

Danida

MEMA, Natural Woodland
Management Project/Udzungwa
Mountains Forest Management
Project

Socio-economic Baseline Study

December 1999

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Report no.

Issue no.

Date of issue 20 December 1999

Prepared SSR

Checked Patrick Golwike

Approved LWO

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1 Introduction

This report contains the twenty-two village profiles covering all communities in the two project areas of the Natural Woodlands Management Project (NWMP) and the Udzungwa Mountains Forest Management Project (UMFP). The two components are jointly referred to as the MEMA project (Matumizi Endelevu Ya Misitu Ya Asili), which translates into “Sustainable Utilisation and Management of Natural Forest”

With the ongoing decentralisation process, the new Forestry Policy, Wildlife Policy and the impending new Land Bill and Village Act, the Government of Tanzania has taken some major political steps towards resolving the conflict between the environmental and poverty alleviation objectives.

The NWMP is designed to assist the local communities and district authorities to achieve the formulated policy goals and to minimise the current conflict among different stakeholders between the environmental objectives and poverty alleviation through fulfilment of the following immediate objectives:

- ? To develop, test and initiate implementation of sustainable, community based, natural woodland management models in initially two pilot areas in order to help facilitate the implementation of key aspects of the new Forest Policy, the Land Bill and the Local government Reform Agenda.
- ? To strengthen the capacity of Iringa Rural District Natural Resources Authority framework to support sustainable community based management of natural woodlands.

The UMFPM project is designed to contribute to the improvement of welfare and living standards of people living in communities within the Udzungwa Mountains ecosystem through the fulfilment of two immediate objectives:

- ? To develop, test and implement JFM models for the environmentally sustainable production, use, management and protection of natural forest and biodiversity resources in the two pilot areas.
- ? To support capacity development in natural forest and biodiversity resource management in other priority catchment forest reserves in Iringa Rural District with all local government structures and other intermediary organisations.

The present baseline study was designed to create an important reference point for the project and generate a better understanding of the socio-economic, socio-political and environmental issues in the two pilot areas. The study will in particular assess the importance of natural woodland and forest providing products and services for domestic use as well as income when products are sold to buyers often from outside the area.

The team comprised of two field-teams working in the two pilot areas respectively. However, the field teams were closely co-ordinated and collaborated when developing a common methodology and later when analysing findings. The scope and nature of issues studied and analysed are presented in the TOR, see Annex 1.

The consultant would like to express its thanks to all officials, institutions and individuals met for the kind support and valuable information which the consultant received during its stay in Tanzania and which highly facilitated the work of the entire team.

2 Methodology

Initially the consultants spent a whole day with the project management discussing the focus in the Terms of Reference in order to agree on the exact wording and more important the priorities of the study. It was agreed that village organisations and structure as well as the users' perspective regarding their present management of the forest and woodland should have the highest priority during the socio-economic study. It was also agreed to maintain the original idea of individual studies in each of the twenty-two communities because of the rather different socio-economic characters and uses of the forest and woodland. Consequently, the team would spend two full days in each village focused on collecting primary data supplemented with follow-up interviews if necessary with individuals, institutions and organisations, see team's work programme Annex 2.

The project had in September/October 1999 completed Participatory Rural Appraisal (PRA) reports on all 22 communities following a 2 – 4 day's appraisal in each community. Mainly divisional forest officers but also other government officers (community development officers and agricultural officers) carried out the studies. The findings and in particular sketch maps were used and further developed by the team.

The team comprised of international consultants, local consultants and divisional foresters. The multidisciplinary nature of the team (forester, anthropologist and community development specialist) highly facilitated the study.

The divisional foresters were of great importance to the team with their local expertise. At the same time the study provided an excellent training opportunity for the divisional foresters to benefit from a multidisciplinary approach and the experience of participating in the entire process from discussing and planning the study approach and methodology, field work, analysis and final report writing and presentation. It is the firm belief of the Consultant that during the process of the study all team members benefited from the dynamic team composition. In particular the divisional foresters found themselves entering a steep learning curve when their former work practise was questioned and they experienced and recognised the nature of their future role as professionals and facilitators of JMF. All participating divisional foresters positively took up this

challenge and the Consultant is confident that the experience will facilitate the future work of the project.

Study approach and organisation:

As already mentioned the study team was divided into two field teams working in the two pilot areas respectively. Each team organised for two days' visits (alternating days) in each community.

On the first day in a village the team facilitated a meeting/workshop with the Village Council. In most cases the Village Council had decided to invite other villagers of importance to participate in the meeting/workshop. The intentions of the meeting/workshop was to discuss issues and collect data concerning:

- ? economic information regarding agriculture, livestock, land tenure, incomes and local businesses, including the economic importance of the woodland/forest to the community,
- ? village Council and other community committees' organisation, management structure and experience, links to internal and external organisations, the existence and enforcement of bylaws and finally the economic and financial status and opportunities of the community management (Village Council),
- ? demographic information, and
- ? a general discussion on forest products and users with the purpose of mobilising a users' meeting for the second day of the study.

The team managed during most workshops to facilitate the participation and contribution of a large number of participants and often issues sparked lengthy discussions among the participants themselves creating the important environment where opportunities exist to probe further to deepen the understanding of often complex data.

On the second day in a village was spent with the users. The team always tried to identify a meeting place in a sub-village where a large number of users with varied interest in the forest and woodland lived. In this way these meetings/workshops often took place very close to the forest and woodland, which were on the agenda for the day's discussion. On this day a number of product cards (produced specially for this study) were utilised to identify the products collected by the users, their priorities and whether these products were available (ranking from scarce, sufficient to abundant). Availability cards, gender cards, PRA maps and fabric maps were then used to facilitate a discussion with the users concerning each product from the woodland and forest.

The discussion tried in each case to determine changes in the use of a particular product, its whereabouts in the forest and woodland, its market and domestic value, time spent collecting etc. The visual product cards, availability and gender priority cards, PRA maps and fabric maps proved very useful in facilitating

the discussion with the predominantly illiterate participants. And even information regarding sensitive issues such as illegal timber harvesting was discussed and data made available to the team based on the created confidence and trust between the facilitators and the participants. The workshop participants and facilitators decided to abandon the issue of legal and illegal was and instead focus on the actual uses of products became the focus of discussion.

Often follow-up interviews were carried out in cases where data could benefit from being cross checked, confirmed or added to by relevant individuals or institutions.

Although the team had agreed with the project management to avoid any project related planning in the communities the meetings/workshops in some cases provided a relevant and excellent opportunity to take a step further and discuss the implications of joint forestry management seen from the users' perspective.

3 Data Analysis and Presentation of Data

The idea and purpose of using a participatory approach is the unique opportunity it gives for participants and facilitators to analyse the data immediately in the field with the participants. This was also the case in this socio-economic baseline study. Much analysis and corrections of data took place during data collection. A continued data analysis then followed immediately after the collection of data, when the team wrote up its findings directly into a village profile. In this way the time between data collection and reporting became the shortest possible, and the team avoided confusing data collected from the rather large number of different communities.

During the write-up the team discussed the findings and primary analysis and agreed on issues where team members had different views. The team also identified immediately during the write-up a number of issues to be clarified through follow-up interviews or cross checking with a supportive literature, see Annex 3.

The project management requested that the socio-economic study should consist of twenty-two individual village studies it was also decided that the reporting format would not be the classical generalised socio-economic baseline study consisting of primary data supported by a large amount of secondary data. Instead the socio-economic baseline study would materialise in twenty-two village profiles one for each project community, containing only primary data of relevance for the planning of project activities.

Although the data in the profiles are mostly site specific and particular for that certain village the team has inserted a number of box texts. These texts are often relevant for a larger number of communities in the project area. Likewise with the conclusive chapter in each village profile (Implications/Opportunities for JMF), which also contains data and analysis that is often relevant in a more general context.

With the entire focus on the individual village profiles the team sees no relevance and need for summary or general findings in this Introduction. Instead the team wants to stress that each of the twenty-two village profiles provides an entity in itself. The village profile provides a dynamic working document to be read, used, discussed and added to in order to provide an entry and reference point to a particular community by government staff, project staff and other stakeholders in the project.

Moreover, the village profiles should be used as a reference for the coming preparatory studies to be carried out in the first half of year 2000:

- ? Forest, Vegetation and Wildlife Resources Baseline Study
- ? Non-Wood Forest Products Baseline Study
- ? Marketing Survey and Marketing Strategy

These studies along with the biodiversity studies carried out by Frontier (NGO) will provide the basis for preparation of Joint Forest Management Plans.

4 Identification of Community-Based Monitoring and Evaluation System

While it is early to design a participatory planning, monitoring and evaluation (PPM&E) system, some principles of such a system were discussed with the project management. PPM&E will begin with the negotiations and planning of objectives that will be established in the Management Plans and Agreements. It is likely that the task of negotiating, planning, monitoring and evaluating will be with a village sub-committee, although the Village Council will likely be signatory to the JFM agreements, being a legal entity in the village.

PPM&E will begin with a small data set and increase as the capacity to gather, analyse and report data grows. In other words the system should not be loaded with data in the beginning, but instead the system should get in place with a small and well selected data set that later can be increased if need arises and capacity allows.

The PPM&E system will be developed fully during the planned consultancy in the third quarter of year 2000.

5 Identification of Benchmark Indicators for Project Year Three

It is noted that the Project Component Descriptions have a Logical Framework Analysis, with Objectively Verifiable Indicators (OVIs) and Means of Verification (MsOV). However, on a larger scale, and to facilitate “process” management of the project, key indicators could conceivably cover two main areas: the **forest**, and the **users**.

Concerning the users/collectors, there were discussions on this issue while designing the methodology and approach of the socio-economic baseline study. The study and the village profiles determined how the proposed JMF areas were currently being used, either legally or illegally. Comparison of the use, using the same systematic approach as in the present study, could also be made at the end of Year Three, or even along the way. In addition, the project could consider directing the Benchmark Study in PY 3 more in the direction of a beneficiary assessment to better facilitate “processes”; a beneficiary assessment answering “**why** things have happened (or not happened), more than **what** has happened” (impact assessment).

Concerning key indicators of the **forest**, the Consultant expects that the information from the Forest, Vegetation and Wildlife Resources Baseline Study, Non-wood Forest Products Baseline Study and the Frontier biodiversity studies will provide a complete data baseline from which forest-based key indicators can be extracted.

Terms of Reference

Socio-economic Baseline Study

Background and focus of study

The JPMU considers the villages to be so different that management plans should be designed and agreed in correspondence with the socio-economic conditions prevailing in each community. Therefore, the socio-economic baseline study will materialise in 22 brief community profiles - one for each village. The socio-economic baseline surveys will focus on socio-economic data of importance to the issue of Joint Forest Management, which means that each activity in the ToR shall be carried out with the role of natural woodland/forest in mind. Special attention shall be given to utilisation and tenure aspects of the different users groups and their respective concerns and status with regard to gender, ethnic belonging, age, and wealth and possible conflict arising from these aspects among the different users groups. The socio-economic study will in this way provide the necessary background information for the planned subsequent studies and design of Joint Forest Management plans.

Consultants and duration of assignment

| | | |
|-------|----------------------|--|
| NWMP: | Søren Skou Rasmussen | 3 person month or 52.2 days working days |
| | Patrick Golwike | 3 person month or 52.2 days working days |
| UMFM: | D'Arcy Davis Case | 3 weeks or 15 working days |
| | Local consultant | 26 working days |
| | Local consultant | 26 working days |

Scheduling of input

Both teams will start their assignment around October 1, 1999

Output

NWMP:

A socio-economic baseline survey consisting of 14 village profiles (one for each village) with focus on socio-economic issues related to utilisation of natural woodland products in the pilot communities.

UMFM

A socio-economic baseline survey consisting of 8 village profiles (one for each village) with focus on socio-economic issues related to utilisation of forest products in the pilot communities.

The socio-economic baseline should present and analyse data related to:

- ? the demographic structure including the population distribution, growth, settlement patterns, ethnic groups, migration and situation of female headed households,
- ? infrastructure and main economic activities (including non-farm production) in terms of their geographic distribution, seasonality and proportion of the population (age, gender and ethnic groups) engaged in them.
- ? community organisations and institutions of various origin and of relevance to natural woodland management (traditional, government, NGO, Project, CBO) including their composition, inter-linkages, previous experience with resource management and administrative and economic practice and experience.

- ? access and use of land by managers and users including the system of land and tree tenure, mechanism of land allocation/acquisition, inheritance, and transfer. Furthermore indicate possible implications on how findings will affect JFM initiatives,
- ? conflicts concerning access to natural resources (focusing on woodland and forest) stemming from e.g. co-existence of pastoral groups and resident agriculturists and conflicting interests among villagers and between villagers and users from outside the village (including traders and government agencies),
- ? identify benchmark indicators for year 3, relative to overall project objectives.

**WORK PROGRAMME FOR SOCIO-ECONOMIC BASELINE STUDY, NWMP, OCTOBER –
DECEMBER 1999**

| OCTOBER | Activity | Village | Divisional foresters particip. |
|----------------|---|-----------------|---------------------------------------|
| SATURDAY 2 | Int. Consultants arrival in Dar Es Salaam | | |
| SUNDAY 3 | Int. Consultants' meeting | | |
| MONDAY 4 | Int. Consultants' meeting | | |
| TUESDAY 5 | Int. Consultants, travel DAR – Iringa | | |
| WEDNESDAY 6 | Briefing at District Natural Resources Office | | |
| THURSDAY 7 | Preparation of field study | | |
| FRIDAY 8 | Preparation of field study | | |
| SATURDAY 9 | Field visit to Udzungwa mountains | Iringa District | |
| SUNDAY 10 | Preparation of field study | | |
| MONDAY 11 | Preparation of field study | | |
| TUESDAY 12 | Village council workshop | Migoli | Joseph Mchome |
| WEDNESDAY 13 | Village council workshop | Kiwere | Emmanuel Lupala |
| THURSDAY 14 | Forest users' workshop | Migoli | (Throughout the week) |
| FRIDAY 15 | Forest users' workshop | Kiwere | |
| SATURDAY 16 | Report writing | | |
| SUNDAY 17 | Report writing | | |
| MONDAY 18 | Village council workshop | Izazi | Florence Nikata |
| TUESDAY 19 | Village council workshop | Makuka | David Kisoma |
| WEDNESDAY 20 | Forest users' workshop | Izazi | (Throughout the week) |
| THURSDAY 21 | Forest users' workshop | Makuka | |
| FRIDAY 22 | Visit to forest products' checkpoint | Mgongo | |
| SATURDAY 23 | Report writing | | |
| SUNDAY 24 | Report writing | | |
| MONDAY 25 | Village council workshop | Mkulula | Joseph Mchome |
| TUESDAY 26 | Village council workshop | Usolanga | Emmanuel Lupala |
| WEDNESDAY 27 | Forest users' workshop | Mkulula | (Throughout the week) |
| THURSDAY 28 | Forest users' workshop | Usolanga | |
| FRIDAY 29 | Follow-up interviews | Usolanga | |
| SATURDAY 30 | Report writing | | |
| SUNDAY 31 | Report writing | | |

| NOVEMBER | Activity | Village | Divisional foresters Particip. |
|-----------------|--------------------------|----------------|---------------------------------------|
| MONDAY 1 | Village council workshop | Mangawe | Florence Nikata |
| TUESDAY 2 | Village council workshop | Nyang'oro | David Kisoma |
| WEDNESDAY 3 | Forest users' workshop | Mangawe | (Throughout the week)) |

| | | | |
|--------------|--|-----------------|-----------------------|
| THURSDAY 4 | Forest users' workshop, Interview with CONCERN (NGO), Iringa | Nyang'oro | |
| FRIDAY 5 | Report writing, briefing MEMA off., Iringa | | |
| SATURDAY 6 | Report writing | | |
| SUNDAY 7 | Report writing | | |
| MONDAY 8 | Village council workshop | Chamdindi | Joseph Mchome |
| TUESDAY 9 | Village council workshop | Ikengeza | Emmanuel Lupala |
| WEDNESDAY 10 | Forest users' workshop | Chamdindi | (Throughout the week) |
| THURSDAY 11 | Forest users' workshop | Ikengeza | |
| FRIDAY 12 | Follow-up interview | Ikengeza | |
| SATURDAY 13 | Report writing | | |
| SUNDAY 14 | Report writing | | |
| MONDAY 15 | Village council workshop | Kinywang'anga | Florence Nikata |
| TUESDAY 16 | Village council workshop | Itagutwa | David Kisoma |
| WEDNESDAY 17 | Forest users' workshop | Kinywang'anga | (Throughout the week) |
| THURSDAY 18 | Forest users' workshop | Itagutwa | |
| FRIDAY 19 | Report writing | | |
| SATURDAY 20 | Report writing | | |
| SUNDAY 21 | Report writing | | |
| MONDAY 22 | Village council workshop, Interview at District Agricultural Office | Mfyome | Joseph Mchome |
| TUESDAY 23 | Village council workshop | Kitapilimwa | Emmanuel Lupala |
| WEDNESDAY 24 | Forest users' workshop, meeting District Livestock Office, Iringa | Mfyome | (Throughout the week) |
| THURSDAY 25 | Forest users' workshop, meeting with District Tobacco Officer, Iringa | Kitapilimwa | |
| FRIDAY 26 | Report writing, meeting with District Livestock Marketing Officer, Iringa. | | |
| SATURDAY 27 | Report writing | | |
| SUNDAY 28 | Report writing | | |
| MONDAY 29 | Field visit to Catholic Mission (workshop) | Ismani Tarafani | |
| TUESDAY 30 | Report writing | | |

| DECEMBER | Activity | Village | Divisional foresters particip. |
|-----------------|---|----------------|---------------------------------------|
| WEDNESDAY 1 | Debriefing NWMP and UFMF teams, District Natural Resources Office | | |
| THURSDAY 2 | Dept consultants, Iringa – Dar Es Salaam | | |
| FRIDAY 3 | Report writing, int. Consultant, Dar Es Salaam | | |
| SATURDAY 4 | Dep. Int. Consultant, DAR. – CPH. | | |

List of supportive literature

Community Based Natural Woodlands Management, Project Description, Danida, December 1998

Deforestation in Tanzania, beyond Simplistic Generalizations, Solon L. Barracclough and Krishna B. Ghimire, *The Ecologist*, Vol. 26, no 3, May – June 1998

Finding the right Institutional and Legal framework for Community-Based Natural Forest Management – the Tanzanian Case, Liz Wily, CIFOR, 1997

Forest Resources Management Project (FRMP), Draft Study Report, June 1995

Iringa District, Socio-economic Profile, Planning Commission, July 1997

Kiongozi cha Serikali za Vijiji, B.R. Nchimbi, 1995

Managing Natural Forests at the Village Level, Dr. S. Iddi and Håkan Sjöholm, a paper prepared for the XI World Forestry Congress, Antalya, October 1997

National Beekeeping Policy, March 1998, Vice Presidents's office, Dar Es Salaam, March 1998

National Environmental Policy, Vice President's office, Dar Es Salaam, December, 1997

National Forest Policy, Vice President's office, Dar Es Salaam, March 1998

Notes on finding the right legal and institutional framework for formalising state-people collaborative management of territorial forest reserves, Liz Wily for Gologolo Project, NRBZ, March 1998

Public Sector Reform in Tanzania – Restructuring of the Ministry of Natural Resources and Tourism, prepared for the Forestry Advisory Group Meeting, October, 1997

Socio-Economic Survey of communities around Udzongwa Mountains National Park, Norconsult for WWF, 1995

Udzungwa Forest Management Project, Socio-Economic Survey, HIMA(Danida), January 1996

Udzungwa Mountains Forest Management and Biodiversity Conservation, Component Description, Danida, August 1998

**TREE, BUSH, WILD FRUIT AND MEDICAL PLANT SPECIES MENTIONED IN THE
VILLAGE PROFILES OF THE FOURTEEN VILLAGES INCLUDED IN THE NATURAL
WOODLAND MANAGEMENT PROJECT (NWMP)**

| Local name | Language | Botanical name |
|--------------------------|----------|-------------------------------------|
| 1. Lukali | H | <i>Turraea nilotica</i> |
| 2. Lwenyi | H | <i>Faurea saligna</i> |
| 3. Mbadilo | H | <i>Combretum molle</i> |
| 4. Mbamilimisa | H | n. a. |
| 5. Mbumanzuki | H | <i>Apodytes dimidiata</i> |
| 6. Mbumila | H | <i>Ochna holstii</i> |
| 7. Mbwejele | G | <i>Albizzia schimperana</i> |
| 8. Mdahisa | H | <i>Myrica salicifolia</i> |
| 9. Mdawi | G | <i>Cordia monoica</i> |
| 10. Mdawisogwe | G | <i>Cordia senensis</i> |
| 11. Mdejedeje | G | <i>Acacia seyal</i> |
| 12. Mdunula | H | <i>Osyris lanceolata</i> |
| 13. Mflieti | H | n. a. |
| 14. Mfugala | G | n. a. |
| 15. Mfundu | H | <i>Vitex iringensis</i> |
| 16. Mgandu | G | <i>Zizyphus abyssinica</i> |
| 17. Mgombwale | ? | n. a. |
| 18. Mguluka | H | <i>Securidaca longipendunculata</i> |
| 19. Mguvani | H | <i>Markhamia obtusifolia</i> |
| 20. Mhavava | H | n. a. |
| 21. Mhehefu | H | <i>Rhus vulgaris</i> |
| 22. Mhembeti | H | <i>Sterculia guingueloba</i> |
| 23. Mhotapozi | ? | n. a. |
| 24. Mkalala | H | <i>Acacia Petersiana</i> |
| 25. Mkambala | H | <i>Acacia mellifera</i> |
| 26. Mkangatowo | H | <i>Dombeya rotundifolia</i> |
| 27. Mkapo | H | n. a. |
| 28. Mkingiliti | H | <i>Phyllanthus englenii</i> |
| 29. Mkola | H | <i>Azelia quanzensis</i> |
| 30. Mkondo (H) Mbuyu (S) | H/S | <i>Adansonia digitata</i> |
| 31. Mkongo | H | <i>Rauvolfia caffra</i> |
| 32. Mkungugu | G | <i>Acacia tortilis</i> |
| 33. Mkunungu | H | <i>Zanthoxylum chalybeum</i> |
| 34. Mkusu | H | <i>Uapaca kirkiana</i> |
| 35. Mkwata | G | <i>Cordyla africana</i> |
| 36. Mkwee | H | <i>Brachystegia speiformis</i> |
| 37. Mlama | H | <i>Combretum zelyheri</i> |
| 38. Mlelulelu | H | <i>Albizzia antunesiana</i> |
| 39. Mlyasenga | H | <i>Combretum zelyheri</i> |
| 40. Mlyatemi | H | n. a. |
| 41. Mmulimuli | H | <i>Cassia abbreviata</i> |
| 42. Mnafuta | G | n. a. |
| 43. Mngang'ana | ? | n. a. |
| 44. Mninga | S | <i>Pterocarpus angolensis</i> |
| 45. Mnsakansaka | G | <i>Piliostigma thonningii</i> |
| 46. Mnusi | ? | n. a. |

| | | |
|-----------------------------|-----|---|
| 47. Mnyaluhanga | H | <i>Pseudolachnosytylis maprovenifolia</i> |
| 48. Mnyang'anya | H | <i>Acacia hockii</i> |
| 49. Mnyewa | H | <i>Strychnos cocculoides</i> |
| 50. Mpalapande | H | <i>Strychnos popatorum</i> |
| 51. Mpalula | ? | n. a. |
| 52. Mpangepange | H | <i>Indigofera barbata</i> |
| 53. Mpelemehe | H | <i>Grewia similis/platyclada</i> |
| 54. Mpembesa | H | <i>Brachystegia microphylla</i> |
| 55. Mpingo | S | <i>Dalbergia melanoxyton</i> |
| 56. Mpogolo | H | <i>Faidhebia albida</i> |
| 57. Mpululu | G | <i>Terminalia sericea</i> |
| 58. Msada | H | <i>Pytigynia schulmanii</i> |
| 59. Msambalawe | H | <i>Vangueria infausta</i> |
| 60. Msangala | H | <i>Burkea africana</i> |
| 61. Msasati | B | <i>Vitex mombassae</i> |
| 62. Msilale | H | <i>Acacia senegal</i> |
| 63. Msisi (H) Ukwaju (S) | H/S | <i>Tamarindus indica</i> |
| 64. Msisina | H | <i>Albizzia harveyi</i> |
| 65. Msombe | H | <i>Ficus sycomorus</i> |
| 66. Mtananango | H | n. a. |
| 67. Mtanula | H | <i>Zizyphus mauritania</i> |
| 68. Mtati | G | <i>Dombeya rotundifolia</i> |
| 69. Mtelela | H | <i>Brachystegia bussei</i> |
| 70. Mtema | ? | n. a. |
| 71. Mtimbitimbi | H | <i>Bauhinia petersiana</i> |
| 72. Mtimbwi | G | <i>Ormocarpum trachycarpum</i> |
| 73. Mtongatonga | H | <i>Strychnos spinosa</i> |
| 74. Mtonge | G | <i>Acacia polyacantha</i> |
| 75. Mtono | H | <i>Commiphora africana</i> |
| 76. Mtoo | B | <i>Ekebergia benguelensis</i> |
| 77. Mtopetope | G | <i>Annona chrysophylla</i> |
| 78. Mtosi | G | <i>Maerua angolensis</i> |
| 79. Mtowo | H | <i>Anzanza garckeana</i> |
| 80. Mtulanzala | H | <i>Albezzia versicolor</i> |
| 81. Mtumba | G | <i>Boscia salicifolia</i> |
| 82. Mtundwa | H | <i>Xirmenia caffra</i> |
| 83. Mtunsa | B | n. a. |
| 84. Mtunumbi | H | <i>Rhus natalensis</i> |
| 85. Muhongolo | G | <i>Albizzia</i> |
| 86. Muhwisa | H | <i>Bridelia micrantha</i> |
| 87. Mukiwu | G | <i>Dombeya burgessae</i> |
| 88. Muwondo | H | <i>Entandofragma caudatum</i> |
| 89. Mvanga | H | <i>Zantha africana</i> |
| 90. Mwarobaini (H) Neem (E) | S/E | <i>Azadarachta indica</i> |
| 91. Mwembadanda | H | <i>Pterocarpus chrysotherix</i> |
| 92. Mwiluti | H | <i>Prunus africanus</i> |
| 93. Myanongolo | H | n. a. |
| 94. Myombo | H | <i>Brachystegia boehmii</i> |
| 95. Mzasa | G | <i>Acacia senegal</i> |

KEY: H = KIHHEHE B = KIBENA G = KIGOGO S = KISWAHILI E = ENGLISH

SOCIO-ECONOMIC VILLAGE PROFILE, CHAMDINDI VILLAGE

DISTRICT: Iringa DIVISION: WARD: VILLAGE: Chamdindi

1.0 Implications for JFM

Like in other communities on the southern side of the Nyang'oro mountain ridge most of the villagers involved in income generating activities in general and activities related to the woodland in particular belong to the poor socio-economic group. The other socio-economic groups are nearly exclusively engaged in activities related to agriculture. A JMF agreement including a restricted access and use to the woodland will be to the disadvantage of the already disadvantaged and unlikely to facilitate the project's objective of poverty reduction – unless viable and realistic income alternatives are included in the JFM plan for this particular socio-economic group. In order to formulate a sustainable JFM plan the poor users have to be fully involved in the planning. This is not done alone through the village council, since the poor socio-economic group is rarely represented there.

A JMF initiative in the village should be very careful in prohibiting the cutting of timber for local use, since this could destroy the transport system and an income generating activity in the village. The possibility should instead be assessed to promote the production of donkey cart making and selling, since this would create jobs in the community and give the villagers a larger benefit of the timber they cut instead of just selling it to buyers from Iringa who can easily get a profit of 300 per cent.

2.0 Location and demography

Chamdindi village is found 7 kilometres from the junction on the Iringa – Dodoma road 65 kilometres from Iringa. The road is accessible all year, except from large vehicles in the rainy season. The village is situated in a valley surrounded by hills. The valley is intensively cultivated while the hills are still containing some woodland. However, the woodland is fast depleting due to the need for new agricultural land.

The resident ethnic groups in Chamdindi are Wahehe, Wakinga, Wabena, Wawanji, Wagogo, Wamasai, Wangoni, and Wanyakyusa. The ethnic groups migrating seasonally into the village land are Wamasai and Wamang'ati. The migrating pastoralists come every year during the dry season.

The table below presents the total population of Chamdindi village made up of the population in the five sub-villages.

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|-----------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Village: Chamdindi | 1744 | 1932 | 406 | 105 |
| Sub-village: Chamdindi Kati | 370 | 400 | 88 | 20 |
| Sub-village: Miegemano | 602 | 660 | 128 | 36 |
| Sub-village: Kibaoni | 236 | 300 | 62 | 16 |
| Sub-village: Ikwega | 268 | 300 | 70 | 19 |
| Sub-village: Nyakansilo | 258 | 272 | 58 | 14 |

3.0 Infrastructure

Infrastructure in the village include 1 primary school and 4 milling machines (only two are functioning). The water supply consists of one hand pump, which is not functioning, since the well has dried up and the pump is broken down. Today the villagers collect water from traditional wells and from Nyang'oro. Water is sold to consumers. There is no market in the village and villagers use the fortnightly market in Nyang'oro.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is the major economic activity in the community with the woodland having less economic importance (except from the perspective of potential agricultural land) seen from the general perspective of the villagers. The farming system is characterised by crop production integrated with livestock keeping. The main domestic crops include maize, sorghum, finger millet, and beans. Cow pea, groundnuts, cassava, sweet potatoes, pumpkin, watermelon, pigeon pea, bambara nuts, green grams, and lentils are minor domestic crops. The villagers started last year to cultivate lentils, and the cultivation is very profitable at TSH 800 per kilo. Sunflower, cotton and tomatoes are the main commercial crops. Cotton cultivation is unprofitable and cultivation will stop unless sales profit raise. Maize, finger millet, beans and green grams are also sold when in excess. Women only cultivate pigeon pea, pumpkin and watermelon, while both men and women cultivate all other crops.

Ninety per cent of the farmers are involved in finger millet production. This production is dependent on the ashes from newly burnt woodland and causes as such a depletion of the woodland. The gender specific labour division regarding this crop is characterised by men cutting and setting fire to the trees while the women spread the ashes and cultivate the finger millet.

Clearing farms start in September – October, whereafter follows land preparation and sowing in November – December. Weeding takes place December - March (weeding trice) and harvesting is May – July. Land preparation technology include tractor but more commonly animal traction and less common the hand hoe. The tractor can be hired at TSH 10,000 per acre. There are about 158 animal traction ploughs in the village. Bullocks are used as draught animals. There are about 260 bullocks in the community. The cost of hiring plough and bullocks is TSH 5,000 per acre. Only one person uses chemical fertiliser, while the majority uses animal manure. Animal manure is sold at TSH 10,000 – 100,000 depending on the size of the kraal where permission is given to collect manure.

4.2 Land Tenure

Land tenure is characterised by traditionally owned land (“malungulu”) and village council land. Eighty per cent of the land is traditionally owned and the rest village council administered. Village council land is only eighty acres in the valley, which the village council rent at TSH 1,500 per acre per season. There is high land pressure in the village. Some farmers buy land from the traditional landowners at TSH 15,000 – 20,000 per acre and others rent from the traditional landowners at TSH 2,000 per acre per season. Due to the land pressure some villagers migrate to neighbouring villages and Dodoma area to farm or seek other employment.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|--|---|--|
| Rich farmers own: 100 – 200 acres | Middle farmers own: 50 – 90 acres | Poor farmers own: 3 – 40 acres |
| Rich farmers cultivate per year: 100 – 200 acres | Middle farmers cultivate per year: 20 – 30* acres | Poor farmers cultivate per year: 1 – 5** acres |

*The area cultivated by the middle farmer is 20 - 30 but the remaining land is rented out meaning that the whole farmland is permanently cultivated.

** Some poor farmers rent the land not cultivated while others have started to sell their land.

Some land is fallow but only for a few middle and poor farmers. The farmers claimed that the fallow land regenerate with bush and trees after only three years. The land will need cutting and burning after fallow of three years. However, the tree specie of “mkwee” does not regenerate.

4.3 Animal husbandry

Livestock also plays a role in the farming system in Chamdindi.

Number of livestock distributed among the resident socio-economic groups is presented in the table below:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--------------------------|----------------------------|--------------------------|
| 10 – 80 cattle | 6 – 10 cattle | 1 – 5 cattle |
| 50 – 70 goat/sheep | 20 – 50 goat/sheep | 1 – 10 goat/sheep |

Number of livestock distributed among the migrant pastoralists socio-economic groups is presented in the table below:

| Rich pastoralists own: | Middle pastoralists own: | Poor pastoralists own: |
|-------------------------------|---------------------------------|-------------------------------|
| 100 – 150 cattle | 20 – 50 cattle | 1 – 20 cattle |
| 50 – 100 goat/sheep | 10 - 15 goat/sheep | 1 – 10 goat/sheep |

Conflicts exist between resident Wamasai and other ethnic groups in the community. The Wamasai often let their cattle graze on the green crops during the night. Only one person has been fined TSH 150,000 after having grazed 5 acres of green crops. Often the pastoralist Wamasai leave cattle with the resident Wamasai. This contributes to the permanent high number of animals in the community, and moreover it is a way for the pastoralists to graze their animals on crop residues in the dry season. There is no system of permitting pastoralists’ cattle to graze on the crop residues, and there are several cases of pastoralists’ cattle entering the crop residues without permit.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | ! | ! | ! | ! | |
| Selling of food | ! | !! | | | ! | ! | | |
| Selling of honey | ! | | | | ! | ! | ! | ! |
| Shops/kiosk | ! | | ! | ! | | ! | ! | ! |
| Petty trading | | ! | | | ! | ! | ! | |
| Hunting | ! | | | | ! | ! | ! | |
| Selling, local medicine | ! | ! | | | ! | | ! | ! |

| | | | | | | | | |
|------------------------------|---|---|---|---|---|---|----|---|
| Carpentry | ! | | | | ! | ! | ! | |
| Selling, building poles | ! | | | | ! | ! | ! | |
| Selling of firewood | ! | ! | | | ! | ! | | |
| Owners of mills | ! | | ! | | | ! | ! | ! |
| Pitsawing, selling of timber | ! | | | ! | | ! | | |
| Handicrafts, needlework | | ! | | | ! | ! | ! | |
| Tailoring | ! | | | | ! | ! | ! | |
| Selling grass for roofing | | ! | | | ! | ! | !! | ! |
| Masonry | ! | | | | ! | ! | ! | |
| Pottery | | ! | | | ! | | ! | ! |
| Blacksmith | ! | | | | ! | ! | ! | |
| Selling of water | ! | | | ! | ! | ! | | |
| Selling of charcoal | ! | | | | ! | | ! | |

Like in other communities on the southern side of the Nyang'oro mountain ridge most of the villagers involved in income generating activities in general and activities related to the woodland in particular belong to the poor socio-economic group. The other socio-economic groups are nearly exclusively engaged in activities related to agriculture. A JMF agreement including a restricted access and use to the woodland will be to the disadvantage of the already disadvantaged and unlikely to facilitate the project's objective of poverty reduction – unless viable and realistic income alternatives are included in the JFM plan for this particular socio-economic group. In order to formulate a sustainable JFM plan the poor users have to be fully involved in the planning. This is not done alone through the village council, since the poor socio-economic group is rarely represented there.

5.0 Village Organisations

The village council comprises of 21 elected members with all sub-villages being represented. Active members were nine. The village had agreed to meet quarterly. The village council and its standing committees have had three meetings and three emergency meetings this year. The agendas discussed during the meetings included building of two new school rooms (which have been constructed), preparation of two brick kilns for constructing teachers staff quarters, and discussing the rent of village council land. Moreover, the village council discussed accounts and presented these at a village assembly meeting.

The village council also discussed the construction of a water dam and so far the community has collected TSH 300,000 and the MP has contributed another TSH 300,000. The money is kept at the Catholic Mission. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have not had any meetings this year.

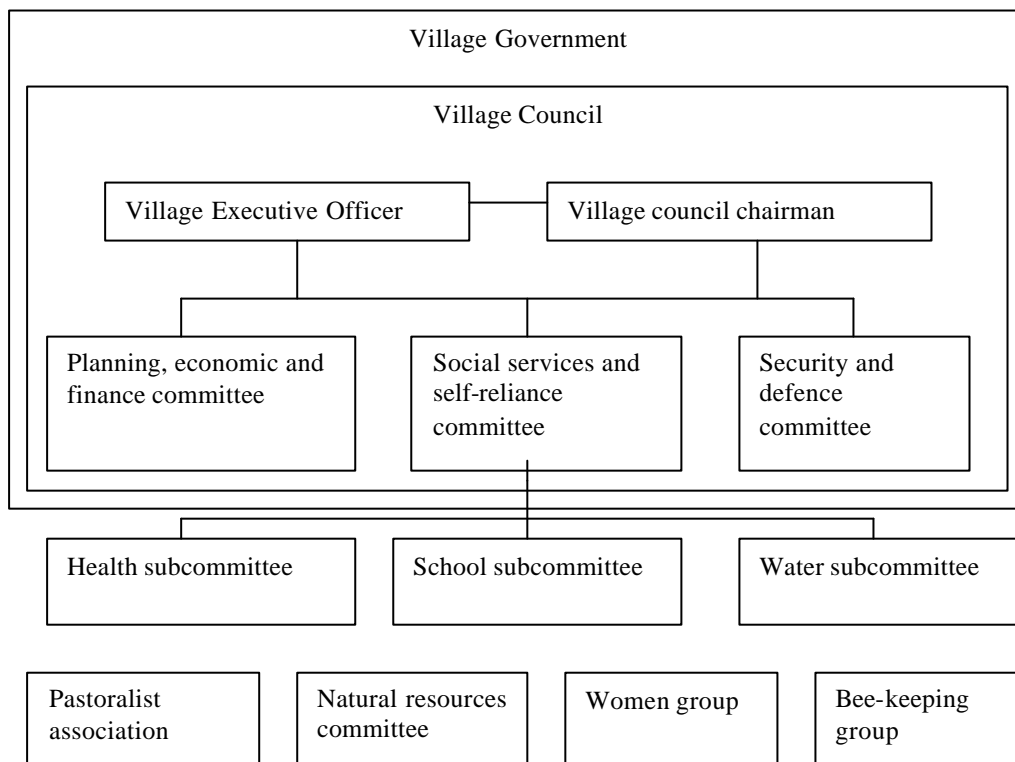
The village council runs the following income generating activities:

- ? Rent from 80 acres of agricultural land where they collected TSH 90,000 this year, when the actual amount should have been TSH 120,000 – a fact that the village council pointed out a one of its problems...
- ? Revenue from a village council local brew club – TSH 18,000 per month

- ? TSH 7,000 on average from a planted woodlot of Eucalyptus, initiated by CONCERN. However, some of the wood has not been sold but used by the village council for building purposes and for brick burning
- ? A community butcher shop, which people can rent to sell their meat from, fetching approximately TSH 12,000 per year

The village council has TSH 160,000 on their bank account. The handling of finance by the village council seems weak and not very transparent. The former village executive officer and the revenue collector were involved in the misuse of village funds – a total of TSH 25,000, which has never been recovered. Seen in this light it is not surprising that the village council keeps its largest amount of money at the Catholic Mission.

The organisational chart below presents the overall structure of the community organisation:



Three sub-committees to the village council exist. These are the school committee, health committee and water committee. The school committee had one meeting. The health committee has had three meetings this year. Major issues discussed and implemented were building of improved toilets and building of school toilets. The committee also had follow-up meeting to monitor progress. The water subcommittee had no meetings this year, but had managed to collect TSH 110,000 and TSH 300,000 for the planned construction of a dam. The water committee was initiated by CONCERN.

One community committee exists – the natural resources committee following the handing over by the former tree committee to the natural resources committee. Tree committee was initiated by CONCERN in 1987. Its main functions were to protect the woodland, establishment of tree nurseries and woodlot and issuing of permits to cut trees in the traditional and woodland for crop cultivation. The members of this committee were not re-elected in the new natural resources committee due to lack of transparency, misuse of revenue collected from cutting trees and failure to account for the money collected. The members had charged more money for permits to clear woodland for farming than was agreed with the village council (TSH 15,000 instead of TSH 3,000). Receipts were not issued for the money received.

The natural resources committee has 11 members, was formed this year by the MEMA. This committee has not yet started working, although the old tree committee has handed over the activities.

Other community groups include a women group with six members engaged in handcraft and “upato” – (each member contributes TSH 5,000 every week and the total amount of TSH 30,000 is given to one woman). The group is not recognised by the village council. Moreover, a bee-keeping group functions, which has 20 members. It was established 1998 initiated by the bee-keeping officer. The group has 32 beehives. The individual members sell the honey and the group is presently holding no money. The members sell honey at TSH 20,000 per 20 litres. Finally, a pastoralist association exists, which started in 1997 with the purpose of collecting money from its members, which can later be used when chasing stolen animals. The association is cultivating 5 acres to add to funds. The association is holding a total of TSH 80,000. The strength of this association compared to other livestock associations is that the resident Wamasai are also members of the group.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village council). However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-villages Ikegwa and Myegamano since the collectors/users come from there, while the managers (village council) and buyers were interviewed in Chamdindi village.

Land pressure is high in the village and the continued search for agricultural land is leading to the depletion of woodlands in the valley (while less depletion is found on the hills) when woodland is included as farmland for a growing population of farmers. Farmers recognise the woodland as potential agricultural land although they also have some income generating activities originating in the woodland.

Some of the young farmers complained to the Member of Parliament (MP) from the area about their difficulties in obtaining land for cultivation. The MP asked the village council to provide land for the young farmers – which it could not, as it administers very little land. The village council just kept silent and the young farmers started cutting the woodland, since they thought the MP granted permission. As a result the woodland is now being cut down at a faster rate than before. The newly formed Natural Resources Committee tried to stop the cutting of woodland but were told by the farmers that they had a permit from the MP. The problem will not be easy to solve since the only vacant land available to the village council is the woodland in the hills. And even that woodland has several ownership claims by the traditional landowners.

The table below presents an overview of the forest users and products by gender and availability in Ikegwa and Myegamano sub-villages:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood for sale | ! | ! | | ! | |
| Firewood, domestic | | ! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | ! | ! | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | ! | ! | | ! | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | !! | ! | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Wood for brick burning | !! | ! | | ! | |

| | | | | | |
|----------|---|---|---|---|---|
| Poles | ! | ! | ! | | |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Charcoal | ! | | | ! | |
| Honey | ! | | | ! | |

6.1 Firewood for sale

Collected by both men and women and considered sufficient. One specie is preferred - “mkwee”. This tree specie is found on the nearby hills and actually the main specie on those hills. Firewood is sold in the village and in Ismani Tarafani. A head load is sold at TSH 100 – 200 while a donkey cartload costs TSH 2,000.

6.2 Firewood, domestic

Mainly collected by women and considered abundant, since a large number of species are used including “mkalala”, “mlama”, “mkwee”, “mpangepange”, and “mkungugu”. The firewood is collected just around the household. Also people from Ndolela, Kihorogota, Nyang’oro, and Ismani Tarafani come to collect firewood in the village. The users explained that the village council had tried to tie a collection fee to the firewood but the village council never implemented this idea. The users also explained that it was rather difficult to criticise especially the collectors from Nyang’oro, since the villagers in Chamdindi collect their water from there – although they pay for the water.

6.3 NWFP

Mushroom: Are collected by both men and women and considered abundant – a sign that the woodland is not far away and not depleted to an extent where mushrooms have disappeared. Species include “wisogoro”, “wilelema”, and “winyafigulu”. The mushroom is sold at TSH 150 per bowl (fresh) and TSH 200 per bowl (dried).

Grass for roofing: Is collected by women and considered abundant. A bundle is sold at TSH 300. The grass is collected in the valley behind the mountains to the south of the village.

Medical plants and trees: Collected by both men and women and considered abundant.

The species includes:

- ? “mkalala” and “mulimuli” used for treating pneumonia.
- ? “mlungulungu” and “lwenyi” for stomach pains
- ? “mtundwa” used for treating diarrhoea and venereal diseases
- ? “mpongolo”, “mylanongolo” and “mtunsa” used as aphrodisiac

Fruits: Collected by both men and women and considered sufficient. The fruits include: “msasati”, “mitowo”, baobab fruits, tamarind, “mipelemehe”, “mifudu”, “udawi”, “ukapo”, and “misambalawe”. Fruits are used for food, porridge, and pombe. CONCERN has had success with its indigenous tree programme nursing “udawi” and “tamarind” seedlings. The villagers later found out that “udawi” can be propagated by using cuttings. “Udawi” was previously not found in the village and has high value for its juice and local brew. In times of hunger the fruits high content of starch and sugar can substitute food for some time. An “udawi” tree will start fruiting after only two years. Moreover, the wood is very hard and is preferred for handles on hoe, axe and other farm tools.

6.4 Pasture, pastoralists' cattle

Both men and women graze the cattle. The pasture is considered scarce. The migrating pastoralists include Wamasai, Wasukuma, and Wamang'ati. Grass is scarce because the pastoralists enter the area with large number of cattle and because they do not have access to graze crop residues. Several conflicts occur when pastoralists graze on crop residues or even green crops. Some cases have been taken to court. The pastoralists association has done nothing to stop or negotiate the practise and likewise the village council. The residents have now arranged night patrols to stop the grazing on crop residues and theft of cattle by the migrating pastoralists. There exists among the villagers a fear of the pastoralists, which the team has not found elsewhere. Some farmers have been beaten up when they tried to address the pastoralists on the crop residue issue or even when they meet in the otherwise open grazing land.

The pastoralists say that residents should not graze in the woodland since they have the crop residues for their cattle. The fact is that some of the pastoralists have established camps to which they return year after year on the exact land which the users interviewed were living on and cultivating before villagisation forced them to leave. By having established the camps the Wamasai are somehow now claiming exclusive user rights to the area. The situation is rather tense and should be solved by the village council perhaps in conjunction with the MEMA committee as intermediate when the members get trained and know their function of negotiating the use of the woodland among different stakeholders.

6.5 Pasture, residents' cattle

Both men and women are involved in grazing cattle and grass is considered sufficient, because the residents also have the option of grazing cattle on crop residues. Men are mainly responsible for grazing bullocks while the women graze cattle. The residents have stopped grazing their cattle in the valley north of the sub-village, since they fear the Wamasai staying there.

6.6 Wood for brick burning

The wood for brick burning is considered sufficient and mainly collected by men while women assist to feed the kiln with the wood. Only the species of "mkwee", "mbata" and "mkungugu" are used. The two last mentioned species are preferred since the burning value is large. Brick making started two years ago, when the villagers learned the technique when making bricks for the Ismani secondary school. Today bricks are sold in the sub-village or village at TSH 15 per piece. The bricks are transported to Chamdindi using donkey carts.

Donkey carts and the issue of locally raising the value of the timber harvested:

The team realised during the interview with the users that a relationship exists between timber harvested by villagers and making of donkey carts. More than 50 donkey carts are found in the community. Those who do not own donkey carts can hire one at TSH 2,000 – 2,500 depending on the distance where the cart is moving. The villagers use donkey carts to transport crops from the field, manure to the field, goods to the market and the sick to the hospital. In the sub-village even women know how to operate donkey carts. Donkey carts are also produced for sale. The wood top of the cart is sold for TSH 30,000 while a complete donkey cart is sold at TSH 70,000 including second-hand wheels and tyres. The villagers do not have the expertise to produce the aisles, which are made in the Ndolela. However, making the wooden boxes is known in the village and carts are not just marketable but also the only way in which timber is processed and value-added in the community. Tree species used for producing donkey cart are "mninga" and "mkola". About 16 pieces of timber are used for one wood top.

A JMF initiative in the village should be very careful in prohibiting the cutting of timber for local use, since this could destroy the transport system and an income generating activity in the village. The possibility should instead be assessed to promote the production of donkey cart making and selling, since this would create jobs in the community and give the villagers a larger benefit of the timber they cut instead of just selling it to buyers from Iringa.

6.7 Poles

Poles are collected by both men and women and considered abundant. Species preferred are “mkalala”, “mpululu”, “mlama” and “muhwisa”. The last two mentioned species are resistant to termites. Poles are used for constructing small kitchens and cattle kraals. The cattle kraal is the major consumer of poles. It is estimated that 250 poles are used to make a cattle kraal.

6.8 Timber

Considered scarce and only collected by men. The users in the sub-village had the expertise to pit saw the timber trees – an operation done in the hills 10 kilometres away from the village. Most timber is cut at request from individual buyers in Iringa. They come to the sub-village, place their order and return again when the timber is ready. The group of men interviewed on the timber issue said that timber cutting was an income generating activity for them and that farming was still their major economic activity. It is unclear how much money they make in a year, but some men said TSH 40,000 – 50,000. The amount is equivalent to selling approximately 35 pieces of timber. None of the men had permit and likewise the buyers who come to the sub-village. The market is booming. The timber is collected on traditional land and not land administered by the village council, although the collectors were aware that there was a permit/fee attached to cutting timber, even on traditional land. Species include “mninga”, “mkola”, and “muwondo”. The timber is sold in the sub-village at TSH 1,500 – 2,000 for a 1”/6”/6feet. The same piece of timber is sold in Iringa at TSH 4,000 – 5,000.

6.9 Hunting

Only men hunt and game is considered scarce. Game includes: Antelope, warthog, dik-dik antelope, wild pig, guinea fowl, quail, porcupine, rabbit and squirrels. The large game (elephant, buffalo, and leopard) comes seasonally. Guns are used as hunting method.

6.10 Charcoal

Is made by men and considered sufficient. Only “mkwee” is used for charcoal making. The charcoal is sold in the village, where food sellers in the market use it. In the cold season charcoal is used in braziers for heating purposes. Charcoal is sold at TSH 2,000 per sack in the community. The charcoal is also sold in Ismani Tarafani and Iringa.

6.11 Honey

Collected only by men and is considered sufficient. A group of five men have registered their beehives with the bee-keeping officer from whom they receive training and extension advice on bee keeping. Before when the woodland was more intact around the village bees were plenty and the hives could be hung in the vicinity of the village. Nowadays, the woodland and the bees are further away, which complicates the hanging of hives, since Wamasai often raid these for honey. Honey is sold in the community at TSH 15,000 per 20 litres. Only one man is selling his wax in Iringa. Otherwise, the bee wax is wasted since the bee-keeping officer has not made the collectors aware of the huge potential for selling the wax in Iringa. The honey is used as food, for porridge, medicine and local brew.

SOCIO-ECONOMIC VILLAGE PROFILE, IKENGEZA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Kihorogota VILLAGE: Ikengeza

1.0 Implications for JFM

The team had a very hard time both organising and conducting the socio-economic baseline study in this particular village. The team went in vain twice to the community and had to “force” a meeting through with the village council. Later the team learned that just before the PRA exercise took place 50 pieces of timber were confiscated in the community – part of which belonged to the village council chairman. While the consultant has no opinion on this incident in isolation it has definitely not facilitated the study in this village. The consultant believes that the project should as soon as possible define and implement a strategy which to a larger extent than at present facilitate the attitude, trust and co-operation needed at the start of any JMF initiative. The team also learned that the PRA exercise was only made possible due to the presence of the ward executive officer. His presence ensured that the village council members were in place. The team did not have this possibility or wish to force the participation of villagers but could on the other hand not help listening to comments like “is it because of MEMA that we should be pushed around!?”. It is difficult to say whether the team’s very negative impression of the work of the village council was influenced by an already established negative attitude by the village council towards MEMA - or if the activities and disorganisation of the village council is the actual state of affairs.

The village council is very weak in its functioning and implementation of activities. It has difficulties of attendance and commitment on behalf of the members. During a separate talk with the village council chairman he informed the team that the village council has never been as disorganised and inactive as today. He told the team that the village council has worked better previously. During the meeting with the village council, council members said that their lack of performance was partly due to the complete lack of training of the members in their respective roles and responsibilities. The members appealed to the project to arrange a training seminar for the village council. The team does not support the idea of a single training session of the village council in matters which are more directed at the overall responsibility of the village council and not the relationship between the village council and the natural resources committee. The general training responsibility of the village council must rest with the district authorities. The team, however, believes that a training of MEMA related issues addressing the village council should be arranged once the village council has been re-elected and trained in general by the responsible authorities. The team has met this request of general training of the village council several times during its study. The team recommends that the project takes the initiative to address this issue at the appropriate place, since the training of the village council is crucial if the project intends to work in co-operation with that village council.

Despite all the difficulties with the village council the team managed to facilitate an excellent meeting with the users and even got to a point where it was relevant and possible to test the ideas of JMF directly with the users. The users were very much interested and contributed positively to the discussion, see box text page 8 - 9.

2.0 Location and demography

The village of Ikengeza is situated 10 kilometres from Chamdindi and 17 kilometres from the main Dodoma – Iringa road. The road to the village is accessible all year although with difficulty during the rainy season.

The village lies in a valley with hills on both sides. Although agriculture takes place in the valley there is still rather intact woodland in some parts of the valley. The hills are covered with woodland and agriculture on the hills takes place mostly on the southern hillsides to the village.

The resident population of the village belongs to the ethnic groups Wahehe, Wabena, Wakinga, Wagogo, Wawanji, Wanyakyusa and Wanayamwezi. The ethnic groups migrating into the area in the dry season with their cattle belong to the Wamasai and Wasukuma.

The table below presents the total population in the village as a compilation of the populations in the sub-villages:

| NAME OF VILLAGE/SUBVILLAGE | BEST ESTIMATE 1999 | NO. OF HOUSE-HOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|--------------------|-------------------------|-------------------------------------|
| Village: Ikengeza | 2370 | 514 | 64 |
| Sub-village: Mseke | 366 | 74 | 20 |
| Sub-village: Myomboni | 466 | 90 | 13 |
| Sub-village: Myolela | 426 | 86 | 5 |
| Sub-village: Manyanambo | 536 | 130 | 11 |
| Sub-village: Mawindi | 576 | 134 | 15 |

3.0 Infrastructure

The following infrastructure is found in the village: 1 primary school, 1 dispensary, and 6 milling machines. A water supply system is under construction and consists of a borehole. The Anglican Church has donated the water supply system. There is no market in the village. The villagers frequent the market in Nyang'oro, which takes place twice per month.

