 Continued

POTENTIAL WEAKNESSES & PROBLEMS THAT CAN RESULT FROM THE CHANGE IN APPROACH

- Expensive and time-consuming approach
- Sometimes can cause conflicts
- In case of scarcity of resources – difficult to practice “property ownership rights”
- Lack of education of the villagers makes the bottom-up approach difficult
- Problems arise when decision makers are not willing

Discussion: Observations, Clarifications and Questions

The group described their roles working for the Wildlife Conservation Society Tanzania (WCST), a local NGO, purely in terms of the project they presently work with i.e. the Uluguru Mountains Biodiversity Conservation Project (UMBCP).

Both the potential of the new policy approach to reduce conflicts through approaching management of the resources differently and also the potential for an increase in conflict resulting out of any change in authority over the resources was recognised. For example, the group highlighted the difficulties professional foresters might experience if no longer empowered to make decisions without reference to others that they perceive as uneducated or lacking in technical knowledge.

Are staffs seconded from the MNRT to work for the WCST still accountable to the MNRT? They are primarily accountable to the WCST and the project, but yes they also remain accountable to the MNRT.

Local communities were not involved in forest management under the old policy and foresters used to be policemen. Now these foresters have to change. One role of the NGOs is to supplement government activities and help this change. In the past the NGOs were working with the villagers so the new policy reflects the NGO agendas e.g. bottom up concept.

NGOs were acting as pressure groups but now they are mandated under the new arrangements⁸.

The group stress that the new approach was likely to be more expensive and time consuming in the short term but if successful it should reduce the costs of forest management.

NGOs sometimes see Government foresters as not doing their jobs properly, but it may not be foresters themselves but rather other government officials who abuse the forestry profession.

Government does not always have sufficient control over NGOs and what they do – some NGOs are just names.

⁸ The NFP (1998) envisages NGOs as taking on roles of awareness raising, capacity building, providing training and technical assistance, helping to finance initiatives and addressing gender issues in implementing the policy.

FLIP CHART 2: DISTRICT GROUP

ROLES

- 1) Forest Extension
- 2) Technical Advice
- 3) Implementation of Forest Policy and Law
- 4) Tree Planting
- 5) Forest Management in:
 - Forest Development
 - Forest Exploitation
 - Fire Protection
 - Patrols and Law Enforcement

RESPONSIBILITIES

- a) To see to it that forests are managed sustainably
- b) Tasks undertaken:
 - Forest Policing
 - Revenue Collection
 - Nursery Establishment
 - Forest Patrols
 - Services and Advice through public meetings, seminars and posters

AUTHORITY AND JURISDICTION

- No full authority
- Legal power is there
- Weak link between District Councils, Ministry and Regions
- Accountable to:
 - DED/ Municipal Director
 - RNRO
 - Councillors
 - Director of Forestry and Beekeeping (in some cases)

[note – issue of performance criteria was raised during in discussion – general view was that administrators do not have the right information to assess technical work of foresters]

Flip Chart 2 Continued

IMPACT OF CHANGES IN LEGISLATION

- Not yet seen the draft bill
- Changes resulting from the from National Forest Policy are:
 - Need to change from forest police to people's involvement officers
 - Change from top-down to bottom up planning
 - Smooth communication between districts and central government

OPPORTUNITIES

- People are anxious to manage forests
- Degradation of forests in Morogoro will be minimised
- Political will is high
- Several Institutions (NGOs will etc.) will be working for forest conservation
- Workload to foresters will be minimised

WEAKNESSES

- People may take this opportunity to degrade the forests for income generation if there's no proper education
- Some people/ leaders may have negative attitude toward foresters and will not participate in forest conservation programmes

Discussion: Observations, Clarifications and Questions

This group of foresters do not have full authority to act. They are employed by the District Executive Director⁹ (DED), an administrator, and must seek advice from the DED via the DNRO before taking any action.

A DFO's job is dependent on the administrator so there is little a DFO can do if the administrator has a poor attitude to forestry. For example, the DED could direct a forester to over-harvest and the forester would not be empowered to refuse.

The District does not always receive all of the information it needs: "*Laws can be out but we don't get the information about the new law*".

Many people complain about District Foresters including the NGOs, but often an NGO may not be doing very much itself.

One problem is that not all forest areas come under the jurisdiction of the District e.g. forest area in Rukwa Game Reserve, which was highly degraded, came under jurisdiction of the Wildlife Division.

How are district foresters accountable to so many authorities? The employer is the local government and civil servant commission, but councillors now have the power to

⁹ Or a Municipal Director

sue districts. Additionally, there is a poor link to the central government so districts are isolated

The British colonial authority was praised for its decision to re-gazette the Eastern Arc Forests but now there are decisions to clear some of these areas because of the lack of fertile land. The problem is that the value of the forest is greater than the money that they generate in the short term.

Professional foresters have concerns about JFM because "*We don't know where it has worked well*".

Examples of Tabora and Babati were discussed. Tabora was considered a failure in the longer term, but Babati is considered successful. Reasons for the success of Babati were:

- The LAMP project organised the community very well;
- There were species in the *miombo* that the community wanted because they were scarce so it was important to the communities.
- By-laws were created and implemented to support management of the *miombo* forest.

There is an issue of different categories of forest and which of those categories a district has authority over e.g. they do not have jurisdiction over the catchment FRs and nowadays many local government FRs only exist on paper.

FLIP CHART 3: CENTRAL FOREST AND BEEKEEPING

ROLES

- 1) Protection – patrolling, boundary consolidation, fire protection
- 2) Forest Development:
 - Enrichment planting;
 - Natural regeneration;
 - Afforestation; and
 - Reforestation

TASKS/ RESPONSIBILITIES

- (i) Extension:
 - Awareness creation;
 - Seminars;
 - Meetings;
 - Exchange;
 - Posters;
 - Training;
 - Radio programmes, TV and films
- (ii) Supervision of harvesting:
 - Issuing of licences;
 - Harvesting coupes
- (iii) Seed procurement and distribution:
- (iv) Gene Resources conservation *ex-situ* and *in-situ*
- (v) Undertake forestry research

IMPACT OF CHANGES IN POLICY & LEGISLATION

- Change from traditional Forest Management to Joint Forest Management (JFM) and Community-based forest management (CBFM)
- Privatisation – change from government ownership to private ownership

OPPORTUNITIES

- less destruction of forest resources
- less management cost
- more revenue to the government

Flip Chart 3 Continued

WEAKNESSES

- employment is jeopardised
- conflicts may arise between local communities and foresters
- privatisation reduces GOT authority/power and control

Discussion: Observations, Clarifications and Questions

No one from this group had seen either the new legislation pertaining to the Local Government Service Act (1982) or the draft Bill for a Forest Act (2000)

Issuing of licences was a key issue for this group: Central Government receives the royalty but local government receives a percentage. The Catchment Forestry Office presently supervises and issues licences in Morogoro because of past irregularities.

No timber has been licensed from the Uluguru North and South Catchment FRs since 1993.

The Director of FBD has had the power to revoke a districts power to issue licenses and the group stressed that it was important that this power is retained.

Cost of licences need to be reviewed.

The need for training was highlighted if foresters are to adapt successfully to their new roles¹⁰. Many foresters feel very threatened by these changes.

¹⁰ Note that many of the tasks presently undertaken by central government and local government foresters will remain unchanged e.g. revenue collection, law enforcement, tree planting, extension work, research etc. rather it is the approach to these tasks that will require change.

Annex 5 **Local Plant & Animal Names Encountered During
the Fieldwork**

(List sent to Neil for checking with foresters)