4.0 Economic activities

4.1 Agriculture, crop cultivation

The agricultural season starts by clearing farms in November, land preparation and sowing in December, weeding January – March and finally harvesting in July.

The farming system is characterised by integrated crop cultivation and animal husbandry. Animals graze on crop residues during the dry season and manure is used to fertilise the soils. Farmers practise fallow on the sandy soils while the reddish clay soils are permanently cultivated. CONCERN who has been working in the village before but ceased their activities three years ago has been active in promoting fallow of land as a means of re-establishing soil fertility. Rich farmers with large farms practise a systematic fallow of three years, while poor and middle farmers fallow more indiscriminately because they can not afford to farm all their land. Farm technologies include both tractor ploughing and hand hoe but with animal traction being the most common. Ploughing one acre using tractor costs TSH 8,000 for one acre, while ploughing using animal traction costs TSH 5,000 for one acre. There is about 100 ploughs in the community and two tractors.

Main domestic crops are maize and sorghum and minor ones are groundnut, cow pea, beans, finger millet and bambara nuts. Commercial crops are sunflower and cotton but also maize and groundnut are sold in the market if in excess. The sunflower is the most profitable to farmers. Farmers face the same problems with the cultivation of cotton as found in other communities; that the profit is too small for the farmer to engage him/herself in the cultivation. However, a divisional meeting has decided that the farmers should be forced to continue cultivating cotton. According to the team this

could profit the private businessman “Tako” and perhaps the general economy of the district but most unlikely not the farmers. It is interesting that in other communities studied the divisional authorities have been much more critical towards continued cotton cultivation against the wills and economy of the farmers. During the meeting with the village council the village council chairman stressed the decision concerning farmers’ forced cotton cultivation.

Meeting with the District Agricultural Office, subject cotton cultivation:

The team had a meeting with the District Agricultural Office discussing cotton cultivation in the district. The officer said that cotton was introduced in the area as a crop cultivated before and reintroduced two years ago. The officer did not seem very up-to-date on the farmers’ perspective regarding cotton cultivation. He told the team that actually last year was especially dry in some of the areas studied by the team, wherefore cotton did not perform well. The officer did not deny the link between divisional executives and “Tako”, although he still thought that the farmers could actually cultivate cotton with a profit. However, he admitted that the extension and awareness raising among farmers cultivating cotton was perhaps not good enough since farmers were not made aware of the risks they are running when cultivating cotton. The officer was not aware that farmers are forced to cultivate cotton by divisional authorities. He also told the team that “Tako” does not have his own extension officers but uses the government extension workers in the villages.

4.2 Land tenure

Land tenure is characterised by a combination of traditionally owned land combined with land administered by the village council. There is no land pressure in the village, but the village council does not have enough land for everyone who might need it, wherefore there is a market for renting land from the traditional landowners. The village council is responsible for 140 acres, which they rent out annually at TSH 2,000 per acre per season. However, the meeting revealed that although the village council claimed that the land was distributed annually according a first-come-first-serve principle there were still farmers not paying and farmers who had permanent access and inheritance rights to their land. The village council also claimed that the land rented annually was based on cash payment before the land was given to the farmer. However, the team was later told that some farmers had not paid in advance and some farmers still owed. The ordinary members of the village council did not know all this information, since the village council did not present budget or accounts. Although the village council claims large tracts of the woodland the traditional landowners also have ownership to the woodland.

The traditional land is rented out at TSH 2,500 – 3000 per acre per season. Only sons inherit traditional land. The traditional land in the woodland claimed by the landowners are the land which they owned and cultivated before villagisation.

Land is unequally distributed among villagers. Regarding the village council land some villagers have had the chance to ensure a permanent piece of land while other are forced to rent different pieces of land every year based on how much land they can afford to cultivate. The unequal distribution of land among the traditional landowners is based on variations in the historical access to land by different owners.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|---|--|--|
| Rich farmers own: 70 acres | Middle farmers own: 30 – 40 acres | Poor farmers own: 5 – 10 acres |
| Rich farmers cultivate per year: 50 acres | Middle farmers cultivate per year: 10 - 15 acres | Poor farmers cultivate per year: 2 – 5 acres |

4.3 Animal husbandry

Livestock also plays a role in the farming system in Ikengeza. Villagers complained during the village council workshop about the stealing of cattle by the Wamasai. However, the village council has done nothing to address the problem and seek a solution. Moreover, the farmers themselves have unlike in other communities not formed any pastoralist association to discuss the problem and find solutions. Livestock graze to a large extent on the crop residues left on the farm but also find pasture in the hills. The migrating pastoralists have no rights to graze crop residues but often graze there by force. They were also accused of grazing green fields, which also happens even with cattle belonging and herded by resident livestock owners.

Number of livestock distributed among the socio-economic groups is presented in the table below:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--------------------------|----------------------------|--------------------------|
| 100 cattle | 40 – 50 cattle | 1 – 5 cattle |
| 40 – 50 goat/sheep | 30 goat/sheep | 10 – 15 goat/sheep |

Number of livestock distributed among the migrant pastoralists entering seasonally in the area:

| Rich pastoralists own: | Middle pastoralists own: | Poor pastoralists own: |
|-------------------------------|---------------------------------|-------------------------------|
| 300 cattle | 100 – 150 cattle | 20 – 70 cattle |
| 150 goat/sheep | 100 goat/sheep | 30 – 50 goat/sheep |

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

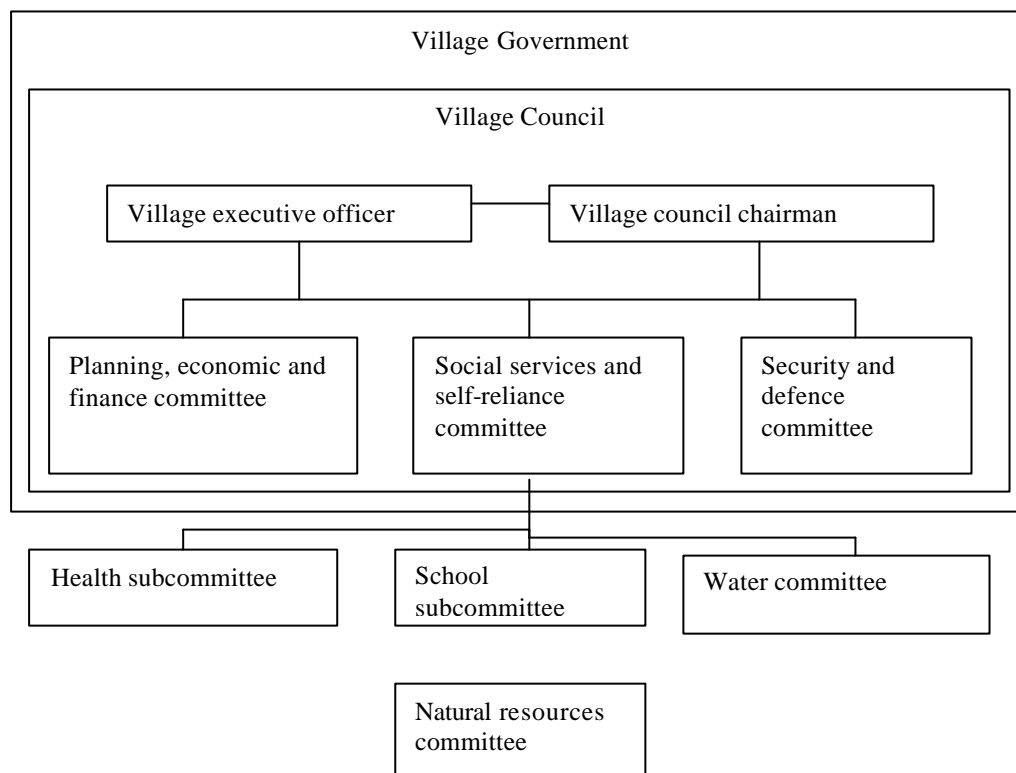
| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | | ! | ! | ! | |
| Selling of food | | ! | | | ! | ! | | |
| Shops/kiosk | !! | ! | | ! | | ! | | |
| Selling meat | | ! | | | ! | ! | | |
| Selling charcoal | ! | | | | ! | | ! | |
| Owners of mills | ! | | ! | | | !! | ! | ! |
| Petty trading | | ! | | | ! | ! | | |
| Selling grass for roofing | | ! | | | ! | ! | ! | |
| Selling building poles | ! | | | | ! | ! | | |
| Selling honey | ! | | | | ! | | ! | |

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. The village council has had three meetings this year discussing repair of the bridge (which was repaired), brick laying for the school, collection of money for school repair and appointment of a village council

bookkeeper (treasurer). Ninety per cent of the plans discussed have not been implemented. Most items discussed concern the school. The only functioning sub-committee in the village is the school committee. The team has the impression that it is the village council chairman and the school committee which are the only persons running the administrative affairs of the village – an impression later confirmed by the village council chairman. The standing committees have had no meetings this year.

The organisational chart below presents the overall structure of the community organisation:



Three subcommittees to the village council exist. These are the school committee, health committee and water committee. The school committee had three meetings this year discussing the cultivation of 12 acres to supplement school funds, preparing school budget, presenting and discussing the income and expenditure report and discussing the maintenance of the school building. The school sub-committee has TSH 134,000 in the bank. The health committee and water committee had not met this year.

CONCERN initiated a tree committee. That committee ceased to function when CONCERN left the village three years ago. During the workshop the representative of the tree committee were not capable of informing the team much about the activities of the tree committee. However, they admitted that some money collected was not accounted for.

The newly elected natural resources committee is the only community committee existing outside the village council structure.

The village council is very weak in its functioning and implementation of activities. It has difficulties of attendance and commitment on behalf of the members. During a separate talk with the village council chairman he informed the team that the village council has never been as disorganised and inactive as today. He told the team that the village council has worked better previously. During the meeting with the village council, council members said that their lack of performance was partly due to the complete lack of training of the members in their respective roles and responsibilities. The members appealed to the project to arrange a training seminar for the village council. The team does not support the idea of a single training session of the village council in matters which are more directed at the overall responsibility of the village council and not the relationship between the village council and the natural resources committee. The general training responsibility of the village council must rest with the district authorities. The team, however, believes that a training of MEMA related issues addressing the village

council should be arranged once the village council has been re-elected and trained in general by the responsible authorities. The team has met this request of general training of the village council several times during its study. The team recommends that the project takes the initiative to address this issue at the appropriate place, since the training of the village council is crucial if the project intends to work in co-operation with that village council.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village council). However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-villages Manyanambo since the collectors/users come from there, while the managers (village council) were interviewed in Ikengeza village.

There is no land pressure in the village, and although some farming is taking place on the hills the woodland are still rather intact except from high value timber species that has been depleted to some extent. Fallow of farmland also takes place, which helps keeping the woodland intact, because the villagers thereby have part of their domestic firewood from the fields.

The woodland in Ikengeza consists of both public land and the Kitapilima Forest Reserve, a forest reserve seriously depleted.

The table below presents an overview of the forest users and product by gender and availability in Manyanambo sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, sale | ! | ! | | ! | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | !! | ! | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | ! | ! | ! | | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Wood for brick burning | ! | ! | | ! | |
| Poles | ! | | | | ! |
| Timber | ! | | | | ! |
| Hunting | ! | | | ! | |
| Charcoal | ! | ! | | ! | |
| Honey | ! | !* | | | ! |

* Some Wagogo women are collecting honey

6.1 Firewood for sale

Collected by both men and women and is considered sufficient. The species preferred are "mkwee", and "mlama". "Mkwee" is the marketable specie in the village. A head load is sold at TSH 250 while a

donkey cart of firewood is sold at TSH 1,000. The customers come from within and nearby villages of Ismani Tarafani, Ndolela and Mkungugu. The reason why it is possible to sell firewood in the village is because some sub-villages have a very long distance to the woodland.

6.2 Firewood, domestic

Collected mainly by women but men also assist. Firewood, domestic is considered abundant. The species include “mkwee”, “mkalala”, “mlama”, and “mlyasenga”. If men collect they do so using donkey cart. Firewood is both collected in the valley and up in the hills.

6.3 Pasture, pastoralists’ cattle

Only men graze cattle and pasture is considered scarce, because of the large number of animals and because the migrating pastoralists do not have access to graze the crop residues. However, they often do so, without permit. There was also in Ikengeza complaints about the entry and grazing of the migrating pastoralists’ cattle. The villagers have done nothing to address the problem. However, it became clear that the sub-village chairman is involved by permitting them to enter the area with their cattle and that he also gets some benefits (money or cattle?) from the pastoralists. Moreover, resident villagers also benefit from relations with the pastoralists. Often pastoralists leave bullocks with residents for up to three years. Residents use the bullocks for ploughing while the animals grow fat on the crop residues. After three years the pastoralist come to collect his animals which at that time will be ready for slaughtering – and the resident farmer might get some new animals. In Ikengeza it is the resident who is responsible for training the bullocks, while in other communities the bullocks are already trained when leased to the residents. Sometimes this arrangement also includes that the resident should plough the land cultivated by the migrating pastoralist.

The migrating pastoralists are most often farming on land which before villagisation belonged to traditional landowners.

6.4 Pasture, residents’ cattle

Both men and women graze animals and pasture is considered sufficient. Grazing takes place on the crop residues in the dry season, while animals graze in the woodland in the wet season. In order to improve their own pasture and the sometimes conflicting interest with the migrating pastoralists the villagers suggested that a particular area in the woodland could be reserved for grazing. This would provide an excellent opportunity for the project to introduce the idea of improved pasture in the community.

6.5 Wood for brick burning

Wood for brick burning is considered sufficient. Men cut the trees and women collect them to the village where the kiln is established. Only two tree species are used for brick burning - “mkwee” and “mkungugu”. The wood (one “meter”) for the brick burning is sold at TSH 300. Burning one kiln of bricks consumes approximately seven “meters”.

6.6 Poles

Only men collect building poles and the poles were considered scarce. The team does not really believe the scarcity of the poles looking at the availability of other woodland projects. However, the users said that poles were not as many as before and demand is increasing. The tree species include “mlama”, “mpalapande”, “mbumila”, “muhwisa”(termite resistant), “mdwendwe”, and “mbamilamisa”. A pole is sold at TSH 200 in the village.

6.7 NWFP

Mushroom: Mushroom is collected by both men and women and is considered abundant. Mushroom is collected on the hills and in the fields. The species found are “wisogoro”, “winyavigulu”, “wilelema” and “wisimba”. A bowl of mushroom is sold at TSH 100. “Wisogoro” specie can be dried and used in the dry season.

Medical plants: Collected by both men and women and is considered abundant. The medical plant species include:

- ? “mulimuli” used for treating chest pain
- ? “mkunungu”, “mlyasenga” and “lukali” used for treating stomach pain (“ndyamgongo” and “tambazi”)

Grass for roofing: Mainly collected by women and is considered sufficient. The grass for roofing is collected on the fields. A bundle of grass for roofing is sold at TSH 300.

Fruits: Collected by both men and women and is considered abundant. Fruits collected is brought and eaten at home. Species includes: “mfundu”, “mpelemehe”, “mlyadenge”, “msambalawe”, tamarind, baobab fruit, “mkapo”, “mkola”, “mbaya”, “mgandu”, “motto” and “udawi”. The tamarind fruit is sold at TSH 2,000 per bag; a baobab fruit cost TSH 5 – 10. Children sent out by their mothers collect the tamarind fruit and the trees are plenty. The major customers of tamarind fruit come from Iringa town. “Mfundu” fruits can be dried and preserved and used in the dry season.

6.8 Timber

Timber is collected by men only and considered scarce. The timber is pit sawn in the woodland in the hills and several men have their own pit saws or know how to use it. All the men pitsawing are also cultivating the land, meaning that the dry season is the timber season. A typical man involved in the timber business can prepare 150 pieces in the dry season. A piece of timber 1½”/12”/12 feet is sold in the village at TSH 2,000. The timber collectors claimed that the timber is mostly used locally and sold to buyers from Ismani Tarafani and Ndolela, and from Iringa town. Tree species are “mkola”, “mninga” and “muwondo”. Some old people informed the team that in the 1940’ies timber logs were taken out in large numbers by an Indian from Iringa town called Manji, who had a sawmill in Iringa. Today nothing like this takes place.

An attempt to discuss village management of timber trees:

The team managed to get good data on timber collection in the sub-village. It decided to take a step further to test the villagers’ opinions, awareness and interest in a possible management of the timber by the village itself based on an idea of the extraction being profitable and sustainable seen from the users point of view. The team had actually agreed not to start any planning during its study. However, the chance and confidence of the users were there and the team found it appropriate to utilise this opportunity.

The timber collectors said that they did not know anything about a new forestry policy but continued to say that they were much interested in being informed about that policy.

First of all the users have the clear opinion that the woodland belongs to them. They are often harassed by foresters but said that despite these interruptions they would still continue to cut timber since the business is good. We discussed if they saw any limitations to the number of trees they could fell and the answer was “yes”. During the discussion it became very clear that the users saw a management consisting of the village council and the users jointly making up a plan and monitoring that plan. The users claimed that they had all the expertise to decide which species and when they are ready for harvesting. The users said that they wanted a management plan, which excluded the collection of timber by villagers from other villages – well knowing that this would imply that they might also be excluded

from their areas. However, the users agreed that certain activities (honey collection, hunting and collection of NWFP) should not be restricted by any boundaries.

The team further asked how the forester could play a role in this new management. They said that he would be needed to provide technical backstopping and awareness raising regarding timber issues. The users also said that the forester presently does not give any advice at all but only police the area. The users added that they would not believe that the present forester could change attitude and definitely wanted another person to facilitate the new management ideas. The users continued to say that a new forester with a new approach could also assist the new natural resources committee performing their role and responsibilities.

The only unfortunate thing about an otherwise very positive and useful discussion is that the team has strong doubts about the management capacity of the present village council.

6.9 Hunting

Only men hunt and game is scarce. Hunting methods include bow and arrow, dogs, guns, and traps. The hunters also hunt in woodland belonging to other villages and likewise villagers from other communities come to hunt in the Ikengeza area the reason being that not all game species are found everywhere. Game includes rabbit, wild pig, warthog, antelope, quail, guinea fowl and dik-dik antelope. Hunters do not use fire as hunting method.

6.10 Charcoal

Charcoal is made by both men and women and considered sufficient. However, charcoal is not important in the village and the village has no links to charcoal markets outside the community. Only men selling roasted meat uses charcoal. Only one specie is used for charcoal – “mkwee”. The price of one sack is TSH 1,000 – 1,200.

6.11 Honey

Only collected by men and a few Wagogo women and is considered scarce. Five men have beehives while others collect directly from the trees. Honey is sold at TSH 15,000 for 20 litres. Before nobody had beehives. Beehives were introduced by the bee-keeping officer, who also introduced the making of wax to the sub-village. However, so far only one old man is producing wax, which according to him is quit profitable. At present he had 50 kilos for sale – one kilo TSH 1,000. Honey is used for food, porridge, medicine and local brew. The beehives are made from only one tree specie – “mkongolo”. That specie is not a timber specie. Villagers in other villages have claimed that only timber species can be used for making beehives. Facilitating interactions among villages could be considered an important extension tool by the project.

PROFILE OF IFUWA VILLAGE

WEST KILOMBERO FOREST RESERVE

District: Iringa (Rural) **Division:** Mahenge **Ward:** Udekwa **Village:** Ifuwa

Potential for JFM

Ifuwa undoubtedly use the Nyumbanitu forest reserve for the essentials such as hunting, beekeeping and milulu collection. The presence of pitsawyers and timber dealers in the area might suggest that some harvesting of timber take place.

Ifuwa village is surrounded by unreserved woodland, which the people use it for the various wood and non-wood forest products, and therefore warrants for initiatives on community based forest management.

What is of concern is that the increased enforcement of forest rules by TANAPA in the nearby Ndundulu forest reserve may have increased the pressure on the Nyumbanitu forest reserve. While the population of Ifuwa and Udekwa combined is not large relatively to the size of forest reserve, any increased pressure may well make it a strong candidate for JFM. The results of biodiversity study of the Nyumbanitu forest reserve will be interesting for JFM planning.

The local government of both Ifuwa and Udekwa are isolated and independent not always adhering to the District bylaws, but the social “glue” of the communities appears to be strong.

1.0 Introduction

1.1 Background

Ifuwa was formed from inter union of clans that lived in the area in scattered hamlets under separate chiefs. The scattered households around the area were brought together during villagization in 1974. At this time the village boundary was established. The Village was named after the river that marks the boundary of the village on the Southern part.

The traditional ethnic group of the area is *Wahehe – Wadzungwa*. Other tribes that have moved in the area are *Wabena, Wabarbaig and Wairaq*.

1.2 Location and Demography

The village is located at about 104 km North West of Iringa town approximately about 3 hours drive. Ifuwa is on the southwestern side of Nyumbanitu Forest Reserve and the forest is relatively close to the village boundary. There are 8 sub-villages of Kidilo, Watalisoli, Vikongwa, Kihanga ‘A’, Kihanga ‘B’, Ikovelo, Mwagidawa and Kitoromela. Settlements are concentrated along the road. The village is surrounded by woodland, which covers big portion of the village land.

The total population is 2800 inhabitants based on the 1996 local census. The total population composition is 1600 women and 1200 men and the productive force is 800 people. There are 320 households distributed in 8 sub-villages each with about 40 households. The household size is 4 – 9 individuals.

Polygamy is practiced with up to 5 wives. This is borne out in the skewed male/female population. The wives can stay in one compound each in separate hut or may be placed in different households. The boys start having their own houses from 18 years and they get married from age 20 – 25 years. Girls get married from age 18 – 22 years.

1.3 Infrastructure

The village has one **primary school** started in 1971 with class I - VII. There are 326 pupils, out of the total number 162 are boys and 164 are girls. There are 7 teachers both are men.

There is one **dispensary** that was started in 1975. In 1994 CUAM an Italian Organization renovated the dispensary and it was equipped with a solar power. CUAM also built two houses for the dispensary staff including one Rural Medical Assistant (RMA) and one Mother and Child Health Assistant (MCH). These are District Council employees. There are 12 traditional midwives in Ifuwa who have attended primary health training. The medicines are provided from District Council through UNICEF support.

Water supply is obtained from surrounding river streams. The villagers reported that water supply is sufficient though water is not safe.

There is no regular public **transport** to Ifuwa village. Villagers rely on visiting or business vehicles. They normally walk on foot to Mahenge or Ilula villages which, are 20 km. and 64 km. respectively. The road is very rough and stony.

Within the village there are three maize mills, three shops/kiosks, and local brew shops. According to the village rules the local brew shops are operating only in afternoon hours (from 2.00 p.m.).

2.0 Village Organizations

2.1 Village Government

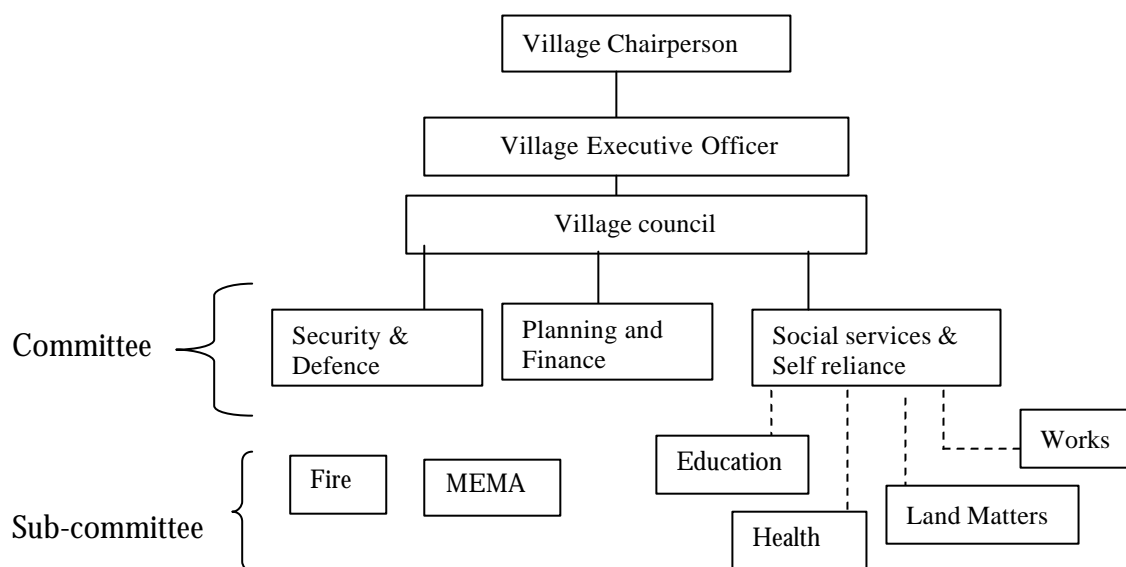
The village government consists of positions shown in figure 1. The village government makes major decisions for all village development activities. The village chairperson and the Village Executive Officer (VEO) are the main office bearers on the village. VEO takes care of the day to day activities and is the person with administrative powers. The village government has Village Council (VC) and its committees that are responsible for planning and implementation of village development activities. Young members mainly dominate the Ifuwa Village Council. There are 25 members in the Village Council. Of these, 15 are elected from the general assembly, and 8 elected from sub-villages. There are 3 female members in the VC. There are three standing committees. The 24 members are distributed in the three standing committees each with 8 members while the Village chairperson remains the 25th member who enters in all committees.

There are 3 standing committees and 5 sub-committees including MEMA

environment committee. The MEMA committee was elected from the general assembly after the Participatory Rural Appraisal was done. This committee has 9 members, and includes representatives from each sub-village. Neither the village council nor the members are aware of their roles. They are hoping that more seminars will clarify their roles. The VC does not know either where this sub-committee be fitted in the standing committees. There is only one member (woman) who is both in the VC and in the MEMA Environmental Committee.

The VC also mentioned presence of Fire Protection Committee, which had the responsibility for fire fighting and protection. This committee has not been active for some time.

Figure 1: Village Organization Chart



Note: Solid lines – centrally established relationship by Local Government, & dashed lines locally established relationship by village government.

Village meetings

The VC follows the routine schedule of the Local Government directives in conducting its village meetings. The VC is supposed to have meeting after every three months, and during the study it had already held three meetings, mainly discussing on village development activities.

2.2 Other Organizations and experience with external support

There are few links to other organizations. The Italian NGO - CUAM did a renovation on the health clinic in 1994. Since then village has no links to outside NGOs. Within the village there are groups of organizations of the ruling party CCM which are Women, Youth and the Parents. However the groups are not active.

2.3 Village Bylaws

Ifuwa village has bylaws but are not documented. The bylaws are developed by the VC without using normal procedure, this include, using village bylaws without the approval of District Council. The village council also institutes District bylaws for management of

village woodlands. For example, firebreaks are permitted for preparation of a new farm and fines are charged for fires set for hunting purposes. Fines vary from TSH 2000 - 50,000.

2.4 Linkages between District and Village council

The District Council provides health assistants and medicines to the dispensary. Education support is also channeled through District Council e.g. teachers, and school materials. For instance the District Council supported school building by supplying the roofing iron sheets.

The Ward Executive Officer (WEO) and Divisional Secretary facilitate the linkage to the District Council. Village Executive Officer collects development levies from village and submits to District Council. Some members of Village Council participate in the Ward and Divisional Development Committees.

3.0 Economic Activities

3.1 Agriculture

Agriculture is major economic activity. Main crops grown are beans and maize. However crops grown mainly by men are banana, finger millet and sugarcane, and these are mainly done on small scale as local cash crops. Women grow peas, sunflower, cassava, groundnuts, and sweet potatoes. They get two seasons of beans in the long rains, and use early or late yielding varieties to take advantage of higher prices.

There is no crop rotation, and they state that they cultivate the farm for 10 years with no fallow periods and get enough yields. The women are in charge of crops for domestic use and may have their own land to do this. While a farm cultivated by a man is referred as a development farm and is for commercial purposes. Women may not take produce from their husband's (commercial) farm without permission.

The farms are 3-5 acres at the smallest and 10-20 at largest. They are generally scattered across the woodlands. A household might have up 5 farm plots.

All farming is performed by hand hoe, and there appears to be little change in the seeds or the systems over the years. They have tried vegetable garden on a small scale, and do sell tomatoes, other minor green vegetables. In farm cultivation, family labour is used comprised of mother and father mainly, and the children assist when they are available.

Soils are said to be very fertile, and can be cropped for many years and get good harvest. Although field observation shows that the soil is very poor, villagers state that they get good harvest of 2-3 bags of maize/acre. The optimal yield in Iringa region is 10 bags per acre.

The agriculture extension officer in the village is a coffee specialist, and does not give advice on any other crops. He tried to get coffee growing two years ago, and a shade tree program to dovetail with it, but has not been very successful. The coffee has not done

well. The villagers are not satisfied with him.

3.2 Animal Husbandry

The local villagers do not keep cattle. Even though there were cattle in the past but died some 40 years ago due to outbreak of anthrax in the area. Currently, there are two people who practice pig rearing, and two who keep goats. But the main thinking of local people is that you can not rely on animals. On the edge of the village land there are tribal *Wabarbeig* and *Wairaq* who keep cattle, and were allocated land by the Village Council (refer box 1). They have 50-300 heads, and graze on the open woodlands and also on crop residues on permission from farm owners. Villagers buy meat from these people.

3.3 Tenure

Before villagization it was not possible for women to own land. Nowadays both men and women can own land. The village land mix consists of customary, rented, borrowed, sold and allocated land. Both men and women inherit the customary land. There is special committee in the village organization that allocates land, and charge a fee for demarcation. The village has more than enough land, and encourages outsiders to come to the community, but few take up on the offer.

3.4 Income Generating Opportunities

The circulation of money in the village is low and it is generally depends on subsistence agriculture. The income potentials in the village are few. As stated previously, men are in charge of any commercial crop, but there is little export because of the distance. Trucks come and collect maize from the roadside. Sugar cane and other crops are sold locally.

There are maize mills that employ youths labour. They may sell game meat, but do not talk about it. Honey production from caves and hives, but they don't want to talk about it because the hives are made from timbers that are harvested illegally. They do illegal pitsawing in the forest reserve. All these activities are sources of income to the community though in very small amounts.

Men migrate out of the area as daily labors while others, for instance the timber sawyers do go for several months and come back to the village during farming season.

Weaving baskets and mats, pottery and beer brewing are some of few income generating activities especially for women. A definition of rich, medium and poor in this village was difficult for villagers to determine they stated that they were all about the same. Table 1 is a summary of the most common income generating activities

Table 1: Income generating activities

| Income Source | Gender | Economic Group | | | |
|--------------------------|--------|------------------|------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing | Sell | Prepare and sell | | | * |
| Maize mill | * | | | * | |
| Weaving: Basket and Mats | * | * | | | * |
| Masonry | * | | | | * |
| Day labour | * | * | | | * |

| | | | | | |
|-----------------------|---|---|--|---|---|
| Cookies | | * | | | * |
| Medicinal plants | * | * | | | * |
| Pitsawing | * | | | | * |
| Timber | * | | | * | |
| Vegetables | * | * | | | * |
| Keeping small animals | | | | | |
| Chicken | | * | | | |
| Goats | * | | | | * |
| Pigs | * | * | | | * |
| Running kiosk | * | | | * | |

Village revenue

The village collects development levy of TSH 4,000 for an adult above 18 years old. Collects livestock tax of TSH 500 per head of cattle. All the collected revenue is paid to the District Council, and 30 percent is returned to the village to support village infrastructure activities, this include schools, clinics, roads, etc. It is also used to cover village administration costs. The village collects fees of TSH 100 per 20 litres of local brew sold.

4.0 Woodland and Forest Use

The discussion was held at Kidilo one of the sub-village of Ifuwa. This sub-village is relatively close to the Nyumbanitu forest reserve. About 65 villagers attended, of whom 20 were women. Table 2 summarises the different products as identified by both men and women and their level of importance as well as availability.

Table 2: Products Identification, Preference by Gender and Availability

| Products | By Gender Preference | | Availability | | |
|-------------------|----------------------|-------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Collecting honey | | * | | * | |
| Hunting | | * | | * | |
| Charcoal | | | | | * |
| Firewood selling | | * | | | * |
| Firewood domestic | *I | *III | * | | |
| NWFP: | | | | | |
| Mushrooms | * | * | * | | |
| Thatch grass | *II | | * | | |
| Fruits | * | | | * | |
| Medicinal plants | } * | } * I | | | * |
| Milulu | } *III | } * | | | * |
| Building poles | | *II | | * | |
| Livestock grazing | | * | | * | |
| Timber | | * | | | * |

4.1 Non Wood Forest Products (NWFP)

Medicinal plants and Milulu were the first choice of men and the third choice of women. They say medicinal plants are important because they highly depend on traditional medicines since they do not have enough money to buy modern medicines. The traditional medicines are like first aid to them and more effective in action. The medicinal plants were reported to be scarce in the woodlands and there are few varieties of plants. However they said that medicinal plants are plenty in the forest

reserve, but they are not allowed to enter. Some reported that occasionally they go into the forest reserve to collect the medicinal plants. With medicinal plants the 'doctors' reported that whenever they go for collection they do not kill or uproot the tree. Instead they take only small portions of roots, bark and leaves. This is done to ensure the tree remains for future use.

Women use *milulu* to make mats as sleeping materials and baskets for carrying crops. Since making mats and baskets is an income generating activity for women hence even men are interested on the business. *Milulu* reported to be scarce in the village surrounding. However they said that are plenty in the forest reserve, but they are not allowed to enter. Users reported that they rarely go into the forest reserve to collect the *milulu*. They ascertain that the distance to the natural forest reserve is however far taking about 8 hours for the return trip. Users have tried to propagate the *milulu* plant but the exercise is not very successful. The planting has been done on valleys and there are few of these areas in the village.

Thatch Grass, Mushrooms and Wild fruits were the second choice for the women. The said that thatch grasses are important for roofing their houses because they can not afford to buy iron sheets. The mushrooms are important food supplement and source of protein, since they do not keep livestock and they have money to buy meat. Wild fruits are important food supplement for families and especially children eat fruits while waiting for main meals. They also said that they do not have alternative sources of cultivated vegetables and fruits.

Mushrooms were reported to be readily available from the surrounding woodland. Mushrooms were said to be plenty only during the rainy season November - March. Wild fruits are collected from woodlands but not readily available. Both men and women pick mushrooms, as well as wild fruits.

Thatch grass is readily available from the surrounding woodland, throughout the year. In traditional polygamy families women have to collect thatch grass for roofing their houses. Even in normal families, women normally help their husbands in house building by providing thatch grass.

Even though other NWFPs were ranked first there was a hot debate since some of men would like to put **hunting** as first because there is a lot of hunting activity going on. However, some of the members considered it to be an illegal activity and did not want to make it explicit to the study team.

Beekeeping was an activity that farmers are doing but they could not give it priority because of the fear that they are doing an illegal activity. They explained that they rarely collect honey from caves or trees but not much. Users reported that they have not tried any beekeeping practice because they do not have the expertise. They said there is a lot of bee colonies around.

4.2 Firewood

Firewood collection was the first choice of women, and the third choice of men. Although men were not the main collectors of firewood they were concerned about firewood because it is the only energy source for cooking and heating. Women use firewood also for local brewing and pottery.

Firewood collection is done mainly by women assisted by their daughters. They reported that firewood collection is strictly women's responsibility. Women do get assistance in firewood collection from their female relatives when they are sick.

Selling of firewood is not common in the village hence men do not go for firewood collection. Men rarely assist in cutting the wood in the forest and women go to collect and bring home.

Firewood is reported to be sufficient but takes long time to collect, approximately two hours. The issue of collection is referred to quality of wood collected and not distances covered. The villagers did not show any interest of going to forest reserve for firewood collection. Firewood is mainly collected in the surrounding woodland and in the cleared and fallow fields.

The frequency of firewood collection is determined by a number of things including season of the year, use, and other social factors. For instance during the dry and harvesting season the collection is done mainly to provide wood for local brewing and to keep aside stock to be used during the farming season. This is distinct from the usual household use of firewood, which is continuous.

There are no special days for firewood collection, with exception of Sundays where most villagers go to church. The women reported that it is customary to find a woman carrying a load of firewood whenever they are coming back from their fields. It is difficult to estimate the exact number of head-loads that are collected per household at any one time. Sometimes the wood is picked around houses if they find any convenient for firewood use.

Although firewood is reported to be plenty at present but they expressed that they do not know how the situation will be in the future. For future availability of firewood, the women requested tree seedling from MEMA so as to do own tree planting. The women referred to the primary school in the village, which in 1997 were provided with tree seeds as part of the package for the introduction coffee crop.

4.3 Building Poles

Building poles were second choice of men and are important because of the need for shelter. They explained this further stating that a house/hut is an identity for manhood and being adult. Also their families are expanding and the need for building more houses increases.

Building poles are plenty in the woodlands but are of lower quality. The users claimed that the better quality building poles (straight, long, and big bole) are found in the forest reserve.

As a result of PRA exercises, there is an effort by villagers to manage part of the woodland (Jangwani area). The village council reported that rules would be instituted in the management of the woodland. Furthermore, the villagers requested for tree seedlings so that they can start their own woodlots. Tree species preferred by them include Grevillea, Pines and Black wattle.

4.4 Timber Harvesting

Timber harvesting is another activity that is being done in the village, but since they know that harvesting timber from forest reserve has been prohibited, they did not want to expose to the study team that they are engaged in any kind of timber harvesting. Nevertheless there are a lot of people who know how to do pitsawing. These people sometimes go to other areas for hired labour on pitsawing.

Box 1: Pastoralists of Ifuwa

The pastoralists found in Ifuwa are of the Wabarbeig and Wairaq tribes who came from northern Tanzania. These people moved with their cattle in search for good pasture and water for their animals. The pastoralists of Ifuwa have been in the village for the past 10 years. The presence of the pastoralists in the area guarantees a source of meat for the villagers. They have been allocated a portion of land within the village, which they cultivate. They own between 50 – 300 heads of cattle. The animals graze freely in open woodlands. Sometimes they put fire on woodlands as a management tool to improve pasture. As a strategy to counteract for any problems that might happen, the cattle keepers do not keep all the animals in one place. They usually move their cattle to places with good pasture and water. They reported that some of their animals are currently in Ifakara but they will soon bring them to Ifuwa once the pasture has improved. Sometimes the pastoralists graze their animals in farms where they feed on crop residues during farm preparation (October – November) on permission by the owners. What is important with these people is that they respect the rules of the village e.g. they do not graze in the Jangwani village woodland area, which is close to their settlement.

PROFILE OF ILAMBA VILLAGE

New Dabaga-Ulongambi Forest Reserve (NDUFR)

District: Iringa (Rural) **Division:** Kilolo **Ward:** Dabaga **Village:** Ilamba

Potential for JFM

The presence of Fire and Natural Resource committees in the village institutional set up warrants a good base for MEMA to collaborate.

Plenty of plantation orchards and woodlots owned by villagers are suggestion for enthusiasm of the villagers to manage forests around them. However, there is reported unreliable market for forest products.

Villagers depend highly for NWFP from the New Dabaga-Ulongambi Forest Reserve and therefore they might be ready to be involved in the management.

1.0 Introduction

1.1 Background

Ilamba is a traditional village and the majority of its people are native to the area. The main tribe is Wahehe. The Wahehe lived in the area in dispersed clans of 3 – 4 households. There are emigrants including Wabena and Wakinga. These people came to work on settlers' farms during the 1950s.

There was local administration with leadership of *Lunanzi, Kijiji, Jumbe, Sub-chief* and *Chief*. The main role of these people was to collect tax and organize people to work on road construction. Excluding the chief, the rest also organised and forced people to work on Chief's farm the system known as "*Lifuge*".

During operation *Sogeza* in 1974 people who were living in scattered households were moved together to the present village area where they were provided with essential social services. In 1977 the village was officially registered as Ujamaa village under village registration Act of 1975. The village had two more sub-villages of Isele and Lusinga, which later were registered as Ujamaa villages in 1975 and 1993 respectively.

1.2 Location and Demography

Ilamba village is located South East about 55 km. away from Iringa municipality. The village borders New Dabaga-Ulongambi Forest Reserve to the East, Lusinga village to the North, and Kidabaga village to the South. It also borders Lukani village to the West. Village boundaries are marked by natural features, which are Mgera, Hasi and Gonza rivers and the NDUFR.

There are two sub-villages of Mkulima and Masimike. Masimike sub-village is bordering the NDUFR.

The village has 1372 inhabitants based on 1998 local census. There are 662 people in Masimike and 710 people in Mkulima. There are 231 households in the village, 112 households and 119 households in Mkulima and Masimike sub-villages respectively. There are 30 women headed households. The average family size in nuclear

household is 5 people and in extended families, is up to 8 people. The village has a work force of 450 people.

Polygamy is practised with up to 2 wives, while in the past a man had up to 6 wives. The system has changed because of religion and economic hardships. The study team was told that boys and girls start to marry at the age of 22 years and above. The dowry paid is 3 cows, 2 goats and 2 hoes, or an equivalent amount of TSH 150,000. Parents or clan members normally assist their sons to pay dowry for the first wife. Out migration is high for youth seeking labour outside the village as a result of shortage of income generating activities in the village. When girls marry it limits their access to own family land.

Religious groups present in the village are Christians of Roman Catholics, Lutheran, Pentecost and Assemblies of God. There are also some Muslims.

1.3 Village Infrastructure

There is one **primary school** in the village, which was started in 1972 with one room for class I. Before 1972 the children were schooling at Kilolo primary school which is 6km away. Until 1981 the school had up to class VII. The school was built through villagers' efforts with some support from the District Council. District Council provided bags of cement and iron sheets. The present number of pupils is 312 with 155 boys and 157 girls. There are 8 teachers (4 men and 4 women). Almost all the teachers are from the village. The school also provides services for adult education and pre-primary education. Udzungwa Secondary School takes students from the whole division as well as countrywide. The school started in 1987. A Vocational Training Centre (*Nyota ya Asubuhi*) is being established under the Roman Catholic Mission. The centre will provide training on tailoring, carpentry and masonry for local people.

Health services are obtained from Health Centre at Kidabaga village which, is 6km away. There are two primary health attendants, a female and a male, and 3 traditional midwives that have attended primary healthy training. There is also one registered traditional healer. Formerly the health attendants were provided with first aid kit but at the moment the support has ceased. In lieu of that, the Iringa Rural District has introduced cost sharing for medical services. The system is referred to as Community Health Funds. The villagers are required to pay TSH 5000 per year for every household or TSH 1000 for each visit to hospital for treatment.

The village is easily accessible and connected to other areas by all weather **access roads**. There is regular public transport between Iringa and Kidabaga village via Ilamba. The villagers in Ilamba use a shortcut path through the forest reserve to Lusinga, Lulanzi and Isele.

The **water supply** in the village consists of river streams and shallow wells. The supply is reliable but water is not safe. The river streams are Matalaweni, Kitalawale, Msaula, Kidete, Makabila and Inyonga.

There is no **market place**, but they depend on market day, which happens once a month at Kilolo village. Other services provided in the village include three kiosks, two *pombe* shops and two maize mills and one butcher. The *pombe* shop is a village project operated

daily from 2.00 p.m. and closed at 8.00 p.m. There is a rule governing this system.

There are **churches** for Roman Catholics, Lutheran, Pentecost and Assemblies of God. There is also a small mosque.

2.0 Village Organization

2.1 Village Government

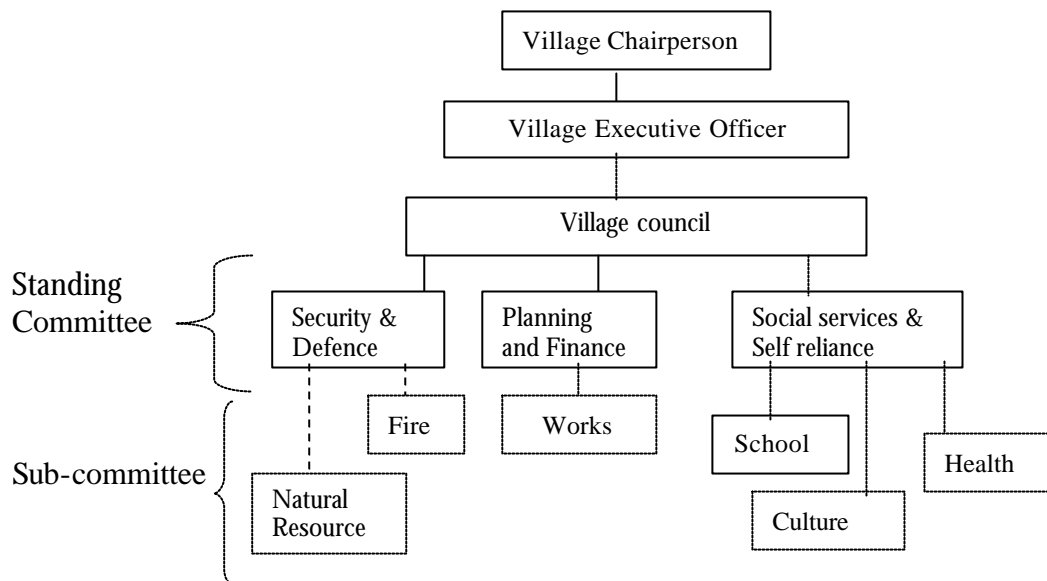
The village government consists of village chairperson, Village Executive Officer (VEO), Village Council (VC) and its committees. The village government has positions as shown in the village organization chart figure 1. The Ilamba village council is composed of 25 members. These are elected members including village chairperson, 2 sub-village chairpersons and other villagers. Seven members are women who were given special seats. During the study there was acting Village Council designated to foresee smooth running of the village until the next elections (November/December 1999).

Invited members to village council are village experts include Head teacher, Agriculture/Livestock Extension officer, Religious leaders and village accountant.

The village council has three standing committees that include Planning and Finance (9)¹, Defence and Security (8), and Social Services and Self-Reliance (8) committees. This organisation set up is centrally determined by the Local Government. There are six sub-committees, which include Health (16), School (10), Culture, Works, Natural Resource (10) and Fire (8).

The two committees related to MEMA include, fire committee which has a role of supervising fire fighting operations, and Natural Resource committee which monitor protection of water sources/points and environmental conservation. The study team was informed that there is a MEMA committee, which was established during PRA exercise but has not started to work, hence it was not included in the village organization. Figure 1 shows village organisation chart.

¹ Numbers indicate members in the committee

Figure 1: Village Organization Chart

The village council and standing committees have routine meeting schedules. The VC is supposed to meet after every three months and in this year had 3 meetings, which discussed village development performance, achievement of planned activities and financial matters. After every VC meeting follows General Assembly meeting which informs the villagers about village developments and progresses; cultivation of commercial crops, food security, revenues and contributions.

Standing committees are supposed to meet every month and in this year the standing committees had meetings as follows:

- ? Planning and Finance met for three times mainly discussing about village projects (including forest, 2 *pombe* shops and 3 cattles) and village revenue collection,
- ? Security and Defence had two meetings discussing on how to deal with thieves and fire incidences. For instance in this year there was two fire incidences and the people involved where sent to court.
- ? Social services and Self- reliance had three meetings discussing on environment sanitation, inspecting latrines and water points.

The Village Council has a system of providing sitting allowances of about TSH 500 or less, to members attending VC meetings or seminars. As a result the study team was requested to do the same.

2.2 Other Organizations and Experience with External Support

Organizations in the village are churches, ruling party (CCM) and its associations of women, youth and parents. The village has minimal experience with external support as regard to community development projects. HIMA project supported the village with free tree seeds through primary school tree planting programme.

However, subsidies and loans on agricultural inputs were provided during the Ujamaa regimes through cooperative society.

2.3 Linkages between District and Village Council

The Ward Executive Officer (WEO) and Divisional Secretary facilitate the linkage to the District Council. Village Executive Officer collects development levies from village and submits to District Council. Some members of Village Council participate in the Ward and Divisional Development Committees.

The study team was informed that, the VC has made a request to the district Council to be given a seminar on management, administration and planning of development activities but there has been no response. However the only available village administrative guide is a booklet that guides sub-village chairpersons to undertake their responsibilities.

2.4 Village Bylaws

The village bylaws are drafted by village council and approved by District Council. Currently there are fire control bylaws that prohibit putting fire without notice when preparing farms. Others are on environmental conservation and protection of water sources. Offences that cannot be resolved by village council are referred to the court. There is also District bylaws enforced by the village council this include bylaws on development levy, schools fees and attendance and development activities.

3.0 Economic Activities

The main economic activity in the village is agriculture. Other economic activities include animal husbandry, timber harvesting and small-scale trade.

3.1 Agriculture

Main crops cultivated in the village are as shown in table 1.

Table 1: Crops cultivated

| CROP | SEASON | GENDER | | MAIN USE | |
|----------------|--------------|--------|------|------------|----------|
| | | Female | Male | Commercial | Domestic |
| Maize | Nov. – Sept. | * | * | * | * |
| Wheat | Mar – Aug | * | | | * |
| Beans | Feb. – June | * | * | * | * |
| Sweet potatoes | June – Mar | * | | * | * |
| Irish potatoes | All year | * | * | * | * |
| Finger millet | Dec. – Aug. | * | | * | |
| Fruits | Feb – May | * | * | * | * |
| Vegetables: | | | | | |
| Cabbage | All year | * | * | * | |
| Tomato | Jul – Feb | | * | * | |
| Green peas | All year | * | | * | |
| Tree crops | All year | * | * | * | * |

In 1966, the village cultivated pyrethrum as a commercial crop up to 1977 when it was abandoned because of lack of reliable market and decline of price. Currently the crop is being re-introduced in an effort to encourage cultivation of commercial crops in the village.

Two farming seasons are reported which are dry (June – November) and rain (December

– May) seasons. Seasons' calendar shown in table 1 cover the period of farm preparation, cultivation to harvesting. Crop cultivation is practised in hill slopes and valleys. Cropping system consists of mixed cropping of maize, beans, Irish potatoes and peas; and crop rotation of maize, wheat and beans. Crop rotation is practised in low fertility plots. Vegetable gardening is done in the valleys throughout the year while Irish potatoes are cultivated on both valleys and hill slope farms. Hill slopes are cultivated without conservation measures to reduce soil erosion.

Before operation *sogeza* villagers practised shifting cultivation because the population by that time was low and people were dispersed in the area. They also used cow dung to fertilise their farms. The harvest obtained was enough for subsistence use. Following operation *sogeza* (1974), there was increase in productivity per acre as result of use of fertilisers improved seeds and appropriate planting spacing. They could harvest up to 15 bags per acre. Today there is less use of fertilisers due to low income and maize yield has diminished to about 4 – 5 bags per acre.

Minimum and maximum cultivated farm size by individual households is 3 and 20 acres respectively. These are usually located in different sites according to mode of acquisition and crop cultivated. A household may have between 2 and 4 plots.

3.2 Animal Husbandry

Few villagers practise animal husbandry. In late 1950s people in Ilamba village were kept large herds of livestock but later on, there was an outbreak of rinderpest and all livestock died. At present animals reared include 110 cattle, 94 sheep, 100 goats, 4 pigs, 2016 local chicken and 1 donkey. The animals are for sale and for domestic use. Cows are also used to pay for dowry.

3.3 Tenure

Village Council recognises and respects traditional land. Land is either inherited or allocated by the Village Council through its planning and finance committee. Both women and men have rights to land inheritance and allocation from the traditional and village administered land. However, male members of the family have more chances of inheriting land than female members, this is due to the fact that females get married to other families.

There is reported shortage of village administered land. Land can be borrowed or rented under mutual agreement between parties. Selling of land among villagers is also done depending on the need and availability. To avoid conflicts the village council has to witness the land selling events.

3.4 Commercial Farms and Woodlots

Since colonial period the village has been managing the District Council woodlot which has about 80 acres of Black wattle (*Hazina ya Uhehe*). The villagers are allowed to collect dry wood for domestic uses. In 1975 during afforestation program, the villagers started planting trees of mainly Pine, Black wattle and Eucalyptus. Today there are scattered woodlots and fruit orchards in the village and almost every household in the village owns a woodlot of Pines, Black wattle and Eucalyptus.

There was a central tree nursery at Kilolo village where seedlings were freely distributed by the district natural resources office. Currently villagers own small-scale tree nurseries. Seedlings are raised for sale and planting in farms.

There is a commercial farm (Ifuwo Farm) owned by Dabaga Vegetables and Fruit Canning Company. The farm has about 518 acres planted with various tree species and fruits trees.

3.5 Income Generating Opportunities

When asked to describe about rich and poor people, villagers related it to the income generating opportunities. For instance persons who own maize mills, kiosks, and butcher were seen as better off than those who provide daily labor to other. Generally villagers feel that there are no rich people rather the villagers are sharing poverty. Income generating activities undertaken by villagers are presented in table 2.

Table 2: Income generating activities

| Income Source | Gender | | Economic Group | | |
|--|--------------|---------------------|----------------|--------|-------------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing: "Kommon" "Ulanzi" | sell sell | Prepare and sell | | | * * |
| Maize mill | * | | | * | |
| Livestock | * | * | | | * |
| Timber | * | | | | * |
| Selling poles Cutting poles | * * | * | | | * |
| Basket making Mats making | * * | * * | | | * * |
| Business (Crops) | * | * | | | * |
| Carpentry | * | | | | * |
| Brick making | * | | | | * |
| Charcoal burning | * | | | | * |
| Masonry | * | | | | * |
| Day labour: Loading and offloading Quarry/stones Agriculture | * * * | * * | | | * * * |
| Cookies | | * | | | * |
| Making hand tools E.g. hoe, <i>nyengo</i> handles, spoons, knives. | * | | | | * |
| Running kiosk | * | * | | | * |
| Butcher | * | | | | * |

Village revenue

The village council collects revenue by charging development levy of TSH 4,000 per individual. Out of the levy TSH 1,500 is deposited as village educational fund, 30 percent of the balance (TSH 2,500 and the amount charged to livestock, crops, etc) is deposited to village development account. There is livestock levy of TSH 500 per head of cattle, TSH 250 per head of goat and sheep. Other sources of income are such as charging fee for selling local brew which TSH 100 per 20 litres of *pombe*; revenue from buying crops by middlemen which is TSH 100 per bag of maize or beans.

Up to the time of study, the village has collected the following revenues:

Local brew club and petty traders fees – TSH 720,000,

Sell of timber from village woodlot – TSH 120,000,

Sale of one cow – TSH 48,000,
Crops buying fees – TSH 150,000.

The village uses its revenue for the following:

Buy building materials (iron roofing sheets and cement) for the new village office,
Stationary and administrative costs for the village government including payment of allowance for VC members during meetings,

4.0 Woodland and Forest

The discussion was held in the forest an area close to NDUFRR. The place was also a station where timber harvested from the forest reserve was piled waiting for transport. There were about 14 villagers attended, of whom 7 were women. Table 3 summarises the different products as identified by both men and women and their level of importance as well as availability.

Table 3: Products Identification, Preference by Gender and Availability

| Products | by Gender Preference | | Availability | | |
|-------------------|----------------------|------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Collecting honey | | * | * | | |
| Wild-Game | | * | | * | |
| Brick burning | * | * | | | |
| Fuelwood: | | | | | |
| Domestic | *I | * | * | | |
| Selling | * | * | | | |
| NWFP: | | | | | |
| Mushrooms | * | | * | | |
| Wild vegetable | *II | * | * | | |
| Thatch grass | | * | * | | |
| Medicinal plants | | * | | * | |
| Milulu | *III | * | * | | |
| Fruits | * | * | | * | |
| Building poles | | *I | * | | |
| Livestock grazing | * | * | | * | |
| Timber: | | | | | |
| Pitsawing | * | *II | * | | |
| Selling | | *III | * | | |

4.1 Non Wood Forest Products (NWFP)

Wild vegetables (*derega*) were the second choice of women. The choice is in accordance with the productive role of women to ensure household supply of food. *Derega* vegetable is mostly preferred and is important food supplement. The wild vegetables reported to be abundant, as were readily obtained from propagated plants around their homesteads and in their fields. However, users said that *derega* is plenty in the forest reserve and is available all year round, but they are not allowed to go.

Other vegetables discussed by women were **mushrooms**. They collect mushrooms from bushes and farmlands in the valleys. Mushrooms are reported to be plenty in the forest reserve because of abundance of dead materials. These vegetables are readily available during the rain season between December and April. The users said that they distinguish the poisonous and edible mushrooms.

Milulu collection was third of women because they make mats as sleeping materials and baskets for carrying crops. Women reported that they collect *milulu* from valleys in their fields where it grows naturally and it is abundant. *Milulu* is reported to be available in the forest reserve. Women also sell *milulu* to men who make mats. Making mats and baskets is an income generating activity for both women and men. Baskets are sold at TSH 200 to 2500.

Medicinal plants were among the products identified and are important traditional medicines. Users reported that almost everybody in village knows about the medicinal plants. This include *mapasa, mnung'anung'a, muhekere, mutasi and mlungulungu*. Medicinal plants are available from bushes, fields and in the forest reserve. Users collect the plants mainly from bushes and fields. They take only small portions of roots, bark and leaves, to ensure the trees are not completely destroyed.

Thatch grass was reported to be readily available throughout the year and is collected from fallow land and valleys. Thatch grass is much collected during dry season (May – October). The grasses collected are *lilolo, likuvala, linyata and lilongasingo*. Women do the actual collection whereas men do the thatching (roofing) work assisted by children. Sometimes collection of thatch grass is done in a collective manner where many people participate this is known as *Mgowe*. Thatch grass is also an income generating activity and a head load costs TSH 200 – 300.

Wild fruits were also identified as important food supplement in the village because it provides high nutrition value for all family members. They collect them from natural forest and bushes. Some of the edible fruits identified are *mifusa, mivengi, miswana, midudu, umwimwi, misaula, matwepele and uhehefu*. There is no pattern for collection, every family member might collect fruits whenever come across the fruit during the season.

Users reported that **hunting activity** is done mainly to control vermin. But sometimes animals such as dik-dik, hare, pigs and bush rats are trapped to provide meat supplement. However some of the members considered it to be an illegal activity and did not want to make it explicit to the study team. They reported that there is no big game.

Hunting is done using traps put along animal pathways, snares, fencing hunting area, and using watchdogs. The traps are visited everyday to check the prey. A trap is sold up to TSH 5000. Sometimes game meat is sold at varying prices.

Honey collection and beekeeping used to be practised, but later ceased because of ignorance. This year, one of the users has made 5 beehives using *Mdeke* trees, which is a fast growing. He has done this through his own initiatives. The beehives are hanged in the bush where there are also some big trees. At present time villagers get honey from caves and tree holes and harvest can be up to 5 – 6 litres. Users claimed that modern beehives can produce more honey and wished to be introduced to the technology. Some users said that they could not practice beekeeping because they are not allowed to cut trees for beehives from the forest reserve. They reported there is plenty of bees in the village as a potential for beekeeping.

Few people keep livestock and every livestock keeper has enough area for **grazing**.

There is no common grazing land in the village. Conflicts between livestock keepers and farmers as a result of grazing into farms are not uncommon. Resolutions are always through negotiations including payment.

4.2 Building Poles

Men consider building poles their first choice because of the need for shelter. They asserted that men are responsible for constructing new houses while women are responsible for repair work. House repair includes replacing mud to the walls. House reconstruction is done after a period of 4 – 5 years.

Trees used for poles include Pines, Eucalyptus, Black wattle and Cypress. Building poles are plenty and obtained from woodlots all year round. Users reported that, almost every household in the village owns a woodlot of at least 0.5 acres.

Selling building poles is a source of income and customers are usually people outside the village. They sell at TSH 20 – 50 depending on size. The users reported that marketing of poles is not reliable.

4.3 Firewood

Firewood collection was the first choice of women. It was reported that the main uses of firewood are for cooking and heating. Women use firewood also when preparing local brew. Firewood collection is entirely a female's role, and is done by women assisted by their daughters. However, in the current system men assist in cutting firewood especially during timber harvesting and women go to collect and bring home. Women frequently do firewood collection and it is customary to find a woman carrying a head load of firewood whenever they are from their farms. The users said that the amount used by households vary according to household size, type and frequency of use, and season of the year. During rain and cold season more firewood is used. On average a household may use a head load of firewood for 2 days.

Selling of firewood is an income generating activity especial for men. The price ranges from TSH 200 – 400 per head load or in kind (a litre of *pombe*). Firewood is also used in brick burning, which is men's activity. Labour and cost involved in brick burning is negotiable between parties. It was estimated that making 20,000 bricks consumes one full trailer of firewood, which is approximately 7 m³.

Firewood is reported to be abundant and takes half an hour to one hour round trip to collect. It is collected from planted woodlots around the village. Consequently, villagers did not show any interest of going to forest reserve for firewood collection. There are no specific woodlots for firewood but it is collected as by-product of other uses of planted trees, include branches, off-cuts, bark and thinnings. Trees used are Black wattle, Eucalyptus and Pine. Black wattle is mostly preferred because of high calorific value.

4.4 Timber Harvesting

Men consider **pitsawing** as second important activity because they have inherited pitsawing skills and it is important activity for getting income. Pitsawing skill is acquired through learning by doing. They said there are plenty of planted trees in the village. Pitsawing is done for commercial as well as for domestic needs. Locally, pitsawer is paid TSH 200 – 250 for sawing a piece of 1"x 8" or 2"x 6" and TSH 140 for size 2"x 4" per piece. Users reported that usually a tree produces 10 – 15 pieces of

sawn wood.

Selling timber is also considered an important activity in the village mainly done by men, because it is a source of income. Prices of timber vary depending on sizes and market situation. For instance a timber of size 1"x 8" and 2"x 6" are sold at TSH 400 - 500. However men reported limited and unreliable local and outside markets. In most cases they have to seek for customers from Iringa town and they are not trustworthy.

Since users know that harvesting timber from forest reserve has been prohibited, they did not want to discuss with the study team about it. However, they reported that there are good and big timber trees in the forest reserve such as *mheti*, *msaula*, *msengela*, *mpalala*, and *mlembelembe*. Users were complaining of the forester in-charge who was involved in illegal harvesting from the forest reserve despite the forest was closed.

5.0 NDUFR and the adjacent community

When discussing products, users were much concerned on use of water as product/service because they see the forest reserve as important for water supply in the village. Using the fabric map, users were able to identify the rivers that originate from the forest reserve. They reported of the road into the forest that was used during timber harvesting and they still use the road as shortcut path to other villages. They said some villagers were used as pitsawing labourers during illegal timber harvesting.

PROFILE OF ISELE VILLAGE

NEW DABAGA-ULONGAMBI FOREST RESERVE (NDUFR)

District: Iringa (Rural) **Division:** Kilolo **Ward:** Dabaga **Village:** Isele

Potential for JFM

The village infrastructure is not well developed and the only reliable institution is the primary school.

Unstable village leadership arising from negative conservatism of one clan show-off and hence frequent changes of village leaders.

Large portion of land is customarily owned 'malungulu', thus limit village administered land. Village economy depends on subsistence agriculture including fruit trees and woodlots. 'Mgowe' is common in the community.

Isele village has experience with community involvement and environmental projects, for instance HIMA project supported the village for five years.

NWFP including honey collection, medicinal plants and animals hunting are widely practiced in the village.

1.0 Introduction

1.1 Background

Before 1974 Isele had only two sub-villages of Igalamo and Itamang'uku where people lived scattered in the area. Each sub-village had its own *lunanzi* (ten cell leaders). During villagization people were moved to the current village set-up and Isele was registered as ujamaa village in 1975.

Ethnic group in the area is Wahehe and there is no other tribal group. In 1950s they practiced shifting cultivation, rotational cropping and used cow manure to increase soil fertility. Crops cultivated were maize, finger millet and Irish potatoes mainly for domestic use. They also kept livestock mainly cattle, sheep and goats about 40 – 60 animals per household. Keeping livestock was for supply of milk, meat, and cow manure and paying for dowry. In 1960s number of livestock decreased due to outbreak of rinderpest. They have tradition of pitsawing from natural forests.

1.2 Location and Demography

The village is located in the South East of Iringa municipality at about 54 km away from Iringa town. It is bordering Lulanzi and Itimbo village to the West; Kising'a village to the East; Itimbo village to the North and Magome village and NDUFR to the South. The village is not surveyed

There are seven sub-villages: Isele 'A', Isele 'B', Malambo 'A' Malambo 'B', Malangali, Mwaya and Igalamo. Malangali sub-village borders with NDUFR.

Based on the villagers' memory the team was informed that the total population is about 1600 people. The village productive work force is 550 people, 270 are females and 280 are males. There are 338 households distributed in the sub-villages as follows Isele 'A'- 52, Isele 'B'- 70, Malambo 'A'- 38, Malambo 'B' - 50, Malangali - 47, Mwaya - 47 and Igalamo - 34 households.

The household size varies between 3 - 8 people. Polygamism is a common practice among the people having up to 6 wives. They said the practice was adopted as a traditional way of family planning. It was also an indicator of wealth. Marrying age for young man is 24 - 30 years and is 18 - 20 years for young woman. Late marriage age was caused by time taken by families of both sides to locate the bride and make marriage arrangements. The dowry paid was 3 cows, 3 sheep, 2 hoes and TSH 2500 but nowadays they pay on cash amounts TSH 150,000. Dowry could be paid all before marriage or the couple can start living together even before all dowry is paid. The main religion is Christians of Roman Catholics and Lutheran.

1.3 Village Infrastructure

The village infrastructure includes, a **primary school**, which started in 1975. There are 300 pupils (137 boys and 163 girls). There are 7 teachers of whom one is a woman. There are services for pre-primary and adult education. Adult education conducts their classes during May - October in morning hours, and no classes during farming season.

There is no **dispensary** in the village and it depends for the service from Kising'a village which is 7 km away and from Kilolo health center which is 10 km away. There are two primary health attendants (male and female) and 6 traditional midwives who have attended primary health training. There are also seven herbalists.

There is no **public transport** The road to the village is not accessible during rain seasons. Public bus service is obtained from Kilolo village. In Isele village there is a pathway passing through NDUFR to Lusinga and Lulanzi villages.

Water supply is obtained from natural water springs. These springs are protected using slabs. Indigenous trees of *Mivengi lulenga* are also planted around the springs to enrich the catchment and reduce soil erosion. This knowledge was acquired from HIMA under Water Sources Protection Programme. The water sources in the village are Igalasi, Kidugala, Malangali, Mwaya and Malambo. Two guards guide each water source.

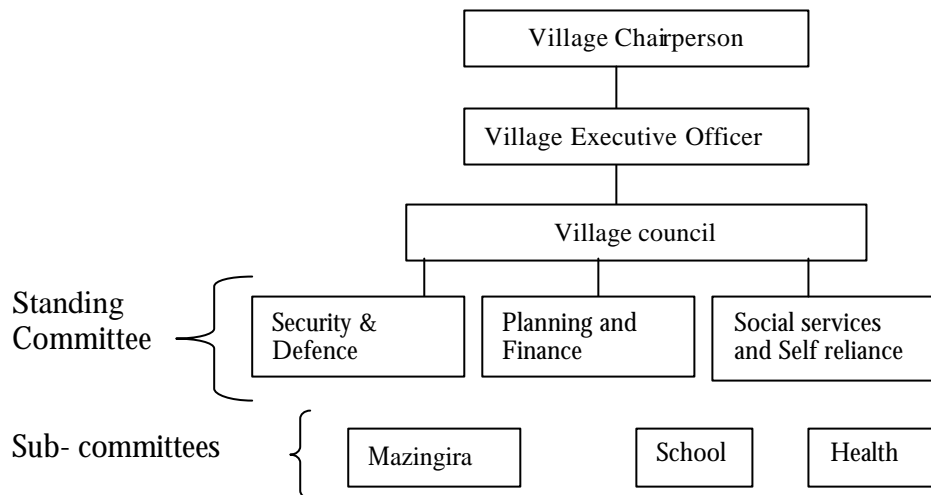
There are two churches of Lutheran and Roman Catholics. There are 3 maize mills (owned by people from outside the village), 4 kiosks, 2 food selling places (*migahawa*) and 2 *pombe* shops.

2.0 Village Organization

2.1 Village Government

Village government consists of village chairperson, Village Executive Officer (VEO) and the Village Council with its committees. Hence the village government is composed of positions as shown in Figure 1.

Figure 1: Village organization chart



The village council has 21 members including village chairperson, VEO, sub-village chairpersons and other village members. Apart from the VEO who is appointed the rest are elected on the general assembly. Other invited members from different institutions within the village include 1 Head teacher, 2 Heads of religious groups and 2 political party (CCM) members (Chairperson and Secretary).

There are three standing committees, Finance and Planning, Defence and Security, and Social Services and Self- reliance. There are also sub-committees, which are not attached to any of the standing committees. These are Mazingira (7 members), School and Health (not active). The Mazingira committee was formed by HIMA and has now been decided to be for MEMA since HIMA has phased out from the village. The committee members do not know their responsibilities because they were told that MEMA would start in year 2000.

Village council members do not know about routine meetings of the council. But they reported that they had several ad-hoc and induced meetings in this year as initiated by different visitors.

There have been frequent changes of top village leadership (VEO and Village chairpersons) caused by administrative failures. It happened three times since 1995 last general elections. Most of them resigned on their own and finally the last VEO disappeared unknowingly. The village is currently under acting VEO who was appointed in September 1999. The study team held meeting with 13 members and few were active. The Village Chairperson and the VEO seemed to be completely not interested to the meeting. VEO said is new to the post and the Village Chairperson said is yet to be elected. Finally the team was informed that there is a tendency of leadership dominance by only one clan of 'Mhongole' such that if one is appointed or elected and is not from that

clan is unlikely will stay long in the post.

2.2 Other Organizations and Experience with external support

There is a church group under the Roman Catholics, which is involved in agriculture.

The village has been under support by HIMA for the period of five years (1992 – 1997). They were involved in tree planting and tree nurseries, organic farming, and water source protection, rearing of small animals like chicken and guinea pigs and soil conservation measures e.g. contour bands and planting of grasses. Trees planted include Pines, Eucalyptus, Grevillea, and Leucaena. The grass species introduced are used for thatching and fodder to livestock. One member complained that exotic trees planted in the village are not appropriate for soil conservation because Pines or Cypress plantations do not allow undergrowth. They would also prefer to plant indigenous tree species.

2.3 Village By-laws

The Village Council members reported that the village bylaws have been approved and are in action although the documents were not available during the study. These include bylaws that require every parent to ensure their children attend school

Follow up of bylaws include fines charged for example on:

- ? Failure of school attendance - fine charged TSH 500,
- ? Failure to participate in development activities – fine charged TSH 1500, and
- ? Encroachment to other peoples' farm - fine charged TSH 4000.

This year the village has collected a total of TSH 5,000 from parents who failed to make follow up of school attendance for their children. There is a village tribunal involving village elders that works on solving conflicts and if they fail cases are forwarded to ward tribunal. District bylaws are used in case of failure to implement District directives. These are such as, if one fails to pay development levy, payment of school fees and causing forest fire.

3.0 Economic activities

3.1 Agriculture

Agriculture is the dependable economic activity in the village. Crops are grown mainly for subsistence purposes. There are two main cultivation seasons of dry season for the valley bottoms '*vinyungu*' cultivation, and rain season for the up-hill farms. *Vinyungu* are the preferred and are said to be more productive areas. Maize and beans are the predominant crops. Mono-cropping of maize is practiced as well as mixed cropping for maize and beans, and maize and pumpkins. Farmers practice crop rotation and shifting cultivation. Crops grown are shown in table 1, with gender preference, main use and seasons of cultivation.

Table 1: Crops Cultivated

| CROP | Season | GENDER | | MAIN USE | |
|-----------------------|----------------------------|--------|------|------------|----------|
| | | FEMALE | MALE | COMMERCIAL | DOMESTIC |
| Maize | Dec - Aug | * | * | | * |
| Beans | March - July June - Nov | * | * | * | * |
| Sweet potatoes | April - March | * | * | | * |
| Irish potatoes | July - Dec May - Aug | * | * | * | * |
| Pumpkins | Dec - Aug | * | | | * |
| Banana | All year | * | * | | |
| Finger millet | Dec. - June | * | | * | |
| Coffee | All year | * | * | * | |
| Fruits | March | | * | * | |
| Vegetables Cabbage | May - Sept. | | * | * | |
| Tree crops | All year | | * | * | * |

Cultivation is done by family labor using hand hoe and sometimes ox-plough. It is common that in a family, there is a farm for development purposes managed by a man, and a farm for domestic use under the management of a woman. The proceeds from the development farm are also stored as food reserve for future use. There is also a collective cultivation system of *mgowe*.

Farm size varies from 2 to 10 acres. Number of plots owned by households varies between 3 and 5 plots depending on mode of acquisition, crops grown and ability to work in the farms.

Farmers reported decrease in crop yield as compared to the earlier system where they used to have plenty of food all year round. They said that there was no commercialization of crops in the past. They used manure to fertilize the farms. Currently the harvest per acre of maize is about 8 bags. They use improved seed variety obtained from Ngongwa farm. They face problems of pests, vermin and sometimes, unfavorable weather. They use organic pesticide known as *ngategetwa*, which is a tuber obtained from Makungu village. They use it pounded as powder or put in liquid solution. Farmers reported that the pesticide is effective.

3.2 Livestock

Animal husbandry is done in the village at very small scale. There are 80 cattle kept by about 7 households, sheep and goat (130 animals) and 50 pigs. Every household keeps chickens and a few households keep guinea pigs and rabbits.

There is no common pasture/grazing land. Every household graze on own farms or *lungulu*. Grasses planted during HIMA in contours and leucaena trees are used as feed for the animals. The animals are for subsistence supply of meat, and some milk.

3.3 Tenure

Large portion of land in the village is *malungulu* (customary land). There is no land shortage in the village. Land owned by households vary between 20 - 80 acres. Men have rights of land inheritance, while women do not. Men start to own land when they are 18 years old. Land can be sold, rented and borrowed depending on the agreement of the

owner and the person in need of land.

3.4 Woodlots and commercial farms

There are woodlots in the village, which are owned by households as well as by village government and institutions (school and church).

The 3 acres village woodlot is maintained as a bank, where trees are harvested when there is urgent need for cash. Primary school has 11 acres of woodlot, the land was allocated by the village government from the formerly village communal farm. During villagization the village had 25 acres of ujamaa farm on which they cultivated maize and beans. When crops were harvested from the communal farm, the proceeds were used to improve school buildings. The communal farm was abandoned in 1980s following the introduction of development levy where villagers have to pay individually.

School has 3 acres of coffee farm inter-cropped with Grevillea trees and it has its own tree nursery. Woodlots in the village are planted with Pines, Eucalyptus and Grevillea trees.

3.5 Income Generating Opportunities

The village council members discussed the wealth status, and felt that there are better off people who have enough food throughout the year, pay school fees and tax, and those who cultivate big farms and employ laborers and vice versa for the poor people. Villagers obtain their income mainly from agricultural production. Other income generating opportunities are shown in table 2.

Table 2: Income generating activities

| Income Source | Gender | | Economic Group | | |
|---------------------|--------|------------------|----------------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing | sell | Prepare and sell | | | * |
| Maize mill | * | | | * | |
| Livestock | * | | | | * |
| Timber | * | | | * | |
| Selling poles | * | | | * | |
| Masonry | * | | | | * |
| Day labour | * | * | | | * |
| Cookies | | * | | | * |
| Running kiosk | * | | | * | |
| Traditional healers | * | | | | * |
| Carpentry | * | | | | * |

Apart from development levy returns from the District Council, the village collects revenue from petty trade and local brew selling amounting to TSH 500 per day. Hence the village has income of TSH 180,000 per year. Due to frequent changes of village leaders it was difficult to tell the village bank balance. Village money is used to cover costs of stationary and entertainment for village visitors, e.g. the Member Parliament.

4.0 Woodland and Forest

The discussion was held in a woodlot in the village. About 15 villagers attended, of

whom 3 were women. VEO informed the study team that the users' turn-up is low because many people feared, thinking that we might have come to apprehend them. They felt they had exposed their illegal involvement in collection of honey, medicinal plants and game hunting from the forest reserve during PRA exercise by MEMA.

Table 3 summarises the different products as identified by users (men and women) and the level of importance as well as availability.

Table 3: Products Preference by Gender and Availability

| Products | Preference by Gender | | Availability | | |
|-------------------|----------------------|-------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Collecting honey | | * | | * | |
| Grazing | | * | | * | |
| Pottery | *III | | | | * |
| Brick burning | | * | | * | |
| Pitsawing | | * | | * | |
| Domestic Firewood | *I | | * | | |
| NWFP: | | | | | |
| Mushrooms | * | * | | * | |
| Thatch grass | | * II | * | | |
| Medicines | | * III | | * | |
| Milulu | *II | | | * | |
| Building poles | | *I | * | | |

Note: Numbers I – III indicate product preference, and * are for product identification and availability.

4.1 Non Wood Forest Products (NWFP)

Mushrooms are important to the community as food supplement. They collect mushrooms from bushes and farmlands during rain season (December – May) and it is sufficient. Both women and men collect the mushrooms. The users said they differentiate the poisonous and edible mushrooms. Edibles mushrooms, *Litelali* (big variety), *Unyafigulu* (medium variety) and *Uyoga* (small size). Mushroom is also available in the forest reserve. Users reported that they sometimes sell mushroom at TSH 50 –100 per bunch.

Milulu collection was second choice of women because they make baskets for carrying crops. Men also make mats for sleeping and for sun drying of maize and flour. Making mats and baskets is an income generating activity for women and men. Women reported that they collect *milulu* from valleys and natural forests where they grow naturally. It was reported that sometimes women buy *milulu* from farmers who have it in their valley fields. The price of one bundle is TSH 500 –600. Users collect ropes from trees locally known as *mhang'ana* and the ropes are for weaving baskets and mats. Period for collecting *milulu* and making mats and baskets is from March to May. Women said that baskets are sold locally in the village and are also sold during market days (*Diula*) in Kilolo and Kising'a, which happens once a month. Prices for baskets are TSH 200 – 3000 depending on size and decorations, and mats are sold at TSH 2000.

Medicinal plants were the third choice for men. Medicinal plants are important for curing diseases and reported to be effective for many diseases. The medicinal plants include *Mnyatoma*, *Mhekele*, *Mwefi*, *Songwe (midudu)*, *Mnyakibiki*, *Mikundikwava* and *Mivengi*. They collect these plants from valleys and rarely from natural forests

(including NDUFRR). Medicinal plants are said to be abundant in the natural forests but not readily available from fields. Collection of medicinal plants involves taking only small portions of roots, bark and leaves. The herbalists said that they charge their clients for the service and amount charged depends on the severity of disease, availability of plants and economic status of the client. Users reported increase in number of herbalists because it earns good money.

Thatch grass was second choice for men and is important roofing material for their houses. Thatch grass is readily available throughout the year and is collected from bushes, farms and valleys. The grasses collected are *lilolo*, *luhano*, *likuvala* and *linyata*. *Lilolo* is collected solely from valley bottoms. Women, children and men collect thatch grass. Users reported that men are responsible for constructing houses. Thatch grass is sometimes sold at TSH 50 – 200 per head load.

Beekeeping and honey collection were also identified by the users especially men. Beehives are made from indigenous tree species collected from bush-lands these include *Mivengi* and *Mkundikwava*. They also use big clay pots as beehives. One big beehive can produce up to 10 litres and a clay pot can produce up to 5 litres. Honey is used for medicinal purposes, food and making local brew. Honey harvesting is done from July – December, this depends on tree flowering period and the time bees enter the beehive. It normally takes up to three months from the time bees settle into the beehive to harvesting of honey. Trees of potential for honey production are *Mivengi*, *Mhenyi* and *Mnyigi*. Beekeepers use smoke to scare the bees when harvesting honey. They prepare fire using dry grass and green firewood to produce smoke. Honey is also collected from underground caves and trees. The farmers said that honey availability is sufficient and it is found in their woodlots and sometimes from forest reserve. They expressed need for improved beekeeping.

Grazing is done individually. Few people keep livestock in the village. Every livestock keeper has an area for grazing and pastures are readily available. Conflicts between livestock keepers and farmers as a result of grazing into farms are not common. Resolutions are always through negotiations and may be paying something in kind or in cash.

4.2 Building Poles

Men consider building poles the first choice because of the need for shelter. Building poles are plentiful in the woodlots and some are collected from bushland. Trees used are *Pines*, *Eucalyptus*, *Black wattle* and *Cypress*. Users prefer Eucalyptus because of straight pole. Trees from bushland are *Mivengi*, *Mivulo*, *Mliandege* and *Kinyenzi*. Poles are sold in the village at TSH 50 – 100 depending on size. Users reported marketing of poles is a problem as there are no reliable customers.

4.3 Firewood

Firewood was the first choice of women. Firewood is important for cooking and heating and women are responsible for cooking food in the family.

Firewood collection is solely women's activity assisted by their daughters. Firewood is available from woodlots, which are plenty in the village but no specific woodlots that are planted for firewood. They also collect firewood from bush land. Firewood collected

from woodlots includes branches, off-cuts, barks and thinning. Household's consumption of firewood is between 2 –3 head loads per week. However, users said that the exact amount used vary according to household size, type and frequency of use and season of the year. During rain and cold season more firewood is used. Occasionally firewood is sold at TSH 100 – 200 per head load.

Women reported that firewood is also used for pottery. **Pottery** was the third choice for women because pots are important for cooking food, beer making, food storage and preparation of maize flour. They collect soil for pot making from valleys and do the burning near their homesteads. Trees preferred for firewood in burning the pots include *Mkolongo* and *Mhalagati* collected from bushes, however reported to be scarce. Women prefer these species because of high calorific value.

Firewood is also used in **brick burning** which is men's activity. Brick burning activity provides labour to youths. Labour and cost involved in brick burning is negotiable between parties. It was difficult for users to estimate the amount of firewood used for brick burning.

4.5 Timber Harvesting

Pitsawing was identified as important activity by men of all age group. Many people in the village have pitsawing skills and it is done for commercial purposes and to meet domestic needs for timber. Pitsawing is also an income generating activity for people who work as labourers. Pitsawer is paid TSH 200 for sawing a piece of 1"x 8", or 2"x 6" and TSH 180 for sawing a piece of 2"x 4".

Timber selling activity is also men's domain. It is a source of income for the majority of villagers. Prices of timber vary depending on sizes and market situation. For instance a timber of size 1"x 8" and 2"x 6" are sold at TSH 500 - 600. Customers are expected to come from Iringa town who usually bargain and like to buy at low prices.

Users pretended to have no interest of getting timber from forest reserve and also they know that the forest is closed for harvesting, however, there is an indication that villagers harvest timber from forest reserve.

SOCIO-ECONOMIC VILLAGE PROFILE, ITAGUTWA VILLAGE

DISTRICT: Iringa

DIVISION: Kalenga

WARD: Kalenga

VILLAGE: Itagutwa

1.0 Implications for JFM

The village council, standing committees, sub-committees and community committees are all well functioning. The team has the impression that somehow the different parties compete with each other for excellence in their work. The project should have an excellent opportunity to successfully start its work in Itagutwa because of the well functioning village council and moreover, the MEMA committee having a direct link to that council.

2.0 Location and demography

The village is situated 8 kilometres from the junction on the Iringa – Dodoma road, 40 kilometres from Iringa. The road to the village is accessible all year.

The Kitapilimu Forest Reserve lies north of the village only 2 kilometres from the village.

The resident ethnic groups in the village area are Wahehe, Wabena and Wakinga. Migrating pastoralists are very few in the village area. Only the same three families (Wamasai) enter with their animals every year.

The table below presents the total population in the village made up of the population in all sub-villages. Detailed demographic information on the sub-villages was not available with the village council:

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSE-HOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|-----------------------|--------------------|-------------------------|-------------------------------------|
| Village: Itagutwa | 1563 | 1564 | 324 | 91 |
| Sub-village: Itagutwa | n.a. | n.a. | n.a. | 33 |
| Sub-village: Mapululu | n.a. | n.a. | n.a. | 20 |
| Sub-village: Mlenge | n.a. | n.a. | n.a. | 13 |
| Sub-village: Kipengele | n.a. | n.a. | n.a. | 25 |

3.0 Infrastructure

The infrastructure found in the village include 1 primary school, a dispensary, 4 hand pumps constitutes the water supply system, 6 milling machines, a monthly market specialising in selling clothes, and a dug out providing water for livestock.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agricultural activities provide the economy for all households in the village, with income from woodland (including forest reserve) being secondary. The farming system is characterised by crop production integrated with animal husbandry. Livestock plays a secondary role compared to crop cultivation.

The farming season starts with land preparation October – November, followed by sowing in December – January, weeding in January – March and finally harvesting in June – July.

Main domestic crops include maize, beans and “kunde”, while minor domestic crops include cassava, sweet potatoes, finger millet, bambara nuts, pigeon pea, and sorghum. Most crops are inter-cropped wherefore it is difficult to specify crops by gender. The villagers cultivate three cash crops (tobacco, sunflower, and cotton) although maize and beans are also sold in the market if in excess. The following percentages apply to number of total households being involved in cash crop cultivation:

Sunflower: 60 per cent

Tobacco: 30 per cent

Cotton: 10 per cent

Cotton cultivation started only last year and two possible buyers were introduced to the farmers. However, only the school farm had a buyer in the end (“Tako”) while Muhammed Enterprises stayed away and the farmers had to burn the crop. This year no farmers think they will cultivate cotton, but still the influence of the divisional secretary and “Tako” is strong and might force the farmers to continue cultivating cotton.

Sunflower cultivation is more popular and profitable to the farmers. A large number of the households are involved in sunflower cultivation. The cultivation also has the advantage that women have learned how to extract the oil from the seeds, which is sold locally at TSH 700 per litre. This means that should a buyer not turn up the farmers always have the possibility of turning the cash crop into domestic use. Interestingly, it is so far only poor women who are involved in sunflower oil extraction while all other cultivators sell the seeds directly.

The Karume Company introduced tobacco in the 1960’ies. Today the American company Dimon is the sole buyer and provider of tools, fertiliser and advice to the tobacco farmers. The company has initiated that the farmers should form a co-operative society. This co-operative comprises of 10 tobacco farmers who also happen to be influential people in the village. The duty of the co-operative is to distribute farm inputs to the 230 tobacco farmers and ensure that they use the tools as expected. The co-operative is represented on the tobacco board. However, the co-operative is not really a co-operative seen from the producer’s perspective. The co-operative does not seek any influence on production pattern, prices and other interest concerning the individual producer. Instead they receive a percentage of the profit from the company which they distribute among themselves claiming expenses at meetings etc. The amount received last year was TSH 40,000 per co-operative member. The team wonders why the village council does not interfere and promote that all or part of the tobacco profit should go into the coffers of the village council.

The farmers cultivating the cash crops do all suffer from the lack of competition when having to deal with single buyers and general influence on their share of profits and price guaranties.

4.2 Land tenure

The land tenure system is characterised by a combination of traditionally owned land and land administered by the village council. The village council only administers 100 acres and as a matter of fact only 20 acres of agricultural land remains under their administration and is providing income to the village council. The rest of the 100 acres have been distributed permanently to farmers in the village

during a recent exercise initiated by the MEMA PRA exercise and immediately followed up by the village council. The villagers who came to Itagutwa in the 1960'ies have also been given land permanently and without any rent or other conditions attached to it. The village council land is inherited to both men and women. If a villager leaves the community he/she can also sell the land without the interference of the village council. Village council land has been sold at TSH 8,000 per acre. The cost of renting one acre is TSH 1,500 per acre per season.

The land belonging to the traditional landowners is becoming increasingly important, since the farmers are demanding more and more land. An acre is rented at TSH 2,500 and sold at TSH 7,000 – 10,000 depending on the soil fertility of that land.

In general it was estimated that 70 per cent of the total agricultural land is controlled by the traditional landowners while the village council administers 30 percent. However, this is questionable since the land belongs permanently to the farmers as soon as the village council gives it to them. The village is aware that they have no more land to distribute and that they will lose further influence on land issues in the village. However, the village council is confident that they have other duties and responsibilities not attached to the land, which will keep the office busy and relevant.

It should also be mentioned that the village council has set aside a grazing area next to the forest reserve. That area includes approximately 60 acres.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|--|---|--|
| Rich farmers own: 50 – 100 acres | Middle farmers own: 10 – 20 acres | Poor farmers own: 2 – 5 acres |
| Rich farmers cultivate per year: 30 – 60 acres | Middle farmers cultivate per year: 5 – 10 acres | Poor farmers cultivate per year: 1 – 3 acres |

The above cultivation figures exclude land being rented by the owners. When the land rented out is included under permanent cultivation and fallow does not take place. A large number of the farmers maintain the soil fertility through application of chemical fertiliser. The farmers have used chemical fertiliser since 1974. The farmers apply approximately 100 kilo of fertiliser per acre. The farmers harvest 8 – 10 bags of maize on a fertilised field while the yield is only 1 – 2 bags if no fertiliser has been applied. The farmers use the technique of spot application of fertiliser.

The most common land preparation tool is the hand hoe, with animal traction second and tractor use third. There are about 100 ploughs and bullocks in the village, and six tractors. The practise of “mgowe” (see Kinywang’anga Village Profile) is common, and the practise accounts for the farmers ability to cultivate large areas without using tractor or animal traction.

4.3 Animal husbandry

Livestock plays a less important role in the farming system in Itagutwa than before. The villagers have lost a large number of cattle due primarily to disease. The cattle graze on a designated area administered by the district council. The cattle also graze inside the forest reserve, which lies just next to the grazing area. Number of livestock distributed among the socio-economic groups is presented in the table below:

| | | |
|---|--|--|
| Rich farmers own: 50 – 60 cattle 50 - 100 goat/sheep | Middle farmers own: 20 – 30 cattle 20 - 30 goat/sheep | Poor farmers own: 1 – 10 cattle 1 – 20 goat/sheep |
|---|--|--|

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

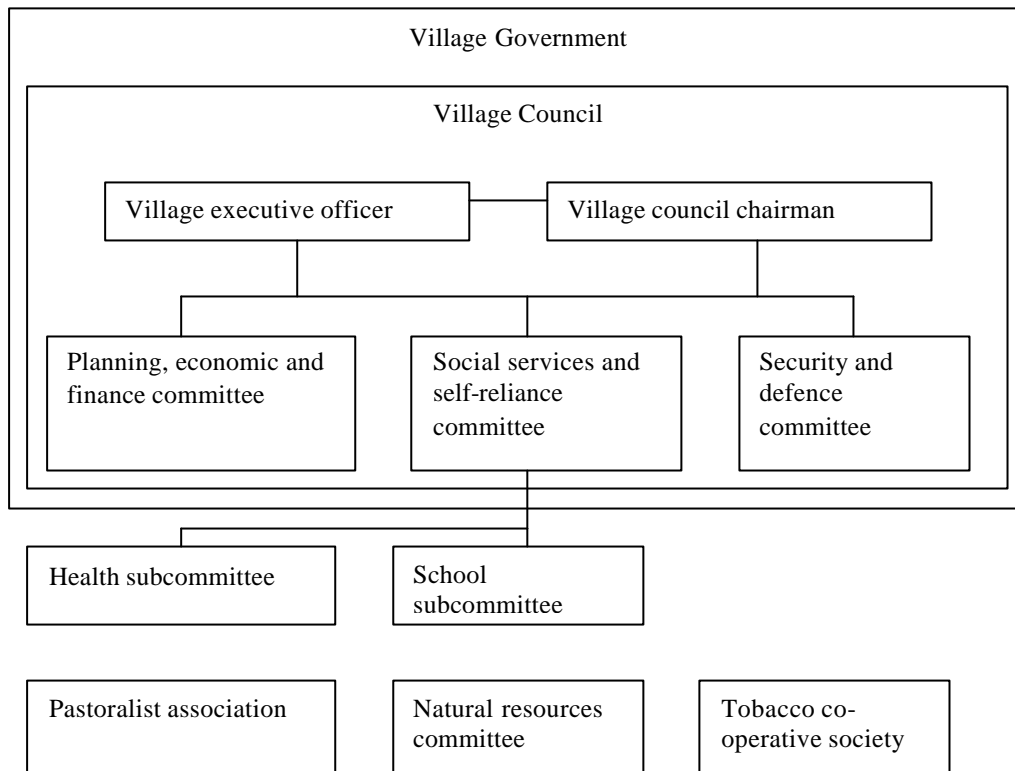
| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|--------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | ! | ! | ! | ! | |
| Selling of charcoal | ! | | | | ! | | ! | ! |
| Selling of local medicine | !! | ! | | ! | | | ! | ! |
| Selling of honey | ! | | | | ! | ! | ! | ! |
| Shops/kiosk | ! | | | ! | | ! | ! | |
| Petty trading | ! | !! | | | ! | ! | ! | |
| Tailoring | ! | | | ! | | ! | ! | |
| Hunting | ! | | | | ! | ! | ! | |
| Selling firewood, local | ! | | | | ! | | ! | ! |
| Carpentry | ! | | | ! | | ! | ! | ! |
| Owners of mills | ! | | ! | | | ! | ! | ! |
| Selling of timber | ! | | | ! | | ! | ! | |
| Selling of cooking oil | | ! | | | ! | ! | ! | ! |
| Selling of poles | ! | | | | ! | ! | ! | |
| Masonry | ! | | | | ! | | ! | ! |
| Selling of basket | | ! | | | ! | | ! | ! |
| Selling of grass for roofing | ! | !! | | | ! | | ! | ! |
| Pottery | | ! | | | ! | | | ! |
| Selling of second hand clothes | ! | ! | | ! | ! | ! | ! | |

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council.

The village council had planned to have 12 meetings this year. So far they have had six meetings, discussing the presentation and approval of plans and budget presented by the Planning, Economic and Finance Committee. The village council also discussed the plans of constructing a new classroom and teachers staff quarters. They have started to produce the bricks. Moreover the village council discussed selling two frames of bicycles and a weighing scale, which were sold. Among other things discussed were to use the iron sheets from the dilapidated corn silo to improve the roof on the village council's local brew club. The standing committee for planning, economic and finance has had two meetings this year preparing and discussing the plans and budget. The standing committee for social services and self-help has had two meetings discussing the very recent redistribution of village council land and the issue of residential plots in the village. That exercise has been completed. The security and defence committee has had no meetings.

The organisational chart below presents the overall structure of the community organisation:



Two subcommittees exist to the village council. These are the school committee and health committee. The school committee planned three meetings and had three meetings this year discussing repair of one classroom, replacements of door and window frames, construction of a pit latrine, which has been completed, and finally annual budgeting and planning. The annual budget of the school is TSH 800,000 collected from parents through school fees (TSH 3,500 per pupil per year) and selling of produce from the school farm. In fact the school is financially independent from external funds from government except for the payment of teachers' salaries. The school committee presents plans and budgets and is accountable to the village council.

The health committee had planned four meetings but conducted only three. Issues discussed included:

- a) mobilising people to construct household latrines. At the moment 97 per cent of households have constructed their latrines
- b) preventive campaigns against cholera
- c) establishment of a community based health fund. So far 79 villagers are members of the fund. Each household has to pay TSH 5,000 per year to be a member. Then the members of that household have free medical services and medicine. Those who have not paid and uses the dispensary pays TSH 1,000 per consultation plus medicine costs.

The dispensary is well maintained. A larger maintenance program was assisted by the Italian NGO CUAM five years ago. Today the community based health fund is highly successful. The medical store in the dispensary is well stocked as compared to previously. No medicine in the store had expired and the rural medical aide explained a system of how to ensure that the medicine was always within the expiry date.

Three community committees exist: the pastoralist association, the tobacco co-operative society and the MEMA committee.

The pastoralist association was formed on the livestock owners initiative. They found that the designated grazing area was increasingly taken over by farmers' crop cultivation, and moreover the access to the dam for watering animals was becoming complicated by dry season gardening right up the dam. The MEMA committee should assist the different stakeholders using the dam to ensure that all

activities could continue if properly managed. The pastoralist association does not hold any money and no fee is attached to joining the association. The association had no meetings as such but addressed their concerns at village council meetings.

The tobacco co-operative society has already been mentioned, see page 2.

The MEMA committee is recently established and includes one member who is also a village council member linked to the social services and self-help committee. The committee has not started working yet.

The village council has the following income generating activities:

- ? revenue from the local brew club, TSH 25,000 per month
- ? revenue from petty traders in the village, TSH 7,000 per month
- ? 10 per cent of the development levy and crop revenues, 1998 TSH 83,000
- ? rent from village council land, TSH 39,000

All-inclusive the village council has an income of approximately TSH 500,000. At present the village council has TSH 26,000 on its bank account in Iringa. The village council has this year spent most of its money on repairs of school building, paying salaries of dispensary watchmen (TSH 6,000 per month), purchasing kerosene for the fridge where vaccines are stored, paying bus fares to Iringa to collect the medicine kit box, and finally paying an allowance of TSH 300 for every village council member participating in the council's meetings and monthly allowance paid to the village council chairman and the village executive officer.

Presently, the village council has women members except for one. The women were all dismissed from the council because they failed to retrieve TSH 30,000, which were kept by the deceased bookkeeper in his house. Keeping money in private houses is strictly forbidden, wherefore the negligence of this rule and the lack of initiative to retrieve the money led to their dismissal. However, seven new women are candidates in the coming election. The position of bookkeeper for the planning, economic and finance committee was given to one of the two opposition members of the village council.

The village council has two opposition members and expects to have another one after the election. The opposition members pressure the village council to perform their duties and responsibilities. When asked during the workshop the opposition members explained that they had a tough time being heard and seeing their ideas through. However, they found that they had a role to perform and got their issues through the village council.

The village council, standing committees, sub-committees and community committees are all well functioning. The team has the impression that somehow the different parties compete with each other for excellence in their work. The project should have an excellent opportunity to successfully start its work in Itagutwa because of the well functioning village council and moreover, the MEMA committee having a formal and direct link to that council.

6.0 Woodland and Forest

The following data regarding the woodland was collected with a number of stakeholders including collectors/users, managers and buyers. However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

27 (men/women) collectors/users participated in a full day's discussion on the woodland. The participants came from the sub-village Itagutwa where a large number of collectors come from. The managers (village council), buyers and middlemen were interviewed the day before in Itagutwa village.

The table below presents an overview of the forest users and product by gender and availability in Itagutwa sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, selling | ! | | | ! | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | !! | ! | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | ! | ! | | ! | |
| Grass for roofing | ! | | ! | | |
| Pasture, residents' cattle | !! | ! | | | ! |
| Wood for brick burning | ! | ! | | ! | |
| Poles | ! | ! | | | ! |
| Wood for curing tobacco | ! | ! | | ! | |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Charcoal | ! | | | ! | |
| Honey | ! | (!) | | ! | |

6.1 Firewood, selling

Only collected by men and considered sufficient. The tree species are “mkwee” and “myombo”. The firewood is sold in the village at TSH 200 per headload. The buyers in the village are mostly the men selling fried meat and civil servants. The firewood is collected both inside and outside the forest reserve. The buyers come from Iringa. A market for firewood with buyers from Iringa town was established in the 1970's and is increasing. The buyers in Iringa include private people but also government institutions (e.g. Iringa Girls Secondary School, Mkwawa High School and Prison Services). The firewood is collected in a 7 tons truck. The truck is not necessarily belonging to the institution but is often a private truck hired by the buyer. A truckload of 5 – 6 tons costs TSH 3,000 – 4,000. The villagers accept this very low price because the firewood is cut illegally in the forest reserve – but it is nevertheless a very unfavourable deal for the collectors. The village council has thought about stopping the illegal buying but has not gone further. Two to three 7 tons trucks are coming to the village every week.

The collectors are full time employed as collectors. The team asked if they were full time in the business because they were poor and without land. The villagers said that the collectors had farming but were young and had decided to engage themselves only in selling of firewood. These firewood collectors are mainly living in the sub-villages Mapululu and Kipengele.

6.2 Firewood, domestic

Collected mostly by women and men assist. The firewood is considered sufficient. The tree species include “mkwee”, “myombo”, “mlama”, “mpululu”, “mfundu”, “mnang'ana”, “mbadilo” and “mpalapande”. The preferred species are “mkwee”, “mbadilo” and “mpalapande”. A typical household collects 3 headloads per week, which is increasing to 5 headloads in the cold season, when firewood is used for heating. Before the rainy season the women will collect a stock of 20 – 30 headloads of firewood, the reason being that the women have less time for collecting firewood at the beginning of the farming season. The stocked firewood is either left outside in the yard or inside a room, if the family has

a big house. The women's concern is not so much with the wet wood, but more the lack of time for them in that particular season.

6.3 NWFP

Mushrooms: Collected by both men and women and considered abundant. The mushroom species include: "wisogoro", "wisimba", "wilelema", "wunyafigulu", "wimenda", "winyaluhanga", "wikulwe", "ugonanyalusi", "unyamikwee", and "unyakipulikilo". The preferred species are "wunyafigulu", "wimenda" and "wikulwe". These three species can be dried, stored and eaten during the dry season. "Wimenda", "wisogoro" and "wisimba" mushrooms are sold at TSH 50 per 500g.

Grass for roofing: Collected only by women and considered abundant. Grass is sold in the village at TSH 200 per bundle.

Fruits: Collected by both men and women and considered abundant. The fruit species found include "mtowo", "msambalawe", "mtundwa", "msasati", "missoula", "mfundu", "minyewewa", baobab fruit, "mibaya", "vipewa", and "migola". "Mitowo" fruits are boiled together with salt and thereafter dried to be eaten during the rainy season. "Mifudu" fruits are sold at TSH 500 per bucket in Iringa town.

Medical plants: Collected by both men and women and considered abundant. The tree species suitable for medicine are

- ? "mdunula" is used for treating fever
- ? "mhulanzula" is used for treating abdominal pains for menstruating women.
- ? "mtonge" and "mmulimuli" are used for treating chest pain.
- ? "msisina" is used for treating skin scratches.
- ? "mlimbo" is used for treating mental disturbance (nervousness, restlessness)
- ? "unyang'ali" and "mlyasenga" are used for treating stomach pains and gases and worms.
- ? "mkung'uni" is used for treating headache on the front of the head.

6.4 Pasture, residents' cattle

Grazing of animals is mostly done by men and assisted by women. The pasture is considered scarce. However some users were of the opinion that the pasture was sufficient, but due to bush fires grass is often burned and pasture becomes a problem. The bushfires are set intentionally by hunters and accidentally by honey collectors, most of who only know the technique of using fire when extracting the honey. Grazing also takes place in the forest reserve, but to a limited extent, since the livestock owners fear theft from the Wamasai intensively grazing in the forest reserve.

6.5 Wood for brick burning

Brick burning is an activity for both men and women. The wood used ("myombo" and "mkwee") is sufficient. Most of the wood is collected in the forest reserve. Brick burning is an increasing activity but still very limited. Only three private houses in the village are built with burned bricks while most government buildings (schools and dispensary) are using burned bricks. A reason why burning bricks for private houses in the village is still a limited activity is due to the distance to the wood in the forest reserve combined with the need to hire a tractor, which costs TSH 15,000 per trip.

6.6 Poles

Collected by most men and women and considered scarce. Only men sell poles, while both men and women are involved when the poles are used domestically. Poles are sold in the village at TSH 200 per

piece. The poles are collected in the forest reserve. Tree species include “mlama”, “mpalapande”, “mbumila”, and “muhwisa”. The team also observed that a huge number of poles are used for cattle kraals – a practise, which could change when the foresters start awareness raising promoting live fencing.

6.7 Wood for tobacco curing

Tobacco curing is an activity for both men and women. The wood is sufficient and collected both inside and outside the forest reserve. Tobacco curing is a major activity in the village involving about 240 households. The team had an interesting discussion with the users that they might have to intensify their management effort in order to ensure that the wood for tobacco curing is available in the future.

Approximately three tractor loads are needed for heating the barn. In the start and end of the tobacco season the farmers cure the tobacco together to minimise the use of wood.

6.8 Timber

Only men extract timber and the timber is considered scarce. All the timber is extracted inside the forest reserve and includes the species of “mninga”, “msangala”, and “mwembadanda”. Timber is sold at TSH 1,500 for 2”/6”/10 feet or 1”/7”/10 feet. The timber collectors said that they experience no problem with getting a market. All timber is produced on request. The buyers come to them and place the order for later collection. Buyers come from Iringa. The activity is seasonal and practised in the dry season. The timber is pit sawn inside the forest reserve, and taken out by truck, bicycles or headload. A man can pit saw approximately 50 – 70 pieces of timber per season. The timber collectors learned pit sawing and started their business in 1983, when men came from Lulanzi (Dabaga) came to the area for timber and taught men in the area the technique of pit sawing. The timber collectors said that there has been no improvements or technology changes in the pit saw operations over the past 16 years.

Negotiating boundaries in the forest reserve:

The information in this box text should be compared with the information in the Kinywang’anga Village Profile, pp 5 - 6. The team again discussed the traditional boundary issue prevailing in the forest reserve. The users confirmed that there are boundaries and that these boundaries are known to the old men in the village, who lived in the forest reserve before it was gazetted in the 1967. The users, however, disagreed with the statement by the users in Kinywang’anga that the people there should have access and user rights to the largest part of the forest reserve. They claimed that actually the villagers in Kinywang’anga were migrants from other areas like Njombe and Makete who came to farm during the time of villagisation. Meanwhile a number of water ponds are found inside the forest reserve. Those water points are called “kinywang’anga” (lit: “the place where guinea fowls drink water”). The users in Itagutwa were in other words accusing the Kinywang’anga people for manipulating the naming of their village with these ponds found in the forest reserve.

The team discussed whether it would be possible for representatives from the five villages surrounding the forest reserve to carry out a joint boundary exercise to establish the traditional boundaries in the forest reserve, which the team and the users believe is a necessary starting point for the JMF in the area. The users said that they could embark on such an exercise (without starting to fight!). They added that the exercise should include intensive trans-walks while agreeing and mapping the boundaries. Finally they said that a professional mapping expert should participate in the exercise and they trusted that the district natural resources office could provide such expertise.

6.9 Hunting

Only men hunt and the game are scarce. Game includes antelope, warthog, rabbit, guinea fowl, wild pig, quail, and bush hyrax. Hunting methods include burning, guns, traps, dogs, clubs and bow and arrow.

6.10 Charcoal burning:

Only men practise charcoal burning and the wood used is considered sufficient. Tree species include “mkwee”, “myombo”, and “mtelela”. The wood is collected inside and outside the forest reserve, 5 – 6 kilometres from the village. The burning of charcoal is a major activity in the community. Charcoal is sold in the village at TSH 800 for a sack and TSH 1,500 for “export”. The buyers come from Iringa town. In the village charcoal is used by sellers of fried meat, civil servants and some use charcoal for heating in the cold season.

6.11 Honey

Men and a few women collect honey, which is considered sufficient in the village. Only three villagers in the sub-village have beehives and the majority collects honey directly from the trees. A few honey collectors in the community produce bee wax. Honey is sold at TSH 8,000 – 12,000 per 20 litres and a bowl costs TSH 700. Honey is used for porridge, local brew, “ugali” and treating burns and coughing. The beehives are made from “mtono” and “mlangali” wood.

SOCIO-ECONOMIC VILLAGE PROFILE, IZAZI VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Izazi VILLAGE: Izazi

1.0 Implications for JFM

Positively, the Village Council is active and has started to reflect on both the economic potential of the woodland and the limitations of a sustainable use. The Village Council commented that the complex ethnic situation of the village is an advantage since the many different economic activities have supported the economy of the village in general. Especially the fishing business has been a contributing factor to the economic development of the community. Especially the fishing business has contributed to an economic usage of the woodland through the selling of firewood used for smoking and frying fish. A discussion was held with one of the fishing communities who saw the potential of the revenue collected today for fishing permits to be jointly managed by the community and the district instead of only the district controlling and benefiting from the revenue.

The team's meeting with the users was very beneficiary and the users/collectors were much interested in the discussion but commented that they had no information on the MEMA project, since the PRA study by the project did not include them but mostly the village council. They asked the team when and how they were going to receive information regarding the project. The team is convinced that this issue of involving the users/collectors right from the beginning has to be highlighted, since the joint forest management is not only between the district and village but also jointly in the village between its managers, buyers and users. Yet, the comments from the users should be taken as a sign of interest and concern to be recognised and utilised.

The team also found that some members of the newly formed MEMA committee was elected in their absence, which is perhaps not the best start of the committee's work.

However, the woodland and lake in Izazi constitutes a large potential with the woodland relatively intact and a growing local market for wood products.

The actual fishing potential of the lake is unknown. Fishermen and spokespersons interviewed by the team indicated that the fish are plenty. Still, the team recommends that a study is fielded to assess the actual economic potential and environmental implications on the woodland of the activities taking place around that natural resource – a kind of lake inventory coinciding with the forest inventory study taking place in the beginning of year 2000. The study should also be of general interest for the District Authorities in Iringa.

2.0 Location and demography

The village of Izazi is situated on the main road between Iringa and Dodoma 85 kilometres from Iringa. The road is accessible all year round.

The total population and number of households in Izazi as a 1999 best estimate by the village council are 3560 inhabitants dispersed among 712 households. The village council has not included the fishermen camps in their estimate. The chairman explained that the population of these communities was difficult to estimate, since the people were moving in and out of these places to a very large extent. However, the spokespersons of one of the camps interviewed by the team estimated that some 885 fishermen was living in his camp, see box text below. The chairman of the village council confirmed the number but added that this number included their families but excluded other camps. Finally, the chairman said that approximately 1000 inhabitants are living in the fishing camps.

The sub-villages of Izazi are Chekechea, Kiwanjani, Ibakabarani, Sokoni, Ihanyi, Madukani, and Ifungunyi.

The village was established during the Ujamaa period starting in 1974. Since then the village has developed into a much larger entity mainly due to the establishment of the Mtera hydroelectric power

station and more important to the Izazi community the lake development caused by that dam. A large number of people migrated to the area to exploit the fishing potential of the lake. This migration is clearly reflected in the composite ethnic pattern. The following resident ethnic groups are found in the community: Wahehe, Wagogo, Wamasai, Wakinga, Wamanda, Wabena, Wapare, Wachaga, Wanyakyusa, Wanyasa, and Waarabu. Non resident pastoralist ethnic groups includes Wamang'ati and Wasukuma. The village council pointed out that the many ethnic groups had brought a kind of dynamism and a higher economic activity level in the village – including job opportunities for the young men in the fishing business and the expanding local market.

3.0 Infrastructure

The following infrastructure is found in the community:

1 primary school, 1 dispensary, a diesel pumped water supply (deep bore well), and a market (mainly livestock, clothes and groceries) which comes alive once a month.

Several shops, kiosks and small restaurants and food stalls have started operating in the village. These businesses have sprung up following the large influx of outside people (and money) following the creation of the lake and its fishing potential. Some indigenous young men have followed the outsider's example and had also set up small shops and other businesses.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture in the village is mainly rain fed with limited small-scale irrigated agriculture taking place in the dry season on the lakeshore. The farming season starts in December to March and harvesting takes place May to June.

Main domestic crops include sorghum, maize, groundnut, sweet potatoes, pumpkin, watermelon, cucumber, "choroco" and "kunde". It is difficult to differentiate between male and female crops since a number of the crops are inter-cropped with men and women often sharing responsibilities for the same crops/plots.

The only commercial crop cultivated is cotton and the future of this crop is rather unpromising due to the lack of market following the collapse of the Co-operative Union in 1998. A merchant from Iringa town took up the business of cotton that same year but stayed away the following year, wherefore the farmers kept the cotton in store since no buyer was available. The farmers informed the team that in order to compensate for the lost income of cotton cultivation they have turned towards the woodland selling firewood and charcoal, fishing and petty trade.

Animal traction was introduced more than 30 years ago at first using bullocks but nowadays using donkeys, since the presence of bullocks attracted cattle thieves who often stole the bullocks and a large number of their cattle. The villagers had through awareness raising by CONCERN learned the advantage of ploughing across the slope to save moisture in the otherwise relatively dry climate.

4.2 Land tenure

The land tenure system is characterised by a traditional ("malungulu") and a government system of allocating, transferring and inheriting land. In the traditional system only men inherit the land, although some women also inherit land – a case that was explained due to the fact that land is plenty in the area. Land allocated by the village council is inherited to both men and women. The traditional landowners sometimes give land for free to family members and friends. This practise is common since the landowners will loose their land to the village council should they not cultivate it for three consecutive years. In other cases they receive two tins of sorghum per acre at harvest while other landowners decide to rent out pieces of land at TSH 2,000 per acre. The tenants on this land is often forced to change their fields every season, especially when the land owner sees that the tenant has had a particular good harvest on that particular piece of land. A woman participating in the meeting said that she had got tired

of always being forced to change land and had agreed to buy piece of land – TSH 10,000 for three acres. The village council allocate land to newcomers or any other person asking for land. No payment is involved and the size of the land given is normally 1 – 4 acres. The village council made a point that it was an important responsibility for it to ensure that everybody had land.

4.3 Fishing activities

Another change is the overall economic activities and the farming system is the fishing activities on the lake. Fishing is more important than crop cultivation to the community in general. However, newcomers fish while the indigenous people mostly do crop cultivation. Nevertheless, the indigenous people also benefits from the fishing activities since the smoking and frying of fish has created a market for firewood – a market that did not exist before. Fishermen do not cultivate any crops in the dry woodlands but do cultivate the moist land along the lakeshore. That particular land is very fertile as a result of the influx of silt from the Ruaha River. A bylaw exists that no cultivation is allowed on the lakeshore. However, this bylaw has been informally negotiated involving TANESCO, the district council and Ministry of Agriculture resulting in the farming activities being tolerated today. The land near the lake is a “first-come-first-serve area” because of it’s newly creation it has never been included in the traditional or village government tenure arrangements. Often the fishermen living near the lake takes the opportunity to cultivate the land.

All fishing in the lake needs a license from the district council except fishing for household consumption.

4.4 Animal husbandry

Livestock plays an important role in the community. Indigenous ethnic groups own approximately 50 cattle (rich socio-economic group), 10 – 15 (middle socio-economic groups), and 1 – 5 (poor socio-economic group). Sheep/goats number 50 – 60 (rich), 15 – 40 (middle), and 1 – 15 (poor). For resident pastoralists (Wamasai) the average is 200 cattle. The migrating patoraslists move into the area in the dry season with herds of the average size of 300 cattle. During the draught in 1997 the resident pastoralists (Wamasai) lost a considerable number of cattle and consequently started to compensate their economic loss through agricultural activities. Today many of the resident Wamasai have established sorghum farms in the woodland of up to 10 acres. The resident livestock owners have formed an association, see later under community organisations.

There are no large commercial farms adjacent to the village and villagers do not migrate to for labour.

4.5 Other income generating activities

The table below presents the income generating activities in the village:

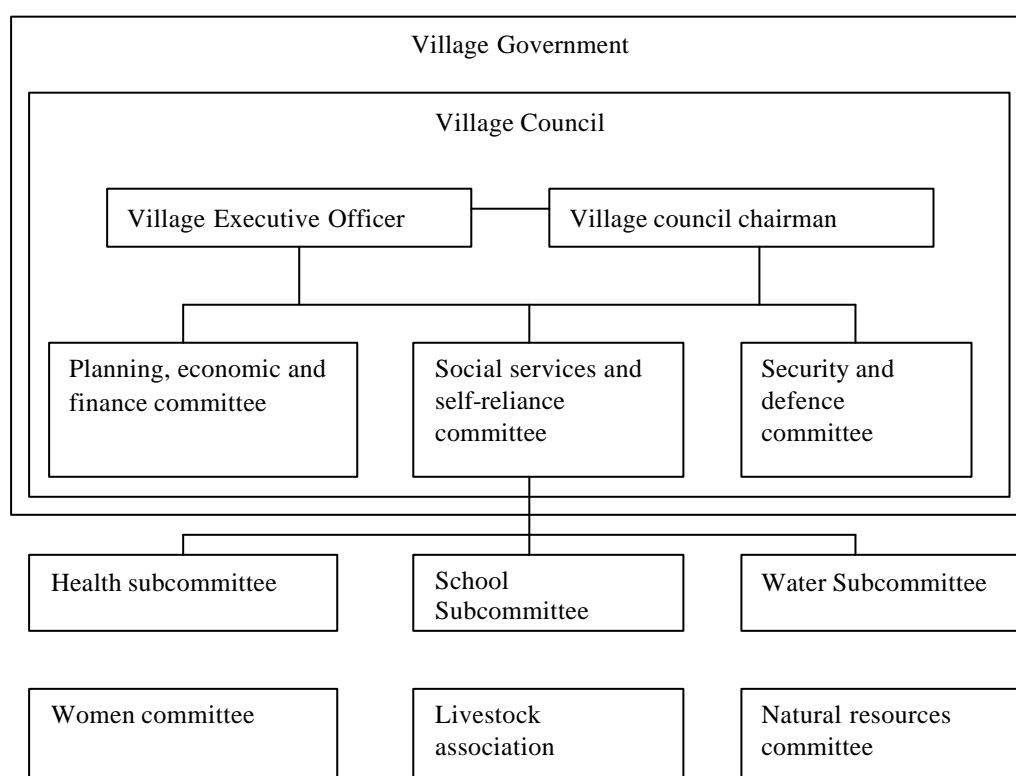
| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | ! | ! | ! | ! | |
| Selling of food | ! | !! | | !! | ! | ! | ! | |
| Petty trading | | ! | | | ! | ! | ! | |
| Selling firewood, local | ! | ! | | | ! | ! | ! | ! |
| Carpentry | ! | | | ! | | ! | | |
| Selling of fish | ! | ! | ! | ! | ! | ! | ! | ! |
| Selling of timber | ! | | | ! | | ! | ! | |

| | | | | | | | | |
|---------------------|---|---|--|---|---|---|----|---|
| Selling charcoal | ! | ! | | | ! | ! | ! | ! |
| Smoking/frying fish | ! | ! | | ! | ! | ! | ! | |
| Boat making | ! | | | ! | | ! | ! | ! |
| Selling meat | ! | | | ! | | ! | | |
| Selling of tobacco | ! | ! | | ! | ! | ! | !! | |
| Day labouring | ! | | | | ! | ! | | |
| Donkey carting | ! | | | ! | | ! | | |
| Selling of honey | ! | | | | ! | ! | ! | ! |
| Pottery | | ! | | | ! | | ! | ! |

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The village council is supposed to meet every month, but has had irregular meetings this year. Meetings seem to have increased due to the activities and decisions needed in connection with building a staff quarters for the primary school and a village government office. The last meeting was held in September.

The organisational chart below presents the village organisation as presented by the village council:



A number of village subcommittees referring to the village council exist. These include school committee, health committee and water committee, all referring to the social services and self-help standing committee. The school subcommittee has been meeting regularly and even cancelled a meeting because of the socio-economic study. They have been active in the new building project of staff quarters

for teachers and are experienced in money collection and accounting, since they are now managing their own annual budget. The water committee has been able to maintain the running of the diesel pumped water scheme. Until 1997 the district council provided the diesel for the operations and maintenance, but since then the subcommittee has established a TSH 1,000 per bucket fee. Recently, they had TSH 96,000 on their account. However, the village council decided that the money should be contributed to the staff quarters building. When asked the village council knew that they had to ensure the diesel for the running of the diesel pump – but also stressed that in the end they were the responsible agency for ensuring water in the community.

The village government including subcommittees has some management experience and has proven a responsibility and capacity to maintain and run village infrastructures and organise the building of new ones through a community initiative assisted by the District Council. The level of organisation and commitment was also reflected during the readiness and ability for the members to engage themselves in the discussion facilitated by the study team's visit. Finally, the village council showed an interest and understanding of the later issue of managing the woodland.

A number of community organisations exist with no direct link to the village government. These include the pastoralist association, women's group, tree committee and the newly formed MEMA committee.

The pastoralist association was formed in 1998 as a community initiative to combat the increasing number of cattle thefts. Each member has to contribute a registration fee of TSH 5000. The total amount today with the committee was TSH 80,000. The money is used in mobilising members to chase the thieves often including using public transport to Iringa to search for the animals. The efforts are being recognised by the police authorities. The committee also organises loans for its members to buy medicine for the cattle in cases where the owners do not have money.

The women's committee was established in 1998 on the initiative of the District Council. The district council advised to form groups in order to receive loans to start income generating activities. Meanwhile, the District Council only provided a loan of TSH 200,000 to the first group of four women belonging to the middle income group and TSH 100,000 to a second group. The money seems very limited and the women participating in the team's meeting did not seem very encouraged to form more groups.

The tree committee was formed on the initiative of CONCERN. Its role was to protect the forest and woodland through fining illegal intruders and collecting revenue. The committee collapsed when CONCERN left. The village council said that the members of the committee got disappointed when they found out that all their efforts were in vain since the natural resources department issued licenses for timber without their knowledge, control or economic benefit.

Some members of the village council were of the opinion that it was the establishment of the MEMA committee that ceased the tree committee but other members were of the opinion that the tree committee had already folded up their activities before the election of the MEMA committee. Whatever the case the village council was of the opinion that the MEMA committee would have a better chance of surviving since they were told that this time the village council was also to be involved in the issuing of licenses.

6.0 Woodland and Forest

The following data regarding the woodland was collected with a number of stakeholders including collectors/users, managers, buyers, middle men and manufacturers. However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

Sixty-eight (men/women) collectors/users participated in a full day's discussion on the woodland. The participants came from the sub-village Ihanyi where a large number of collectors come from. The managers (village council), buyers and middlemen were interviewed the day before in Izazi village. Moreover, the team included an interview with village leaders and fishermen in Mnadani Camp where a large number of the fishermen are staying – fishermen who consumes a large amount of firewood for their smoking and frying of fish, see box below.

The table below presents an overview of the forest users and product by gender and availability in Mwanyengo sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | ! | !! | | | ! |
| Firewood, domestic | | ! | | ! | |
| NWFP | | | | | |
| Mushrooms | ! | | | | ! |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | ! | | | ! |
| Pasture, residents' cattle | ! | ! | | | ! |
| Charcoal | ! | ! | | | ! |
| Wood for brick burning | | | | | |
| Poles | ! | | | ! | |
| Timber | ! | | | | ! |
| Hunting, small game | ! | | | | ! |
| Honey | ! | | | | ! |

The immediate users/collectors from the sub-village Ihayni are economically very dependent on the woodland and has livestock as the second source of income while crop cultivation is very limited – the collectors buy maize from Izazi in exchange for charcoal and firewood. When they talked about their dependence of rain their concern was with regard to grass for their cattle. The people belong mostly to the ethnic groups of Wagogo, Wahehe and Wamasai and are mostly in the poor and middle socio-economic group. The people in Ihayni ranked their most important woodland products as follows:

| Male, domestic | Male, economic | Female, domestic | Female, economic |
|--------------------------------------|----------------------------------|--------------------------------------|-------------------------------------|
| 1 st . Poles for building | 1 st . Firewood, sale | 1 st . Firewood | 1 st . Firewood for sale |
| 2 nd . Herbs | 2 nd . Honey | 2 nd . Fruits | 2 nd . Charcoal for sale |
| | 3 rd . Timber | 3 rd . Poles for building | |

6.1 Poles

Only men collect poles for house construction and other purposes. Poles are sufficient in the woodland. Tree species include “mkambala”, “mgandu”, “mhavava”, and “mkalala”. The mentioned species are susceptible to termites. The poles are collected within the village boundaries in the gullies and near the mountain range. Poles are also collected from outside their area. These poles are collected without permit and there is no one controlling this harvesting for the household. Poles are normally not sold. However, some of the collectors sometimes get a job of building a house for somebody in Izazi. In those cases the poles are valued together with the labour.

6.2 Firewood for the household

Only women collect firewood. Firewood is sufficient in the woodland. Three tree species are important for firewood - “mpululu”, “mhavava”, and “mkambala”. The women collect the firewood far away (about 2 – 3 kilometres) and spent three hours doing so three times per week. The firewood is not collected on the mountain.

6.3 Firewood for sale

Mostly women collect firewood for sale. The firewood for sale is considered scarce. The tree species for this firewood are the same as for the domestic firewood. A head load of firewood is sold at TSH 200. Firewood is sold in Izazi village. Meanwhile, the highest number of buyers consuming the largest amount of firewood is the fishermen near the lake, see box text below. The fishermen do not collect their firewood themselves. Not because they are newcomers in the area and not having the right to do so, but because they do not have time for this activity. Some women have the selling of firewood to the fishermen as their only job and source of income. People from Migoli, Nyangoro and Iringa also come to collect firewood in the area of the village. They come because they have depleted their own resources. The users interviewed claimed that the scarcity of the firewood for sale was due to collection by these outsiders. However, the users also mentioned that the firewood needed in the fishing business causing depletion of the firewood in the woodland.

6.4 NWFP

As can be seen from the table above both men and women collect and the availability of the products varies. Mushrooms are collected by men, which is rather unusual. However, the mushrooms, which are scarce are far away on the mountain, so the men collect these when returning from the livestock market in Nyang’oro. Grass for roofing is collected by women and is scarce. The women collect the fruits, “udawi” and “ukwaju”, which mixed makes a sweet juice, which if left for a day becomes a local brew. The juice sells at TSH 50 per litre. During the time of hunger, these fruits became very important as food, and were sometimes a substitute for staple food. These fruits are only found in the dry season, August – October and the first rains will spoil the remaining fruits. Those who know about their uses collect medical plants. They are abundant. Also people from outside the village woodland collect medical plant in the area, if the species have disappeared from their areas. The men in Ihanyi visit Makatapola sub-village where they collect plants not found in their own area.

6.5 Timber

Only collected by men and considered scarce. Timber is collected even to the top of the mountain. The main buyers of timber come from the carpentry workshops in Izazi. Moreover, people from Migoli, Mangawe, Nyangoro, and Iringa come to collect timber. They have no license and use trucks to transport the timber. The men in Ihanyi assist the timber collectors as paid labour. Few people are involved but those who are, said it was a profitable business. Depletion of the timber species is not just by felling the trees. The timber people often test the quality of the tree before cutting it. This testing often kill the trees which are left standing without being harvested. The catholic mission used to collect timber from Ihanyi, but now they had stopped since the quantity they need can not be found in this area any longer, wherefore they have started to collect they timber east from Migoli. Timber species include: “muwondo”, “mkola”, “mhembeti”, “mkalala”, and “mninga”.

6.6 Pasture, pastoralists’ cattle

Both men and women are involved in grazing the animals. Women take care of young animals while the men take care of the grown up ones. Wamang’ati and Wamasai came last year to graze, but this year they have not come, either because there is enough grass in their area or because they know that this year the grass is particularly scarce in Ihanyi. These pastoralists also graze on the lakeshore. They enter

the area without permit from the villagers and leaves again without notice. However, they have little respect for the special pastures created by the resident pastoralist for their young animals. At the beginning of the rainy season the resident pastoralists fence (with wood and scrubs from the woodland) an area in which the young animals are grazed supervised by the women in the village. Grazing also takes place on the mountain. However, the only water source there is a spring, which is salty wherefore grazing there becomes less attractive.

6.7 Pasture, residents' cattle

Both men and women are involved in grazing the animals. Women take care of young animals while the men take care of the grown up ones. The resident pastoralists and indigenous people have conflicts over grazing rights with the passing pastoralists but mostly concerning the fenced areas for the young animals, which the migrating pastoralists do not respect and include for their grazing. More conflicts exist with the neighbouring villages of Migoli, Mangawe, and Nyang'oro. People from Izazi and the mentioned villages all crosses into each other's areas. However, it seems that the people from Mangawe and Nyang'oro are more frequently in the areas of Izazi and Migoli since their areas are more depleted. The conflicts are in a process of being solved through a stronger demarcation exercise initiated by divisional secretary and village councils. This exercise is not completed.

6.8 Charcoal

Mostly women are collecting charcoal. The amount of charcoal collected is not plenty but plenty of the people in Ihanyi are involved, since they trade charcoal for maize in Izazi. Three tree species important for the charcoal include "mkungugu", "mhavava" and "mkambala".

6.9 Hunting

Men solely do hunting and game is scarce. The weaponry used is bow and arrow and traps. They do not have guns and can therefore not scare the elephants away that enter the area in the farming season, where they cause great damage to crops. The most common game includes antelopes, wild pig, and guinea fowl. The big game is hunted by outsiders from Iringa, Mangawe and Nyang'oro.

6.10 Honey

Honey is scarce because of the method used to collect the honey. Men only collect honey. Only two men have beehives, while the other men collect directly from the trees and underground beehives. The honey is sold Izazi at TSH 5,000 per 20 litres and TSH 2,500 for 10 litres. Honey is used for food, porridge, tea and medical purposes.

Fishing activities in Mnadani Camp:

Before 1982 there used to be only a few fishermen in the area fishing in the Ruaha River. After 1982 when the lake was created a large number of fishermen came to the area to exploit the economic potential of the lake. These people came from Lake Victoria, Lake Nyasa and Lake Tanganyika and belong to the ethnic groups of Wakinga, Wabena, Wamanda, Wanyasa, Wahehe, Wakisi, Wanyamwanga, Wafipa, Wasukuma, Wakerewe, Wagogo, Wangoni, Wayao, Wanyiramba, Warangi, Wazaramo, and Wamakonde. They were all fishermen in those areas but decided to migrate since the fishing potential was diminishing in their original places. Since then also indigenous people from Izazi have learned how to fish. Still people enter the camp to settle and fish. Today to population is estimated at approximately 1,500 with the actual number of fishermen being 885 according to their spokesman and fishermen interviewed by the team.

Approximately 400 of the 885 fishermen have a permit to fish sold to them annually by the fisheries extension officer in Izazi at TSH 3,200. The permit gives the right to fish without any limitations on the amount of fish landed by the individual permit holder. Those fishing without permit do so mostly for the household. The revenue collected in this operation is all taken to the district.

The buyers have a license to buy fish in the camp and other similar camps. The District Natural Resources office in Iringa issues the permits. Some people in the camp had the license to buy fish. All buyers in the camp depend on the trucks coming from Iringa to collect the fish. Trucks come two days per week in the off season and more often in the season. The off season is the dry season while the rainy season is also the season for fish. The spokespersons and fishermen interviewed said that the fish was abundant.

The team discussed the readiness and capacity for the fishermen themselves to collect and manage the revenue. The spokespersons said that this would cause no problem, since they were already responsible for the Development Levy collection in the camp.

The connection between the woodland and the fishing activity is the firewood used for smoking and frying fish for sale. Fish is also sold fresh using ice, which the buyers bring from Iringa. However, most of the fish, which are transported and sold as far as Dar-Es-Salaam and Zambia are smoked. Every fisherman in the camp has a smoking stove. The following rough estimate on fire wood consumption was given by the spokespersons of the camp:

- ? 40 head loads of firewood is the minimum quantity used for smoking and frying fish every day in the off season
- ? 150 head loads of firewood is the minimum quantity used for smoking and frying fish every day in the season

This means that the fishing activity is the largest commercial consumer of firewood in the area, and causing the firewood to be scarce today – at least around the village of Izazi itself. The team believes that a conflict between the indigenous people of Izazi and the fishing community is possible over the issue of availability of firewood. If the firewood consumption continues and increases due to the constant influx of newcomers a day could come when the firewood for domestic use of the indigenous people is in danger or too complicated and time consuming to collect. Should this conflict happen an important factor will be that the fishermen are newcomers and outsiders while the indigenous people are agriculturists and livestock owners with a different usage of the woodland.

A later interview with the chairman of the village council confirmed the analysis of the team. He said that the use of the firewood by fisherman was depleting and reducing the amount of firewood in the area. He confirmed the above estimates on consumption of firewood, but also said that the actual amount used was most likely even higher.

PROFILE OF KIDABAGA VILLAGE

NEW DABAGA -ULONGAMBI FOREST RESERVE (NDUFR)

District: Iringa (Rural) **Division:** Kilolo **Ward:** Dabaga **Village:** Kidabaga

Potential for JFM

Presence of committees on Fire protection and Mazingira in the village institutional set up, supports for the establishment of the MEMA committee that will strengthen their efforts provided there would be strong village government support.

The forest reserve is important for water supply in the village, and, closeness of the forest reserve to villagers implies there is a lot of dependence on the forest essentially for non wood forest products such as medicinal plants, ropes, wild vegetables, honey and game meat.

The indigenous knowledge used in the village justifies the potential for the community to manage their natural resources.

Traditional beliefs in the village might play a crucial role in protecting the forest. For instance the presence of 'litemela' (a miracle snake) inside the forest reserve prevents people going beyond this place.

1.0 Introduction

1.1 Background

The current village area was formally settlers' farm. The local people were once living scattered in the area and occupied marginal land, which was not fertile for crop production.

Main tribe is Wahehe. There are also minor tribes who came in the village looking for employment to the settlers. These are Wakinga and Wabena.

The traditional administrative set-up had the positions of *Lunanzi, Kijiji, Jumbe, Sub-chief and Chief*. Excluding the chief others had the role of tax collection and organising people to work into Chief's farm and various activities e.g. road construction.

It was until 1969 after the Arusha Declaration when part of the land that was formerly occupied by settlers was nationalised and returned to the local people. Following villagization operation commonly known as Operation "Sogeza" in 1974, the scattered households were then moved to the current village area. The village was then officially registered as Ujamaa Village in 1975.

1.2 Location and Demography

Kidabaga village is located to the South -East of Iringa Municipality about 55 km. from Iringa. It borders New Dabaga – Ulongambi Forest Reserve and Magome to the East, Ilamba village to the North and West, and Ng'ang'ange village to the South. The village is not surveyed and river mark village boundary. These are Hasi, Funo

and Kigwese and forest reserve boundary.

The village has five sub-villages of Kihesa, Ikelamo, Chamgogo, Makanyagio and Kati. The NDUFR is close to the village centre.

The total population is 2274 based on 1998 local census. The village has a work force of 701 people. Children of age 0 – 18 years are 1357 persons. Average household size is 5 persons. There are 354 households. Distribution of households in sub-villages is as follows: Kati 63, Kihesa 90, Chamgogo 67, Makanyagio 89 and Ikelamo 45. There are 38 female-headed households. Most households are concentrated along the road.

Polygamy is a common practice among the people in the village with up to 6 wives. The main religious groups found in the village include Roman Catholics, Lutherans, Pentecostals and Assemblies of God.

1.3 Village Infrastructure

There is a government **Health Centre** constructed in 1977 by the government on an effort of to provide essential social services to Ujamaa villages. The centre is currently under a newly introduced Community Health Fund programme. The programme requires a nuclear family with children below age 18 years to pay TSH 5000 per year or TSH 1000 on each visit to hospital for treatment and other medical services. However the study team were told that villagers can not afford to pay that amount. There are 2 Medical Assistants, 1 Public Health Nurse, 1 Health Officer and 6 Nurse Auxiliaries. Village has two health attendants.

A **primary school** started in 1978 with class I – VII. There are 12 teachers of whom 5 are females and 7 are male. There are 500 pupils with 257 girls and 243 boys. Pre-primary education has started in 1999 and there is also an adult education class.

In 1974 soon after Operation *Sogeza*, the government supported the village with tap **water** using diesel pump. During that time running and maintenance costs were incurred by the government. Later on the government decentralised the water management to the village government. Kidabaga village cannot afford the maintenance and running costs of the water pump, due to lack of funds and other commitments. The village now depends for its water supply mainly from river streams and shallow wells.

Road is accessible throughout the year and there are reliable services of public transport.

Other services in the village include 4 local guesthouses, 6 maize mills, 2 kiosks, 2 shops, 5 *pombe* shops, 4 restaurants, 2 butchers (beef & pork), 1 bar, 3 tractors (owned by Catholic mission, secondary school and one individuals).

2.0 Village Organization

2.1 Village Government(VG)

The village government comprises of positions shown in figure 1. The study team was informed that the 1995 elected village council (VC) was dismissed due to misconduct

(see box 1). About 20 (7 were women) acting VC members participated in the discussion and said that the village council is supposed to have 15 - 25 elected members. Election for new VC will be conducted in November/December 1999. The elected members shall include Village chairperson, 5 sub-village chairpersons and other elected villagers. Seven of the elected members are women (special seats). VC has invited members that include experts in Forestry, Livestock/Agriculture, Tea Project Manager, Heads of religious groups, Head teacher and In-charge of health centre.

The current Village Executive Officer (VEO) is a woman. She said that she is acting and is new on the post. She was not active during the meeting.

The village council has three standing committees, these are Planning and Finance (5)¹, Defence and Security (5), and Education, Culture and Social services (5). There are 4 sub-committees of Health (6), School (12) and Mazingira (25) and Fire protection (10) as shown in figure 1. The newly established MEMA committee was not mentioned because the PRA team informed them that it would start its activities in year 2000, but two members participated in the VC discussion.

The village council reported that meetings for the VC, standing committees and village assembly are conducted after every three months. During the Village assembly the VC presents reports on village expenditure and revenue collection as well as other village development and social activities.

Important sub-committees to JFM are the Fire protection, Mazingira and MEMA.

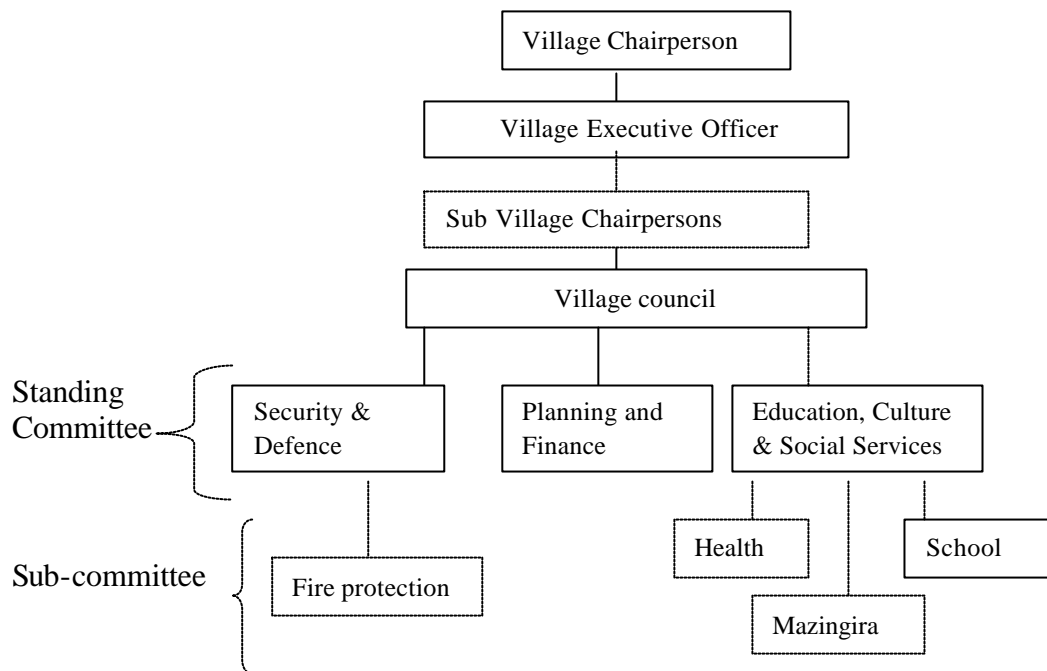
Fire protection: inspects firebreaks for farmers who want to do farm preparation.

Mazingira: safeguards water catchment areas, illegal tree cutting and general environment protection. **MEMA:** roles and responsibilities are not known yet.

Other organisations present in the village are churches and one women group.

The village has not been supported by any external organisation. However, during Ujamaa the village received agricultural inputs and subsidies through village co-operatives.

¹ The numbers indicate members in the committees.

Figure 1: Village Organisation Chart

2.2 Village By-laws.

The study team was informed that the village bylaws are drafted by village council and approved by District Council. However, the bylaws can be in operational even before the approval.

Currently there are bylaws, which are being used by the village council without approval. These include bylaws on fire protection and illegal tree cutting in natural woodland and the village charged a fine of TSH 3000 for the offence.

2.3 Linkages between District and Village Council

The Village Executive Officer (VEO) is a functional link between the village and the District Council. VEO receives and administers directives from the District Council and reports to Ward Executive Officer. VEO collect development levy. The District Council also places extension workers in the village.

There is Ward Development Committee meeting which draw members from villages who are village chairpersons, VEOs, sub-village chairpersons, Ward councilors, heads of government and non- government institutions. Main issues discussed include emphasis on village development activities, assessment of village activities, give District directives like, collection of development levy, school fees, torch contribution, by-laws preliminary discussions and clarifying on the use and implementation of District by-laws

Divisional Development Committee meeting met twice this year and draw members from villages comprise Village chairpersons, VEOs, WEOs, Ward Councilors, sub-village chairpersons, heads of government institutions and non-government organizations. Sometimes if there are special issues to be addressed in the meeting,

District officials participate. Issues discussed are directives from the district, development activities, etc.

Box 1: The Kidabaga Village Council

In 1996, the District Commissioner dissolved the village council following embezzlement of funds accrued from harvested trees from the village woodlot. The money was to be used for building village office and buy village vehicle. As a result of this situation the village was under the leadership of sub-village chairpersons up to now.

The study team had a discussion with 20 members who are likely to become the future village council after the November/December 1999 local government elections. Consequently few members had the enlightenment of running the village council. Equally the Village Executive Officer was also complaining that she is new to the current position and she does not know much of village administration.

Following this episode the future of the new village council will depend on the training and the awareness raising efforts planned by district, ward and divisional authorities, which are known to be minimal.

3.0 Economic Activities

The main economic activity in the village is subsistence agriculture. Cultivation is practised on hill slopes farms and valley bottoms. Other economic activities include livestock, timber harvesting and small-scale trade.

3.1 Agriculture

Crops cultivated in the village are shown in Table 1. Main domestic crops cultivated are maize, beans and sweet potatoes, and surplus produce is marketed.

Table 1: Crops cultivated by Gender and Main Use

| CROP | SEASON | GENDER | | MAIN USE | |
|-----------------|----------------|--------|------|------------|----------|
| | | Female | Male | Commercial | Domestic |
| Maize | Nov- August | * | * | * | * |
| Beans | Nov- March | * | * | * | * |
| Wheat | April – July | * | | * | * |
| Irish potatoes. | April – June | * | * | * | |
| Sweet potatoes | June – March | * | * | * | * |
| Finger millet. | Dec – June | * | | * | |
| Green peas | April - August | * | * | * | |
| Vegetables | All year | * | | * | * |
| Tree crop | All year | * | * | * | * |
| Fruits | Mar - May | | * | * | |

The farmers practised inter cropping of maize beans and pumpkins so as to utilise farm space effectively and control water run off. Rain and dry are two farming

seasons in the village. Rain season usually starts from November to May and dry season is from July to August. The dry season farming is done in the valley bottoms known as “*vinyungu*” and crops cultivated include irish potatoes, green peas, green maize (*gobo*) and vegetables. Rain seasons farming is done for the rest of the crops and cultivation is carried out in the hill slope farms.

Farm work is done by household labour and sometimes get assistance from neighbours. There is a traditional voluntary system of assisting each other called “*Mgowe*”. Mode of cultivation is by hand hoe and some few individuals use ox-plough.

Cultivated land owned by individual households varies from 3-20 acres. A household may have 3 to 5 plots located in different places depending on the mode of acquisition and crops cultivated. The study team observed some cultivated farms very close to NDUFR.

Farmers reported increase in crop production as a result of application of fertilisers, proper crop spacing and cow manure. This was in 1975 and good harvest was 10 – 15 bags of maize per acre. Currently, the study team was told that, crop yields has dropped because of various natural disasters like heavy rains (El -Nino) and frequency frosts.

3.2 Animal Husbandry

Animal husbandry is not a common practise in Kidabaga. However, few individuals practise it as shown in table 2. There are also few individuals practise zero grazing of dairy cows.

Table 2: Animal husbandry summary

| Livestock | No of Animals | No. of HH | % of HH |
|---------------|---------------|-----------|---------|
| Cattle | 57 | 9 | 2 |
| Goats | 58 | 7 | 2 |
| Sheep | 4 | 2 | 0.5 |
| Pigs | 141 | 50 | 11 |
| Local chicken | Various | All HH | 100 |

Animal husbandry is practised mainly for domestic and sometimes for local selling e.g milk. In the past animals were used to pay dowry. This involved three cows, two sheep and two hoes. In the present system the dowry is about THS 150,000 equivalent.

3.3 Tenure

In Kidabaga village there are mainly two types of land ownership, customary and village administered land. Majority of the villagers claimed to own inherited land commonly referred as “*lungulu*”. Women also are said to have user rights to land, but if married the land is returned to the family members. It was reported that the village experience land shortage for expansion of farms. The communal farm of the village, which was about 100 acres, has been allocated to villagers. As a result of settlers’ influence, currently there is big area of land being occupied by Dabaga Tea Project and Brothers’ Catholic Mission.

Land in the village is obtained through inheritance, allocation, borrowing, renting and buying. The village council has to witness the process of land acquisition.

There is no proper land use plan in the village, moreover land is categorised in two main uses, settlement and crop cultivation including fruit trees and tree woodlots.

3.4 Commercial Farms and Plantation

Village owns 45 acres of fruit trees and 35 acres of pines plantation planted from 1975 during afforestation program. Dabaga Tea Project occupies 73.9 ha planted with tea and a large portion of uncultivated land with natural forests. Brothers' Catholic Mission owns several acres of natural forest in the area. Individual farmers also have tree woodlots of Pines, Cypress, Eucalyptus and Black wattle of varying sizes. There are also fruit tree orchards, which include peaches, plums, and pears.

3.5 Income Generating Opportunities

Other income generating activities carried out in the village is shown in table 3. The village council members were asked to explain wealth status, but it was difficult for them to decide. There was a general understanding among the villagers that there are only better off and poor people. Indicators used for better off are: ability to pay school fees and development levy, enough food for the family, good house roofed with corrugated iron, maize mill, big tree plantations and fruit farms. The reverse is the case for the poor people.

Table 3: Income generating activities

| Income Sources | Gender | | Economic Group | | |
|----------------------|--------|--------|----------------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Maize Mill | * | | | * | |
| Petty trade- cookies | | * | | | * |
| Pitsawing labour | * | | | | * |
| Guest Houses | * | | | * | |
| Shop | * | | | * | |
| Kiosks | * | * | | | * |
| Butcher | * | | | | * |
| Pombe shops | * | * | | | * |
| Selling timber | * | * | | * | |
| Carpentry | * | | | | * |
| Masonry | * | | | | * |
| Tailoring | * | * | | | * |
| Mats and basket | * | * | | | * |
| Medicinal plants | * | * | | | * |
| Selling green maize | * | | | | * |
| Iron smith | * | | | | * |
| Restaurant | * | | | | * |

Apart from development levy returns from the District Council, the village collects revenue from petty trade and local brew selling amounting to TSH 37,000 per month. Funds from shop rents amount to TSH 30,000 per month. Hence the village has income of TSH 800,000 per year.

It was difficult to know the village bank balance. This year village money is used to cover the following costs:

- Paying allowances to village health assistance @ TSH 2000 per month
- Allowances for village chairman, VEO, accountant and a watchman @ TSH 5000 per month
- Allowances for members attending meetings @ TSH 500 per meeting
- Office stationary
- Water pump maintenance costs amount to TSH 100000

4.0 Woodland and Forest Use

The discussion was held just at the boundary of the forest reserve and the village land. 16 people attended the discussion of which 2 were women and 14 were men. The table 4 summarises the different products as identified by both men and women and their level of importance as well as availability.

Table 4: Products Identification, Preference by Gender and Availability

| Products | Preference by gender | | Availability | | |
|------------------------------|----------------------|------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Beekeeping and collect honey | * | * | | * | |
| Hunting | | * | | | * |
| Charcoal | | * | | * | |
| Brick burning | | * | | * | |
| Firewood – domestic | | * | * | | |
| NWFP: | | | | | |
| Wild vegetable | *III | * | * | | |
| Medicines | *I | *III | | * | * |
| Milulu | *II | * | | | * |
| Building poles | * | *II | | * | |
| Timber: | | | | | |
| Pitsawing | | *I | | * | |
| Selling | | * | | | |

Note: Numbers I – III indicate priority and * indicate product use and availability.

4.1 Non -Wood Forest Products (NWFP)

Derega a wild vegetable was the third choice of women. The reason for the choice is due to the responsibility of women to ensure supply of food to the household. *Derega* is mostly preferred and is a traditional vegetable.

The vegetable is reported to be abundant and readily available in the forest reserve all year around, but access to the forest is restricted, yet they go. They also collect *derega* in small bushes around the village. Villagers have tried to propagate the vegetable around their homesteads and it grows faster during rain season between December and April.

Milulu collection was ranked second important product by women. *Milulu* is used for making mats as sleeping materials and baskets for carrying crops.

Women reported that they collect *milulu* from Ng'ang'ange valley where the plant

grows naturally. Users take 3 – 4 hours as return trip to collect *milulu*. They report that *milulu* and ropes for weaving are plenty in the forest reserve, but collection is prohibited. *Milulu* collection and weaving activity is mostly done during rain season.

Women sell *milulu* to men who make mats. A bundle is sold at TSH 500. Making mats and baskets is an income generating activity for both women and men. Prices for selling baskets and mats in the village range from TSH 200 to TSH 2500 per mat or basket.

Traditional medicines were first choice and third choice of women and men respectively. With traditional medicines the users reported that almost everybody in the village knows about the medicines. Common medicinal plants used in the village include *mhongola*, *msaula*, *mngwangwasale*, *mpwelele*, *mbefi*, and *mlungulungu*. The users claim that when collecting medicinal plants they take only small portions of roots, bark and leaves and leave the tree intact. Medicinal plants are reported to be readily available and collected from natural forest, bushes and farmland. Users said that they sometimes collect the plants from forest reserve secretly because the forest is closed.

Hunting activity is done in the village mainly to control vermin and provide meat supplement. Men do it on a very small scale. Animals available are such as dik-dik, hares, rock hyrax, colubus monkeys, baboons, bush rats and bush pigs. The animals are in the forest reserve and in bushes. Hunting is done using traps put along animal pathways, watchdog and arrows. Hunters do not use snares because they are dangerous for their own lives.

During discussion, some of the users considered hunting inside the forest reserve to be an illegal activity and did not want to discuss it further with the study team.

Honey collection is a common practice among the people of Kidabaga. Honey collection is done from underground caves and tree holes inside the forest reserve. The users reported that one could harvest up to 5 litres from the cave. They also stated that one could harvest more and quality honey from the natural forest than in the bush land or farmlands. Users reported that they also collect honey of sting-less bees (*lipundami*) from underground holes. Few people in the village practise **beekeeping** and are mainly men. They make log beehives using *mdeke* trees, which are lighter and easy for construction. *Mdeke* tree grows fast and therefore there is a guarantee of beehive materials. The beehives are hanged in big trees around the homesteads. The beekeepers sometimes use big pots as beehives. Honey harvesting is done three times a year (June, November, and March) and may harvest up to 10 litres from one beehive. When harvesting, they use destructive smoking (traditional) method to scare bees and make them dormant. Honey is used as medicine and food supplements, and is sold. Price for a litre of honey is TSH 1000.

4.2 Building Poles

Building poles was the second product chosen by men because of the importance for shelter, and men have responsibility to provide for housing. Building poles are abundant in their woodlots and sometimes buy from others. Trees available from woodlots are eucalyptus, black wattle and *tasmania*. The poles are sold at TSH 50 – TSH100 per pole. Nevertheless, users face problem of securing reliable market for

selling poles. Sometimes villagers harvest poles illegally from forest reserve and species favored include *mheti*, *mhefi*, *mkolongo* and *mpalapala*.

4.3 Firewood

Mainly women collect firewood and sometime their daughters assist them. Women use firewood for heating, cooking, and for making local brew (*pombe*). Firewood is abundant and collected from planted woodlots around the village. There are no specific woodlots planted for firewood but it is collected as by-product. Trees available for firewood are Black wattle, Eucalyptus and Pine. It was reported that women do sometimes enter inside the forest reserve to collect dead wood for firewood.

There are no specific days for firewood collection. Women collect firewood nearly every day especially when they are returning from their farms. They said that the frequency and amount of firewood collected vary according to household size, frequency of use, type of use and season of the year. During rain and cold season more firewood is used. On average a household might use up to 3 head loads per week.

Firewood is also used for brick burning which is men's activity. Burning bricks is also an income generating activity. Normally they use both green and dry wood. Black wattle tree is highly preferred for brick burning. It was estimated that making 10,000 bricks consumes about 7 tons of firewood, which is approximately 7 m³.

4.4 Timber

Pitsawing was first choice of men. It is important because they have pitsawing skills and is among their main activities for income generation. Women also assist their husbands in carrying timber to the landing sites. Trees sawn are pine, eucalyptus and cypress. Pitsawing is done for commercial as well as for domestic needs. A labour engaged in pitsawing is paid TSH 200 –250 for a piece of 1"x 8" or 2"x 8" and a piece 2"x 4" at TSH 140. Most of the trees available are undersized and usually trees sawn produce 10 – 15 pieces. Users complained that the land in the village is not enough to expand tree growing because large area is owned by tea estate and/or owned by individuals as *lungulu*.

Timber selling is also an important income generating activity in the village and mainly men are engaged. Prices of timber vary depending on sizes and market situation. For example timber of sizes 1"x 8" and 2"x 6" are sold at TSH 500 - 600. However they reported problems of marketing their timber in the village as well as external market. They depend on customers from Iringa town.

Since users know that harvesting timber from forest reserve has been prohibited, they did not want to discuss with the study team about it. Users reported that there are valuable and big timber trees in the forest reserve. Some of the species mentioned include *mheti*, *msaula*, *msengela*, *mlungulungu*, *mlembelembe*, *mnyakisage*, *mpalala* and *mtanga*. They showed interest in mentioning many tree species available with high expectation to be allowed to harvest in the forest reserve.

5.0 NDUFR and Adjacent Communities

Finally the study team discussed the current status of the forest with users. The users are well informed of river streams that originate in the forest. They know other land marks in the forest such as hills and peculiar landmarks. For example there is small lake where a miracle snake called '*litemela*' lives and people do not go to this place as it is believed to be dangerous, only few medicine men can reach the place. Users said that they are ready to co-operate with the government in the management of the forest reserve.

SOCIO-ECONOMIC VILLAGE PROFILE, KINYWANG'ANGA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Nduli VILLAGE: Kinywang'anga

1.0 Implications for JFM

The team strongly recommends that the future activities of the two projects are better co-ordinated than has so far been the practise – if both projects are going to operate in the village. It should in particular be considered if three committees (MEMA, HIMA and the existing tree committee) are really necessary and the best option for managing natural resources. Villagers participating in the socio-economic study also expressed concern and were somehow confused about the number of studies – and why the same foresters had to come twice to ask the same questions?

The team was informed that traditional boundaries exist in the forest reserve and are referred to by the users of the forest reserve in all the five communities surrounding the forest reserve. The team therefore recommends that a joint exercise including the natural resources office and users from all the five villages should be initiated to carry out a mapping exercise indicating the traditional boundaries of the forest reserve. The study team has not been able to embark on such an exercise, due to time constraints and lack of professional mapping expertise on the study team. However, the team strongly believes that the production of such map including all the communities surrounding the forest reserve will be necessary before the project can continue its JMF initiatives.

2.0 Location and demography

The village is situated 8 kilometres from the junction on the Iringa – Dodoma road. The village is accessible all year although with some difficulties in the rainy season.

Resident ethnic groups in the community include Wahehe, Wabena, and Wakinga. Migrating Wamasai come to the area seasonally.

The woodland and the forest reserve are both depleted because of timber extraction and the demand for wood products from a growing population. However, agricultural activities and the expansion of agricultural land are the most important factors regarding depletion of the woodland.

The table below presents the total population in the village as a compilation of all sub-villages:

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSE-HOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|-----------------------|--------------------|-------------------------|-------------------------------------|
| Village: Kinywang'anga | 600 | 624 | 152 | 55 |
| Sub-village: Songambebe | 100 | 105 | 28 | 8 |
| Sub-village. Mherza | 150 | 158 | 39 | 17 |
| Sub-village: Mjimwema | 230 | 235 | 54 | 19 |
| Sub-village: Tuliani | 120 | 122 | 31 | 11 |

3.0 Infrastructure

Infrastructure in the village consists of 1 primary school, 1 milling machine, and a few kiosks and local brew houses. No market is found in the village and villagers frequent the markets in Kising'a and Itagutwa. The drinking water supply is ensured by a dug-out established by CONCERN and recently rehabilitated by HIMA. The primary school is temporarily moved to other premises since a new primary school is being built. The Catholic Church finances the school, with the villagers providing bricks, water and unskilled labour.

4.0 Economic activities

4.1 Agriculture, crop cultivation

The farming system is characterised by crop production integrated with animal husbandry. The farming season starts in September with clearing of land, sowing takes place in December, followed by weeding in January – February and finally harvesting in June – July.

Main domestic crops include maize, sorghum, and kunde. Other domestic crops include “njugu”, groundnut, sweet potatoes, cassava, beans, pigeon pea, and green grams. The only commercial crop is sunflower. Also maize, cowpea and sorghum are considered cash crops since they are sold if in excess.

Five years ago the villagers used to cultivate cotton. The cotton cultivation stopped due to no market and the farmers had to burn the cotton the last year they cultivated it. Also in Kinywang'anga the divisional authorities are trying to re-introduce cotton cultivation with “Tako” again being the sole buyer. The villagers said that they would not cultivate cotton unless loans were provided for them as part of the deal. Maybe the lack of an active village council has prevented the farmers from cultivating cotton against their will. The farmers told the team that with sunflowers the situation is different. They receive more money for their sunflower seeds because there is more than one buyer, which has resulted in increase in prices.

Chemical fertiliser was provided for free in 1972 as part of the Ujamaa programme. However, the free supply of fertiliser only lasted one year. In 1971 the government introduced sorghum to ensure production of more draught resistant crops. The government introduced the brown sorghum “serena” and white sorghum “lulu”, which can only be used for food. Today only a few farmers cultivate brown sorghum, while the cultivation of white sorghum is popular since the crop can be used for both food and local brew. Therefore the crop is marketable which is not the case with white sorghum. A sack of white sorghum is sold at TSH 15,000 in the village, which is more than the price of a sack of maize.

4.2 Land tenure

The land tenure is characterised by the presence of both traditional land and land administered by the village council. However, the village council only administers 30 acres and part of that land is permanently distributed to households, which do not pay for the land. The village council was still insisting that they have land for rent at TSH 1,500. However, this land can only be a fraction compared with the vast land of the traditional landowners. The traditional landowners either rent their land to villagers at TSH 2,000 or sell it at TSH 7,000 – 10,000 depending of the soil fertility status of the land. Traditional land is inherited to both men and unmarried women. However, if a woman inherits land and later marry outside the village she will have to return her land to her brothers.

Land administered by the village council is inherited to both men and women. Due to land pressure the village council has been forced to include an area of land otherwise reserved as pasture. This land is supposed to be rented in the coming season. However, the farmers said that the land is in a valley prone to flooding and therefore not very suitable for cultivation.

The team had a long discussion on the role of the village council with regard to land. Firstly of all the village council has very little land and secondly every village council chairman and executive officer and possibly other members of the village council receive a piece of land for free which they do not return once they leave the office. In this way the village council will very soon have no land left.

Somehow the free land is the one of the important privileges which the council and CCM executives have.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|---|---|--|
| Rich farmers own: 25 – 30 acres | Middle farmers own: 10 – 15 acres | Poor farmers own: 3 – 5 acres |
| Rich farmers cultivate per year: 20 acres | Middle farmers cultivate per year: 10 acres | Poor farmers cultivate per year: 3 acres |

4.3 Animal husbandry

Livestock also plays a role in the farming system in Kinywang'anga. Only a few farmers use animal traction and the hand hoe is still the most used farm tool. The farmers organise themselves into work parties (“mgowe”) to overcome the large area of cultivation. The farmer who wants the work done has to provide local brew for his work mates. The work then rotates from farmer to farmer. This system of organising farm work is much practised in areas like Kinywang'anga where animal traction is not yet common.

Farmers have recently had a large number of their animals stolen. This situation is reflected in the table below presenting number of livestock distributed among the socio-economic groups:

| | | |
|--|---|--|
| Rich farmers own: 20 cattle (50 – 70 before) 10 goat/sheep (30 – 50 before) | Middle farmers own: 8 - 10 cattle (10 – 15 before) 3 – 5 goat/sheep (10 – 30 before) | Poor farmers own: 1 – 2 cattle (no changes) 1 – 4 goat/sheep (no changes) |
|--|---|--|

Interview with the Iringa District Livestock Office:

The team conducted an interview with the District Livestock Office, Iringa District. The district assistant officer told the team that thefts are rampant in the dry season but come down in the rainy season. From 1980 to 1993 the district office monitored the animal tracts used by the pastoralists, which gave good opportunity to check theft. The programme stopped due to lack of funds and transport. Today the office advise village executive officers and ward livestock officer to check “Animal Movement Permits” of the pastoralists to control ownership and thereby possible theft. However, the team has experienced that these checks are irregular and mostly serve as a money collection opportunity for the village executive officer. Although the district livestock officer does not have the means for effectively monitoring of livestock theft, he stated that the theft is relatively constant and that the experiences in Kinywang'anga could be an isolated case.

The district livestock office informed the team that the pastoralist associations found in many of the communities are established on the initiative of the livestock owners themselves. The officer said that the initiative was appreciated but the office did not support the livestock associations. The livestock extension officer has an obligation to advise the livestock associations. The associations are still in their beginning stage and especially inclusion of migrating pastoralists is lacking in most of the associations. The officer said that the church (Roman Catholic and Lutheran) often supports the livestock associations.

Number of animals* kept by the migrating Wamasai:

| | | |
|---|--|---|
| Rich pastoralists own: 200 – 400 cattle | Middle pastoralists own: 70 – 100 cattle | Poor pastoralists own: 10 – 20 cattle |
|---|--|---|

* The migrating Wamasai do not enter with sheep and goat since their preferred pasture is the leaves of the “mkungugu” tree – a tree that has disappeared from the area.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|-----------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | ! | !! | | ! | |
| Selling of honey | ! | | | | ! | ! | ! | |
| Processing of sunflower oil *, ** | | ! | | ! | | ! | ! | ! |
| Shops/kiosk | ! | | | ! | | ! | | |
| Petty trading | | ! | | | ! | ! | | |
| Hunting | ! | | | | ! | ! | ! | ! |
| Selling of firewood | !! | ! | | | ! | | ! | ! |
| Carpentry | ! | | | ! | | ! | | |
| Owners of mills | ! | | | ! | | ! | | |
| Handicrafts (needlework) | | ! | | ! | ! | !! | ! | ! |
| Selling of poles | ! | | | | ! | ! | ! | |
| Selling grass for roofing | | ! | | | ! | | ! | ! |
| Masonry | ! | | | | ! | ! | ! | |
| Pottery | | ! | | | ! | | | ! |
| Selling of charcoal | !! | ! | | | ! | ! | ! | ! |

* 50 per cent of the households are involved in sunflower oil extraction. The oil is sold in the neighbouring villages and in Iringa at TSH 600 per bottle (0.75 litre).

** Village council members said that in the households the major income from selling agricultural produce is controlled by men while women control income from petty trading.

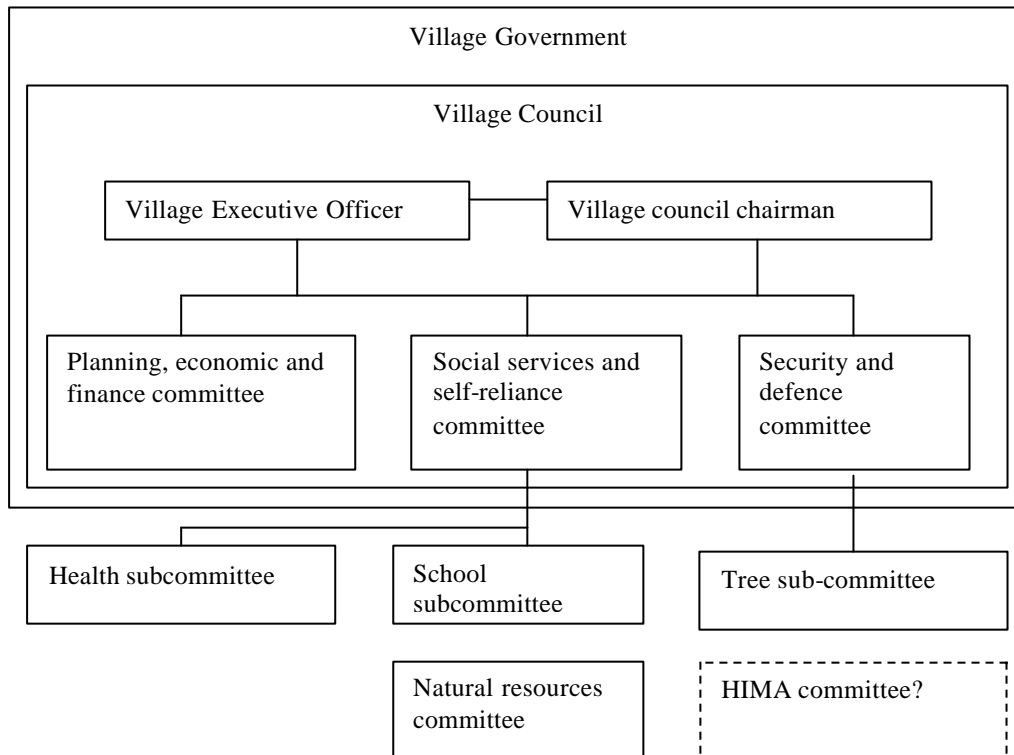
5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. The village council has had two meetings this year. The village council has three standing committees: planning, economic and finance committee, social services and self-help committee, and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have had no meetings this year.

The village council has had more project mobilised meetings than actual village council meetings. First HIMA conducted a five days holistic study in August followed by MEMA conducting PRA studies in September and now (November) MEMA carrying out socio-economic study. The village council is very disorganised and has suffered from the village council chairman and village executive officers not doing

their job. A village assembly meeting organised by the divisional secretary managed to get a “vote of no confidence” whereafter a new village council chairman and village executive officer were appointed. These new executives are still not fully informed and able to perform their duties. However it will be unfair to disqualify the village council members and their work because of the previous appalling management. The existence of work parties and the community organising the on-going building of the new school proves a community spirit. And members of the village council also said that they were ready to stand for re-election because they had issues they wanted to fight for.

The organisational chart below presents the overall structure of the community organisation:



Three subcommittees to the village council exist. These are the school committee, health committee and tree committee. The school committee had four meetings this year discussing plans and budgets, the reconstruction of the primary school, dropout problem of pupils and school fees. The school committee is by far the most organised and active village organisation. The health committee has not met this year.

The tree committee refers to the security and defence committee and has not met this year. Actually the sub-committee has been dormant since CONCERN left the village in 1995. Previously it used to organise household nurseries and patrols although the workshop revealed that it has never been a very active sub-committee. The tree sub-committee was also de-motivated by the chairman of the village council making his own arrangements regarding the woodland without involving the tree committee. The tree committee had experienced to go on patrols and question the cutting of building poles and burning of charcoal by villagers from other villages, whereafter these people flashed a permit from the village council chairman in Kinywang'anga.

The newly formed natural resources committee has no formal links to the village council. HIMA has not yet formed their committee, but has started training of selected villagers in nursery management and soil and water management. The team strongly recommends to the project that the three committees all addressing natural resources should co-ordinate their activities.

6.0 Woodland and Forest

The woodland in Kinywang'anga is administratively divided into woodland belonging to the village council and the Kitapilimwa Forest Reserve. However, that administrative distinction does not have large consequences for the users, which the team interviewed. They consider both “woodlands” as

belonging to them based on traditional boundaries, which directs the access and use to the woodland. The boxed text below presents the users' perception of access and use of the Kitapilimwa Forest Reserve:

The users' perception of the Kitapilimwa Forest Reserve:

The Kitapilimwa Forest Reserve was gazetted in 1967'ties before the Ujamaa villagisation programme. The villages of Ikengeza, Kinywang'anga, Itagutwa, Kitapilimwa, and Mfyome all border the forest reserve. The village of Kinywang'anga borders the forest reserve directly. According to the users in Kinywang'anga they claim the largest part of the Forest Reserve. This clear statement of the existence of boundaries inside the forest reserve lead to an interesting discussion. During the discussion it became evident that the five communities surrounding the forest reserve know perfectly well which part of the forest reserve belongs to them and which part belongs to the neighbouring communities. These boundaries are based on traditional boundaries ("malungulu" land).

The fact that traditional demarcations extent into the forest reserve is not surprising given the general findings of the team that:

- ? The villagisation programme in the 1970'ties had few implications if any for the traditional landowners and their land holdings, when the government started distributing land. In many of the communities studied the village council only administers a fraction of the total land and e.g. in Itagutwa the village council have no more land to distribute and administer.
- ? Villagers have the past 20 years started returning to the land and villages, which they left after the land was declared village land. Nevertheless, they saw that exodus as temporarily and have maintained their traditional land and the perception concerning boundaries.
- ? Part of that traditional land was previously agricultural land. However, other parts of the land were woodland, where traditional claims also existed. That traditional woodland is now to a large extent being depleted because of an increasing demand for agricultural land whenever the woodland consist of fertile soils and the climatic conditions favour agriculture.

In the minds of the users no distinction exists between community forest, forest reserve, village land and other terms in government terminology. Instead – and perhaps because the government minimised the dialogue with the villagers and maximised their decisions, the villagers continued practises in the woodland and forest reserves following their perceptions only interrupted by forest officers, who still prioritised patrolling more than dialogue and awareness creation, according to the users of the woodland.

Following the clarification regarding boundaries in the forest reserve, the users said that any future management plan should exclude villagers from other villages from collecting timber in their area, while charcoal burning, firewood collection, honey collection and collection of NWFP could be jointly agreed upon among villages.

The team recommends that a joint exercise including the natural resources office and users from all the five villages should be initiated to carry out a mapping exercise indicating the traditional boundaries of the forest reserve. The study team has not been able to embark on such an exercise, due to time constraints and lack of professional mapping expertise on the study team. However, the team strongly believes that the production of such map including all the communities surrounding the forest reserve will be necessary before the project can continue its JMF initiatives.

Finally, the findings also send a message to the natural resources office about taking time and efforts to awareness raise and negotiate ideas before plans and actions are initiated.

The following data regarding the woodland was collected with a number of stakeholders including collectors/users, managers, and manufacturers. However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

Forty (men/women) collectors/users participated in a full day's discussion on the woodland. The participants came from the sub-village Tuliani where a large number of collectors come from. The managers (village council) were interviewed the day before in Kinywang'anga village.

The table below presents an overview of the forest users and product by gender and availability in Tuliani sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, selling | ! | ! | | ! | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | ! | ! | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | ! | ! | | ! | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | | | ! | |
| Pasture, residents' cattle | !! | ! | | ! | |
| Wood for brick burning | ! | ! | | ! | |
| Poles | ! | ! | | ! | |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Charcoal | ! | ! | | ! | |
| Honey | ! | | | ! | |

A ranking exercise with the users regarding the three most important woodland products gave the following result:

Men:

1. charcoal (because the market for charcoal is busy and the wood is there)
2. poles (because men are responsible for building the house)
3. grass for roofing (because of the importance of the house/family)

Women:

1. firewood, domestic (since the women are solely responsible for cooking)
2. grass for roofing (because of the importance of shelter and the income following the selling of the grass)
3. mushrooms, (because green vegetables are rare in the community in the dry season, wherefore mushrooms provide an alternative – and income also for the women)

6.1 Firewood, domestic

Is collected mostly by women assisted by men. Firewood, domestic is considered abundant. Tree species include: “mkwee”, “mkalala”, “mlama”, “mlyasenga”, “muhwisa”, “mpululu”, “mnyaluhanga”, “mfundu”, “msambakwe”, “mtowo”, “msada”, and “mtelela”. The preferred species for cooking are

“mlama”, “mkwee” and “mtelela”. The firewood, domestic is collected in the village council woodland and inside the forest reserve – up to two kilometres away. A woman belonging to a typical household collects two head loads of firewood per week. In the cold season when firewood is used for heating the same woman will collect four head loads. The women ensure that they have a stock of approximately 20 head loads in the house before the rainy season. During the rainy season the women have less time for collecting firewood because of their agricultural activities.

6.2 Firewood, selling

Collected by both men and women and considered sufficient. Only three tree species are collected and sold – “mkwee”, “mtelela”, and “mlama”. A headload is sold in the village at TSH 200 while if taken to Kising’ a village it fetches TSH 400. Pick-up cars come from Iringa to buy firewood. The villagers fill the pick-up car with firewood and charges TSH 3,000 for the wood. Firewood is sold in the village to local brew manufacturers and civil servants that do not have time themselves to collect the firewood. The buyers from Iringa started coming in the 1980’ ties. These buyers have been warned by the natural resources office not to collect firewood in the area, but they still come.

6.3 NWFP

Mushrooms: Collected by both men and women. Species include: “wikulwe”, “unyavifugulu”, “wilelema”, “wimenda”, “wingingwi”, “ugonanyalusi”, “wilulwi”, “witali”, “unyakipulikilo” “wisimba” and “wisogoro”. The majority of villagers prefer the last two mushroom species, because they can be dried and used during the dry season. The people in Kinywang’anga depends on mushroom as a substitute for green vegetable which is not found during the dry season.

Grass for roofing: Collected only by women and considered sufficient. The users told the team that if no bush fires the grass for roofing would have been abundant. Grass is sold between TSH 200 – 300 depending on size of the bundle. The grass is only sold in the village.

Fruits: Collected by both men and women and considered sufficient. Species include: “mtowo”, “mfundu”, “msambalawe”, “mtundwa”, “mitangadasi”, “msasati”, “mbaya”, and tamarind. “Mnyewa” fruits are sold at TSH 10- 20 and other fruits are sold at TSH 400 per bucket in the village.

Medical plants: Collected by both men and women and considered abundant. Species include:

- ? “mulimuli” and “mkunungu” used for treating chest pain(“tambazi”)
- ? “mlyasenga” and “mhotaponzi” used for treating stomach worms
- ? “lwenyi” used for treating convulsion in children (“degedege”)
- ? “lukali” used for treating abdomen pains

The team found it somehow difficult to get detailed information on uses of medical plants since the traditional healers do not want to expose their secrets and “business” to their clients.

6.4 Pasture, pastoralists’ cattle

Only men graze the animals and the pasture is considered sufficient. The pasture would have been scarce if a considerable number of the residents’ cattle had not been stolen. The migrating pastoralist graze inside and outside the forest reserve. The migrating pastoralists come in the rainy season, which is different from the migration pattern in other communities. If the pastoralists came in the dry season they would not find water for their animals, since the water in the community dam is strictly reserved for residents drinking water. The residents send their cattle to the cattle trough in Kising’ a. In reality the Wamasai in the area only migrate in a very limited area around Ismani, Pawaga and Kalenga divisions. Some Wamasai have also settled permanently in the village. They obtain permission to do so by the village council.

The Wamasai are not popular among the majority of the residents. Unlike in other communities where animal traction is common and the residents benefit from the bullocks leased by the Wamasai, this benefit is only for a minority in the community – those with large land practising animal traction. These people also happen to be the village council executives who give permission for the migrants to enter. The majority of the people still practise the hand hoe while preparing land and also maintain the traditional work parties – “mgowe”.

6.5 Pasture, residents' cattle

The pasture is considered sufficient and both men and women are involved in grazing the animals. Grazing takes place both inside and outside the forest reserve. The pasture could have been abundant if not for bush fires and the presence of the large number of cattle belonging to the migrating pastoralists. The residents have recently lost a large number of their animals. They blame the resident Wamasai for conspiring with the migrating Wamasai about stealing their animals. The residents interviewed had no clear idea of where the stolen animals were actually heading; except from that they definitely left the area. The residents refrain from grazing animals in the far woodland because of the theft of animals. Also cattle belonging to residents of Ikengeza village come to graze their animals in the area.

6.6 Wood for brick burning

Both men and women are involved in brick making. The wood is considered sufficient. However, brick making is not an important activity in the sub-village. Only three tree species are used – “myombo”, “mkwee” and “mpululu”.

6.7 Poles

Cut by men and women assist in carrying the poles to the house. Poles are considered sufficient. The tree species include “mlama”, “mpululu”, “mbumila”, “mvanga”, and “msangala”. Tree species used as poles, which are termite resistant, are “mvanga”, “mbumila” and “mlama”. Only men sell poles. They are sold in the village at TSH 100 per piece. Also people come from Kising’ a by donkey carts buying poles. In Tuliani only two persons have donkey carts. Poles are collected both inside and outside the forest reserve.

6.8 Timber

Only men are involved in timber extraction, which takes place only in the forest reserve. The timber is considered scarce. The timber is pit sawn in the forest reserve and several men are involved in the business including men from Dabaga, Itagutwa, Mfyome and Ikengeza villages. They come because the land managed by the Kinywang’anga is the largest and the one still containing the most timber. However, all men involved in timber are still cultivating the land. They have the timber business as a dry season activity. A man can prepare approximately 100 pieces of timber per season. The only timber specie in the area is “mninga”. Buyers are carpenters coming from Kising’ a and within the village. Also people from Iringa come to the village to buy timber. All buyers place an order and thereafter return later to collect the timber. The natural resources office has fined some of the men involved in the timber business up to TSH 20,000. Others have had their timber confiscated by the village council. Prices on timber in the village is TSH 1,500 for a 1”/6”/12 feet. The timber collectors are fully aware of the prices in Iringa town. They are also aware that they actually need a license to cut timber. However, to avoid trouble and confiscation they have also started turning the timber into furniture. No furniture has been confiscated in the community and no one asks questions once the timber has become furniture.

6.9 Hunting

Only men hunt and game is considered scarce. Game includes antelope, warthog, guinea fowl, quail, and wild pig. The hunting takes place inside and outside the forest reserve. The hunting methods include using guns, dogs, and bow and arrow. Larger animals like elephant disappeared 30 years ago.

6.10 Charcoal

Collected by both men and women and considered sufficient. Charcoal is a big business in the village compared to other woodland products. The people in Tuliani sub-village said that there is a market for charcoal in the village and Iringa town. Buyers from Iringa come with pick-up cars and trucks to buy charcoal in the sub-village. Charcoal is made inside and outside the forest reserve. One bag of charcoal is sold at TSH 1000. Only two tree species are used to make charcoal - "myombo" and "mtelela".

Both men and women in the sub-village make charcoal in a joint exercise called "mgowe". A man or woman calls a group of ten to fifteen people who help the inviting person to cut the trees and burn the charcoal and later fill it in sacks and load the pick-up car or truck. The inviting person is responsible for buying 20 - 40 litres of local brew and food for the people who came to help.

Some charcoal burners have license to produce charcoal. However, the license is limited to an area named Idodi where they never go. They actually burn the charcoal inside the forest reserve.

6.11 Honey

Only men collect honey, which is considered sufficient. Ten men in the sub-village have an average of 3 – 20 beehives each. They hang the hives in the trees in the woodland but not too far away, since Wamasai often steal the honey. The men use the tree specie of "mtono" and "mpululu" for making the hives. The hives are never placed in a "mkunungu" tree, since the bees do not near that tree. Apart from that no tree specie is preferred. Honey is sold at TSH 200 per litre and TSH 12,000 – 15,000 per 20 litres. The honey is not refined. The season for honey is May – June. Only one person produces bee wax in the sub-village. Honey is used for food, together with "ugali", porridge, local brew and also for medical purposes.

SOCIO-ECONOMIC VILLAGE PROFILE, KIWERE VILLAGE

DISTRICT: Iringa DIVISION: Kalenga WARD: Kalenga VILLAGE: Kiwere

1.0 Implications for JFM

The socio-economic study indicates that the woodland is under pressure and its management is causing conflicts with both neighbouring communities and pastoralists seasonal use of pasture in the area. Meanwhile, the study team found a relatively weak community management with non-functioning standing committees and subcommittees of the village council. The village council seems dominated by the chairman who with his other responsibilities outside the community might not have the time (interest?) needed to ensure the functioning of the village council which he chairs.

The villagers are discontent with the increasing number of cattle owned by pastoralists entering the village land for pasture and disagree with the permission given by the village council. Nevertheless, the villagers have taken no initiative to bring the issue for discussion with the village council.

A demarcation exercise has been successfully completed including the neighbouring villages' participation. Moreover, the villagers have prioritised their tobacco cultivation, which constitutes a main usage of wood. However, the villagers have not been able to successfully manage their prioritisation against other usage of the woodland (charcoal burning and timber harvesting). The immediate economic benefits of charcoal burning and timber harvesting seems to temper outsiders as well as villagers to compromise their priorities for an immediate economic benefit.

The study team clearly experienced a less open attitude of woodland users due to fear of the presence of government forestry staff participating in the exercise, which is not surprising since action has been taken by these authorities to stop illegal practises in the village.

The woodland of Kiwere is under pressure due to its economic potential for a large number of village users as well as outsiders from Iringa, wherefore a joint forestry management plan could be a successful intervention. However, with the limited activities and management experience of the village council, subcommittees and community committees in general and in relation to a sustainable management of the woodland, a considerable effort of mobilisation, training and awareness raising among villagers as well as outside users - before the actual formulation of a JFM plan can be initiated.

2.0 Location and demography

The community of Kiwere is situated on the road between Iringa and Pawaga 25 kilometres from Iringa town, and accessibility is good all year.

The total population in the four sub-villages making up Kiwere is found in the table below:

| Name of village/sub-villages | Total population 1988 | Best estimate 1999 | No.house-holds 1999 | No. House-holds, women headed, 1999 |
|------------------------------|-----------------------|--------------------|---------------------|-------------------------------------|
| Sub-village: Chapakazi | 561 | 578 | 102 | 7 |
| Sub-village: Mwaya "a" | 453 | 465 | 99 | 9 |
| Sub-village: Mwaya "b" | 416 | 422 | 78 | 12 |
| Sub-village: Makondo | 356 | 361 | 67 | 5 |
| Total: Kiwere | 1786 | 1826 | 346 | 33 |

Permanent resident ethnic groups in the community comprise of Wahehe, Wakinga, Wabena, Wamasai, Wasukuma, Wanyamwezi and Wawanji. Non-resident pastoralists belong to the Wamasai and Wasukuma. The village was formed in 1964 as part of the village settlement scheme.

3.0 Infrastructure

The infrastructure in the village includes:

1 primary school

1 market (once per month, mainly cattle)

A diesel engine pumped water scheme was established in 1965 but has not been functioning for the past ten years due to the high running cost of the diesel engine and lack of maintenance. The diesel pump is still intact and so is the water tank. It should also be mentioned that the village council has a subcommittee for water. However, this committee is not functioning.

4.0 Economic activities

4.1 Agriculture, crop cultivation

The main economic activity in the village is agriculture. The main food crops include maize and a number of minor food crops. The main commercial crops include tobacco and tomatoes, with tobacco being the most important cash crop in the community and moreover the third most important "user" of woodland products.

Tobacco growing and curing:

Tobacco growing and the idea of the settlement scheme are closely inter-linked. Tobacco growing started in 1964 and at those time individual households received more than half their income from tobacco farming. The tobacco farming was organised as a communal activity with both community managed plots, communal curing and marketing of the tobacco through one government buyer. The management of the tobacco growing remained the same although with minor changes through the Ujamaa farming period.

In 1996 a dramatic change took place with regard to tobacco growing. The tobacco board lost their monopoly and private international tobacco companies were introduced. Consequently, the farming of tobacco became an activity for the individual farmers on his/her private farm. Also tobacco curing became an activity of the individual household. Today more than 80 per cent of the households (approx. 300) are involved in tobacco growing and tobacco curing. Both men and women carry out the activity and today it is estimated that tobacco growing contributes about less than half of the cash income of households.

The wood to cure the tobacco is collected on the village land - like in the earlier days. Some farmers expressed concern of the high consumption of fuelwood caused by individual curing. They explained that they tried to combine own curing activity with other farmers to save wood; especially in the early harvest season where the leaves of the individual farmer are too few to fill the barn.

Farmers receive chemical fertiliser from the tobacco company through the tobacco board. The cost of the fertiliser is later subtracted from the payment of the individual farmer. The selling of the tobacco is done at special market days.

The farmers in Kiwere have no representation in the tobacco board or elsewhere where they could influence the price they receive for their product.

4.2 Animal husbandry

Livestock plays an important role in the farming system. Wamasai (resident) households have an average of 100 cattle while other ethnic groups have an average of 6 –10 cattle for rich and middle income groups, while in general the poor has no cattle. The cattle graze in designated areas in the woodland and on harvested fields, see sketch map.

4.3 Land tenure

The land tenure system is characterised by a traditional system (malungulu) and the government system of land being distributed by the village council. In the traditional system only men inherit land while the land distributed through the government system is inherited by both men and women. Some of the traditional landowners rent out part of their land for TSH 2,000 per acre per season.

The farmers explained that they consider the government land they farm as being given by the central government and not the village council. This is attributed to the history of the village being one of the settlement schemes formed at a time when the idea of the village council was to gain power. Today the village council distributes land following applications from the farmers. The village council allocates the land on a three years lease. Through this system the village council maintains a kind of crop rotation, since the applicant has to specify what crop he/she wants to cultivate, after which the village council decides on the piece of land. The village experiences no shortage of agricultural land. The village council had held a meeting this year to discuss how to allocate land for the young men “just hanging around”. However, it was an initiative of the village council since no applications had been received this year from the young men (top-down planning...).

Today the village land is demarcated through an exercise involving all surrounding villages. This demarcation exercise came about due to a major land dispute with neighbouring villages over agricultural land three years ago.

Changes in the farming system and technology choice include a change in draught animals from bullocks to the use of donkeys. Animal traction using bullocks was introduced three years ago. However, bullocks were often stolen wherefore the farmers started to use donkeys. Some wealthy farmers have a plough but no donkeys and therefore team up with farmers (poor farmers) having the donkeys but not the plough. The poor farmers use also uses the donkeys to collect water, which they sell in the community. The cost of ploughing by tractor is TSH 11,000 per acre while the donkey ploughing cost TSH 5,000 per acre making animal traction attractive to the farmers.

There are no commercial farms in Kiwere and farmers do not migrate to seek employment on commercial farms.

4.4 Other income generating activities

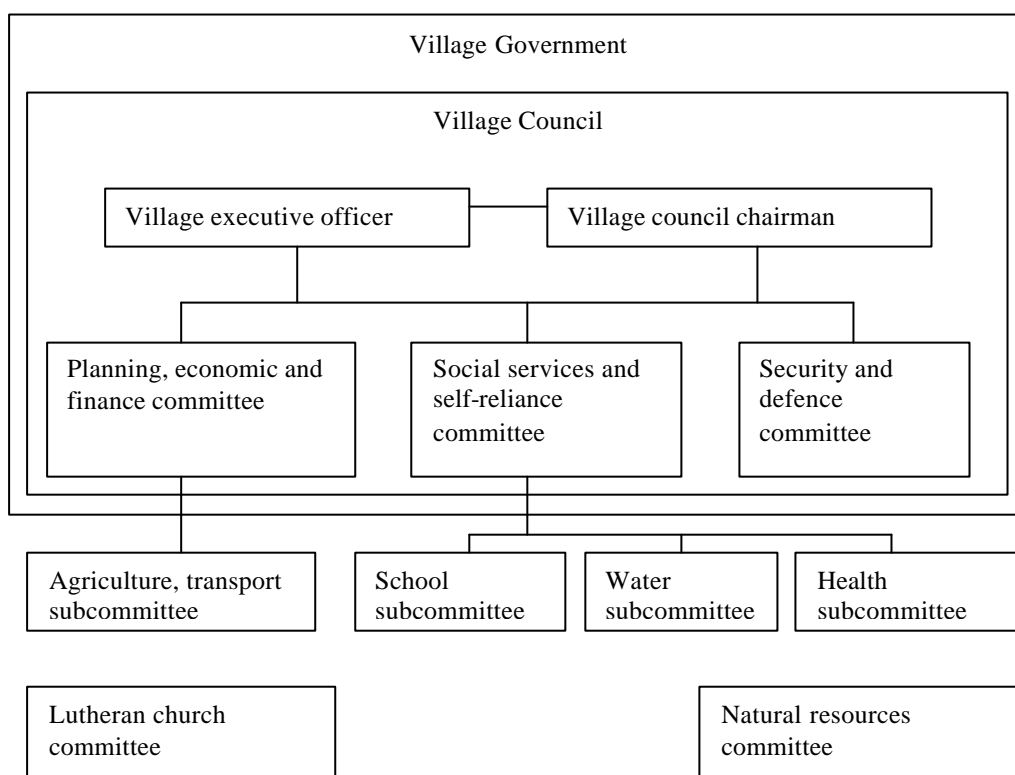
The income generating activities are presented in the table below:

| Income generating activities | Gender | | Economic Group | | | Age Group | | |
|------------------------------|--------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | ! | !! | ! | ! | |
| Selling of food | ! | ! | | ! | | | ! | |
| Shop/kiosk | ! | | ! | ! | | ! | ! | |
| Selling firewood, local | ! | ! | | | ! | ! | ! | |
| Carpentry | ! | | | ! | | ! | ! | |
| Masonry | ! | | | | ! | | ! | |

| | | | | | | | | |
|-------------------------|---|---|--|---|---|---|---|---|
| Selling charcoal, local | ! | | | | ! | | ! | |
| Selling water | ! | ! | | | ! | ! | ! | ! |
| Selling grass, roofing | | ! | | | ! | ! | ! | ! |
| Selling honey | ! | | | ! | | | ! | |

5.0 Village Organisations

The village organisation is presented in the organisational chart below:



The village council has members from all sub-villages. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The village council is supposed to meet every month. However, this year the village council has met three times (middle October) according to the chairman. However, the team has doubt whether the village council actually met even three times. The female members of the village council participating in the socio-economic study seemed very passive and uncomfortable at the meeting and contributed very little to the overall discussion. The village council seems very controlled by the chairman who also happens to be the ward counsellor. The standing committees of the village council has had one if any meetings this year.

Five sub-committees exist under the village council: agriculture and transport, school, land distribution, health, and water. The subcommittee for agriculture and transport is involved in the collection of wood for curing tobacco. Individual farmers hire the truck or tractor for TSH 15,000 for one day. The school committee is inactive, and this year's maintenance of the primary school was entirely organised by the main village council. The water committee has also ceased to exist and is having no meetings and no activities. The sub-committee for land distribution had one meeting this year to solve a minor conflict

concerning agricultural land. The mentioned subcommittees have no major planning or budgeting experience.

Moreover, the Lutheran Church has set up a community committee outside the village council structure to collect money in conjunction with establishing a gravity water scheme for the community. This committee has had no links to the water subcommittee and has ceased to exist now the money has been collected and handed over to the church. No money has been collected for the maintenance of the scheme. The village council believed that the maintenance would be minimal compared to their previous diesel pump and said they would maintain the coming water supply.

The recently elected MEMA committee is not yet linked to a standing committee. However, the village council expressed that it will be linked to the security and defence committee since its role is protection of the woodland.

6.0 Woodland and Forest

The following data regarding the woodland was collected at a collectors/users meeting in the sub-village of Chapakazi since the largest number of users/collectors resides in that sub-village. Sixty-three men and women turned up for the discussion, which is a relatively large number to carry out such an exercise with. However, the exercise was successful.

The village has no experience of having wood/forest/land management project such as CONCERN, HIMA or other initiatives. The people are mainly farmers and only relatively dependant on the woodland products. However, the previously mentioned tobacco is the most important cash crop to the largest number of households in the community and the largest consumer of wood.

The three most important woodland products for men in the sub-village are wood for curing tobacco, building poles and pasture for residents' cattle. The three most important woodland products for women in the sub-village are fuelwood for domestic use, mushrooms and wood for curing tobacco.

The table below presents an overview of the forest users and product by gender and availability in Chapakazi sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Wood for curing tobacco | ! | | | ! | |
| Firewood, for sale | ! | !! | | ! | |
| Firewood, domestic | | ! | | ! | |
| NWFP: | | | | | |
| Mushrooms | | ! | | | ! |
| Medical plants/roots | ! | | ! | | |
| Fruits | ! | !! | ! | | |
| Pasture, pastoralists' cattle | ! | | | ! | |
| Pasture, residents' cattle | ! | | | | ! |
| Charcoal | !! | ! | | | ! |
| Wood for brick burning | ! | | | ! | |
| Poles | ! | | | ! | |
| Timber | ! | | | ! | |

| | | | | | |
|------------|---|--|--|---|---|
| Hunting: | | | | | |
| Big game | ! | | | | ! |
| Small game | ! | | | ! | |
| Honey | ! | | | ! | |

The presentation below takes its point of departure in products collected with the analysis developing from that perspective.

6.1 Firewood, domestic

Collected mainly by women. The firewood is sufficient. Before the firewood was abundant and collected just around the house. Now the women have to walk up to 5 kilometres, since cutting of wood for curing tobacco has depleted the immediate woodlands. The firewood is collected within the village land boundaries, see map. Collection does not yet take place on the hills.

6.2 NWFP

Mostly collected by women. Mushrooms are scarce while medicine and other products are sufficient. The mushrooms are nowadays often collected up to 20 kilometres from the sub-village, but still within the village boundaries. Most households are involved in mushroom collection. Mushrooms are dried if in excess. The women said the mushrooms have disappeared due to the depletions of woodland, intensive cultivation and insufficient rainfall. There are many species of mushrooms including “wikulwe”, “wunyafigulu”, “wimenda”, “wisimba”, “wilulwi”, and “wigwingi” (local Wahehe terms). Also fruits collected in the woodland has nutritional importance to the villagers. These fruits include “mtowo”, “mikusu” and “msasati”. “Mtowo” is boiled and preserved with salt and eaten like a sweet/gum. Many women also said they collect grass for brooms.

6.3 Honey

Only collected by men. The honey is sufficient. Ten men have traditional beehives while one man has 200 beehives including both traditional and modern beehives. Two tree species “myombo” and “mbuyu” are important since the bees prefer those. The honey is collected using fire/smoke. The honey is used for local beer, food and medicine. Honey is sold if in excess. The women said they prefer honey to sugar. The commercial honey producer is supported by the Natural Resources Department, Iringa, who gave a manual honey press to the man, while the large majority of farmers in the community is still in need of general extension regarding the economic potential of honey.

6.4 Firewood for sale

Mostly collected by women. The firewood is sufficient. For the few men collecting firewood it is abundant because they use truck to collect the firewood up to 25 kilometres away but still within the village land boundaries. The trucks come from Iringa town and the men are employed as workers to collect the firewood. The firewood is sold in the sub-village at TSH 200 a head load, while the men receive TSH 8,000 for filling a truck. The species used for the firewood include “myombo”, “mkwee” and “mlama”. Some of these trucks are coming from schools and colleges and other government institutions in Iringa. Some of the trucks coming have permits.

6.5 Pasture, pastoralists' cattle

Only men are responsible for grazing the animals and they mostly belong to the ethnic groups of Wamasai and Wasukuma. The villagers said that the grass for the pastoralists was sufficient and that they had an agreement with the village council. The number of cattle belonging to the pastoralists is increasing. Pastoralists in the area have between 150 – 600 cattle. The coming of the pastoralists depends on the situation of their pastures in their areas of origin. Some areas of the woodlands and agricultural lands are excluded from grazing through a by-law protecting these areas. The areas are found along the stream and other water bodies, which constitutes the drinking water supply to the village. However, this by-law is often not respected by the Wamasai. The villagers also complained about cattle stealing by the Wamasai.

6.6 Pasture, residents' cattle

Only men above 18 years graze cattle. Women also have a big interest in this issue since they own cattle, while they do not graze them. A by-law exists which prohibits boys to graze animals – the reason being that they should attend school. Families are fined if boys are herding cattle except from during weekends. The grass is scarce for resident animals. The reason given for this is that too many pastoralists with too many cattle are allowed into the village land. The users participating in the exercise did not agree to the permission given by the village council, which permits the grazing of the pastoralists' animals. No initiative has been taken to solve this problem and the villagers agreed that the initiative rests with the chairman of the village council.

6.7 Charcoal burning

Mostly done by men but some women are also involved. The charcoal is scarce because the same species are used for tobacco curing which has higher priority in the community than charcoal burning. Trucks come from Iringa to buy the charcoal. Individuals cut the wood for the charcoal, the burning and the selling – not groups of farmers. Charcoal is sold at TSH 1000 per bag – a bag, which fetches TSH 2000 in Iringa town. During the discussion the team asked why the farmers did not team up and use the truck belonging to the Village Council. The farmers said that they did not have a permit to allow them into Iringa and secondly didn't have the money to get that permit. However, the idea was well taken.....Later the team discovered that the truck has actually been used several times to illegally convey charcoal to Iringa....Collecting data and suggesting management at the same time is not easy and should be avoided....!

6.8 Brick making

Mostly men are involved but women help to bring the wood to the kiln. The wood for brick making is sufficient. However, it is not a major activity in the community with only ten people being involved. Bricks are not sold outside the community. The tree species for brick burning are the same as for tobacco curing and brick making might therefore not be prioritised. Some women are directly involved in the brick making in connection with community development activities (e.g. school building)

6.9 Poles

Poles are only collected by men and are sufficient. Some people from Kipera enter the village land to collect poles. The villagers say they had two meetings to discuss the continuation of this activity. The outcome of this meeting was that the collection should cease. Meanwhile poles are still collected. Tree species include "mpululu", "midwendwe", "mlama", and "mtimbwi".

6.10 Timber

Only collected by men and are considered sufficient by men and scarce by women because the species for timber are depleted. People from outside enter to harvest timber (illegally). Another reason for the depletion of the timber species is the use of “mninga” for curing tobacco at a time when the value and importance of that species was not realised by the villagers and before outsiders started to collect this timber in the community. The villagers claimed to have no expertise in pitsawing and other timber related technologies. However, this might not reflect the whole truth and some villagers later said that some people in the community for sure had the knowledge but that they feared the consequences of giving that information in front of officers from the Natural Resources Department, Iringa.

6.11 Hunting

Men only do hunting and game is scarce. Big game disappeared 30 years ago and today the men only hunt rabbits, wild pigs and dik-dik antelopes and guinea fowl.

6.12 Tobacco curing

Men only do collecting wood for tobacco curing, while women are involved in preparing the barn. Wood for tobacco curing is sufficient and has high priority among both men and women, since tobacco cultivation is very important to the farmers, see text above. Species for tobacco curing includes “myombo”, “mkwee” and “mlama”. Today the wood for tobacco curing is collected 20 kilometres from the village.

PROFILE OF LUSINGA VILLAGE

NEW DABAGA-ULONGAMBI FOREST RESERVE (NDUFR)

District: Iringa (Rural) **Division:** Kilolo **Ward:** Dabaga **Village:** Lusinga

Potential for JFM

Lusinga village started planting trees since 1970s during an afforestation campaign. At present the village has plenty of scattered exotic woodlots owned individually and communally. The village is self sufficient in building materials and firewood for domestic use and this has put pressure off the forest reserve.

The present Village Executive Officer inspired good leadership. Most villagers are conscious about the regulation controlling the use of the forest reserve and there are some bylaws in use. The villagers were concerned when the forester in-charge to the reserve was involved in illegal harvesting meanwhile the forest was closed for any exploitation.

Establishment of fire and environment committee is instrumental to warrant proper administration of the reserve.

Dabaga Tea Project in the village, has large area of natural forest bordering New Dabaga-Ulongambi Forest Reserve. The project might be anticipated to be a collaborative partner in this aspect.

1.0 Introduction

1.1 Background

The current set up of the village is not a traditional. Traditionally the local people lived in scattered clans in the area. Local tribe is *Wahehe*. There were also other tribes like *Wabena*, *Wasangu*, *Wakinga*, and *Waluguru* who came as “*manamba*” to work in settlers’ farm.

In 1940s white settlers occupied village land and they cultivated commercial crops, such as pyrethrum, wheat, and tobacco they also kept dairy cattle and poultry. The local people together with “*manamba*” provided labour to settlers’ farms.

The village was under colonial administrative with *Chief*, *Sub-chief*, *Kijiji* and *Lunanzi*. Their main role was tax collection and organising people to work on road construction. The *Lunanzi* also organised and forced people to work on Chief’s farm the system known as “*Lifuge*”.

The villagization operation of 1974 commonly known as operation “*Sogeza*” moved them to Kilanzi area that was considered to be the centre of the village. Kilanzi was very close to NDUFR. The weather was not favourable (cold) and there was not enough land for cultivation. As a result, in 1976 they returned to the current Lusinga village area regarded as a sub-village to Ilamba village. This administrative set up facilitated provision of necessary inputs under the Ujamaa mode of production. However the implementation was seen not to be rational that the Lusinga people demanded to have their own village administration. Also they found the school in Ilamba village was far for their children.

Finally, Lusinga was officially registered as Ujamaa village in 1993.

1.2 Location and Demography

The village is located South East of Iringa Municipality about 50 km from Iringa. The village borders Ilamba village to the South, Lukani village to the West, Lulanzi village to the North –West and to the East there is NDUFR.

Natural features mark the village boundaries, include rivers: Mtitu, Mgella, Ikunduvi and Malenga makali. Also a portion of natural forest under Dabaga Tea Project marks village boundary to NDUFR.

There are three sub-villages of Mifugo, Donodono and Kilimahewa.

The total population of Lusinga village is 1375 inhabitants according to 1998 local census. The productive work force was reported to have 450 people of whom 290 are women and 160 are men. Children of age 0 – 5 years are 300, age 8 – 17 years are 254 where 112 are boys and 142 are girls.

There are 280 households, which are scattered over the large area in the three sub-villages. The distribution of households in the sub-villages is 90 households in Mifugo, 80 households in Donodono and 110 households in Kilimahewa. Numbers of people per household vary between 4-5 persons. There are 25 female-headed households. Most households are concentrated along the road.

Polygamy is practised with up to 6 wives. The practice is common for non-religious and non-committed Christians. The village is dominated by Christians mainly Roman Catholics and Lutherans.

1.3 Village Infrastructure

There is one **primary school** in the village that was started in 1982 with only class I. Until 1988 the school had up to class VII. The school was built through villagers' efforts with some support from the District Council. The present number of pupils is 254 with 112 boys and 142 girls. There are 9 teachers of whom 6 are men and 3 are women and most of them are native in the village. The school also provides services for adult education and pre-primary education.

Health services are obtained from Kilolo, Itwanga (Missionary Health Center) and Kidabaga villages, which are far from Lusinga village, about 5-10 km away. There are 2 primary health attendants: a female and a male and 4 traditional midwives who have attended primary healthy training.

The village is easily accessible throughout the year, connected to other areas by all weather **access road**. There is no regular public transport.

Water supply in the village is mainly obtained from river streams where they make shallow wells. The water supply is reliable but not safe.

There is no market place, but they depend on a market day, which occurs once a month at Kilolo village. Other services include three kiosks; one shop, one village *pombe* shop and 3 maize mills. The *pombe* shop is operated daily from 2.00 p.m. and closed at 8.00 p.m.

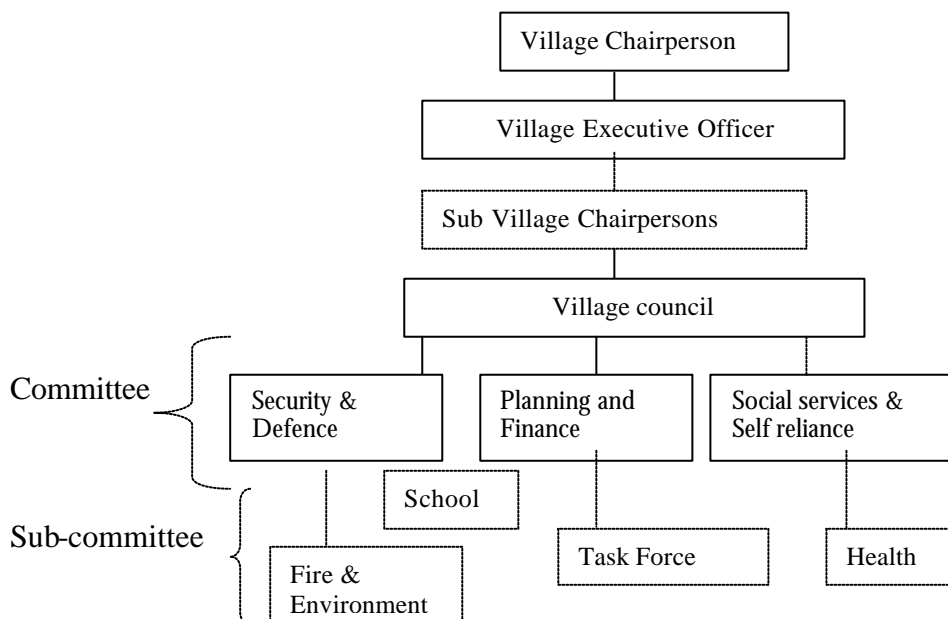
2.0 Village Organization

2.1 Village Government

The government is composed of positions shown in figure 1. The village council is composed of 25 members. These are elected members that include village chairperson, 3 sub village chairpersons and other villagers. 7 elected members are women with special seats. Last election was in 1995 and next election will be conducted in November/December, 1999. Therefore, currently the village council has been dissolved, but a temporary village council administers the village. Almost the same members have applied for the next election. There are also invited members who are village experts and leaders of organizations that are in the village. These include Head teacher, Agriculture Extension officer (Tea Estate), Livestock officer, and Religious leaders and village accountant. Village Executive officer is a member by being a secretary to the village council. The present Village Executive Officer is a woman and seems to be highly motivated to her post.

The village council consists of three standing committees that include Planning and Finance, Defence and Security and, Social Services and Self –Reliance. There are two sub-committees of health and task.

Figure 1: Village Organization Chart



The village council has routine meetings. The VC meetings are conducted after every three months and standing committees conduct their meetings every month and when need arises. For instance in this year the Village Council had conducted three routine and several ad-hoc meetings.

There was confusion among the VC members, during discussions particularly the position of sub village chairpersons and link of school committee with reference to the village organisation structure.

2.2 Other Organizations and Experience with External Support

There are churches Lutheran and Roman Catholics, ruling Party (CCM) and opposition Party (Tanzania Labor Party) and one cultural group.

There has been no external support to the village with regard to community development projects. However, the government provided subsidies and loans on agricultural inputs during the Ujamaa regime through cooperative society. Remnants of the support are an old storage building and a scrap maize mill.

2.3 Village Bylaws

The village bylaws are drafted by village council and approved by District Council before put into operational. Currently there are some bylaws which are: environment bylaws that prohibit to cut trees at water sources, put fire without notice when preparing farms, running of the *pombe* shop before 2.00 p.m. and after 8.00 p.m. The fines charged is between TSH 1,000 to 3,000 depending on the offences committed. Offences that cannot be resolved by village council are referred to the court.

3.0 Economic Activities

3.1 Agriculture

The villagers in Lusinga practice subsistence farming. Crops are mainly produced for domestic use and excess produce is sold. They use hand hoe for cultivation and the use of family labour for cultivation. Sometimes collective farming “*mgowe*” is organised. Most crops are grown by both men and women. Crops cultivated in the village are shown in Table 1.

Table 1: Crops cultivated by gender and main use

| CROP | Season | Gender | | Main Use | |
|----------------|--------------|--------|------|------------|----------|
| | | Female | Male | Commercial | Domestic |
| Maize | Nov. – Sept. | * | * | * | * |
| Wheat | Mar – Aug | | * | * | |
| Beans | Feb. – Jun | * | * | * | * |
| Sweet potatoes | Jun – Marl | * | * | | * |
| Irish potatoes | All year | * | * | * | |
| Finger millet | Dec. – Aug. | * | | * | * |
| Fruits | Dec – Apr | * | * | * | * |
| Vegetables | All year | * | * | * | * |
| Green peas | All year | * | * | * | |
| Tree crops | All year | * | * | * | * |

Farmers practise is mixed cropping of maize, beans and peas. Rotation farming is also done between maize and beans, which are the main crops and cultivated in the farming rain season. Vegetable gardening is done in the valleys (*vinyungu*) throughout the year while Irish potatoes are cultivated in valleys and upland farms.

The farmers reported change in productivity per acre per year. Before villagization operation good harvest was 5 bags of maize per acre and soon after the operation the yield raised to 10 – 15 bags/acre. This was a result of use of fertilisers and appropriate planting spacing. Currently the yield dropped and farmers get between 2- 3 bags of maize per acre. They can not afford to buy chemical fertilisers because of low income and use of cow manure is limited to few individuals.

Farmers in the village cultivate more than one farm plot. A household may have between 3 and 5 plots. These are usually located in different places according to mode of acquisition and crops grown. Some of village crop fields and woodlots are bordering the NDUFR. There are both large and small cultivated farms depending on the ability to work and family size. Households cultivate between 3 and 10 acres per year.

3.2 Animal Husbandry

The Wahehe had in the past a tradition of livestock keeping. They kept cattle, goats and sheep. Nowadays few villagers practise animal husbandry. Animals kept in the village include 152 cattle owned by 15 households, about 80 sheep and goats owned by 8 households, 25 percent of all households keep pigs and all households keep local chicken. The animals are for sale and for domestic use. Cows are also used to pay dowry.

3.3 Tenure

Village Council recognise and respect traditional land. Land is either inherited or allocated by the Village Council through its land allocation committee, which is within the task force sub-committee. Both women and men have rights to land inheritance and allocation from the traditional and current system. There is reported shortage of land in the village. Villagers borrow land under mutual agreement between parties. It is not allowed to sell any piece of land.

3.4 Commercial Farms and Woodlot

Since village afforestation campaigns in 1970s the village has been planting trees. By 1975 the village had 4 acres of communal woodlot planted with mainly pine and 0.5 acre planted with wattle and eucalyptus. There was a central tree nursery at Kilolo village where seedlings were freely distributed. Currently the village owns a 7 acres woodlot that has different rotational age classes. When the village is in need of money for development activities they do selective felling. Almost every household in the village owns a woodlot of pines, wattle or eucalyptus to meet firewood and building poles needs, and sometimes money for the household requirements.

There is also a commercial tea farm owned and managed by Tanzania Small Holder Tea Development Agency (see box 1). The project has encouraged villagers to grow tea as a cash crop. The farmers owned about 7.22 acres.

3.5 Income Generating Opportunities

The village council found it difficult to differentiate the rich and poor villagers. They find themselves to fall under same categories or have similar standard of living with the exception of some few individuals who are better off, characterised with iron-roofed house and maize mill. Hence the economic groups were ranked as medium or poor. However, there are opportunities for raising income through various activities performed by the economic groups as shown in table 2.

Table 2: Income generating activities

| Income Source | Gender | | Economic Group | | |
|---------------|--------|------------------|----------------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing | sell | Prepare and sell | | | * |
| Maize mill | * | | | * | |
| Livestock | * | * | | | * |
| Timber | * | | | | * |
| Selling poles | * | * | | | * |
| Basket making | | * | | | * |
| Mats making | * | | | | * |

| | | | | | |
|---------------------|---|---|--|---|---|
| Black smith | * | | | | * |
| Carpentry | * | | | | * |
| Pottery | | * | | | * |
| Brick making | * | | | | * |
| Charcoal | | | | | |
| Burning | * | | | | * |
| Selling | * | * | | | * |
| Masonry | * | | | | * |
| Day labour | * | * | | | * |
| Cookies | | * | | | * |
| Shoe repair. | * | | | | * |
| Running kiosk | * | | | * | |
| Selling of firewood | * | * | | | * |

Market values for some of the items are as follows:

- ? firewood sold at TSH 100 – 200 per head load;
- ? basket TSH 500 – 3,000;
- ? mats TSH 1000 –2000;
- ? charcoal TSH 300 per tin and TSH 1,200 per bag; and
- ? local brew 20 litres bought at TSH 1000 and sold at TSH 1500.

Village revenue

The income for village is derived from charging development levy of TSH 4,000 per individual. It is only the village productive force that pays the levy. There is also revenue collected yearly on livestock owned which is TSH 500 per head of cattle, TSH 200 per head of goat and sheep. The entire levy collected in the village is submitted to District Council. Out of the total levy TSH 1,500 is deposited to school development fund for school development activities, and 30 percent of the balance is deposited to village development account. The amount is distributed as 10 percent allowance to VEO, 10 percent allocated to cover village administrative costs, 7 percent to village chairperson and 3 percent to sub village chairpersons.

Other sources of income include charging TSH 100 for every 20 litres of *pombe* sold, TSH 100 for everyday sale of cookies, butchery is charged TSH 500 per head of cattle slaughtered. The village also collects TSH 20-50 per pole. The accrued money is utilised for village administrative activities and provision of services.

This year the village has collected revenue as follows:

- ? 30 percent of development levy – TSH 1,150,000
- ? petty trade fees – TSH 72,000
- ? Local brew – TSH 300,000

Box 1: Dabaga Tea Project farm

Dabaga Tea Farm is owned and managed by Tanzania Small Holder Tea Development Agency. The Agency is direct under the Ministry of Agriculture and Co-operatives. The farm was established in 1988 under Tanzania Tea Authority following the government objective to increase tea production and improve the standard of living of the villages surrounding the farm. The farm was in operational from 1989/1990 financial year where they started with seedling production and awareness creation in the villages. The farm is locally supervised and managed by a Project Manager assisted by a Farm Manager and three agricultural extensions Officers.

The farm occupies 3,500 hectares of surveyed land, which was formerly owned by villages at respective locations. There is also a big portion of natural forest, which borders the New Dabaga -Ulongambi Forest Reserve. There are five management areas/blocks under the tea project. This include the area in villages of Lusinga, Ilamba, Magome, Kidabaga and Boma la Ng'ombe.

The actual area under tea cultivation is 200.85 ha. This is distributed in three areas as follows: in Lusinga village 80.7 ha owned by project and 7.22 ha owned by the villagers, in Kidabaga village, 73.9 ha owned by project and 9.33 ha owned by villagers, and in Ilamba 29.7 ha owned by project. So far no development in Magome and Boma la Ng'ombe village areas. The villagers were provided with tea seedlings on loan basis that the loan would be paid back during selling of tealeaves to the authority

In 1994 under the same project, the processing factory was constructed. Since that time the factory was not in operation due to financial constraints. Currently, the cultivated farms both under the estate and village lands are not well managed and the study team observed the tea plants to be under thick bushes.

4.0 Woodland and Forest use

The discussion was held in an area close to New Dabaga-Ulongambi Forest Reserve. There were 18 forest users who participated in the discussion, of whom 3 were women. Table 3 summarises the different products as identified by both men and women and their level of importance as well as availability.

Table 3: Products Identification, Preference and Availability by Gender

| Products | By Gender and Preference | | Availability | | |
|-------------------|--------------------------|------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Collecting honey | | * | | | |
| Hunting | | * | | | |
| Charcoal | | * | | | |
| Brick burning | * | * | | | |
| Firewood domestic | *II | *I | ** | | |
| NWFP: | | | | | |
| Mushrooms | | * | | | |
| Wild vegetable | *I | * | | * | |
| Thatch grass | | * | | | |
| Medicines | | * | | | |
| Milulu | *III | * | | | * |
| Building poles | * | *II | * | | |
| Livestock keeping | | *III | | | * |
| Timber | | * | | | |

Note: Number I – III indicate preference and * indicate product use and availability.

4.1 Non-wood Forest Products (NWFP)

Wild vegetables (*derega*) were the most important product of women. The reason for this choice lies on the role of women to ensure availability of food in the family

The wild vegetables were claimed to be sufficient, as they are readily available throughout the year. Users said that the vegetable is plenty in the forest reserve, an area they are not allowed to enter.

Other vegetables discussed by women were “*mnafu*” and mushrooms. They collect these from bushes and farmlands. **Mushrooms** are reported to be plenty in the forest reserve because of abundance of dead materials. These vegetables are collected and used during the rain season November - March.

Milulu collection was third important product for women because they make sleeping mats and make baskets for carrying crops. Making mats and baskets is an income generating activity for both women and men.

Women reported that they collect *milulu* from valleys where it grows naturally. Users reported that *milulu* is also available in the forest reserve where they are not allowed to go. Women sell *milulu* to men who make mats. A head load is sold at TSH 200 – 500. To ensure availability of *milulu* users reported that they have tried to propagate them but without success. The planting has been done in the few valley bottoms.

Traditional medicines were among the product identified. With traditional medicines the ‘doctors’ reported that they have a system of collection, which ensure sustainable supply of the product, without trees destroyed. They take only small portions of roots, bark and leaves. They also collect small shrubs and herbs. The “doctors” reported that they charge little money to their clients as expression for appreciating the service. Hence the amount is negotiable but not less than TSH 200. Collection of medicines is done throughout the year. They collect medicinal plants from the forest reserve, bushes and fields. They said there are varieties of medicinal plants in the forest reserve but they do not go.

Thatch grass was reported to be readily available throughout the year and is collected from fallow land and valleys. Women and children collect the grass whereas men do the roof thatching. Sometimes collection of thatch grass and roofing work is done in a collective manner where people from other families participate as a voluntary system known as “*mgowe*”. Selling of thatch grass is also an income generating activity where a head load costs about TSH 100 – 200. Thatch grass is mostly collected during dry season when house repair and building is done. Users reported that an average house of three rooms uses 20 –25 head loads.

Users reported that in Lusunga, they do not practice **beekeeping** in the forest but there are honey hunters. Honey is collected from caves and hollow trees. They use traditional method of scaring bees by burning dried grass to make smoke and thus harvest the honey. Users emphasised that they do not hang beehives because it is very cold for the bees to settle. Instead they have adopted a system which is favourable for bees to settle whereby they use of inverted big pots on the ground with bored small hole.

Users reported that **game hunting** is done mainly to control vermin. But sometimes animals such as dik-dik, hare, pigs and bush rats are trapped using snares, dogs and arrows to provide meat supplement. However some of the members considered it to be an illegal activity and did not want to make it explicit to the study team. They said that there is no big game at all in the village.

4.2 Firewood

Firewood collection was the first choice of men, and the second choice of women. Although men were not the main collectors of firewood they were concerned about this product because it is energy source for cooking and heating. Men stressed further that without firewood there is no food and thus no energy to work.

Firewood collection is done mainly by women assisted by their daughters and sometime by husbands. However in the traditional system this activity was strictly females' role. Firewood is used also for making local brew, which is an important income generating activity for women. Families also use firewood for brick burning.

Selling of firewood is not a source of income in the village. Firewood is reported to be abundant and takes half to one hour (return trip) to collect. Firewood is obtained from planted woodlots around the village. The villagers did not show any interest of going to forest reserve for firewood collection. Trees for firewood use are Black wattle, Eucalyptus and Pine. Black wattle is most preferred because of high calorific value. No specific woodlots are planted for firewood but it is collected as by-product of other uses of trees. These include branches, off-cuts, barks and thinnings.

Women frequently do firewood collection and it is customary for a woman carrying a load of firewood whenever they are returning from their farms. Estimated use of firewood per household per week is 2 – 3 head loads. The users said that the amount would vary according to household size, type and frequency of use, food cooked, and seasons of the year. During rain and cold season more firewood is used.

4.3 Building Poles

Men considered building poles as the second in importance because of the need for shelter. The users claimed that house building is done frequently and hence the need for materials. The materials are obtained from own-planted woodlots and also through buying. Trees used are Pines, Eucalyptus, Black wattle and Cypress.

Selling is also an income generating activity in the village. The poles are sold at TSH 20 – 50 depending on size. However, market for poles is not promising as the selling to local people is negligible and outside market is limited.

4.3 Timber Harvesting

Timber harvesting is another activity mainly done by men in the village. It was reported that harvesting is done from planted woodlots of pines and cypress. Users also stated that trees are obtained from own woodlots or purchase from others. Purchase price of one tree is between TSH 400 – 1000 depending on tree size. The study team was informed that there are only small (immature) trees available for harvesting. They do premature harvesting because of the need for money. It was estimated that one tree harvested can produce up to 13 pieces of timber. Prices of timber vary depending on sizes and market situation. For instance a timber size of 1"x 8" and 2"x 6" are sold at TSH 500 – 1000. Timber harvesting is an income generating activity in the village for pitsawers. A pitsawer is paid TSH 220 – 250 to produce a piece of 1"x 8" or 2"x 6" of timber sizes.

The study team observed that woodlots in the village lack proper management, no

thinning, pruning and no proper spacing.

Since the users know that harvesting timber from natural forest reserve has been prohibited, they did not want to discuss it with the study team. Users reported that there are good and big timber trees in the forest reserve.

Market situation is unpredictable. They reported that they rely on out of the village customers who are not reliable. Sometimes they give out their timber to customers who wish to buy, but they do not have money. The deal is that they will pay them after selling timber. In most cases they get the money in installments after long follow-up or they loose.

PROFILE OF MAGOME VILLAGE

NEW DABAGA-ULONGAMBI FOREST RESERVE (NDUFR)

District: Iringa (Rural) **Division:** Kilolo **Ward:** Dabaga **Village:** Magome

Potential for JFM

The village is very remote and inaccessible in most times of the year particularly during rain season and thus has limited market links.

Remoteness and plenty of forest woodlots in the village may necessitate village-based conservation and management of state owned forest reserve.

Presence of local and informal village institutions e.g. Group organizations and collective work arrangements are indications of local community's willingness and readiness to collaborate with each other in issues of village developments.

Strong village governance and the available linkage to District authority might provide a strong support for the initiation of JFM. Furthermore, the Village government is aware and enforces District bylaws this implies the possibilities to institute JFM bylaws too.

Agriculture is the main economic activity in the village and is highly practiced in valley bottoms along the riverbeds. All the rivers that shed their water to the valleys have their source in the NDUFR, hence the forest is very important for the livelihood of people in Magome.

Dependence on NWFP by the community emphasizes the need for community involvement in management of forest reserve.

1.0 Introduction

1.1 Background

In the past people in Magome village lived in two traditional sub-villages of Ulefi and Ndengisivili. Some few people were also reported living in scattered areas. Main ethnic group is Wahehe. Wahehe practiced subsistence agriculture, livestock keeping and lumbering. They cultivated mainly maize, beans and finger millet and kept up to 200 heads of cattle. During villagization in 1974, people living in original sub-villages and those living in dispersed areas were moved together to the current village area. In 1975 the village was registered as Ujamaa village.

The village started a communal farm of 24 acres where they cultivated maize and pyrethrum. Pyrethrum was grown mainly as a cash crop. Market place for selling

pyrethrum was at Kilolo village. It also had a communal woodlot of 7 acres planted with mainly Pines and Cypress.

1.2 Location and Demography

The village is located 81 km. South East of Iringa town. It is bordering the New Dagaba-Ulongambi Forest Reserve to the Western side, Ukwega and Isele villages to the North, Kidabaga village to the South West, and Kimala and Kiwalamo villages to the East. The village has not been surveyed but natural features are used to mark village boundary. These are NDUFR, and rivers Lukosi, Funo and Masungwa. General landscape is undulating mountains with a lot of scattered bare hilltops.

The village has four sub-villages of Ndingisivili, Ulefi, Magome and Mtule.

In 1995 the village's total population was 1512 and the population in 1999 is 1491 inhabitants based on local census. Reason given for this decrease includes out-migration where men go for pitting in other regions. There are 348 households in the village. 190 households in Magome and Mtule, and 158 households in Ulefi and Ndingisivili. The average family size is 6 people per household. There are 46 women headed households. The village has a productive force of 545 inhabitants.

Polygamy is common in the village with up to 3 wives, and each wife has a separate household and sometimes placed in different sub-villages. Marriage age is 24 years and above. Village council members stated that at this age a youth is mature enough to take family responsibilities. Payment of dowry is about 170,000 or 3 cows, 3 sheep, 3 hoes and TSH 2500.

The main religious groups in the village are Christians including Lutheran, Catholics and Pentecost.

1.3 Village Infrastructure

The infrastructure of the village includes **water supply**, which is obtained from river streams and water springs. The rivers that supply water to the village include Holowa, Mapala, and Kipeme. Villagers reported that there is plenty of water though not safe.

There is one **primary school**, which started in 1972. The school has class I - VII with a total number of 427 pupils. The school is in Magome sub-village. In 1997 the village started to build another school at Ulefi sub-village as an expansion of the former school. There are classes I – III with 75 pupils. The two schools have 7 teachers, all men teaching in both schools.

There is no **dispensary**, and the villagers depend on the dispensary in Kimala, which is about 7 km away. They also depend on health centre, which is in Kidabaga village and is 13 km away. Magome village has two primary health attendants (a man and a woman) and 4 traditional midwives who have attended primary health training. There are also several herbalists in the village. Under the support of Pentecost Church the village expects to have a dispensary by year 2000. So far there is one main building already

constructed. The villagers supplied bricks as their contribution.

There is a **road** to the village but it is not accessible throughout the year. It is passable only during the dry season. Villagers participate in road repairs. Magome villagers depend on public transport from Kidabaga village where there are regular bus services. Normally the villagers walk on foot through the NDUFR where there is a shortcut path that connects the village to Lusinga and Lulanzi villages.

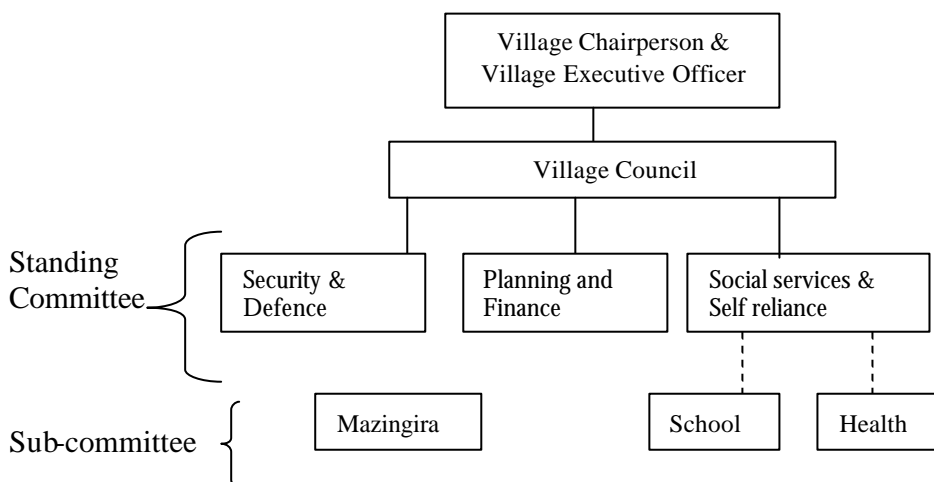
Other social services available in the village include 5 maize mills (all private), 3 kiosks, 2 butchers (for pork and beef) and 2 *pombe* shops.

2.0 Village Organization

2.1 Village Government

The village government is composed of positions as shown in Figure 1.

Figure 1: Village Organization Chart



Note: Solid lines indicate centrally established relationship from the District Council, and dotted lines are linkages established by Village government

The team was informed that, the village chairperson and Village Executive Officer (VEO) are in the same administrative level, but have different roles in the village. Village chairperson is the in-charge of the village government and main duty is to mobilize people to pay development levy, while VEO is to enforce and make follow up of development levy and various development activities.

The village government in Magome consists of 21 elected members of which 7 members are women. The elected members include village chairperson, 4 sub-village chairpersons, and other villagers who also enter into the 3 standing Committees. The three standing

committees are the Defense and Security Committee (5)¹, the Planning and Finance Committee (5) and the Social welfare Committee (5).

There are three sub-committees of School (10), Health (8) and Mazingira or MEMA (8), (see Figure 1). The Mazingira/MEMA committee is not associated with any standing committee because their responsibilities are not known yet. The committee was formed during PRA exercises conducted by MEMA project. The study team was enlightened that, not all members of the sub-committees are necessarily members of the village government. The village government or village assembly nominates sub-committee members.

The invited members to the village council who are also village experts and advisers include Agriculture/Livestock Extension Officer (based in Kimala village), Ward Councilor, Religious leaders (3), Head Teacher (1), Health attendants (2), Political parties of CCM (2) and CHADEMA (2) and elder (adviser to the village).

Village Meetings

Study team was informed on the following village meetings:

- ? Village council meets after every three months. However during this year village council had three meetings. Main issues discussed were:
 - ? building of Udzungwa Secondary School, houses for primary school teachers and class rooms,
 - ? road repairs and collection of stones for building bridge, and
 - ? cultivation of special crops as strategy against famine and commercial crops.

Village council also said that during this year it had several ad-hoc meetings initiated by visitors.

Achievements include collection of TSH 75,000 as contribution to secondary school; one house has been built and another house and one classroom are under construction; and a 3-km road stretch has been repaired and stones were collected.

- ? School sub-committee had three meetings this year and discussed:
 - ? provision of food to school pupils,
 - ? school development projects,
 - ? school fees and pupils' uniforms.

Achievements include pupils are now getting food; a number of school projects were initiated which are cultivation of coffee, pyrethrum and Irish potatoes; and fish farming. A total of TSH 1,142,800 has been collected as school fees paid by 357 out of 502 pupils.

- ? Health sub-committee had two meetings in this year and main issues discussed were:
 - ? children health care (attendance to clinic),

¹ Indicates number of members

- ? campaign against children malnutrition,
- ? supervision of environment sanitation including construction of places for drying home utensils, digging of garbage pits and pit latrines,
- ? inspection of water points, and
- ? planned for meeting with midwives.

Activities planned were performed and all households in the village were visited.

- ? Village Assembly held three meetings this year. Main issues discussed include:
 - ? briefing the villagers on village progress and school development projects,
 - ? revenue collection and expenditure, and
 - ? directives from the District Council.

2.2 Other Organizations and experience with external support

Group organizations existing in Magome village include:

- ? **Ugwalo Farmers:** has 8 members and it started in 1998. The main activities undertaken by the group are coffee farming as a cash crop and raising coffee seedlings for sale. One seedling is sold at TSH 100. The group is still young hence no achievements so far.
- ? **Tupendane Group:** deals with timber business and has 5 members.
- ? **Upendo Group:** is a newly formed group in 1999, and has 9 members. It is involved in zero grazing of dairy cattle. This is a project supported by Heifer International Project (HPI) through Lutheran Church. More villagers will benefit from this project as explained from the pre-set conditions of the project. The procedure for the villagers to get a cow is to submit their requests to the Village government for discussion and later the names of applicants are submitted to the project through the church. The villager will receive a female heifer from an earlier member.
- ? **Tukaze Mwendo Group:** It is an old group, which was formed by 24 members. Their main interest was agricultural production, vegetables gardening and forest plantation orchards. The group was strong in the sense of resources owned. It had a milling machine and members wanted to buy a house for business in Kidabaga. Unfortunately their adviser was not trustworthy and he ran away with all their money. The group is no longer stable and the number of members has dropped to 12.

Other projects in the village are fish farming which started in 1995 under the support of Lutheran church and dispensary, which is under the support of Pentecost church. Majority of households (75%) in the village practice fish farming.

2.3 Village By-laws

The village prepares its by-laws and submits them to the District council for approval. They have not received any response from the District. However, the village enforces the following by-laws on:

- ? Failure to participate to village development activities – fine charged TSH 500;

- ? Failure to cultivate special crops as strategy against famine outbreak – fine charged TSH 3000;
- ? Failure to participate in fire fighting – fine charged TSH 500;
- ? Failure to participate in helping sick people (escort to health centre) – fine charged TSH 500;
- ? Not attending village meetings – fine charged TSH 500.

There are also District by-laws or directives implemented in the village that are addressing development levy and livestock revenue collection, school fees, fire incidents, etc. In this year (1999) ward tribunal charged a total of TSH 24,000 from 6 people who failed to pay contribution for secondary school.

2.4 Linkages between District and Village Council

The Village Executive Officer (VEO) is a functional link between the village and the District Council. VEO receives and administers directives from the District Council and reports to Ward Executive Officer. VEO collect development levy.

There is Ward Development Committee meeting which draw members from villages who are village chairpersons, VEOs, sub-village chairpersons, Ward councilors, heads of government and non- government institutions. Main issues discussed include emphasis on village development activities, assessment of village activities, give District directives like, collection of development levy, school fees, torch contribution, by-laws preliminary discussions and clarifying on the use and implementation of District by-laws

Divisional Development Committee meeting met twice this year and draw members from villages comprising the Village chairpersons, VEOs, sub-village chairpersons, heads of government institutions and non-government organizations, and WEOs and Ward Councilors. Sometimes if there are special issues to be addressed in the meeting, District officials also participate. Issues discussed are directives from the district, development activities, etc.

3.0 Economic Activities

3.1 Agriculture

Isele people depend on subsistence agriculture as the main economic activity. Maize is the main crop grown. Other crops grown are beans, finger millet, vegetables - cabbages, green peas, fruit trees include peaches and pears, Irish potatoes, sweet potatoes, yams, banana, sugarcane and coffee (newly introduced). Table 1 summarizes crops grown by gender and main use.

Table 1: Crops grown

| Crop | Season | Gender | | Main Use | |
|-----------------------|---|--------|------|------------|----------|
| | | Female | Male | Commercial | Domestic |
| Maize | Oct. – June July – April | * | * | | * |
| Yams | Sept | * | | | * |
| Beans | March – Aug July – Jan Dec- March | * | * | * | * |
| Sweet potatoes | July – Feb | * | * | | * |
| Irish potatoes | July – Dec April – Oct | * | * | * | * |
| Banana | All year | * | * | | |
| Sugarcane | All year | | | | |
| Finger millet | Dec. – July. | * | | * | * |
| Fruits | Dec – Apr | * | * | * | |
| Vegetables Cabbage | April – Sept. July – Nov | | * | * | |
| Green peas | May – September Sept – Jan | * | * | * | |
| Tree crops | All year | | * | * | * |

Farming seasons are mainly dry and rain seasons. Dry season cultivation is done in the valleys (*vinyungu*) and rain season is for upland and hill-slopes fields. Crops are grown by both women and men and are for commercial and domestic uses. During land preparation, men do the clearing of the bush, and later men, women and children participate in the cultivation. Farm cultivation is normally done using hand hoe.

Inter-cropping of maize and beans is practiced. Households might have as many plots as they would like depending on the ability to work in the farms. Usually farmers have more than 4 plots on different sites depending on the type of crop grown. Crops like vegetables, peas, and Irish potatoes are cultivated in the valley and maize and beans are cultivated in hill slopes and upland farms. Land fallow is also a common practice. Average farm size cultivated by households is 6 acres.

There is decline in crop yield due to decrease in soil fertility, unfavorable weather (frost) and low income (ability to buy farm inputs). Production is 3 – 4 bags of maize per acre while in the past used to get 8-10 bags of maize per acre.

3.2 Animal Husbandry

Animals kept in the village include cattle, goat, sheep, chicken, pig, duck, dog, and cat. Table 2 is a summary of animal husbandry in the village.

Table 2: Animal husbandry summary in Magome village

| Animal | Number | Households involved | % of total households |
|---------|--------|---------------------|-----------------------|
| Cattle | 139 | 17 | 5 |
| Goat | 26 | 6 | 2 |
| Sheep | 14 | 2 | 1 |
| Pig | 104 | 91 | 26 |
| Chicken | 868 | Almost all | All |
| Duck | 4 | Few | Few |
| Dog | 52 | Few | Few |
| Cat | 12 | Few | Few |

The cattle keepers include nine villagers who have dairy cattle, which were obtained through HIP. Every household keeps local chicken. Many households practice pig rearing. The animals kept are for domestic use and for sale. Milk is sold in the village at TSH 250 per litre. Cows, sheep and goat are also used to pay dowry.

Grass for the dairy cattle is collected from fields and there are special areas that have been set aside by farmers for grazing their animals.

3.3 Tenure

The land ownership is mainly traditional – inherited land (*malungulu*). Individuals own land sizes of between 5 – 300 acres. Farmers reported that, in the past, land was allocated to people depending on the ability to pay tax. Those who paid tax were given more land as a motivation to increase agricultural production. There land is enough in the village. People from outside can obtain land, depending on the agreement between the owner and the one who want, but the Village Council has to witness land acquisition.

Both men and women inherit land. A youth in the family is given own piece of land to practice cultivation when is 18 years old. When girls are married they might get land from their parents and that is referred as *linyakibaki*, and those who are adult but have no husbands they are given land known as *ligani*.

3.4 Woodlots and Fruit trees

The Village government has village woodlots, which are managed, as "bank", and harvesting of timber is done when the village government is in great need of money. Trees planted include Black wattle, Pines, Cypress and indigenous tree species.

Every household has about 0.5 acre of fruit trees planted mainly with peaches and pears, and has tree woodlots. Farmers who have their farms bordering the NDUFR have been directed by the forester in-charge to plant two rows of trees as firebreak to the forest reserve. They planted indigenous tree like *mdeke*, *mlungulugu*, *mivengi* and *mitanga*.

3.4 Income Generating Opportunities

The criteria for rich, medium and poor was discussed, and the village council stated that there are only two main groups of medium and poor. The medium characterized with enough food for the family all year round, ability to pay development levy and school fees promptly, as contrary to the poor.

Magome villagers get their income from selling of agricultural crops including forest crops and other petty business and paid labour in pitsawing and farm work. Table 3 shows some of income generating activities undertaken by Magome villagers by gender and corresponding economic group.

Table 3: Other Income Generating Activities

| Income Source | Gender | | Economic Group | | |
|--------------------|--------|------------------|----------------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing | sell | Prepare and sell | | | * |
| Maize mill | * | | | * | |
| Selling milk | * | * | | * | |
| Timber | * | | | * | |
| Basket making | | * | | | * |
| Mats making | | | | | |
| Carpentry | * | | | | * |
| Fish & fingerlings | * | * | | * | |
| Selling | | | | | |
| Pit sawing labour | * | | | | * |
| Masonry | | | | | * |
| House keeping | * | * | | | * |
| Day labour | * | * | | | * |
| Running kiosk | * | | | * | |

Village revenue

The village council collects revenue by charging development levy of TSH 4,000 per individual (work force). Out of the levy TSH 1,500 is deposited as village educational fund, 30 percent of the balance (TSH 2,500) is deposited to village development account. There is livestock levy of TSH 500 per head of cattle, TSH 250 per head of goat and sheep. Other sources of income are such as charging fee for selling local brew - TSH 100 per 20 litres of *pombe*, revenue from buying crops by middlemen, which is TSH 100 per bag of maize or beans. Also mothers pay fee of TSH 200 per month for attending child's clinic.

During 1999 the village has collected revenue as follows:

- ? 30% of development levy - TSH 875,000
- ? Local brew club - TSH 60,000
- ? Clinic fee TSH - 132,000

The village uses its income as follows:

- ? The 30 percent development levy is distributed in the village as follows, 10% is

allowance for VEO, 7% is allowance for chairperson and 3% is allowance for sub-village chairpersons, and the remaining 10% of development levy is deposited to village account for village development activities,

- ? Paying monthly allowances for 2 health attendants
- ? Buying stationary for village office and for clinic
- ? Paying sitting allowances for members attending various meetings including, village council, Ward and Division meetings and transport costs.

Magome village has a balance of TSH 20,000 in the Bank.

4.0 Woodland and Forest use

The exercise was done near the village office and 17 (8 women) users participated in this exercise. Table 4 shows the products identified according to gender, preference and availability.

Table 4: Products Identification, Preference by Gender and Availability.

| Products | By Gender and Preference | | Availability | | |
|---------------------------------|--------------------------|------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Beekeeping and Honey Collection | | * | | * | |
| Charcoal | * | | | | * |
| Firewood | *I | | * | | |
| NWFP: | | | | | |
| Thatch grass | | *III | * | | |
| Medicinal plants | * | * | | * | |
| Milulu | *II | | | | * |
| Wild vegetable | *III | | | | |
| Pitsawing | | *I | | * | |
| Building poles | * | *II | * | | |
| Selling Timber | * | * | | * | |

Note: I – III indicates preference between most to least.

4.1 Non Wood Forest Products (NWFP)

Thatch grass was third choice of men and is important for roofing houses. Men, children and women participate in collection of thatch grasses. Thatch grasses are readily available in the fallow land and bushes around the village. Gathering period is during rain season from November – May. Types of thatch grass available and mostly preferred in the village include *Linyata*, *Luhano* and *Lilolo*.

Honey collection is a common engagement in the village essentially for men and few villagers practice **beekeeping**. Users reported that they have abandoned traditional beekeeping because they can easily collect honey from underground caves and tree holes from the forest. Villagers (beekeepers) use big clay pots as beehives. The team was told that there is potential of beekeeping but they lack modern beekeeping expertise.

Medicinal plants were third choice of men because the plants are used to cure chronic diseases. Users said that, medicinal plants are their first aid, and are readily available in the village. Furthermore, they said that medical services are far and they can not afford to pay the cost of it because of low income. They collect medicinal plants from valleys and bushes in the village. They claimed that medicinal plants are plenty in the forest reserve but it is prohibited to go inside the forest. However, it was reported that some users cultivate near to the forest reserve, thus, the probability of them to collect medicinal plants from forest is high. Users expressed their needs to be allowed to collect medicinal plants from the forest reserve. Traditional herbalists charge their clients for the medicines. Some of medicinal plants used include *Lidasi* (breast cure) and *Mnung'anung'a* (high fever).

Milulu was second choice of women because *milulu* is used to make mats for sleeping and baskets for carrying crops. Baskets and mats are also sold and therefore source of income to women. *Milulu* are readily available from valleys and sometimes women buy *milulu* from farmers who have them in their valleys (*Malungulu*). *Milulu* is sold at THS 500 per bundle. Users reported that there is no *milulu* inside the forest reserve because of closed tree canopy.

4.2 Firewood

Firewood was first choice of women because of their traditional role of ensuring availability of cooked food for the family. Firewood is used for cooking, heating, brewing and brick burning. It is the responsibility of women to collect firewood and sometimes children help their mothers. Frequency of firewood collection depends on family size, food cooked, type of use and number of meals. Women reported that one head load of firewood can last for two or three days. Firewood is readily available from woodlots of Black wattle, Eucalyptus, Pines and bushes around the village. Black wattle trees are mostly preferred because of high calorific value.

Family members also collect firewood for brick burning. Men do the cutting and women and children carry the wood. The amount of wood used for burning bricks was not known during the study period.

4.3 Building Poles

Building poles were second choice of men and reported to be readily available from planted woodlots. Study team was told that at least every household owns a tree woodlot. They said poles are important because it is the obligation of a traditional Hehe man to build a house for his family. Common tree species used are Eucalyptus and Black wattle. Men reported that they prefer to use Eucalyptus poles because are straight and long. Occasionally they use some indigenous tree species from natural forest such as *Misengela*, *Mianzi* and *Mipalala*.

4.4 Timber Harvesting

Pitsawing was first choice of men because it is an important income generating activity for them. The team was told that, pitsawing is an inherited skill and is passed from one generation to another. The skill encourages out migration for men to work outside the

village and in other regions.

Trees harvested for pitsawing are Pines, Cypress and Eucalyptus. The trees are harvested from the age of ten years. Women assist their husbands in the work by carrying timber to the yard and prepare some food for them. **Timber selling** is also important for men in the village. Prices of timber depend on tree species and market situation. For example prices for Pine timber is THS 500, Cypress is THS 700 and Eucalyptus is THS 800.

Marketing of timber and other crops was a big issue raised by users, as they find it difficult to sell their products. Main problem is poor accessibility due to bad road. Farmers depend for customers from Iringa town who usually offer low prices and sometimes buy timber on loan basis. Users reported that they sometimes hire vehicle from town for carrying timber to Iringa especially in the dry season (May – September). Hiring costs is about TSH 100,000 per trip.

5.0 NDUFR and the adjacent community

Finally, study team used the fabric map to have the users locate themselves, and encourage stories about the forest, and where users go into the forest. On the map, the users could identify their village boundaries, landmarks within the forest, such as the mountain peaks and also indicate areas within the forest, which were well known to them.

One of the fears expressed during users meeting was that of losing valley bottom fields. The issue came about from the map that showed extensive utilization of these valleys. They feared that introduction of joint forest management (JFM) may prohibit them from using the valleys since the rivers originate from NDUFR.

SOCIO-ECONOMIC VILLAGE PROFILE, MAKUKA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Izazi VILLAGE: Makuka

1.0 Implications for JFM

The lack of accessibility to the village during the rainy season (villagers confirmed that the village is not accessible for cars during six months) will be a crucial factor in the JFM plans regarding this village depending on the community extension and monitoring structure MEMA envisages.

The woodland is to a large extent intact in the village land. This situation is partly due to the lack of a market for some woodland products of the sub-villages including the village of Makuka itself. Some villagers are seeking employment outside the community because of the lack of income and economic opportunities in the village – a situation that could change, if the villagers (especially in the remote sub-villages) were provided with donkey carts, which would enable them to enter firewood and charcoal markets in Makuka and Izazi.

The MEMA project should also discuss its possibilities for improved pasture management, which is much needed in the village due to the lack grazing options for the cattle owned by the villagers. The traditional practise of fencing grazing areas for especially young animals would constitute a huge advantage for introducing suitable grasses to the area and thereby improving pastures and the economic potential of the villagers – and the woodland.

Experience with improved grazing, interview with district livestock office:

The team conducted an interview with the assistant livestock officer to investigate the experience with improved grazing. The officer told the team that especially CONCERN with the officer had been working with has some experience from Ismani division in the villages of Izazi, Ilambilole, Usola nga, and Mkulula. The improved grazing activities have included:

- ? demarcation of grazing area
- ? identification of locally available pasture grass species
- ? site description, conditions and trends
- ? re-seeding with either same species as found or new species e.g. *Chloris gayana* (Rhodes grass), *Cynodon* spp, *hyperrhemia* spp. and *Glycina* spp.
- ? advising the livestock keepers on “rational grazing” (stocking rate)
- ? de-stocking in cases of overgrazing

Problems encountered included:

- ? de-stocking is not easily accepted by livestock owners
- ? demarcated land is not honoured by pastoralists
- ? bushfires sweeping the grass land making seeding of grasses difficult
- ? irregular and insufficient rainfall

The team recommends to the project to seek advise and further information from CONCERN if planning improved grazing activities.

The formation of the new Natural Resources Committee (MEMA committee) caused a long discussion with the village council. The village council pointed to the fact that the election procedure and the membership of the MEMA committee are different from other subcommittees wherefore it is difficult to

include the committee in the village government structure. The MEMA committee includes some people that are not members of the village council and all members were elected at a general village meeting and not appointed by the village council, which is the case with other subcommittees in the village. This means that the MEMA committee is not a legal entity, which can take the necessary decisions, control and management of the woodlands. The ward councillor said that he was aware that the same problem existed in the other MEMA committees in his ward and advised the project to discuss the matter internally and with the village governments in order to find a solution to what the village council considered a problem. A member of the village council also found that the whole election of the MEMA committee had been too sudden.

The team also discussed the issue of villagers being more linked to ward, division and district than towards neighbouring villages. In other words inter-village links are weak – and often distrust exists among villages. This will have implications for JFM plans should MEMA envisage that the management plans link villages horizontally and not only vertically pointing towards the district. The overall village-ward-division-district structure is a hierarchical structure of control more than management - while the negotiation of a more vertical structure providing the possibility for management (more than control) among villages would be an advantage for JFM initiatives. This is a general observation by the team with implications for the JMF plans in all project villages.

2.0 Location and demography

The village of Makuka is 11 kilometres from Izazi; Izazi, which lies on the main Iringa – Dodoma road. The 11 kilometres from Izazi to Makuka is not accessible in the rainy season from December to May, where the numerous dry riverbeds, which the road passes get filled with water.

The woodland surrounding Makuka is flat and the natural vegetation is less dense than in Migoli and Izazi. The village is situated at the western end of the lake behind the Mtara Dam and the village lands crosses the Ruaha River to the very west, see map.

Makuka was until 1987 a sub-village of Izazi whereafter it got the status of village and had its own village council established. However, the settlement dates back at least three generations.

The total population and number of households for the village and sub-villages are presented in the table below.

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|------------------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Village: Makuka | 237 | 2551 | 1084 | 144 |
| Sub-village: Makuka “a” | 514 | 600 | 300 | 26 |
| Sub-village: Makuka “b” | 270 | 291 | 50 | 8 |
| Sub-village: Makuka “c”, Mondomela | 464 | 502 | 205 | 15 |
| Sub-village: Makuka “d” Magombwe | 454 | 473 | 216 | 50 |
| Sub-village: Makuka “e” Nyamahato | 274 | 280 | 103 | 6 |
| Sub-village: Makuka “f” Itemagwe | 394 | 405 | 210 | 39 |

The above table shows some interesting population figures. The household size is in some sub-villages far below the national average. This could indicate the very young population of these sub-villages and the fact that many are newcomers, who might not yet have established a family of their own or brought their entire family with them.

The ethnic composition of the resident population of Makuka includes the following ethnic groups: Wahehe, Wagogo, Wamasai, Wasukuma, Wasagara, Wanyamwezi, Wakimbu, Wabena, Wanyamwanga, Wanyakyusa and Wangoni. Wamang'ati is the only non-resident pastoralist ethnic group in the village. The large number of ethnic groups is caused by people coming to the area due to the fishing potential of the lake behind the Mtara Hydroelectric Power Station.

The village is comparatively poor. Shops and milling facilities are owned by people not resident in the community.

3.0 Infrastructure

Infrastructure is scarce in the community and only includes:

1 primary school, 3 milling machines (owned by non-residents). The village uses the lake as its water supply. The people in Makuka use the market facilities in Izazi. Very few houses in Makuka are built with burned bricks and consist of mud houses with thatched roof.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Only very few people – if any – depends entirely on agriculture. Food (maize) is bought from outside (mainly Ismani) and milled in the community. The risk involved in farming prevents most people from cultivating large acreage due to inadequate rainfall and non-fertile soils. Crop cultivation is therefore only for domestic consumption. No cash crop cultivation takes place in the village.

Main crops cultivated include sorghum, maize, cowpea, and sweet potatoes. Crops (sorghum, maize and cowpea) are inter-cropped to ensure that at least one crop survives even if rain is scarce. Recent changes in the crop pattern include sweet potatoes being introduced only two years ago by the Wasukuma ethnic group. Previously the villagers used to cultivate rice near the Ruaha River in the dry season. This cultivation stopped when the rice fields got flooded due to the expansion of the lake. The villagers commented that they might start cultivating rice again following the construction of a traditional irrigation canal – and now when the lake size and seasonal changes are known.

4.2 Animal husbandry

Livestock has more importance than crop production. The villages estimated the following average number of animals among resident socio-economic groups:

- ? Rich: cattle (50), goat/sheep (100)
- ? Middle: cattle (20), goat/sheep (50)
- ? Poor: cattle (2 – 5), goat/sheep (1 – 8)

Resident Wamasai has the following average number of animals distributed among socio-economic groups:

- ? Rich: cattle (300), goat/sheep (250)
- ? Middle: cattle (200), goat/sheep (100)
- ? Poor: cattle (50), goat/sheep (30)

The pastures on which the above animals feed are not sufficient and cattle owners often seek better pastures outside the village land. The only migrant pastoralist group entering the village area in the dry months is the Wamang'ati.

4.3 Land tenure

The land tenure system is a combination of the traditional “malungulu” land ownership and government land. Land is sufficient and rarely causes any conflict. Traditional landowners only inherit through the male while government land is inherited through both men and women. Also single women have land allocated through the village council. The farmers practise a kind of fallow system where a cultivated piece of land is left fallow for about three years before cultivated again. The land preparation of these fields includes felling of all trees except from single “mikuyu” trees, which the farmers claimed, were nitrogen fixing. Nevertheless most species on the woodland can not regenerate in three years and the depletion of the immediate woodland near the village due to agricultural activities was evident.

Fishing is the “cash crop” in the village. Many of the newcomers and indigenous residents are involved in the fishing in one way or another. Some fish, other buy and sell fish while others again smoke and fry the fish for sale. The team had a long discussion on the possibilities and capacity for the village to manage the lake in order to get their share in the huge profit, which today is mostly generated in Iringa town through selling by private businessmen and revenue collected by the District Council. Several problems occurred during the discussion regarding the management. Among these financial constraints and management problems due to the fact that villagers are more linked to ward, division and district than towards neighbouring villages, a situation that in several cases cause distrust among villages.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | | ! | ! | ! | |
| Selling of food | ! | !! | | ! | | ! | ! | |
| Selling of water | ! | ! | | | ! | ! | ! | |
| Petty trading | ! | !! | | | ! | ! | ! | |
| Selling of building poles | ! | | | | ! | | ! | ! |
| Selling firewood, local * | ! | !! | | | ! | ! | !! | ! |
| Selling of tray, “ungo” | ! | | | | ! | | ! | ! |
| Fishing | ! | | | | ! | ! | ! | |
| Carpentry ** | ! | | | ! | | ! | ! | |
| Selling of fish | ! | ! | | ! | | ! | ! | |
| Selling of timber | ! | | | ! | | ! | ! | |
| Selling charcoal | !! | ! | | | ! | | ! | ! |
| Smoking/frying fish | ? | ? | ? | | | | | |
| Selling of maize flour | ! | ! | | ! | | ! | ! | |
| Boat making | ! | | | ! | | ! | ! | |

| | | | | | | | | |
|------------------------------|----|---|--|---|---|---|---|---|
| Selling of grass for roofing | !! | ! | | | ! | | ! | ! |
| Masonry | ! | | | ! | | ! | ! | |
| Selling of tree fruits | ! | ! | | | ! | ! | ! | |
| Pottery *** | | ! | | | ! | | | ! |

* Including wood for smoking and frying fish

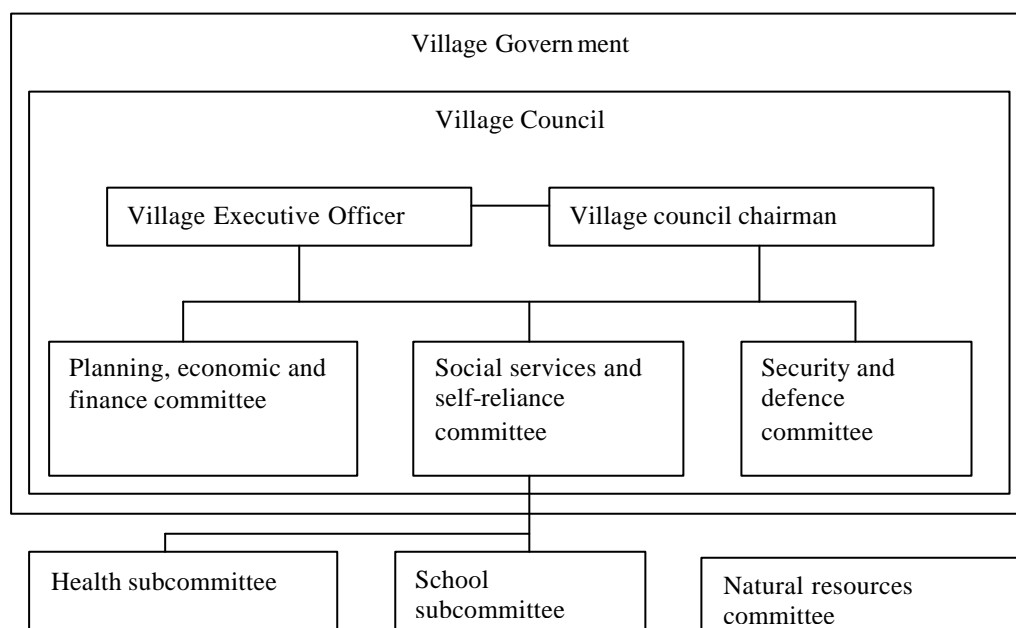
** With timber from the village woodland

*** The firewood for burning the pottery is fetched by the same person who makes the pottery

According to the villagers there are no rich people in the village. The rich people are involved in large scale buying of fish and own mills – but are residing outside the village.

5.0 Village Organisations

The organisational chart below present an overview of the village organisational structure:



The village council comprises of 25 elected members with all sub-villages being represented. A new village council has just been elected but has not yet started working. The village council said that more than half of the new council was new members. A problem encountered with the previous village council was lack of participation in meetings. Only 12 out of 25 members participated. One reason was that three members had died and other members had left the community to fish in neighbouring villages. The demographic structure in the area is in other words fluctuating and fast changing. The village chairman also pointed to the fact that many members did not know their own responsibility or the general functioning of the village council. The district authorities have never taken the initiative to train elected village council members. The village council has had three meetings this year. Meetings were called when there was a particular issue to discuss. The chairman said that the village council has learned from previous bad experience and that the new council was ready to work. The team observed that many village council members were young.

The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have had no meetings this year.

Two subcommittees to the village council exist. These are the school committee and health committee. Both subcommittees have had no meetings this year.

CONCERN has been visiting the village but never included the village or had office there. The community has limited previous community work experience and no development projects of any kind have previously worked there.

The formation of the new Natural Resources Committee (MEMA committee) caused a long discussion. The village council pointed to the fact that the election procedure and the membership of the MEMA committee are different from other subcommittees wherefore it is difficult to include the committee in the village government structure. Members of the MEMA committee includes some people that are not members of the village council and all members were elected at a general village meeting and not appointed by the village council, which is the case with other subcommittees in the village. This means that the MEMA committee is not a legal entity, which can take the necessary decisions, control and management of the woodlands. The ward councillor said that he was aware that the same problem existed concerning the other MEMA committees in his ward and advised the project to discuss the matter internally and with the village governments in order to find a solution to what the village council considered a problem. A member of the village council also found that the whole election of the MEMA committee had been too sudden. The team had the impression that the village council saw the function of the MEMA committee and the project as a chance to get hold of some revenue from outsiders collecting wood products – but they seemed rather unaware of the whole management issue and question of sustainability of the woodland.

In general the village council and whole organisational structure in the village is weak and inexperienced. Partly because of the newly formation of the village and partly because of lack of interest concerning village organisation and management.

No bylaws exist in the village according to the village council and they were also of the perception that no permit or license were needed to collect any product from the woodland, which is an interesting perspective and start for JFM activities.

6.0 Woodland and Forest

The following data regarding the woodland was collected with a number of stakeholders including collectors/users, managers, and buyers. However, the presentation below takes its point of departure in woodland products collected with the analysis developing from that perspective.

The members of the village council were of the opinion that no permit is needed to fetch any product from the woodland. They also informed the team that the boundaries of the village land goes as far as to the top of the mountain ridge. The elders traditionally know the boundaries. There are no by-laws according to the village council regulating the access and control to the woodland.

Thirty-four (men/women) collectors/users participated in a full day's discussion on the woodland. The participants came from the sub-village of Nyamahato, where a large number of users/collectors come from. The managers (village council) and buyers were interviewed the day before in Makuka village.

The table below presents an overview of the forest users and product by gender and availability in Nyamahato sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | ! | ! | ! | | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | | ! | | | ! |
| Grass for roofing | ! | | | | ! |
| Pasture, pastoralists' cattle | ! | ! | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Charcoal | ! | | ! | | |
| Poles | ! | | | ! | |
| Timber | ! | | | | ! |
| Hunting, small game | ! | | | | ! |
| Honey | ! | | | ! | |

The immediate users/collectors from the sub-village Nyamahato are dependent on the woodland for a long range of domestic products. An actual market is not available, wherefore the commercial utilisation of the woodland is limited including the extraction of charcoal, timber and firewood for sale. The people in the sub-village can economically be divided into two subgroups: a) resident pastoralists with a large number of livestock and very limited crop cultivation, and b) farmers with less livestock and more crop cultivation. The crop cultivation in the area is risky and on average this group of farmers only cultivate one acre of sorghum per season, which is barely sufficient for feeding a household. In this situation the farmers do not turn to the woodland for an economic gain, since there is no immediate market. Instead they seek employment as casual farm labourers in Nyang'oro, Pawaga, and Chamdindi where they are paid either in cash or in maize or maize flour. The people belong mostly to the ethnic groups of Wagogo, Wahehe and Wamasai and are mostly in the poor (indigenous crop cultivators/livestock owners and middle (resident pastoralist) socio-economic group.

The villagers said that boundaries exist for the village land but that access is free in the area – and “why should we go to other areas if there is plenty here”. The mountain is used for grazing and is at a distance of five hours (single journey) on foot.

The people in Nyamahato presented and analysed their use of the woodland products as follows:

6.1 Firewood, domestic

Collected by women, but male bachelors collect their own firewood, and sometimes also married men collect firewood for the household, since the women are occupied fetching water at a distance of four hours (return). Male Wamasai never collects firewood. The firewood is abundant and collected around the homestead. The tree species for firewood include: “mpulula”, “mkungugu”, “mkambala”, “mhavava”, “mfugala”, and “misanzi”. No people come from outside to collect firewood for their domestic use on the village land.

6.2 Firewood, sale

Collected by both men and women and considered to be abundant. The only buyers of the firewood are the fishermen at the fishing camp called “custom”. They buy the firewood brought to them by the

residents of Nyamahato, or they travel themselves to the sub-village using donkey cart. A headload of firewood is sold in “customs” at TSH 200 while the buyer has to pay TSH 2,000 for a cartload of firewood in the sub-village itself. No one in the sub-village has a donkey cart to ease the long transport. Tree species used for sale of firewood are the same as those used for domestic.

6.3 Poles

Only collected by men and considered to be sufficient. Poles are not sold in general but some residents in the sub-village built houses for other villagers. The people building the house makes a complete contract, where they are responsible for the entire construction including poles, grass or scrub for roofing and mud to plaster the walls.

Poles and Wamasai house construction:

A medium house in the area not using sunburnt or burned bricks costs TSH 7,000 to build while a bigger house costs TSH 15,000. Since no bricks are used the walls also contains a large number of smaller poles, which the clay is plastered on. The villagers estimated that a medium house consumes 200 – 300 poles. A house lasts between 5 – 10 years depending on the quality and species of poles and the presence of termites during that period. Villagers said that termites were plenty. The species most resistant to termite attack include non-dried “mkambala” and “mkungugu”.

6.4 NWFP

Both men and women collect NWFP but most products are either collected by men or by women. Mushrooms are only found on the mountain, and are therefore considered scarce in the sub-village because of the distance. Medical plants are abundant and collected by both men and women and include the following species: “mkongolo”, “mmulimuli” and “mlungulungu”. Mostly women collect fruits. Especially the “udawi” is important. It has a high sugar and starch content and is used for juice and local brew. The fruits are few and other collectors include monkeys and birds. Grass for roofing is scarce – especially this year due to lack of rainfall and a pest attack, see below under pasture. In this case of no grass for roofing the villagers were using “ngelula” – a bush scrub.

6.5 Pasture, pastoralists’ cattle

Both men and women graze the animals with larger animals being grazed by men while women graze the young ones. Grass is considered scarce, especially this year when an attack of “mbilasi” insects destroyed the pasture. Also rainfall this year was scarce. Therefore the pastoralists have not come this year. The pastoralists uses the pasture as free access and due not have to seek permission from any of the residents in the sub-village. The only place in the area where they are not allowed to graze is near the village of Pawaga because a larger part of the land there is cultivated with rice. The pastoralists’ pasture includes the mountain area. The pastoralists enter the area with herds between 400 – 600 cattle.

6.6 Pasture, residents’ cattle

Both men and women herd the animals and the pasture is considered to be sufficient. The sufficiency is largely due to the practise of fencing certain areas near the sub-village for grazing late in the dry season when grass elsewhere has become scarce. This system constitutes the difference between the scarcity of grass for migrating pastoralist and the settled livestock owners. The residents including settled pastoralists have fewer animals then the migrating pastoralists. The livestock owners can be divided into the following two groups:

- a) settled pastoralists with very little crop cultivation owns between 70 – 100 cattle, while
- b) indigenous cattle owners with more crop cultivation own between 8 – 20 cattle.

6.7 Timber

Only collected by men and is considered to be scarce. People from Nyamahato sub village do not use pitsaw for making timber. They use axe, cutlass and chisel and can therefore not produce timber on a larger scale. They produce timber from “mkalala” which is used for doorframes and tops. The larger group of collectors come from Ismani, Nyang’oro and Chamdindi. Timber species are found on the top of the mountain. These species include “mwondo”, “mbwegere”, “mninga”, and “mkalala”.

6.8 Charcoal

Only men make charcoal. The wood for making charcoal is abundant but the market is not there. The only and limited market is in the fishing hamlet of “Custom” where some people use charcoal for cooking. A bag of charcoal fetches TSH 1,000.

6.9 Hunting

Only men hunt and the game is scarce compared with previously. People from Iringa, Nyang’oro and Chamdindi come to hunt big game while the villagers mainly hunt dik-dik antelope, other antelopes, rabbit, wild pig and birds. The villagers only use bow and arrow and traps for hunting.

6.10 Honey

Honey is only collected by men and is scarce. The men have no beehives but collect the honey directly from the trees on the underground beehives. A bucket of 20-litre honey is sold for TSH 4,000 – 5,000. The honey is in particular used by the women for preparing local brew. Moreover, the honey is used for medical purposes and porridge.

SOCIO-ECONOMIC VILLAGE PROFILE, MAKUKA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Izazi VILLAGE: Makuka

1.0 Implications for JFM

The lack of accessibility to the village during the rainy season (villagers confirmed that the village is not accessible for cars during six months) will be a crucial factor in the JFM plans regarding this village depending on the community extension and monitoring structure MEMA envisages.

The woodland is to a large extent intact in the village land. This situation is partly due to the lack of a market for some woodland products of the sub-villages including the village of Makuka itself. Some villagers are seeking employment outside the community because of the lack of income and economic opportunities in the village – a situation that could change, if the villagers (especially in the remote sub-villages) were provided with donkey carts, which would enable them to enter firewood and charcoal markets in Makuka and Izazi.

The MEMA project should also discuss its possibilities for improved pasture management, which is much needed in the village due to the lack grazing options for the cattle owned by the villagers. The traditional practise of fencing grazing areas for especially young animals would constitute a huge advantage for introducing suitable grasses to the area and thereby improving pastures and the economic potential of the villagers – and the woodland.

Experience with improved grazing, interview with district livestock office:

The team conducted an interview with the assistant livestock officer to investigate the experience with improved grazing. The officer told the team that especially CONCERN with the officer had been working with has some experience from Ismani division in the villages of Izazi, Ilambilole, Usola nga, and Mkulula. The improved grazing activities have included:

- ? demarcation of grazing area
- ? identification of locally available pasture grass species
- ? site description, conditions and trends
- ? re-seeding with either same species as found or new species e.g. *Chloris gayana* (Rhodes grass), *Cynodon* spp, *hyperrhemia* spp. and *Glycina* spp.
- ? advising the livestock keepers on “rational grazing” (stocking rate)
- ? de-stocking in cases of overgrazing

Problems encountered included:

- ? de-stocking is not easily accepted by livestock owners
- ? demarcated land is not honoured by pastoralists
- ? bushfires sweeping the grass land making seeding of grasses difficult
- ? irregular and insufficient rainfall

The team recommends to the project to seek advise and further information from CONCERN if planning improved grazing activities.

The formation of the new Natural Resources Committee (MEMA committee) caused a long discussion with the village council. The village council pointed to the fact that the election procedure and the membership of the MEMA committee are different from other subcommittees wherefore it is difficult to

include the committee in the village government structure. The MEMA committee includes some people that are not members of the village council and all members were elected at a general village meeting and not appointed by the village council, which is the case with other subcommittees in the village. This means that the MEMA committee is not a legal entity, which can take the necessary decisions, control and management of the woodlands. The ward councillor said that he was aware that the same problem existed in the other MEMA committees in his ward and advised the project to discuss the matter internally and with the village governments in order to find a solution to what the village council considered a problem. A member of the village council also found that the whole election of the MEMA committee had been too sudden.

The team also discussed the issue of villagers being more linked to ward, division and district than towards neighbouring villages. In other words inter-village links are weak – and often distrust exists among villages. This will have implications for JFM plans should MEMA envisage that the management plans link villages horizontally and not only vertically pointing towards the district. The overall village-ward-division-district structure is a hierarchical structure of control more than management - while the negotiation of a more vertical structure providing the possibility for management (more than control) among villages would be an advantage for JFM initiatives. This is a general observation by the team with implications for the JMF plans in all project villages.

2.0 Location and demography

The village of Makuka is 11 kilometres from Izazi; Izazi, which lies on the main Iringa – Dodoma road. The 11 kilometres from Izazi to Makuka is not accessible in the rainy season from December to May, where the numerous dry riverbeds, which the road passes get filled with water.

The woodland surrounding Makuka is flat and the natural vegetation is less dense than in Migoli and Izazi. The village is situated at the western end of the lake behind the Mtara Dam and the village lands crosses the Ruaha River to the very west, see map.

Makuka was until 1987 a sub-village of Izazi whereafter it got the status of village and had its own village council established. However, the settlement dates back at least three generations.

The total population and number of households for the village and sub-villages are presented in the table below.

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|------------------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Village: Makuka | 237 | 2551 | 1084 | 144 |
| Sub-village: Makuka “a” | 514 | 600 | 300 | 26 |
| Sub-village: Makuka “b” | 270 | 291 | 50 | 8 |
| Sub-village: Makuka “c”, Mondomela | 464 | 502 | 205 | 15 |
| Sub-village: Makuka “d” Magombwe | 454 | 473 | 216 | 50 |
| Sub-village: Makuka “e” Nyamahato | 274 | 280 | 103 | 6 |
| Sub-village: Makuka “f” Itemagwe | 394 | 405 | 210 | 39 |

The above table shows some interesting population figures. The household size is in some sub-villages far below the national average. This could indicate the very young population of these sub-villages and the fact that many are newcomers, who might not yet have established a family of their own or brought their entire family with them.

The ethnic composition of the resident population of Makuka includes the following ethnic groups: Wahehe, Wagogo, Wamasai, Wasukuma, Wasagara, Wanyamwezi, Wakimbu, Wabena, Wanyamwanga, Wanyakyusa and Wangoni. Wamang'ati is the only non-resident pastoralist ethnic group in the village. The large number of ethnic groups is caused by people coming to the area due to the fishing potential of the lake behind the Mtara Hydroelectric Power Station.

The village is comparatively poor. Shops and milling facilities are owned by people not resident in the community.

3.0 Infrastructure

Infrastructure is scarce in the community and only includes:

1 primary school, 3 milling machines (owned by non-residents). The village uses the lake as its water supply. The people in Makuka use the market facilities in Izazi. Very few houses in Makuka are built with burned bricks and consist of mud houses with thatched roof.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Only very few people – if any – depends entirely on agriculture. Food (maize) is bought from outside (mainly Ismani) and milled in the community. The risk involved in farming prevents most people from cultivating large acreage due to inadequate rainfall and non-fertile soils. Crop cultivation is therefore only for domestic consumption. No cash crop cultivation takes place in the village.

Main crops cultivated include sorghum, maize, cowpea, and sweet potatoes. Crops (sorghum, maize and cowpea) are inter-cropped to ensure that at least one crop survives even if rain is scarce. Recent changes in the crop pattern include sweet potatoes being introduced only two years ago by the Wasukuma ethnic group. Previously the villagers used to cultivate rice near the Ruaha River in the dry season. This cultivation stopped when the rice fields got flooded due to the expansion of the lake. The villagers commented that they might start cultivating rice again following the construction of a traditional irrigation canal – and now when the lake size and seasonal changes are known.

4.2 Animal husbandry

Livestock has more importance than crop production. The villages estimated the following average number of animals among resident socio-economic groups:

- ? Rich: cattle (50), goat/sheep (100)
- ? Middle: cattle (20), goat/sheep (50)
- ? Poor: cattle (2 – 5), goat/sheep (1 – 8)

Resident Wamasai has the following average number of animals distributed among socio-economic groups:

- ? Rich: cattle (300), goat/sheep (250)
- ? Middle: cattle (200), goat/sheep (100)
- ? Poor: cattle (50), goat/sheep (30)

The pastures on which the above animals feed are not sufficient and cattle owners often seek better pastures outside the village land. The only migrant pastoralist group entering the village area in the dry months is the Wamang'ati.

4.3 Land tenure

The land tenure system is a combination of the traditional “malungulu” land ownership and government land. Land is sufficient and rarely causes any conflict. Traditional landowners only inherit through the male while government land is inherited through both men and women. Also single women have land allocated through the village council. The farmers practise a kind of fallow system where a cultivated piece of land is left fallow for about three years before cultivated again. The land preparation of these fields includes felling of all trees except from single “mikuyu” trees, which the farmers claimed, were nitrogen fixing. Nevertheless most species on the woodland can not regenerate in three years and the depletion of the immediate woodland near the village due to agricultural activities was evident.

Fishing is the “cash crop” in the village. Many of the newcomers and indigenous residents are involved in the fishing in one way or another. Some fish, other buy and sell fish while others again smoke and fry the fish for sale. The team had a long discussion on the possibilities and capacity for the village to manage the lake in order to get their share in the huge profit, which today is mostly generated in Iringa town through selling by private businessmen and revenue collected by the District Council. Several problems occurred during the discussion regarding the management. Among these financial constraints and management problems due to the fact that villagers are more linked to ward, division and district than towards neighbouring villages, a situation that in several cases cause distrust among villages.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | | ! | ! | ! | |
| Selling of food | ! | !! | | ! | | ! | ! | |
| Selling of water | ! | ! | | | ! | ! | ! | |
| Petty trading | ! | !! | | | ! | ! | ! | |
| Selling of building poles | ! | | | | ! | | ! | ! |
| Selling firewood, local * | ! | !! | | | ! | ! | !! | ! |
| Selling of tray, “ungo” | ! | | | | ! | | ! | ! |
| Fishing | ! | | | | ! | ! | ! | |
| Carpentry ** | ! | | | ! | | ! | ! | |
| Selling of fish | ! | ! | | ! | | ! | ! | |
| Selling of timber | ! | | | ! | | ! | ! | |
| Selling charcoal | !! | ! | | | ! | | ! | ! |
| Smoking/frying fish | ? | ? | ? | | | | | |
| Selling of maize flour | ! | ! | | ! | | ! | ! | |
| Boat making | ! | | | ! | | ! | ! | |

| | | | | | | | | |
|------------------------------|----|---|--|---|---|---|---|---|
| Selling of grass for roofing | !! | ! | | | ! | | ! | ! |
| Masonry | ! | | | ! | | ! | ! | |
| Selling of tree fruits | ! | ! | | | ! | ! | ! | |
| Pottery *** | | ! | | | ! | | | ! |

* Including wood for smoking and frying fish

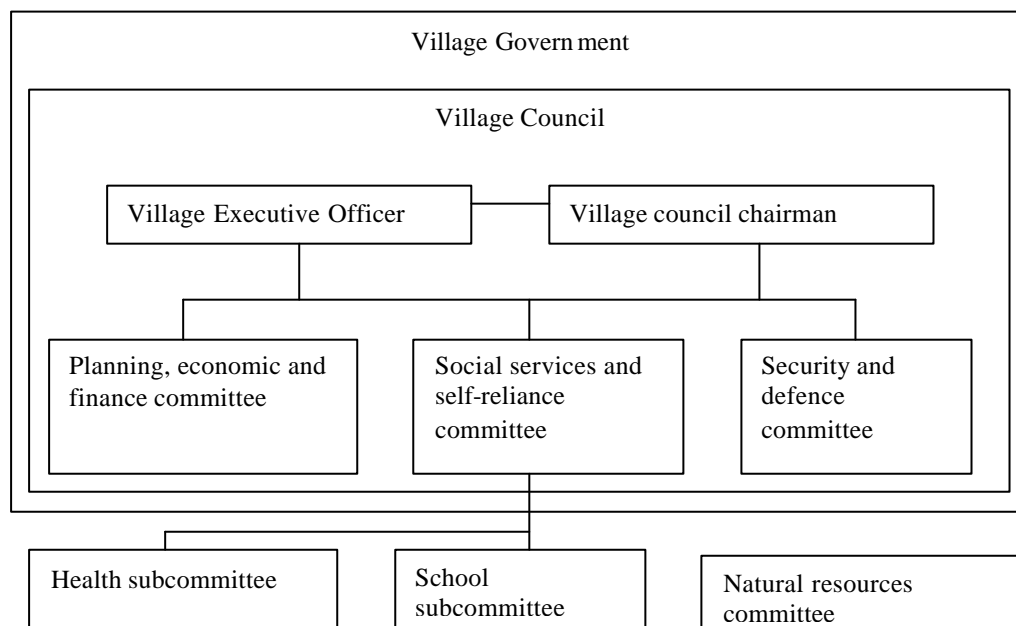
** With timber from the village woodland

*** The firewood for burning the pottery is fetched by the same person who makes the pottery

According to the villagers there are no rich people in the village. The rich people are involved in large scale buying of fish and own mills – but are residing outside the village.

5.0 Village Organisations

The organisational chart below present an overview of the village organisational structure:



The village council comprises of 25 elected members with all sub-villages being represented. A new village council has just been elected but has not yet started working. The village council said that more than half of the new council was new members. A problem encountered with the previous village council was lack of participation in meetings. Only 12 out of 25 members participated. One reason was that three members had died and other members had left the community to fish in neighbouring villages. The demographic structure in the area is in other words fluctuating and fast changing. The village chairman also pointed to the fact that many members did not know their own responsibility or the general functioning of the village council. The district authorities have never taken the initiative to train elected village council members. The village council has had three meetings this year. Meetings were called when there was a particular issue to discuss. The chairman said that the village council has learned from previous bad experience and that the new council was ready to work. The team observed that many village council members were young.

The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have had no meetings this year.

Two subcommittees to the village council exist. These are the school committee and health committee. Both subcommittees have had no meetings this year.

CONCERN has been visiting the village but never included the village or had office there. The community has limited previous community work experience and no development projects of any kind have previously worked there.

The formation of the new Natural Resources Committee (MEMA committee) caused a long discussion. The village council pointed to the fact that the election procedure and the membership of the MEMA committee are different from other subcommittees wherefore it is difficult to include the committee in the village government structure. Members of the MEMA committee includes some people that are not members of the village council and all members were elected at a general village meeting and not appointed by the village council, which is the case with other subcommittees in the village. This means that the MEMA committee is not a legal entity, which can take the necessary decisions, control and management of the woodlands. The ward councillor said that he was aware that the same problem existed concerning the other MEMA committees in his ward and advised the project to discuss the matter internally and with the village governments in order to find a solution to what the village council considered a problem. A member of the village council also found that the whole election of the MEMA committee had been too sudden. The team had the impression that the village council saw the function of the MEMA committee and the project as a chance to get hold of some revenue from outsiders collecting wood products – but they seemed rather unaware of the whole management issue and question of sustainability of the woodland.

In general the village council and whole organisational structure in the village is weak and inexperienced. Partly because of the newly formation of the village and partly because of lack of interest concerning village organisation and management.

No bylaws exist in the village according to the village council and they were also of the perception that no permit or license were needed to collect any product from the woodland, which is an interesting perspective and start for JFM activities.

6.0 Woodland and Forest

The following data regarding the woodland was collected with a number of stakeholders including collectors/users, managers, and buyers. However, the presentation below takes its point of departure in woodland products collected with the analysis developing from that perspective.

The members of the village council were of the opinion that no permit is needed to fetch any product from the woodland. They also informed the team that the boundaries of the village land goes as far as to the top of the mountain ridge. The elders traditionally know the boundaries. There are no by-laws according to the village council regulating the access and control to the woodland.

Thirty-four (men/women) collectors/users participated in a full day's discussion on the woodland. The participants came from the sub-village of Nyamahato, where a large number of users/collectors come from. The managers (village council) and buyers were interviewed the day before in Makuka village.

The table below presents an overview of the forest users and product by gender and availability in Nyamahato sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | ! | ! | ! | | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | | ! | | | ! |
| Grass for roofing | ! | | | | ! |
| Pasture, pastoralists' cattle | ! | ! | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Charcoal | ! | | ! | | |
| Poles | ! | | | ! | |
| Timber | ! | | | | ! |
| Hunting, small game | ! | | | | ! |
| Honey | ! | | | ! | |

The immediate users/collectors from the sub-village Nyamahato are dependent on the woodland for a long range of domestic products. An actual market is not available, wherefore the commercial utilisation of the woodland is limited including the extraction of charcoal, timber and firewood for sale. The people in the sub-village can economically be divided into two subgroups: a) resident pastoralists with a large number of livestock and very limited crop cultivation, and b) farmers with less livestock and more crop cultivation. The crop cultivation in the area is risky and on average this group of farmers only cultivate one acre of sorghum per season, which is barely sufficient for feeding a household. In this situation the farmers do not turn to the woodland for an economic gain, since there is no immediate market. Instead they seek employment as casual farm labourers in Nyang'oro, Pawaga, and Chamdindi where they are paid either in cash or in maize or maize flour. The people belong mostly to the ethnic groups of Wagogo, Wahehe and Wamasai and are mostly in the poor (indigenous crop cultivators/livestock owners and middle (resident pastoralist) socio-economic group.

The villagers said that boundaries exist for the village land but that access is free in the area – and “why should we go to other areas if there is plenty here”. The mountain is used for grazing and is at a distance of five hours (single journey) on foot.

The people in Nyamahato presented and analysed their use of the woodland products as follows:

6.1 Firewood, domestic

Collected by women, but male bachelors collect their own firewood, and sometimes also married men collect firewood for the household, since the women are occupied fetching water at a distance of four hours (return). Male Wamasai never collects firewood. The firewood is abundant and collected around the homestead. The tree species for firewood include: “mpulula”, “mkungugu”, “mkambala”, “mhavava”, “mfugala”, and “misanzi”. No people come from outside to collect firewood for their domestic use on the village land.

6.2 Firewood, sale

Collected by both men and women and considered to be abundant. The only buyers of the firewood are the fishermen at the fishing camp called “custom”. They buy the firewood brought to them by the

residents of Nyamahato, or they travel themselves to the sub-village using donkey cart. A headload of firewood is sold in “customs” at TSH 200 while the buyer has to pay TSH 2,000 for a cartload of firewood in the sub-village itself. No one in the sub-village has a donkey cart to ease the long transport. Tree species used for sale of firewood are the same as those used for domestic.

6.3 Poles

Only collected by men and considered to be sufficient. Poles are not sold in general but some residents in the sub-village built houses for other villagers. The people building the house makes a complete contract, where they are responsible for the entire construction including poles, grass or scrub for roofing and mud to plaster the walls.

Poles and Wamasai house construction:

A medium house in the area not using sunburnt or burned bricks costs TSH 7,000 to build while a bigger house costs TSH 15,000. Since no bricks are used the walls also contains a large number of smaller poles, which the clay is plastered on. The villagers estimated that a medium house consumes 200 – 300 poles. A house lasts between 5 – 10 years depending on the quality and species of poles and the presence of termites during that period. Villagers said that termites were plenty. The species most resistant to termite attack include non-dried “mkambala” and “mkungugu”.

6.4 NWFP

Both men and women collect NWFP but most products are either collected by men or by women. Mushrooms are only found on the mountain, and are therefore considered scarce in the sub-village because of the distance. Medical plants are abundant and collected by both men and women and include the following species: “mkongolo”, “mmulimuli” and “mlungulungu”. Mostly women collect fruits. Especially the “udawi” is important. It has a high sugar and starch content and is used for juice and local brew. The fruits are few and other collectors include monkeys and birds. Grass for roofing is scarce – especially this year due to lack of rainfall and a pest attack, see below under pasture. In this case of no grass for roofing the villagers were using “ngelula” – a bush scrub.

6.5 Pasture, pastoralists’ cattle

Both men and women graze the animals with larger animals being grazed by men while women graze the young ones. Grass is considered scarce, especially this year when an attack of “mbilasi” insects destroyed the pasture. Also rainfall this year was scarce. Therefore the pastoralists have not come this year. The pastoralists uses the pasture as free access and due not have to seek permission from any of the residents in the sub-village. The only place in the area where they are not allowed to graze is near the village of Pawaga because a larger part of the land there is cultivated with rice. The pastoralists’ pasture includes the mountain area. The pastoralists enter the area with herds between 400 – 600 cattle.

6.6 Pasture, residents’ cattle

Both men and women herd the animals and the pasture is considered to be sufficient. The sufficiency is largely due to the practise of fencing certain areas near the sub-village for grazing late in the dry season when grass elsewhere has become scarce. This system constitutes the difference between the scarcity of grass for migrating pastoralist and the settled livestock owners. The residents including settled pastoralists have fewer animals then the migrating pastoralists. The livestock owners can be divided into the following two groups:

- a) settled pastoralists with very little crop cultivation owns between 70 – 100 cattle, while
- b) indigenous cattle owners with more crop cultivation own between 8 – 20 cattle.

6.7 Timber

Only collected by men and is considered to be scarce. People from Nyamahato sub village do not use pitsaw for making timber. They use axe, cutlass and chisel and can therefore not produce timber on a larger scale. They produce timber from “mkalala” which is used for doorframes and tops. The larger group of collectors come from Ismani, Nyang’oro and Chamdindi. Timber species are found on the top of the mountain. These species include “mwondo”, “mbwegere”, “mninga”, and “mkalala”.

6.8 Charcoal

Only men make charcoal. The wood for making charcoal is abundant but the market is not there. The only and limited market is in the fishing hamlet of “Custom” where some people use charcoal for cooking. A bag of charcoal fetches TSH 1,000.

6.9 Hunting

Only men hunt and the game is scarce compared with previously. People from Iringa, Nyang’oro and Chamdindi come to hunt big game while the villagers mainly hunt dik-dik antelope, other antelopes, rabbit, wild pig and birds. The villagers only use bow and arrow and traps for hunting.

6.10 Honey

Honey is only collected by men and is scarce. The men have no beehives but collect the honey directly from the trees on the underground beehives. A bucket of 20-litre honey is sold for TSH 4,000 – 5,000. The honey is in particular used by the women for preparing local brew. Moreover, the honey is used for medical purposes and porridge.

SOCIO-ECONOMIC VILLAGE PROFILE, MANGAWÉ VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Kihorogota VILLAGE: Mangawé

1.0 Implications for JFM

The case of Mangawé (but also including several other communities on the northern southern side of the Nyang'oro mountain range) shows that as soon as agricultural activities intensifies the traditional land owners start reclaiming their land back in the places where they lived before the villagisation programme. And as the population increases and likewise the economic potential of agriculture the woodland right to the top of the mountain could be included as agricultural land in future at the expense of the woodland. The Mangawé study also shows and confirms data from other communities in the same area that the village council only has nominal claims to the land when being confronted with the traditional landowners' need for more agricultural land. This raises a very important question to the ownership, present administration and future user rights to the mountain ridge. The team is rather convinced that similar traditional land rights exist on the northern side of the mountain range. There, however, the traditional landowners do not yet claim the rights, since agriculture is less important due to the circumstances mentioned above. Nevertheless, on both sides of the mountain any JMF initiative will have to take into account that traditional landowners are still as powerful as before. To plan a management based solely on negotiating management and use of the woodland with the village council and immediate users in these areas could hamper the progress, and success of activities. Finally, the users of the woodland do not see any problems concerning the availability of the most important woodland products: firewood (domestic) and poles for construction.

The existing and functioning tree sub-committee members interviewed by the team were confused with regard to the existence of both natural resources committee and the tree subcommittee. They asked MEMA to explain how they see the future of the two committees performing (perhaps similar) tasks in the same area but with different access and links to the village council? Moreover, the experience and the difficulties recognised by the members represents difficulties that any JFM initiative will also face, wherefore a more accommodating approach to existing and relevant community activities.

The team had difficulties even approaching the main woodland users. They have experienced fines, confiscation etc. from government agencies to a level where they see these officers as enemies – while they still continue their practise. They know that the present enforcement can only make things difficult for them but not hinder their activities. The question and challenge remain how the project will regain the trust of the people needed to embark on JMF activities. It will also be necessary to agree with the anti-poaching squad and other agencies, which are active in the area, on an approach acceptable to all stakeholders. First of all it will be very necessary to create an atmosphere of trust with woodland users before any plans can be initiated. The facilitation of that could include a workshop where all government officers (dealing with natural resources) in the area are faced directly with the user's. The officers themselves and not somebody representing them should explain how management, approach, attitudes and user rights are going to change, and why! they will need the co-operation of the user's.

Positively the village council including the village executive officer gave the team the impression of a well functioning organisation, with established procedures, which were adhered to. Of organisational interest is also the presence and influence on the village organisation of an opposition.

2.0 Location and demography

The village of Mangawé is 4 kilometres from the junction in Nyang'oro on the Iringa – Dodoma main road. The village is accessible all year.

The village is situated on a slope with the woodland on the ridge above the village and the agricultural land in the valley below. There is no woodland left in the valley – only on the hill slope. Moreover, little natural regeneration takes place, since all agricultural land is permanently cultivated.

The ethnic groups of resident villagers include Wahehe, Wabena, Wakinga, Wagogo and Wamasai. The only migrating ethnic group seasonally entering the community is the Wamasai.

The total population of the village as a best 1999 estimate is 2240 inhabitants distributed among 482 households. The village is a conglomeration of six sub-villages: Stand, Mjimwema, Chengelela, Kihesa, Hollo and Lugalo.

3.0 Infrastructure

The infrastructure in the community includes 1 primary school, 1 dispensary (completed but not yet operating due to lack of medical staff), a water supply system with a number of standpipes connected to the larger Ismani (gravity) Scheme, 6 milling machines (and three not working), Roman Catholic Church, New Apostolic Church (which distributed food relief last year - !?!), and a planned kindergarten to be partly funded by the Catholic Church.

There is no market in the village and villagers use the market facilities in Igula and Nyang'oro.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is the major economic activity in Mangawe with permanent intensive cultivation of the whole agricultural land. This is the most dramatic change in the farming system, which previously was characterised by burning woodland and an extensive farming system, which included fallow. No fallow takes place and the woodland is being depleted. A tree committee initiated by CONCERN has established woodlots to ease the pressure on the woodland. Land pressure is high and newcomers find it difficult to rent or otherwise get land. Some resident youth decide to migrate to Igula to rent land, while others buy land from the traditional landowners, which sell at TSH 10,000 per acre.

Farming takes place on the hillslope where the only remaining woodland is found. But the large number of stones and the presence of monkeys destroying crops if not well guarded complicate cultivation.

Main domestic crops include maize, and beans with groundnut, sorghum, cowpea and sweet potatoes being the minor food crops. Commercial crops include sunflower and cotton. However, cotton cultivation might cease since farmers experience no benefits from the cultivation. The executives from all villages in the ward had met to discuss the cotton cultivation, which is totally controlled by "Tako", a businessman from Iringa. The executive village officer interviewed said that most likely no one would cultivate cotton this coming season. Cotton cultivation was practised in 1989 – 1991 for two seasons with a buyer from Morogoro. Later he did not turn up to buy the cotton and cultivation of cotton stopped. Cotton cultivation continued in 1997 and the farmers were told that one acre could produce 800 kilogram of cotton, (the district agricultural officer informed the team that 600kg were the expected yield per acre) while the fact was that the farmers cultivated 80 kilo on average. "Tako" gave the production figures without the involvement of the government agricultural extension worker. The regional commissioner also tried to give loans to women groups to cultivate cotton. This attempt failed and haft the women have not yet repaid their loans.

Also beans are cultivated by some farmers as a cash crop. If a farmer succeed cultivating beans it will bring a considerable amount of money to the household.

No farmers use chemical fertiliser, while a few of those with plenty livestock manure the field using broad casting and not spot application. The poor farmers with no livestock do not fertilise their fields.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|--|---|--|
| Rich farmers own: 30 acres | Middle farmers own: 5 – 10 acres | Poor farmers own: 1 – 4 acres |
| Rich farmers cultivate per year * : 10 acres | Middle farmers cultivate per year: 5 – 10 acres | Poor farmers cultivate per year: s |

* The area cultivated by the rich farmer is 10 but the remaining land is rented out meaning that the whole farmland is permanently cultivated.

4.2 Land tenure

The land tenure system is completely dominated by the traditional landowners, which own and control 95 per cent of all agricultural land in Mangawe. The village council administers only 130 acres of agricultural land. This land was distributed long ago. The people farming the land of the village council land pay an annual rent of TSH 3,000 per acre per season. Unlike in other communities where the village council administers large land, the land is given to farmers without any annual rent attached to it. In Mangawe the village council considers the 130 acres worth an amount of TSH 300,000 as a permanent income – and recognises the village land as an income-generating project for the village council and the village. If anyone wants more land than the village council can offer he/she has to approach the traditional landowners that rent their land at TSH 4,000 per acre per season – or cultivate on the hill slope woodland.

The traditional land is inherited though men only. But a father can decide to allocate a piece of land for his daughter. This land will be returned to the father immediately the woman gets married, whereafter it is the husband's responsibility to provide land for his wife.

4.3 Animal husbandry

Livestock also plays a role in the farming system in Mangawe. Nearly all farmers use animal traction with bullocks and donkeys. The livestock graze to a large extent on the crop residues left on the farm but also find pasture in the hills.

Number of livestock distributed among the socio-economic groups is presented in the table below:

| | | |
|--|--|--|
| Rich farmers own: 40 cattle 50 goat/sheep | Middle farmers own: 20 cattle 30 goat/sheep | Poor farmers own: 1 – 5 cattle 10 – 15 goat/sheep |
|--|--|--|

The livestock population is increasing compared to the 1960'ties. Villagers had become aware of the importance of livestock through the introduction of animal traction. However, the team believes from observations that the grazing left could have implications for a continued livestock increase.

4.4 Other income generating activities

Income generating activities in the village include: local brewing, selling of food, petty trading, small shops, selling of firewood, selling of wood for brick making, selling of poles, selling of timber, and farm labouring. The income generating activities mostly supplement the income of the poor, since the middle and rich farmers concentrate on their farming activities.

5.0 Village Organisations

The team found on arrival that no village council meeting/workshop was organised. The village executive officer explained that he had discussed the issue of the workshop with the ward executive, who turned down the idea. A meeting like that just before the village council elections, which are taking place in November 1999 would be seen as a campaign effort by the CCM ruling party. The team therefore decided to have an interview with the village executive officer and went through most of the workshop issues (but not procedures). The team learned that most likely it was the village executive officer, who had decided himself not to arrange the workshop. However, he had a point of the workshop being seen as a campaign by the CCM. The opposition is very strong in Mangawe and is very sensitive to political manipulations while it at the same time has improved the performance of the village council. The village executive officer fully participated in the interview and provided the team with data. However, the dynamics and discussion of a workshop was missing.

The village council comprises of 25 elected members with all sub-villages being represented. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council.

The village council and all its standing committees have had three meetings this year and was preparing a fourth meeting to hand over the village projects and other issues in conjunction with the coming village council elections.

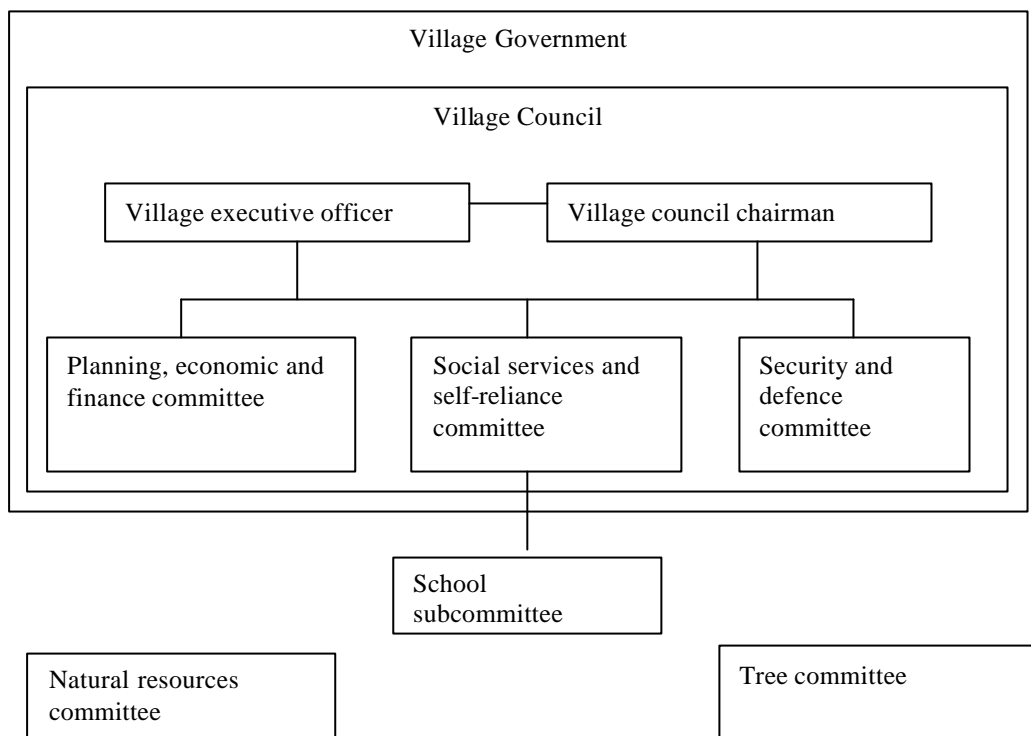
The village executive officer informed the team that every standing committee prepared written quarterly reports concerning their affairs and including accounts before each village council meeting. Every standing committee presented their reports at the meeting. The team had a chance to look into one of these reports, which by village council standards was impressive.

The village executive officer was of the clear opinion that the strong presence of opposition parties represented in the village council had forced the village council to improve their performance and accountability to a level not found previously. Also the role of the village executive officer had become more important and less party political now when he had to facilitate all political parties. He informed the team that the opposition is present and becoming stronger in seven out of ten villages in the ward. He said he experienced a more dynamic village council and community than before.

The village council is running three community projects:

- ? The council controls 130 acres, which is rented out every year equivalent to an annual rent of TSH 300,000.
- ? A tractor, which is, rented out for TSH 4,000 – 7,000 depending on the use and distance. The tractor is used for collecting firewood, agricultural produce from the fields, and distribution of manure. The tractor is also rented out for sick transport. The village council has an annual estimated income of TSH 600,000 from the tractor.
- ? A local brew shop run by the village council brings the village council an estimated annual income of TSH 700,000

The organisational chart below presents the overall structure of the community organisation:



Two subcommittees to the village council exist. These are the school committee and health committee. The school committee had meetings this year discussing the lack of payment of school fees by some parents, pupils' attendance, and the progress of school self-help activities. The health committee has equally met and has mobilised a health and hygiene campaign in the village to address the importance of construction and use toilets and inspect the cleanness of the utensils in shops selling local brew and food. Moreover, the health committee mobilised a campaign regarding the importance of plastering houses to prevent illness in the household. Finally, a tree subcommittee is in existence. The village executive officer was positive towards the work.

The tree subcommittee was interviewed separately by the team.

Interview with tree committee:

The 11-member tree subcommittee was formed in 1996 at the initiative of CONCERN. The tree subcommittee has members, who are also members of the village council, wherefore the subcommittee is directly linked to the village council. Some committee members have been changed during time and in general only five members have been active. Women are included among the 11 members, but all are inactive due to the nature of the tasks performed by the committee – patrols up in the mountain. Tasks of the committee include:

- ? Patrolling on the mountain to minimise cutting of trees without permit. The committee has carried out patrols once a month (although they planned every fortnight). Sometimes they have received an allowance of TSH 1,000 from the village council after the patrol. Patrolling of the area has been very difficult since they have not been provided with transport (bicycles) and has a large area to cover. The illegal activities have no season but takes place even in the rainy season.
- ? Issuing of permits through the village council. A permit can be obtained at TSH 1,000 for clearing woodland on an agricultural field, and TSH 2,000 for clearing poles necessary for construction of a two-room house. The village council keeps all money from the permits. The village executive officer said that last year they collected TSH 12,000 in permits and fines. He estimated that the maximum amount, which can be obtained through permits, does not exceed TSH 20,000. This

means that the village council has much more profitable businesses than issuing permits to use the woodland.

- ? Awareness raising on environmental issues in the village and sub-villages.
- ? Providing technical advice for household nurseries in Mangawe village.

The two committee members interviewed had not been trained since they joined the committee after CONCERN had left the community. They were confused about the issue, election and tasks to be performed by the new Natural Resources Committee, which they were not allowed to join because of their membership of the village council. They asked what MEMA would do, when both committees were going to patrol the same area? They advised MEMA to clarify the issue mentioned.

Finally the committee members said that they felt comfortable working under the guidance of the village council.

Three community committees are found in Mangawe. The water committee is involved in mobilising the collecting of funds. The water committee has no direct link to the village council but to the water users association. A pastoralist association has been formed with the purpose of enabling livestock owners to trace their cattle if stolen. The association has a bank account of TSH 400,000. The association also cultivated 10 acres as an income generating activity contributing to their fund.

A number of bylaws have been established by the village council:

- ? No cutting of trees on hills
- ? No burning
- ? Those not participating in community activities will be fined TSH 1,000
- ? Insulting in public will be fined by TSH 1,000
- ? Drunk shouting in the night is fined by TSH 5,000
- ? Confiscation of timber which is used for furniture making for the village council office.

The by-laws in enforced to a varying degree. In 1999 the village council has collected TSH 12,000 in fines.

The village executive officer believed that the majority of the village council would be new members following election.

In general the village council and other committees are well functioning and active to an extent which is rarely seen at the village level. This should provide the project with an opportunity to succeed.

The MEMA committee was elected at sub-village level without the presence of facilitators. No members of the MEMA committee are members of the village council and no members from the still functioning tree committee are members of the MEMA committee. The village executive officer said that due to the MEMA committee's membership and election procedures it has no formal link to the village council.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village executive officer). However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-village, Hollo, since the collectors/users mainly come from there, while the managers (village executive officer) and buyers were interviewed in Mangawe village.

The meeting with the users in Hollo, 5,7 kilometres from Mangawe up in the hills about 8 kilometres from the summit of the Nyang'oro mountain range provided an excellent opportunity to view and

observe the use of the woodland on this southern side of the mountain range. In general the southern side of the mountain ridge is far more cultivated and the woodland much more depleted as a result than on the northern side (Migoli, Izazi and Makuka villages). Both the soils and the rainfall favour agriculture to a much larger extent on the southern side than on the northern. During villagisation (1960'ies) the people in Hollo was asked to leave to Mangawe and settle there. Due to the introduction of animal traction and tractors in Mangawe at the same time and the high potential for agriculture, combined with a increasing population the farmers originating in Hollo could not have their demand for agricultural land satisfied in the early 1980'ies. They started to return to Hollo and since then they have all moved back.

Traditional ownership the Nyang'oro Mountain Range:

During discussion with the users the team was informed that traditional landowners own land right to the top of the mountain. They confirmed that today the village council administers the hillsides. On the other hand the village council also administered the land where today the people of Hollo are cultivating after they "reclaimed" their traditional land. A "reclamation" in which the village council have had no say, leaving the question open, whether the administration and ownership by the village council was ever recognised by the traditional landowners. In the same way the young people in Hollo will in future, when more land is needed for cultivation, claim their traditional rights to cultivate even the remaining mountaintop. This raises a very important question to the ownership, present administration and future user rights to the mountain ridge. The team is rather convinced that similar traditional land rights exist on the northern side of the mountain range. There, however, the traditional landowners do not yet claim the rights, since agriculture is less important due to the circumstances mentioned above. Nevertheless, on both sides of the mountain any JMF initiative will have to take into account that traditional landowners are still as powerful as before. To plan a management based solely on negotiating management and use of the woodland with the village council and immediate users in these areas could hamper the progress, and success of activities.

The team was informed by the village executive officer that Hollo was a place with plenty of users but also a place, which had experienced severe repression from government officers, wherefore the team should expect a difficult time. The meeting with users confirmed that they do have very negative experience with the government staff – especially wildlife officers. The people referred to cases where they were fined up to TSH 50,000. Some people have had to sell animals to pay the fine and in no cases were receipts issued. The chasing of woodland users have gone to an extent where people have been fined for collecting honey and if found with the remaining feathers of a slaughtered guinea fowl. The recent attempt of the district natural resources office to create a forestry reserve has unfortunately left the people in Hollo full of fear and distrust of any government office. The team experienced a cool welcome with no one willing to talk. A considerable amount of facilitation was needed before the meeting could proceed as normal – and actually end with success. To achieve this, the team had to work "undercover" without making their actual identity known - including its link to the Natural Resources Office. The question and challenge remain how the project will regain the trust of the people needed to embark on JMF activities.

There is a market for woodland products (building poles, wood for brick burning, and timber) in Mangawe except from charcoal and firewood for sale. All the timber collected is used locally (Mangawe) for manufacturing furniture, window and doorframes and roofing of government buildings.

The table below presents an overview of the forest users and product by gender and availability in Hollo sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | ! | | ! | |
| Medical plants/roots | ! | ! | | ! | |
| Fruits | ! | ! | | ! | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | ! | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Wood for brick burning | ! | ! | ! | | |
| Poles | ! | ! | ! | | |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Honey | ! | | | ! | |

6.1 Firewood, domestic

Collected mainly by women, but men also assist when they return back from the field. Men also collect the big stem of wood needed for “pombe”- brewing, where preferred species include “mikwee”, “myombo”, and “mtelela”. Firewood is considered abundant, since a large number of species are used: “mkwee”, “mpelemehe”, “mgiha”, “mkambala”, and “mkungugu”. The firewood is collected just around the household.

6.2 NWFP

Collecting the names and investigating usage of a long range of NWFP is very time consuming. The team has in all village profiles included availability of NWFP, but has decided to present a more elaborate list below.

Mushroom: Collected by both men and women and is considered sufficient. Mushroom is found on the mountains and agricultural fields. The preferred species are “wisogoro”, “wilelema”, winyavigulu”, ”wisika” and winyausako. Two species, “wisogoro” and “winyausako” can be dried and eaten during the dry season. A specie of mushroom found in the cow kraal is poisonous.

Medical plants: Collected by both men and women and is considered sufficient. Tree species suitable for medicine include:

- ? “parapande” and “mkongolo”, which is used to treat abdominal pains
- ? “mhotaponzi” treats diarrhoea
- ? “mvangaduma” and “mhasamulo” are used as a storing chemical for maize
- ? “mlungulungu” is used to treat snake bites

- ? "mflieti" treats dysentery
- ? "mtundwa" kills worms in the stomach and increase appetite
- ? "mpogolo" treats malaria

Grass for roofing: Mainly collected by women and is considered sufficient. Collection of grass for roofing is seen as a women's' activity. Grass for roofing is sold locally in the sub village at TSH 200 – 300 per bundle.

Fruits: Collected by both men and women and is considered sufficient. The fruit species include: "mikwata", "mibuyu", "mikwaju", "mpangepange", "mpelemehe", "msasati", "mtovo", "mikole", "mitafuta", "msada", "misandawe", "mfundu", and "mtongatonga". Some of these fruits are used for making juice ("mpelemehe") and others are mixed with porridge ("mikwaju", "mibuyu", "mitafuta" and "miperemehe").

6.3 Pasture, pastoralists' cattle

Both men and women graze the animals of the migrant pastoralists (Wamasai) and the grass is considered scarce. The reason for the scarcity is the number of animals, which the migrating pastoralists enter with in the area and moreover their restricted access to graze the crop residues. The farmers can give access if the pastoralist is willing to pay TSH 2,000 per acre. To alternatives exist whereby the migrating pastoralist enter into agreements on how to graze the animals:

- ? A pastoralist can leave his milking cows with a resident farmer. The farmer will then graze the animals on crop residues and gain access to the milk and the manure when keeping the animals.
- ? A pastoralist can chose to leave a few bullocks with a resident farmer. The farmer will then graze the bullocks on crop residues and use the bullocks for land preparation. Since bullocks need training to plough an arrangement like this has duration of at least two to four years.

6.4 Pasture, residents' cattle

Both men and women graze the cattle and pasture is considered sufficient the reason being that the residents have fewer animals and the advantage of grazing the animals on crop residues.

6.5 Wood for brick burning

Wood for brick burning is collected by both men and women and considered abundant. Species include "myombo", "mkwee" and "mtelela". The wood is collected on the mountain. Bricks are burned in Mangawe and not the sub-village. The involvement of the collectors includes collecting the wood only and filling it on a tractor. The payment for doing this job is TSH 3,000 – 4,000 per tractor load. The tractor collecting the wood is hired in Mangawe through the village council. Brick burning is not a new activity in Mangawe.

6.6 Poles

Men cut the poles and women assist to carry the poles to the sub-village. Poles are considered abundant and include the tree species of "mkola", "mgihl", "mkambala", "muhwisa", "mbumila", "mposi", "mdwendwe", and "mtananango". Poles are sold in the sub-village at TSH 300 per piece and TSH 500 if taken to Mangawe. People in the sub-village carry the poles as headload or use bullocks to do the job. "Mdwendwe" and "mkambala" are resistant to termites, which makes them preferred in house construction. The people in the sub-village did not use poles for mud-wall construction but only the roof. Mostly Wamasai uses poles in wall construction, as most of their houses are temporary anyway.

6.7 Timber

Timber is scarce and only collected by men on the mountain including the village land of Izazi and Migoli. The species include “mhembeti”, “muwondo”, “mkola” and “mninga”. The village council issues permits but several people collect timber without the permit. The Tree Committee is involved in the control of timber collection, see box above.

6.8 Hunting

Only men hunt. The game is considered scarce. Hunting takes place on the mountains including the village land of Migoli and Izazi. The team has during its study listened to several complaints from these and other communities about the trespassing of villagers from Hollo. It seems that hunting is a traditional and major activity in the community. The villagers said that they used guns, dogs, and bow and arrow – but other communities claim that several bushfires are causes in the area in general by hunters from Hollo using fire as hunting method. The hunters in Hollo have been chased for a long time by wildlife officers and possibly beyond what is reasonable. Game includes antelope, warthog, dik-dik antelope, rabbit, wild pig, guinea fowl and quail.

6.9 Honey

Honey is collected by men and considered sufficient. The people explained that due to the high altitude of their village the bees are not plenty. Moreover, only four people are having eight beehives together, while the rest are collecting honey directly from the trees. Honey is rarely sold outside the village. Honey is used for food, mixing with porridge and for local brew. March to April is the season for honey. People from other villages come to Hollo to collect honey.

SOCIO-ECONOMIC VILLAGE PROFILE, MFYOME VILLAGE

DISTRICT: Iringa

DIVISION: Kalenga

WARD: Kalenga

VILLAGE: Mfyome

1.0 Implications for JFM

The village of Mfyome is a very well organised community. The village council is functioning and so is all other management committees in the community. Moreover, the village has earlier taken its own initiative to manage the woodland and are ready to join the MEMA project to a further development of that system. These features should provide good opportunities for all stakeholders to formulate and implement a JMF plan.

Next month and following the village council election the Natural Resources Committee might have 10 members, which are also members of the village council due to their election. This issue and other important data for the JNF initiative in Mfyome are found in the box text on pp. 5 – 6.

2.0 Location and demography

The village of Mfyome is situated 24 kilometres north of Iringa town. The road is accessible all year although with some difficulty during the peak of the rainy season. The village has woodland covered hills to the south and vast agricultural land with the cultivation bordering the Kitapilimwa Forest Reserve to the north of the village.

The village was established during the settlement scheme programme in 1964 with an economic foundation based on tobacco growing. The settlement went through the villagisation programme in 1974, when distribution and re-distribution took place. In 1976 the village was registered as “Ujamaa” village.

The residents belong to the ethnic groups of Wahehe, Wabena, Wakinga, Wawanji, Wapangwa, and Wamasai. The pastoralist groups entering the village land in the dry season are Wamasai.

The table below presents the total number of inhabitants comprised of inhabitants in the sub-villages. Only total number of inhabitants in Mfyome and number of households in each sub-village were known to the village council.

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Village: Mfyome | 2322 | 2624 | 515 | 51 |
| Sub-village: Mhefu | n.a. | n.a. | 131 | 12 |
| Sub-village: Maiamba “a” | n.a. | n.a. | 109 | 10 |
| Sub-village: Maiamba “b” | n.a. | n.a. | 100 | 9 |
| Sub-village: Msosa | n.a. | n.a. | 79 | 5 |
| Sub-village: Matembo | n.a. | n.a. | 45 | 12 |
| Sub-village: Mgega | n.a. | n.a. | 51 | 3 |

3.0 Infrastructure

The infrastructure in the village includes 1 primary school, 1 dispensary, a wind milled water supply system which is under construction, financed by the Catholic Mission. There is no market but several shops in the village. The nearest market is the weekly market in Kiwere. Moreover, five milling machines are found in the village, churches and a mosque.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is the major economic activity in the village. The farming system is dominated by crop production with livestock playing a less important role. The farm technologies include animal traction, tractor ploughing and hand hoe for land preparation. Eighty per cent of the villagers use animal traction while the rich use tractor and the poor hand hoe. Before animal traction was introduced the farmers formed “mgowe” work parties. This organisation of farm work has ceased except among poor farmers. Ploughing costs TSH 5000 per acre, while the cost of hiring a tractor costs TSH 10,000 – 12,000 per acre. Ninety per cent of the farmers use chemical fertiliser on especially maize, tobacco and tomatoes. Also pesticides are used by farmers cultivating tobacco.

The farming season starts in October with initial preparations of land, followed in November – December with final land preparation and sowing. Weeding is in January – March and harvest is between May and July.

Main domestic crops include maize, cowpea, beans, and groundnuts and the minor domestic crops include cultivation of finger millet, sorghum, sweet potatoes, and cassava. Cash crops prioritised according to importance are tomatoes, sunflower and tobacco. However, also maize and groundnuts are also sold when in excess. Earlier tobacco was the most important cash crop.

Tobacco cultivation started immediately the village was established in 1964 and was at that time the whole economic foundation of the village. Firstly, the government at that time brought a manager. Later in 1968 the co-operative society took over the management until 1972, when the Tobacco Authority of Tanzania took over. In 1975 tobacco growing became an Ujamaa activity until 1982 when the co-operative society again managed the activities. Today the American Tobacco Company Dimon is the sole buyer of tobacco in the village.

Tomato is the most profitable cash crop in the village for the time being. The farmers cultivating tobacco uses chemical fertiliser, pesticides and herbicides. In a good season an acre cultivated with tomatoes fetches up to TSH 1,000,000. Buyers come from Dar-Es-Salaam.

4.2 Land tenure

Land tenure is characterised by land having been distributed by the village council and with no traditional land – “malungulu”. This is the only community studied by the team where there is no traditional land. In 1964 land was distributed to the newcomers. During that time each household got 3 acres per year to cultivate. However, the practise was stopped in 1968. When the Ujamaa programme started it was impossible to continue the practise of 12 acres and those people who were not able to cultivate their 12 acres had part of their land redistributed. Land was then distributed according to ability to farm the land following a maximum of 3 – 6 acres per household. Today there is no more land in the vicinity of the village, while it is still possible to get land far from the village – especially in the sub-village of Matembo, where the landless have moved. The sub-village is 2 ½ hours walk from Mfyome. Land is rented at TSH 4,000 – 5,000 per acre per season. Both men and women inherit land.

The farm size for resident socio-economic groups is found in the table below:

| | | |
|---|--|--|
| Rich farmers own: 12 acres | Middle farmers own: 6 – 9 acres | Poor farmers own: 0 – 3 acres |
| Rich farmers cultivate per year: 12 acres | Middle farmers cultivate per year: 6 – 9 acres | Poor farmers cultivate per year: 0 – 3 acres |

The table above shows that no land is fallow in the village but all under permanent cultivation.

The table below presents the relationship between size of land compared to membership of the village council. Land distribution is again a topic in the village, wherefore it is worrying that the landless are not represented in the council. It is also not surprising that the village council does not press harder for a redistribution of land.

| Acres owned | Percentage of households | Percentage of village council members |
|-------------|--------------------------|---------------------------------------|
| 0 acres | 20 per cent | 0 |
| 3 acres | 30 per cent | 30 per cent |
| 6 – 9 acres | 20 per cent | 60 per cent |
| 12 acres | 30 per cent | 10 per cent |

4.3 Animal husbandry

The number of livestock owned by residents is relatively small compared to other communities in the area. However, the livestock is integrated in the farming system as 80 per cent of the households use animal traction as land preparation technique. Thirty households own between 4 – 8 sets of bullocks and ploughs. These households actually have renting of bullocks and ploughs as an important income generating activity. The cost of hiring bullocks is TSH 5,000 per acre, while the cost of hiring a tractor is TSH 10,000 – 12,000 per acre. Only the poor people and especially people living in Matembo sub-village are still practising hand hoe and manage the technique through traditional work parties “mgowe”. The traditional work parties have ceased to exist among middle and rich farmers using tractor or animal traction. Instead they pay farm labourers up to TSH 5,000 for weeding one acre.

The livestock of the residents graze on crop residues but also find pasture in the woodland bordering the forest reserve, while migrating pastoralists graze inside the forest reserve.

Number of livestock distributed among the socio-economic groups is presented in the table below:

| | | |
|---|--|--|
| Rich farmers own: 30 cattle 20 goat/sheep | Middle farmers own: 15 – 20 cattle 10 – 15 goat/sheep | Poor farmers own: 1 – 5 cattle 1 – 5 goat/sheep |
| Resident Wamasai own: 1000 cattle 200 goat/sheep | Resident Wamasai own: 100 – 500 cattle 20 – 50 goat/sheep | Resident Wamasai own: 20 – 50 cattle 10 – 40 goat/sheep |

Number of livestock belonging to migrant pastoralists:

| Rich pastoralists: | Middle pastoralists: | Poor pastoralists: |
|---------------------------|-----------------------------|---------------------------|
| 500 – 1000 cattle | 200 – 500 cattle | 15 – 30 cattle |
| 200 – 600 goat/sheep | 50 – 100 goat/sheep | 20 – 30 goat/sheep |

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

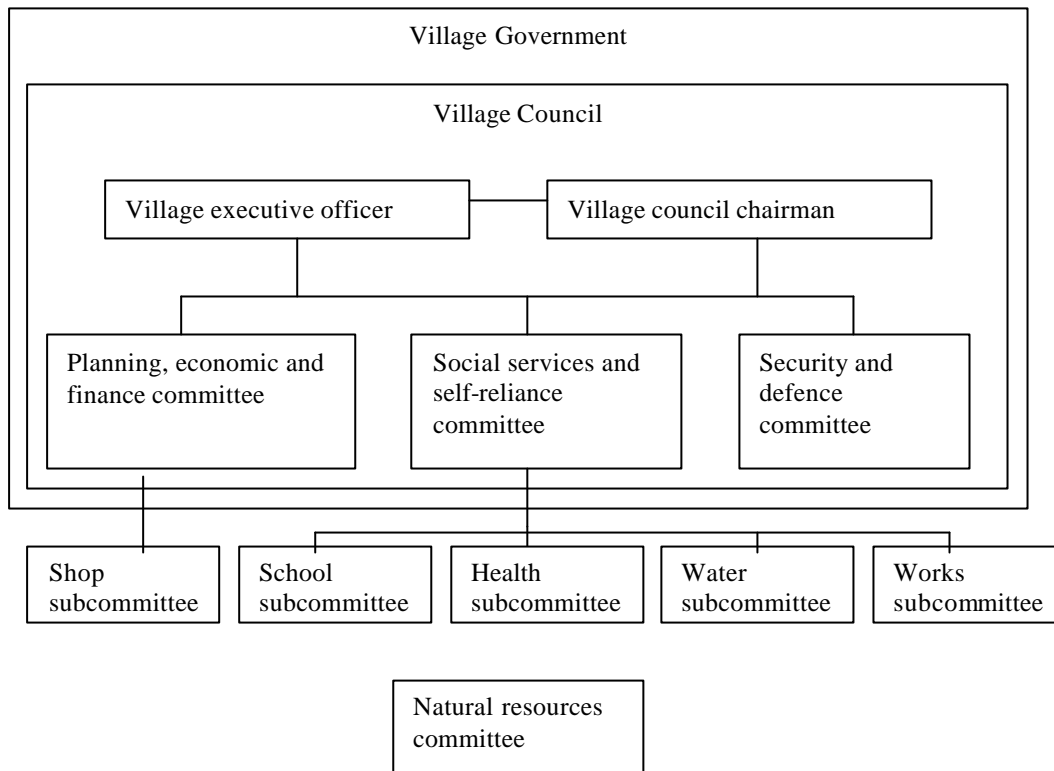
| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | | ! | ! | !! | |
| Selling of charcoal | !! | ! | | | ! | ! | ! | ! |
| Selling of meat (butcher) | ! | | | ! | | ! | ! | ! |
| Shops/kiosk | ! | | ! | ! | | ! | | |
| Petty trading | | ! | | | ! | ! | ! | |
| Tailoring | ! | ! | | ! | | ! | ! | ! |
| Selling firewood, local | ! | ! | | | ! | ! | ! | ! |
| Carpentry | ! | | | | ! | | ! | ! |
| Owners of mills | ! | | ! | | | ! | | |
| Selling of timber | ! | | | ! | ! | ! | ! | |
| Mat weaving | ! | | | | ! | ! | ! | ! |
| Selling grass for roofing | | | | | | | | |
| Masonry | ! | | | | ! | ! | ! | ! |
| Renting bullocks and plough | !! | ! | | ! | | ! | ! | ! |

The table above shows that the middle and rich households are more involved in income generating activities since they have less land and possibilities for renting additional land compared to other communities studied. In those villages the rich and middle households have larger farms and nearly exclusively concentrate on farming while only the poor supplement their income - and service the community - through income generating activities.

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council.

The organisational chart below presents the overall structure of the community organisation:



The village council has had 10 meetings this year discussing the following issues:

- ? the break down of the village council tractor and how to repair it (it has still not been repaired)
- ? the village council wanted to shift one of their two milling machines to better service the different sections of the village. The milling machine was moved but has broken down since then
- ? discussion on how to obtain an “land occupancy certificate” at the district land office. The district land officer advised the village that the procedures had to include the neighbouring villages to agree on all boundaries in the area. The divisional and ward offices should organise the exercise but has done nothing so far
- ? the problem of water supply in the village. The Catholic Church has now promised to complete the wind powered water scheme and has started the work
- ? security and defence in general in the village, but in particular the role of militia with regard to woodland and forest reserve management
- ? repair of primary school and construction of individual toilets in the village, an activity which have started
- ? payment of development levy. The village council operates a list of 800 able individuals supposed to pay TSH 4,000 each per year. However, only 50 per cent have paid their levy. A discussion among the workshop participants revealed that villagers found the many levies, taxes and fees too many
- ? they were reluctant to pay those where it was difficult to see the immediate actions following payment. Payment of animal tax was one example mentioned while villagers agreed that payment of school fees was appreciated as the education of children takes place every day in front of their eyes

The standing committee of planning, economic and finance has had no meetings this year. The standing committee of social services and self-help has had three meetings this year discussing issues raised by

the village council and raised by the sub-committee referring to that standing committee. The standing committee for security and defence had no meetings this year.

Five subcommittees exist to the village council:

School subcommittee: The subcommittee had two meetings this year discussing non-attendance of children and the problem with those who do not have school uniforms. The subcommittee agreed to monitor the parents of the children who do not attend school and fine or take the parents to court if no improvement. The subcommittee was concerned about parents spending time and money in local brew houses while children were left on their own.

Health subcommittee: The subcommittee had two meetings this year discussing construction of communal latrines. Moreover, the subcommittee has been busy launching an AIDS awareness campaign. The committee members informed the team that when they distributed free condoms randomly the men thought this was the go-ahead for an increase in sexual partners and activities. Today the committee is more critical when it distributes the condoms and is concentrating on education more than condoms. This activity was initiated by an NGO and continues to receive support from the family planning programme of the health department. The committee said that they experience a positive change in behaviour among men and women in general. However, the young men are still not responding to the campaign.

Water subcommittee: One meeting to discuss and follow up organising work for the water scheme under construction.

Works subcommittee: The committee had two meetings this year. The primary objective of the committee is to ensure land for all villagers.

Shop subcommittee: The village council owns the shop. The committee has met every month to take stock, planning of procurement of goods and accounting for sales and procurements. Today the shop has TSH 1,250,000 on its bank account in Iringa and goods in the shop at the value of TSH 600,000. Committee members explained that before the shop of the village council was the only one in the village and business was better than today when more shops and competition is present.

The newly formed Natural Resources Committee has one member who also happens to be a member of the village council and the standing committee for social services and self help. Still the village council has not discussed the link of the Natural Resources Committee to the village council. The committee has had two meetings already and carried out four patrols in the forest reserve – advising the users without fining and confiscation. The study team recommends that the district natural resources office should start actively working in the community since the committee is eager to learn more and start implementing.

The village council has no opposition members and does not expect to have any following the elections this November 1999, since the opposition candidates talk a lot but have not clear idea or suggestions to what they want to do.

The income of the village council is coming from the following sources: A truck for renting, a butchers shop, and two milling machines all owned and managed by the village council, and development levy. Some figures on the income of the village council have already been presented above. Unfortunately the bookkeeper was absent during the village council workshop wherefore the team has not been able to get all information. But all members of the village council present at the workshop ensured the team that all accounts are made and presented for approval of the village council.

The whole village organisation and its many committees are active and well functioning and provide a good opportunity for an immediate start of MEMA activities.

The village council chairman's story about woodland management:

Having heard about the village council chairman's good and bad experiences regarding management of community woodland, the team decided to conduct a separate interview with the chairman.

The chairman told the team that the village council a few years ago decided that commercial users of the woodland including the forest reserve should pass the village council office and get a permit at the cost of TSH 1,500 before entering the community woodland. Permits were issued specifying the purpose of the collection of allowed products (wood for curing tobacco, firewood etc.). The permits did not specify that collection was only allowed in the woodland and not the forest reserve. The chairman anticipated that this was obvious to the collectors – or perhaps less important since the District Natural Resources Office earlier had burned charcoal in the forest reserve using the villagers as labourers (FIP project).

The idea of introducing a fee on the use of the woodland came about when the Catholic mission had completed a kindergarten school in the Matembo sub-village where the village council was responsible for paying the teachers. The money collected was supposed to pay the teachers' salaries. However, the implementation of the idea ran into problems.

- ? At first the receipt book was given to the sub-village chairman, who later was not able to account for the money collected, which was either spent in the sub-village or by the sub-village chairman himself.
- ? Then the issuing of receipts became the responsibility of the village executive officer and the system became better managed for some time. Unfortunately, the new village executive officer did not monitor the activity following her issuing of receipts and one time a man from the village who had a receipt to collect wood for curing tobacco was caught by the divisional forester using his permit to burn charcoal inside the forest reserve. The village executive officer was taken to the police but later released.
- ? Moreover, trucks from outside the community started to use different routes to the woodland and forest reserve in order to avoid the fee in Mfyome.

Today the chairman hopes that the MEMA project will assist the village council to formulate a better management system taking the problems into account. The team has heard several rumours from forest officers narrating the above incident in different versions. The important issue is, however, that the village by itself took an initiative to manage the woodland with the purpose of developing their educational facilities – and in a sub-village – Matembo, which is the poorest part of the community. The initiative ran into problems, some of which are mentioned above. Despite the problems the village is ready, has experience and new ideas to try a management system with the purpose of developing of the community.

The chairman also commented on a change in policy by the district natural resources office. He said that before the village council used to confiscate timber and when handing it over to the district natural resources office the office returned 20 per cent of the value to the village council. This system stopped and the divisional foresters are now working through informants in the village. The village council chairman had no comments to whether he appreciated having marionette foresters in the village. However, he was more concerned with the fact that these marionettes nowadays often make direct deals with the offenders, who paid the marionettes for not informing the foresters resulting in a loose-loose situation for the district natural resources office, the village council and the forest.

The village council chairman continued the discussion of the MEMA committee's link to the community's organisational set-up. He argued that according to him he anticipated that a future management would include both planning, economic, social and defence elements wherefore the issue needed careful consideration. However, he also said that so far the MEMA facilitators had mostly stressed the protection aspect of the management and more information was needed from MEMA to get a full picture of the project's ideas. The chairman then took up the issue of the composition of the MEMA committee. He said that the facilitators had stressed that only one member of the committee could be a member of the village council. Now 10 members of the newly formed members of the MEMA committee are candidates in the village council election taking place by the end of November.

The chairman expected that they would all be elected – and what then? The team advised the chairman to await information from the project. The team is convinced that this issue does not only exist in Mfyome.

The team is not ready to recommend on this particular issue since the question of composition of the committee has already been commented on several times in the village profiles. Nevertheless, the issue is an interesting example of how difficult it is for projects to foresee and attempt to control events and procedures outside its boundaries.

The very knowledgeable village council chairman told the team that he has withdrawn his candidature as chairman in the coming elections but will stand as an ordinary village council member.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village council). However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-village Matembo where a large number of the collectors/users come from, while the managers (village council) and buyers were interviewed in Mfyome village.

Land pressure is high in Mfyome village and the continued search for agricultural land is leading to expansion into the area of the sub-village of Matembo. In fact the only advice the village council can give to newcomers or young people in the village is to go to Matembo to farm. Matembo is 9 kilometres away from Mfyome. The surroundings of the sub-village are characterised by thick woodland, which however, is now being depleted by the agricultural activities. The sub-village borders traditionally owned woodland and the Kitapilimwa Forest Reserve – and both woodlands and their products play an important role in the economy of the users interviewed. The sub-village was established in 1969 and was lying inside the forest reserve until 1981 when the boundaries of the forest reserve was renegotiated and the village became registered as sub-village.

The table below presents an overview of the forest users and product by gender and availability in Matembo sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood , selling | ! | ! | | ! | |
| Firewood, domestic | | ! | | ! | |
| NWFP | | | | | |
| Mushrooms | ! | ! | ! | | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | ! | ! | ! | | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | ! | | | ! |
| Pasture, residents' cattle | ! | | | ! | |
| Charcoal | ! | ! | | | ! |
| Firewood for curing tobacco | ! | | | ! | |
| Firewood for brick burning | ! | ! | | ! | |

| | | | | | |
|---------|----|---|---|---|---|
| Poles | ! | | ! | | |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Honey | !! | ! | | ! | |

The participants prioritised the importance of woodland products as follows:

- Women:** 1st priority, firewood, domestic (essential for preparing food)
2nd priority, grass for roofing (essential for providing shelter and also providing an income for women)
3rd priority, firewood for sale (provides an income for the women)
- Men:** 1st priority, poles (essential for building the house and also provides an income for men)
2nd priority, timber (essential for providing furniture in the school, building material for government buildings in the village and also provides an income for individuals)
3rd priority, charcoal (provides income for individuals)

Especially the men had difficulty prioritising woodland products. They claimed that priorities is entirely dependant on the individual, wherefore the team has chosen to present data from all listed woodland products collected by users in all its village profiles.

6.1 Firewood, selling

Firewood for sale is collected by both men and women and considered sufficient. The tree species include “mkwee”, “mlama”, “mtelela”, and “myombo”. The firewood for sale is collected inside and outside the forest reserve. Firewood is sold in Mfyome at TSH 200 per headload. Private buyers come from Iringa to buy firewood. They pay TSH 7,000 – 8,000 for a truckload and TSH 3,000 for a pick-up carload. The users do not ask whether the buyers have permits to collect the wood. The village council has introduced a fee of TSH 1,500 for a truckload. However, that fee is often not paid because the truck drivers use other routes out of the village area, see box text above. On average a truck comes to load every two weeks. The business of firewood has been busier before, but since the buyers now need of a permit from the District Natural Resources Office, the amount of firewood leaving the community has reduced according to the users.

6.2 Firewood, domestic

Firewood for domestic use is collected only by women and is considered sufficient. The firewood is collected near to the household and women only spent about half an hour to collect a headload. The firewood for domestic use is collected in the woodland outside the forest reserve. The women collect three headloads of wood per week in the dry season and four headloads in the cold season when firewood is also used for heating. The women do not stock firewood before the agricultural season because of the short distance wherefore they have enough time to collect the wood even when they are busy farming. Tree species include “mkwee”, “mlama”, “mpalapande”, “msambalawe”, “mlyasenga”, “mpululu”, and “myombo”.

6.3 NWFP

Mushrooms: Mushroom is collected by both men and women and considered abundant. The species include “wilelema”, “wisogoro”, “wimenda”, “winyausako”, “wilulwi”, “winyafigulu”, “wisimba” and “wikulwe”. The preferred species are “wisogoro” and “winyafigulu”. The mushroom is sold in Mfyome

and Iringa town at TSH 50-100 per bowl. All species can be dried, stored and eaten during the dry season.

Grass for roofing: Only women collect grass for roofing, which is considered sufficient. The grass for roofing is collected in the fields and village woodland located to the west of Matembo sub-village. A bundle of grass is sold in the sub-village at TSH 200. The species preferred are “likuvi”, “lipelele” and “kigonamwikeve”.

Fruits: Both men and women collect fruits, which are considered abundant. The fruit species found include “mtowo”, “msasati”, “mtundwa”, “msambalawe”, “migola”, “minywewa”, “mibaya”, baobab fruit and tamarind. Fruits are collected in the village woodland and the forest reserve. The fruits of “msasati” and “mtowo” are sold in Mfyome at TSH 50 per bowl. The baobab fruit and “mtowo” are dried, stored and eaten during the rainy season.

Medical plants: Both men and women collect medical plants, which are considered abundant. The medical plants are collected in the village woodland and the forest reserve. A patient pays between 200 – 1000 depending on the medicine provided. The medical plants include:

- ? “mpongolo” used for treating convulsion in children
- ? “mlama” and “mtanula” used for treating stomach pains
- ? “mflieti” used for treating stomach worms
- ? “mmlimuli” and “mhungulu” used for treating pneumonia
- ? “mpalapande” used for treating malaria
- ? “lwenyi” used for treating diarrhoea

6.4 Pasture, pastoralists’ cattle

Both male and female pastoralists (Wamasai) graze cattle. The pasture is considered scarce due to the large number of animals. Most years only five to six families enter the area with their cattle amounting to approximately 3,000 - 4,000 heads of cattle. However this year 40 – 50 families entered with their animals, which caused particular scarcity. The pastoralists come in the rainy season. Sometimes a pastoralist will leave a small number of cattle with a resident farmer. The pastoralist will also leave a few bullocks, which can be used by the resident farmer for ploughing and transporting large poles free of charge but with the condition that the farmer grazes the other cattle. Bullocks are trained when they start transporting poles and logs and can therefore be used within a very short time for ploughing. The pastoralist will collect his cattle and bullocks after approximately three years.

When the team had its workshop it was interrupted when participants suddenly got up to chase a known cattle thief who had already managed to steel 50 cattle not far from the local brew house, where the workshop took place. The thief was caught and handcuffed and half the cattle returned to the owners. The users decided not to kill the thief but beat him up until the remaining cattle was found.

6.5 Pasture, residents’ cattle

Only men graze the animals. The grass is considered sufficient and moreover the animals are grazed on crop residues. The residents also give permission to migrating pastoralists to graze their animals on crop residues. The payment is TSH 1,500 for grazing rights to one acre. In the agricultural season the cattle graze in the forest reserve at the same areas where the pastoralists’ cattle graze, although the pastoralists often move in a larger area.

6.6 Charcoal

Charcoal is made by both men and women and considered scarce because the large size tree species are becoming scarce. Tree species include “mtelala” and “mkwee”. The people in the sub-village learned to

burn charcoal in the late seventies. It was the District Natural Resources Office who had a project (FIP Project) in the area at that time where the office burned charcoal inside the forest reserve – charcoal that was sold in Iringa. The users worked as labourers and learned the technology. An official letter from 1937 proposed the creation of a fuelwood reserve in the Kitapilimwa forest. The team does not know whether it was this idea that was taken up 40 years later.

Today the users do not allow people from outside to come and burn charcoal. They keep the business exclusively for themselves. Charcoal is burned inside and outside the forest reserve. Charcoal is often burned by a traditional work party “mgowe” organised by an individual who prepares local brew for the participants. Thereafter one of the participants organises a similar “mgowe” etc. A large amount of wood gives up to 80 – 100 bags of charcoal and the “mgowe” (cutting of wood, arranging the wood, and burning) takes four days.

Charcoal is sold to buyers from Iringa at TSH 1,000 per bag. The price is rather low compared to other communities studied and the charcoal burners explained that the low price was due to the large quantity sold at one time. The charcoal burners have agreed on the price and no one is selling charcoal below that price. The charcoal burners have not organised an association as such but discuss issues of importance when they sit together and drink local brew. The charcoal burners said that often the buyers will go away if they think the price is too high. However, within an hour they are back, because they will never go empty back to Iringa once they have spent the money coming. The sacks for the charcoal is provided by the buyer and the expense of loading the truck is shared between the person organising the “mgowe” and the buyer (each person participating in the loading takes TSH 500).

6.7 Firewood for curing tobacco

Only three farmers in Matembo cultivate and cure tobacco. The market for the wood is therefore in Mfyome. The tree species used and the arrangement of the wood and transport follow the same procedures as the firewood for brick burning, see below.

6.8 Firewood for burning bricks

Both men and women do collection of the wood and the wood is considered sufficient. Tree species include “mkwee”, “mlama”, and “mtelela”. No burning takes place in Matembo. The collectors get TSH 5,000 for cutting and loading one tractor. The tractor comes from Mfyome. It costs TSH 15,000 to rent the tractor for the trip.

6.9 Poles

Poles are collected only by men and considered abundant. Tree species include “mlama”, “mpalapande”, “mkwee”, “mnyaluhanga”, “msangala”, “muhwisa”, and “mvanga”. Poles are used for house construction and animal kraals in the sub-village. Poles are sold in Mfyome at TSH 150 per piece. The tree species of “mlama” and “msangala” are termite resistant. Poles are collected inside and outside the forest reserve.

6.10 Timber

Only men cut timber, which is considered scarce. Extraction of timber on a large scale took place from 1980 – 1985 when people came from Iringa in large numbers, cut the trees and took the logs back to Iringa to process. The users in the community only worked as labourers and simply looked on as the timber disappeared. Later villagers in Mfyome learned to pitsaw and started timber activities in the forest reserve and woodland. The users in Matembo did not learn to pit saw before 1997. The school in Mfyome needed new furniture, whereafter a group of young men was sent to Mfyome for training in pitsawing. They became experts and have since then been busy preparing timber for people in Mfyome and Iringa town. The users in the sub-village do not have their own pitsaws, and believe they do not

need them because the timber is less than before and because they enter acceptable agreement concerning renting of pitsaws from the owners in Mfyome. A man rents a pitsaw at TSH 10,000 per month or without cash payment but payment in timber (10 pieces per month). Sometimes the owners of the pitsaws from Mfyome, Itagutwa and Iringa come to the area. They bring pitsaws and the men get TSH 800 per piece they prepare for the buyers. When the users prepare and sell the timber directly they get TSH 1,500 per piece (1”/8”/8 feet or 2”/6”/12 feet or 1”/12”/12 feet). The size 1”/12”/12 feet is the most difficult to pitsaw and used especially for furniture making. Timber species are collected inside the forest reserve (“mninga”) and outside in the woodland (“mkola”). The activity takes place in the dry season and a man can pitsaw approximately 120 pieces in a season. All men involved in timber cutting are farming and with the largest income from their farming activities. They consider timber as an important income generating activity. No men has been fined or jailed in connection with their activities but has had timber confiscated by the village council.

6.11 Honey

Honey is mainly collected by men, but women assist in holding the container for the honey. The honey is considered sufficient. The collectors use fire/smoke to separate the bees from the honey while collecting. Honey is sold at two prices in the sub-village:

- ? TSH 10,000 for 20 litres of “cleaned” honey, which is used for porridge, ugali, and tea, and
- ? TSH 8,000 for 20 litres of “raw” honey, which is used for local brew.

Approximately 15 villagers have between 3 – 8 beehives each and others collect honey directly from the trees. Tree specie used for making the beehives is “mkongolo”.

6.12 Hunting

Only men hunt and game is considered scarce. Game includes dik-dik antelope, wild pig, guinea fowl, quail, rabbit, and warthog. Hunting methods include guns, dogs, traps, bow and arrow, and clubs. Hunting takes place inside and outside the forest reserve. Also people from Itagutwa, Kipera, and Kiwere come to hunt in the area.

SOCIO-ECONOMIC VILLAGE PROFILE, MIGOLI VILLAGE

DISTRICT: Iringa

Ward: Ismani

WARD: Izazi

VILLAGE: Migoli

1.0 Implications for JFM

Migoli has a number of committees, which are involved in management of the woodlands. The experience of those committees will be of importance to any future woodland management in the community. It should be mentioned that the experiences with “outside” woodland management has been rather negative or of no importance to the village. The CONCERN committee collapsed when the project was no longer there and no percentage of the revenue/fines collected by the committee have been returned to the village. Moreover, the initiative taken by the Natural Resources Department in Iringa to demarcate the boundaries of the woodland has also met problems. The socio-economic survey shows that the boundaries of the woodland are already known to the villagers and access rather free – wherefore they the village council did not see any reason for the exercise, which never got started.

The community recognise the lake as government property and a joint management of the woodlands might be perceived as strange to the villagers, if other natural resources (the water in the lake) are not included or addressed in that plan.

The multi-ethnic composition of the village is causing some conflicts regarding the use of natural resources (agricultural land). On the other side, it means that the community organisations and traditional landowners have been forced to negotiate access to land and property in a constantly rapidly changing social and natural environment. The proposal of any future plan should take into consideration those experiences. Moreover, the study team found that the multi-ethnic composition of the village gave a dynamic dimension to the community, which was strongly felt during especially meetings with the village council.

The study team recommends to MEMA that this study could be supplemented by the following assessments:

- ? a visit to the sub-village of Makatapola where a large number of woodland users are found in order to decide whether this sub-village – although on the other side of the lake – should also be included in a future plan
- ? that separate meetings are held with the previous CONCERN committee, pastoralist committee, and the carpentry committee to probe further into their experience
- ? to meet with pastoralist ethnic groups and probe further into their use of the woodlands

2.0 Location and demography

The village of Migoli is located on the main Iringa – Dodoma road, which is assessable all year. The distance between Migoli and Iringa is 97 kilometres or two hours by car.

The village is situated next to the lake behind the Mtera Dam (hydroelectric power station). The lake was created in 1981 and commissioned in 1982. Today the lake created by the dam has a major economic impact on the village and the ethnic composition and population growth of the community.

The total population of Migoli as an addition of all sub-villages is presented in the table below:

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Migoli | 3406 | 3867 | 724 | 188 |
| Sub-village: Mwanyengo | 125 | 250 | 60 | 10 |
| Sub-village: Kenya | 356 | 222 | 67 | 16 |
| Sub-village: Makonge | 670 | 865 | 96 | 35 |
| Sub-village: Mtera | 860 | 1050 | 104 | 45 |
| Sub-village: Migoli | 885 | 980 | 234 | 52 |
| Sub-village: Mapelamengi | 510 | 600 | 163 | 30 |

Two sub-villages are of particular importance to the use of the woodland; Mwanyengo and Maperamengi since a large number of the direct collectors are found there. However, the sub-village of Maperamengi is located on the northern side of the lake and therefore not utilising the Nyang'oro woodland which has immediate interest and priority of the MEMA. Moreover, the sub-village of Mtera is inhabited by the largest number of customers (and exporters) of woodland products.

The ethnic composition of the village is characterised by a large number of different ethnic groups including: Wahehe, Wagogo, Wangoni, Wapangwa, Wamakonde, Wamatengo, Wapare, Wajita, Wakinga, Wayao, Wanyasa, Wasukuma, Warangi, Wamburu, Wamasai, Wasagara, Wakuria, Wanyamwezi, Wamanda, Wahaya, Wanyamwanga and Wakerewe. All these ethnic groups are resident in the village. Many ethnic groups came during the construction of the dam and have chosen to stay to exploit the fishing potential of the lake. The indigenous ethnic groups include Wahehe and Wagogo. Pastoralist ethnic groups include Wabarabaigi, Wamasai, and Wasukuma. In other words the ethnic diversity is much more complex than in any other village in the area.

3.0 Infrastructure

The infrastructure in the village includes:

1 primary school, 1 health centre, 1 dispensary and a vocational training centre and orphanage managed by the Roman Catholic Church. The vocational training centre is providing education in agriculture and more importantly in carpentry using the wood from the immediate woodland.

People in Migoli uses the market in Izazi village as their main trading point.

No piped water supply exists and the villagers collect domestic water from the lake.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is not a major activity in the village. Fishing constitutes the major economic activity and farming activities provides an economic supplement to the household when the fish is off-season.

Main crops are maize, fingermillet, cowpea and minor crops include rice, sweet potatoes cassava and green grams. Most crops are cultivated by both men and women. Men, however, mostly cultivate cassava, and women are cultivating cowpea. Commercial crops include cotton as major and groundnut as minor.

4.2 Animal husbandry

Livestock are plenty in the village with the Wamasai (resident) possessing the largest number (30 - 50 cattle). Households belonging to other ethnic groups have fewer animals (6 – 10 cattle).

4.3 Land tenure

The traditional land tenure system was characterised by individual ownership of residents belonging to the two indigenous ethnic groups in the village. After the construction of the dam traditional ownership to the land changed to include some of the newly arrived ethnic groups. These groups are now claiming ownership to the very fertile and wet strip of land next to the lake causing conflict with the indigenous landowners who owns the large but dry areas inland. The newcomers claim their ownership to the fertile land next to lake because that was the original dry bush-land, which were given to them while they arrived. Today new settlers are entering the woodlands, since they are not allowed to settle any longer at the lakeshore. The plans of the village council to irrigate a large tract of land next to the lake could create further tension. The MP of the area has already brought a diesel pump for the irrigation project.

The village council is allocating land not already cultivated and owned by the traditional landowners. However, villagers who want land for agriculture can also approach the traditional landowners. These arrangements are negotiated from one farming season to the next. No renting of land takes place in the community. Some land conflicts have occurred when the village council has allocated land to a farmer, which ownership was later claimed by a traditional landowner. Other conflicts have happened when a farmer of a particular piece of land has travelled and later on his return finds that another farmer is cultivating his land.

There are no land conflicts with farmers from neighbouring villages since they do not trespass the agricultural land of the village. Fishing is the major economic activity in the community, especially for the poorer young men. The district council controls the management of the lake. Any fisherman has to get a permit from the district council in order to fish in the lake. Most people having license to fish belong to the newcomers, while only a few of the indigenous people have the license. The fishermen are users but not managers. The making of boats, poles for setting nets and the smoking of the large quantity of fish all needs different products from the woodland.

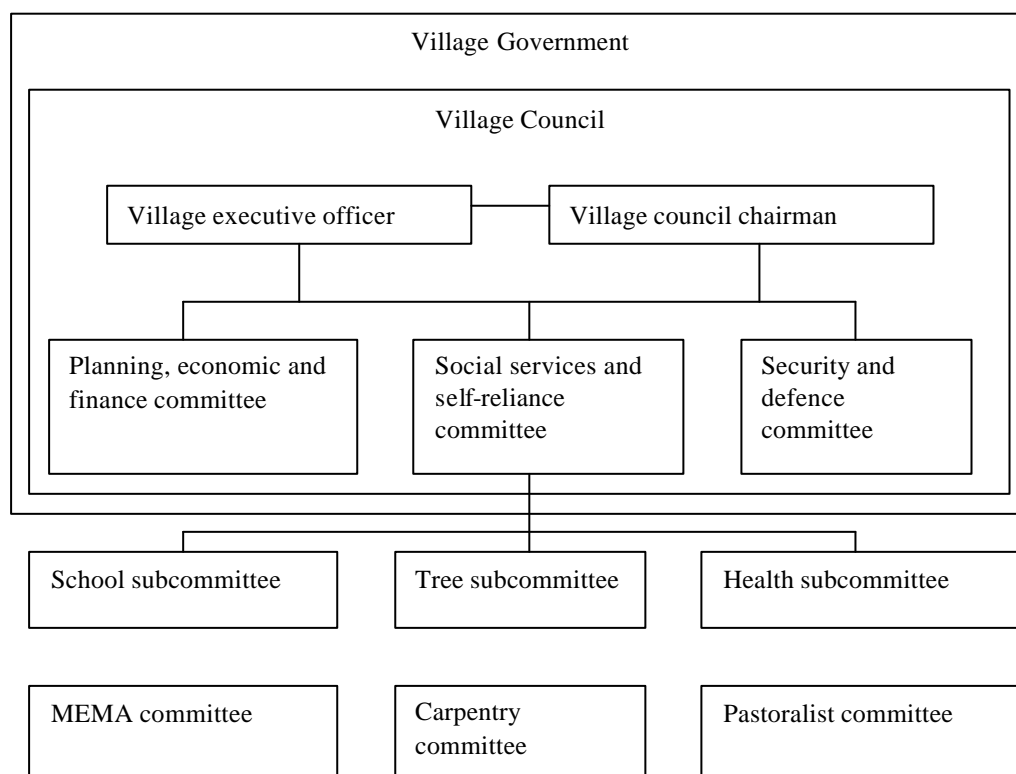
4.4 Other income generating activities

A major income generating activity for the poorer women (and to some extent men) is smoking and frying of fish used both in the community and for sale. Other important income generating activities of particular interest for the management and users of the woodland include: carpentry, commercial brick making, charcoal burning and selling of firewood and timber. Moreover, income generating activities include honey collection, petty trading and processing of agricultural products. The table below indicates main income generating activities:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | | ! | ! | ! | |
| Selling of food | | ! | | | ! | ! | ! | |
| Shop/kiosk | ! | ! | ! | | | ! | ! | |
| Selling firewood, local | ! | ! | | | ! | ! | ! | |
| Carpentry | ! | | | ! | ! | ! | ! | |
| Fishing | ! | | | ! | ! | ! | | |
| Selling charcoal, timber | ! | ! | | | ! | ! | ! | |
| Smoking/frying fish | ! | ! | | | ! | ! | ! | |
| Selling meat | ! | ! | | ! | | ! | ! | |
| Milling machine | ! | | ! | | | | ! | |
| Brick making | ! | | | ! | ! | ! | ! | |
| Tailoring | ! | ! | | ! | ! | ! | ! | |

5.0 Village Organisations

The diagram below presents an overview of the village organisation in Migoli:



The village council comprises of 17 elected members with all sub-villages being represented. The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The village council is supposed to meet every month. However, this year the village council has met three times (middle October). The standing committee for planning, economic and finance handles all money and finance issues of the village council – meaning that not all elected members of the village council necessarily have that experience.

A number of village subcommittees referring to the village council exist. These include school committee, health committee and tree committee; all falling under the social services and self-help standing committee.

The newly formed MEMA committee has not yet been linked to any standing committee. The village council made the point that since the village council representative on the MEMA committee belongs to the security and defence standing committee the MEMA committee would also be linked to the village council through that link. The reason given was that the village council had understood that the function of the MEMA committee is protection – as the most important aspect of the management of the woodlands.

The membership of the various subcommittees differs according to role and responsibility. The tree subcommittee was initiated by the CONCERN project six years ago and ceased to function after the project left the community. The role mentioned by one of its members (who was also a member of the village council) was to collect revenues (fines, royalties). These were given to the forest worker who submitted the proceeds to the district council. The tree subcommittee had never received its percentage of the money collected.

Another woodland related initiative by the village council included a demarcation of the village boundaries. That activity was initiated by the district natural resources office one year ago. The village council stated that they never started the exercise and never took the effort to negotiate the borders with the neighbouring villages. The reason given was that the villagers knew the boundaries while no further demarcation was needed seen from the perspective of the village council.

The village has a number of organisations, committee (initiatives) outside the government structure of interest to the management of the woodland and welfare of the village. These include the Carpentry Committee involved in furniture making by the Catholic Church and the Pastoralist Committee. The Pastoralist Committee was originally formed of both resident and the non-resident pastoralists using the woodland areas with a purpose to negotiate grazing and prevent cattle steeling. Cattle steeling (by non-resident Wamasai) has today become the most pressing issue but because of lack of trust between Wamasai and the other ethnic groups rearing cattle, the Wamasai is no longer participating in the work of the Pastoralist Committee.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users, managers, buyers, middlemen and manufacturers. However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-village, Mwanyengo, since the collectors/users mainly come from there, while the managers (village council), buyers, middlemen and manufacturers were interviewed in Migoli village.

The table below presents an overview of the forest users and product by gender and availability in Mwanyengo sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | ! | ! | | ! | |
| Firewood, domestic | | ! | ! | | |
| NWFP | | | | | |
| Mushrooms | | ! | | ! | |
| Medical plants/roots | !! | ! | | ! | |
| Fruits | ! | !! | | ! | |
| Pasture, pastoralists' cattle | ! | | | ! | |
| Pasture, residents' cattle | ! | | | ! | |
| Charcoal | ! | | | ! | |
| Wood for brick burning | ! | | | ! | |
| Poles | ! | ! | ! | | |
| Timber | ! | (!) | | ! | |
| Hunting | | | | | |
| Big game | ! | | | | ! |
| Small game | ! | | | ! | |
| Honey | ! | | ! | | |

The immediate users/collectors from the sub-village, Mwanyengo are economically very dependent on the woodland and had farming as a minor activity. The people belong mostly to the ethnic groups of Wagogo, Wahehe and Wamasai and are mostly in the poor and middle socio-economic group. The three first mentioned woodland products below (firewood for sale, charcoal and timber) are the economically most important products to the villagers in Mwanyengo.

6.1 Firewood for sale

Mostly women collect firewood for sale. Firewood was considered to be sufficient in the area. Before the firewood for sale was abundant but more collectors have entered the business. Preferred species include “mkambala” and “mhavava”. The firewood is collected on the large plain before the mountain and the gullies to northwest of the sub-village. Sometimes people from Izazi enter to woodland to collect, which is allowed by the village. Buyers of the firewood are from Migoli and the villagers from Mwanyengo, brings the firewood to Migoli. One bundle of firewood is TSH 250. The collectors often exchange the firewood for groceries in Migoli.

6.2 Charcoal burning

Mostly done by men. Wood for charcoal considered sufficient. Only two species, “mkambala” and “mhavava” are used for charcoal. These species are not abundant as before and the collectors have started to move far near the gullies to the northwest 2 kilometres from the sub-village and near the mountains. The burned charcoal is transported to the buyers in Migoli who are not burning charcoal themselves. One bag of charcoal is sold at TSH 1,250 - 1,500 depending on the quality. Also pastoralist Wamasai are involved in charcoal burning and selling.

6.3 Timber

Timber is collected by men but with the assistance of women to carry the wood. Timber is considered sufficient although collectors claim that the timber species are becoming fewer and that they have to collect the timber further away than before including part of the mountain. The only three species collected are “mninga”, “muwondo” and “mkola”. Two rather distinct collection patterns exist which involve the collectors differently. Firstly, the collectors cut timber wood on request from buyers in Migoli. This wood is processed in Migoli and not in the sub-village where collectors claimed to have little expertise in pit sawing – which they have in Migoli. (see below on wood buyers and manufacturers in Migoli). Secondly, timber is harvested by outsiders from Mangawe, Usolanga, Nyangoro (all villages on the southwest side of the forest ridge and included in the socio-economic study) and Dodoma. The collectors from the first three mentioned villages collect timber in the area because it has finished in their area, while the Dodoma collectors come because they know the most valuable timber trees are in the area and because of road accessibility between Migoli and Dodoma. The Dodoma collectors do the pit sawing in the sub-village. They employ to some extent the people in the sub-village but bring their own pit saws and workers to complete the job. No one has a permit or license to collect timber. A village bylaw exists but is not enforced. The people in the sub-village claimed to fear the forest worker and said that illegal felling of “mninga” can give you up to 35 years in jail(!). However, no one has been jailed so far but several of the collectors had been warned. Punishing of people from Migoli becomes further complicated because they are all related to each other. Selling price of timber: TSH 2,000 per piece 1”/12”/10 feet (“muwondo” and “mkola”). Also Wamasai are involved in timber collection from the woodland. Fishing boats are constructed using timber in the village woodland.

6.4 NWFP

The collectors are only a few women and the products are in abundance. Fruits are eaten in the woodland and not taken to the sub-village. Two types of mushrooms are collected. One is found on the mountain and is less preferred since it is stringy. The other is found on their agricultural fields and is the preferred type. Mushrooms are plenty when the rains are plenty. The women dry the mushroom if they are not consumed immediately. Dried mushrooms can be kept for one month. Medical plants, roots etc. are important but only a few women have the knowledge to collect them.

6.5 Pasture, residents’ cattle

Both men and women own cattle, while only the men (and boys) graze the animals. Grass is sufficient but depending on the number of bushfire incidents and amount of rain. The collectors were aware of the district by-law, prohibiting bush burning and pointed at a signboard saying “Usichome moto”(“don’t set fire”). The collectors whom were all cattle owners said they had reduced burning as a method of hunting and claimed that hunting practice was done by outsiders hunting in their area. Nevertheless the villagers confirmed that there was enough grass for their animals. Grazing takes place all around the sub-village, which is situated in the middle of the woodland.

6.6 Pasture, pastoralists’ cattle

The grass is sufficient and used by Wamasai who comes to graze when the grass is scarce in their own area. However, this year they have not arrived meaning that they have grass in their own area. As already mentioned the grass is sufficient and is not an issue of conflict. Nevertheless, it should be mentioned that today the Wamasai are becoming more and more involved in timber collection, firewood collection for sale and charcoal burning. Also the residents in Migoli mentioned several conflicts with the Wamasai whom they claimed were stealing cattle in the area.

6.7 Hunting

Hunting is practised by men in the sub-village. Big game is scarce while small game (rabbits, birds, antelope, porcupine) are sufficient. Those who hunt big game in the area are from outside (Iringa, Izazi and Mangawe). The outsiders hunt without permit. The hunters from the sub-village have changed their practise of hunting method from burning the bush to using dogs, traps and bow and arrow. They do not hunt for big game since they do not have the guns necessary. The big game has become scarce due to the large number of hunters killing the animals and/or stressing them to move away. It should be mentioned that the elephant has returned to the area.

6.8 Poles

Collected by both men and women. Poles are abundant. Normally the poles collected are for domestic use. Selling of poles is practised when there is a demand for it and one pole cost TSH 100 - 150.

The species normal used are “mkalala”, “mhavava”, “mkambala”, “mguluka”, “mtema”, “mpalula” and “mkongongolo”. “Mguluka” and “mkongolo” are resistant to termites.

6.9 Honey

Collected by men and is abundance. The main use of the honey collected includes local brew, food, and medicine. The honey is plenty because not many have the expertise to collect. Only two villagers had traditional beehives while most people involved collect the honey directly from the trees. Honey substitutes sugar in the households and the women said they prefer honey to sugar.

6.10 Firewood for domestic use

Mainly collected by women and in abundance. The women said they collect all species for the household while the species for selling are restricted. The firewood is collected just around the household.

Buying and selling of woodland products in Migoli:

Two main groups of buyers are found in Migoli. One group consists of mainly women who buy the wood from Mwanyengo and sell it in Migoli. The people buying wood are those smoking and frying fish, brick makers. Some of these women buy the wood in Mwanyengo using donkey cart to transport the wood while others buy the wood from villagers from Mwanyengo when they come to Migoli to sell.

The second group of buyers in Migoli is involved in buying timber. Some of the timber is used in Migoli and other is sold to traders from Dodoma and Iringa.

Timber prices in Migoli, “mninga”:

- ☞ Timber buyers in Migoli buy in Mwanyengo at TSH 2,000 per piece
- ☞ The same buyers resell the timber in Migoli to the carpenters/furniture makers at TSH 3,000 – 5,000 per piece depending on the quality. The timber is also sold to buyers from Iringa and Dodoma at the same price.

Timber prices in Migoli, “mkola”:

- ☞ Timber buyers in Migoli buy in Mwanyengo at TSH 1,000 – 1,200 per piece
- ☞ The same buyers resell the timber in Migoli to the carpenters/furniture makers in Migoli at TSH 2,000 – 3,000 per piece depending on the quality. The timber is also sold to buyers from Iringa and Dodoma at the same price.

Wood for brick making:

- ✍ The price is TSH 2,000 per cubic meter. A kiln of 50,000 bricks needs 30 – 36 cubic meter of wood. One brick is later sold between TSH 6 – 10 depending on the season and quality. Bricks are more expensive in the rainy season. The bricks in Migoli are slightly more expensive than bricks in Iringa due to a larger market and more competition in Iringa. However, the bricks in Migoli are made from the excellent material of clay/gravel at the lakeshore.

Firewood for smoking and frying fish:

- ✍ The fish smokers buy their firewood directly from villagers coming to Migoli from Mwanyengo. They buy the wood per head load at TSH 300 – 500 depending on quantity.

Carpentry/Furniture making in Migoli:

There are five carpentry/furniture-making workshops in Migoli. The carpenters buy their timber either directly ordering the wood from Mwanyengo or they send people from Migoli to the forest to collect the timber they need. The products from the workshops are sold in Migoli or to outsiders – including the workers at the nearby TANESCO.

Moreover, the Catholic Mission in Migoli provides vocational training in carpentry and furniture making. The Mission gets its timber directly from the people in Mwanyengo, who prefer the Mission as their customer since they always pay immediately. The Mission is the largest carpentry/furniture producer in Migoli.

SOCIO-ECONOMIC VILLAGE PROFILE, MKULULA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Malengamakali VILLAGE: Mkulula

1.0 Implications for JFM

Except from timber there is no market for woodland products in Mkulula village and the team observed large areas of virgin woodland being burnt for agricultural purposes without a single woodland product being collected from the land. The area of land being burnt in this way is huge, because the farmers cultivate a larger piece of land than they can weed. According to farmers weeds become a problem after two – three years of cultivation whereafter the farmer clear a new piece of virgin woodland where weeds are less and therefore crop performance better and less labour intensive. The challenge for a JMF intervention under these conditions will be discuss the practise with the farmers and find ways of negotiating the continuation of the practise, which is environmentally damaging but economically sensible to the farmers. The data on regeneration of woodland in Usolanga will also address the issue in Mkulula, although the situation is different in Mkulula since there is still plenty of virgin woodland in the valley to include in the farming system. The system approach to JFM in Mkulula will have to discuss the depletion of the woodland in terms of “prevention” more than “cure”, which is the case in other communities in the study area.

The previous regulation (management?) of burning the woodland for agricultural purposes has been confused and lacking trust between the managing stakeholders – CONCERN, the forester, the village council and farmers resulting in collapse of any regulatory system. Trust and confidence have to be rebuilt before any new management initiative could count on having any positive impact. The team found that although it spent time and efforts trying to create an informative and trustful environment, the team still witnessed a considerable amount of manipulations distorting or limiting the information regarding e.g. the aspects of hill farming and the role of villagers in Mkulula in timber collection. The village council chairwomen is most likely a successful manager in the village but did not bring much information to the team that was not filtered though village and her own politics.

The meeting with CONCERN proved very successful and the team recommends that the project takes time and effort to assess and learn from any initiative having operated or still operating in a given village to learn from their mistakes and successes – before – the project embark on interventions.

2.0 Location and demography

The village is found on a branch road 30 kilometres from the main Iringa – Dodoma road. The branch road is in disrepair but is nevertheless accessible all year.

The village is situated in a valley between two mountain ridges. The mountain ridge to the north is the same ridge, which other project villages are facing, while the other mountain ridge facing south is less interesting seen from a project perspective, since the village land does not reach the mountain but stops at a gully near the mountain.

The resident ethnic groups include Wahehe, Wagogo, Wamasai, Wabena, Wakinga, and Wasagara. The migrating pastoralist groups in the area include Wamang’ati and Wamasai.

The community represents by rural standard an affluent society with its wealth originating from large and fertile land, which is cultivated. The woodland is rather intact, partly because the lack of a market to justify its utilisation beyond the household, and partly because the villagers can get more money from crop cultivation and livestock and finally because the population is increasing at a normal rate.

The estimated total population in the village and its surrounding sub-villages is 2100. The sub-villages include: Stand “a”, Stand “b”, Mbuyuni, Mpalagaga, Kikuyu (became a sub-village in 1995), Lulanga “a”, Lulanga “b” (became a sub-village in 1995), and Lhomejo.

3.0 **Infrastructure**

The infrastructure in the village comprise of 1 primary school, 1 dispensary and a piped water supply scheme (gravity), 4 milling facilities and a number of churches.

4.0 **Economic activities**

4.1 **Agriculture, crop cultivation**

The village Mkulula is a busy and thriving farming community with large tracts of fertile land and including a considerable number of livestock. The main domestic crops are maize and sorghum and with the vegetable crops of cowpea, groundnut, bambara nuts, pumpkin and finger millet representing minor crops. Cotton and sunflower are the cash crops cultivated in the village. The farmers have been cultivating cotton since 1990 and sunflower since 1963. Farmers were complaining about cotton being less profitable and said that they preferred to cultivate maize. The team found that the farmers most likely only continue with the cotton cultivation because the crop was introduced as compulsory – a characteristic, which still seems to surround the crop. The farming season starts in December with land preparation and ends in April – June with harvesting. Land preparation includes the technology of hand hoe, animal traction and tractor. The technologies of animal traction and tractor have made it possible for farmers to cultivate larger tracks of land than before. The following prices of land preparation include:

- ? Animal traction using bullocks TSH 4,000 per acre. There is about 50 households owning ploughs in the community. A farmer with a plough can borrow his plough to another farmer in return for the land preparation of three acres or some plough owners rent their plough to an other farmer for TSH 12,000 per farming season.
- ? The cost of using tractor is TSH 8,000 per acre. There is no tractor in the village but rather in the neighbouring village of Usolanga.

4.2 **Land tenure**

The land tenure system is characterised by traditional privately owned land, government land distributed by the village council, renting of traditional land and the use of farm labourers coming from Dodoma and from the village itself. Approximately half the agricultural land is owned by the traditional landowners while the village council distributes the other half. Villagers rent land from the traditional landowners at TSH 1,500 per acre per season.

The farmers said that they prefer to rent land from the traditional landowners instead of the village council, because the landowners land has been cultivated before, wherefore they do not have to cut down the bush, meaning that the village council only have rights to the marginal lands and virgin woodland.

Farm acreage is large even among the poor farmers:

| | | |
|--|--|--|
| Rich farmers own: 30 – 50 acres | Middle farmers own: 10 – 20 acres | Poor farmers own: 6 – 8 acres |
| Rich farmers cultivate per year: 10 – 20 acres | Middle farmers cultivate per year: 10 – 15 | Poor farmers cultivate per year: 6 acres |

4.3 Animal husbandry

Also livestock plays an important role in the household economy with the following distribution among the socio-economic groups:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--------------------------|----------------------------|--------------------------|
| 50 – 60 cattle | 10 – 30 cattle | 1 – 9 cattle |
| 80 goat/sheep | 50 goat/sheep | 20 goat/sheep |

Cultivation and grazing take place on the mountain slopes. The village land was demarcated during the Ujamaa period. The demarcation points in the valley are beacons and baobab trees while there is no demarcation marks on the hills. The young people in the village council said it was only one person who actually knew the boundaries – the chairman of the village council at that time – who today happens to be the chairman of the Natural Resources Committee. Grazing is free on the mountain and people from other communities – e.g. Usolanga and migrating Wamasai – enter the mountain slope of the village land.

The village land is fertile and villagers estimated the maize yield per acre to 7 – 10 bags. A few farmers use pesticides and some farmers use cattle manure to improve the yield.

Small-scale fishing takes place in a tributary to the Ruaha River.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | | ! | | ! | !! | !! | ! | ! |
| Selling of honey | ! | | | | ! | ! | ! | |
| Masonry | ! | | | | ! | ! | ! | |
| Petty trading | | ! | | ! | !! | ! | !! | ! |
| Selling firewood, local | ! | !! | | | ! | ! | !! | ! |
| Selling of meat | ! | ! | | ! | | ! | ! | |
| Fishing | ! | | | ! | ! | !! | ! | ! |
| Carpentry | ! | | | ! | | ! | | |
| Selling of bricks | ! | | | ! | !! | ! | | |
| Shops/kiosk | ! | | ! | ! | | ! | ! | |
| Selling charcoal | ! | | | | ! | ! | | |
| Tailoring * | ! | ! | | | ! | ! | ! | |

* Repairs only

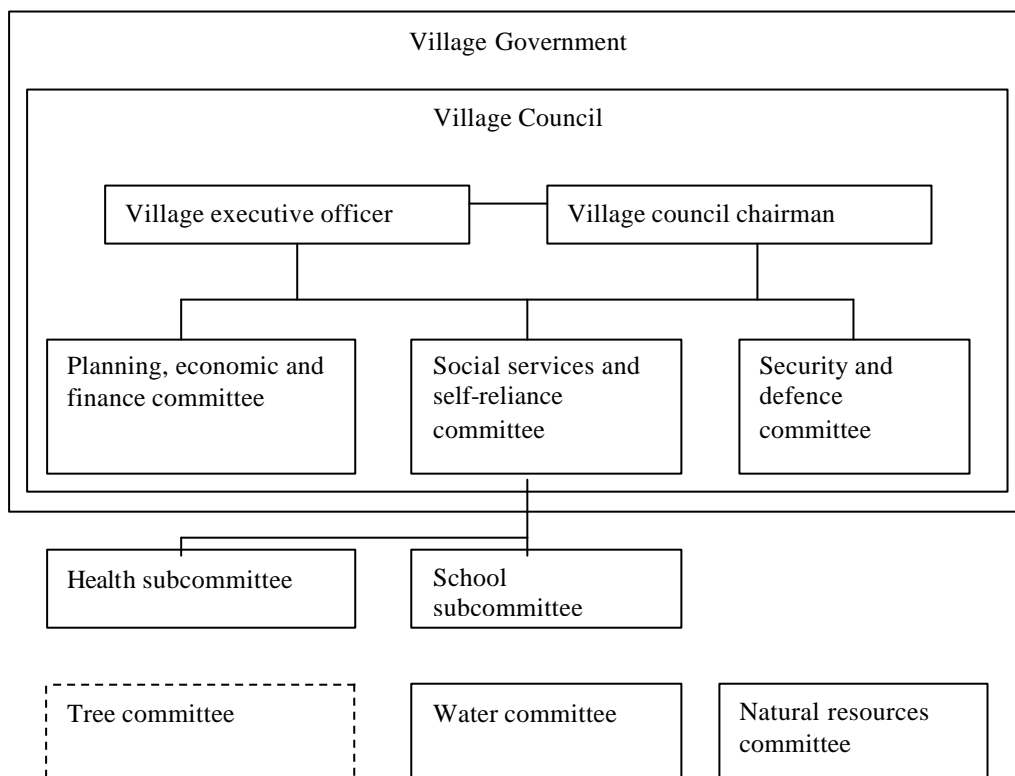
People in the rich socio-economic group are not very involved in income generating activities since they get their business from large scale agriculture and livestock.

People in the village do not migrate for labour. On the other hand the farmers employ casual farm labourers from Dodoma and the poorer farmers from the village itself.

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. A new village council has just been elected but has not yet started working. The most striking feature of the village council in Mkulula is that a woman chairs the village council – and chairs it well it seems following the team’s meeting with the village council.

A village organisational chart according to the village council is presented below:



The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have had no separate meetings this year. The village council had planned to meet every quarter this year and had so far this year met three times.

Two subcommittees to the village council exist. These are the school committee and health committee. The health committee planned to meet quarterly and have conveyed two meetings so far this year. The sub-committee’s meeting centred around primary health care for babies, children and their mothers. The recent meeting had been arranged as a community meeting to discuss the upsurge in venereal diseases. The schools sub-committee has met twice this year and once it had a meeting together with the village council. The meetings were arranged to discuss repair of the school, problems with children not attending school and the problem with parents who do not pay their school fees. The school committee has an account where money from school fees and money from other income generating activities (school farm) are entered. The account is in Iringa and the school committee prepares plans and budgets, which are presented to the village council for approval.

The village council collects their revenue from three sources:

- ? Development levy, TSH 4,000 which is taken to the district council whereafter 10 per cent goes back to the village council's bank account in Iringa
- ? Tax on livestock, where the revenue goes to the district council, whereafter 10 per cent goes back to the village council's bank account in Iringa
- ? Tax of crops, where the revenue goes to the district council, whereafter 10 per cent goes back to the village council's bank account in Iringa

Last year the village council collected TSH 3,000,000 and consequently received 30 per cent of that amount (TSH 900,000) on their account. This money constitutes the annual budget for the village council. The village council proposes plans and budgets, which the district council has to approve before the money is released from the village council's bank account. Most times money is not released but materials are bought for the village council instead of giving cash money directly to the village council. The description of this system is similar in for other village councils although amount differs.

Two community committees exist: the water committee and the natural resources committee (MEMA). The water committee collects money from individuals, TSH 1,200 per year. Seventy per cent of the money collected is submitted for the water association, 10 per cent remains for the water committee and 10 percent is used to pay water fee collectors and the remaining 10 per cent is paid to the water scheme attendant. The water committee is linked to the water association and not the village council.

In general the village council, sub-committees and the water committee is active and has some experience in planning and budgeting for development activities in the community.

A seven-member tree committee was functioning until the natural resources committee was elected. The tree committee with no formal links to the village council was initiated by CONCERN. CONCERN left the village in 1996. However, the tree committee continued their activities with producing and distributing seedlings to interested villagers. As a result of the natural resources committee election the tree committee was dissolved. The natural resources committee contains no members from the village council and has therefore no official link to the village council. Only two members of the tree committee were elected into the natural resources committee. The team finds that the possibilities for building on the experience and continued work of the tree committee has not been fully explored or realised before election took place. The village council also commented that the election of the natural resources committee was abrupt and sudden.

Formally the tree committee was given a receipt book by the forester in order to issue receipts and thereby a permission to utilise a particular piece of woodland for charcoal and firewood extraction and other uses – excluding timber. Receipts were given to both villagers and outsiders. However, the receipt book was taken back by the forester after some time. According to the village council chairwomen the forester argued that if the tree committee was holding the receipt book (and thereby managing the utilisation of the woodland) no woodland would be left in a short time. The chairwoman of the village council commented on this case, that in fact more woodland is being cut after the village lost its “voice” in woodland management. She added that the village today neither controls the amount of cutting or where people chose to cut the woodland. The village council members expressed that they saw this experience as very negative. They continued to say that the only government staff, who benefits the community was the community development officer and the teachers while the agricultural extension worker (whom they had not seen since April) and the forestry extension worker did not contribute positively to the village welfare and interests.

Finally ten women groups of five members each have been formed on the initiative of the Regional Commissioner with the purpose of giving loans in order to support economic activities of disadvantaged women. The first year the loans were given to executive women in the community. And one woman, who was also a village council member, said that she had used her loan to employ more farm labourers on her cotton field. However, the village council admitted that the somehow biased loan scheme had been corrected last year to become more oriented towards those women who actually need the money.

Following, the team had an interesting discussion with the village council regarding how to ensure that the poor individuals are given a change to participate in the decisions and activities concerning village development.

6.0 Woodland and Forest

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village council). However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective.

The collectors/users were interviewed in the sub-village, Luganga (b)/Malekani, since the collectors/users mainly come from there, while the managers (village council) and buyers were interviewed in Mkulula village.

In general there is no market for woodland products in Mkulula except from timber. All the timber collected is used locally for manufacturing furniture, window and doorframes. However, the team found that the woodland – even virgin woodland was being burned for crop production. Since no market is available, the wood is not collected nor used. The area of woodland being included for agricultural purposes is rather large since the introduction of tractors and animals traction has made it possible to cultivate large acreage. In relation to this the farmers cultivate a larger acreage than they can weed. Farmers informed the team that after cultivating the same piece of land for two – three years the weed becomes a problem, whereafter they burn another piece of woodland. The land is fertile and very suitable for agriculture wherefore the farmers recognise the economic potential for the woodland as agricultural land. This observation also concerns the poor people.

The woodland cut today is near the settlements, which were abandoned during the villagisation programme and therefore traditionally owned by the people who left the land to settle in Mkulula. Whether the woodland is actually being depleted depends on the extent, nature and speed of the natural regeneration. It was very difficult for the team to get reliable information regarding this issue. However, in the Usolanga Village profile there is more data concerning this issue, which could be relevant for Mkulula. The team also tried to discuss the crop cultivation on the mountain but got very inconsistent information, since there seemed to be an awareness among the people interviewed of this activity being illegal. Also here the Usolanga Village Profile gives good data.

The table below presents an overview of the forest users and product by gender and availability in Luganga (b) sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, domestic | ! | ! | ! | | |
| NWFP | | | | | |
| Mushrooms | | ! | | ! | |
| Medical plants/roots | ! | ! | ! | | |
| Fruits | | ! | ! | | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | | | | ! |
| Pasture, residents' cattle | ! | ! | | ! | |
| Poles | ! | ! | ! | | |
| Timber | ! | | | ! | |
| Hunting | ! | | | ! | |
| Honey | ! | | | ! | |

6.1 Firewood, domestic

Firewood is being collected by both men and women and is considered abundant, which is definitely also the team's observation. Women collect firewood for cooking and men collect firewood for heating in the night and fires to scare the wild animals away from attacking the animals. Three species for firewood include "mtema", "mhavava", "mkambala", "mfuku", and "msada".

6.2 NWFP

Mushroom: collected by women and considered sufficient in the dry season but abundant during the rainy season. Species of mushrooms include: "wilelema", "wikongolo", and "winyafigulu". Medical plants: collected by both men and women and considered abundant. Species include "mkongolo" and "msilale" (gum arabic) which is also used as incense by the farmers. Likewise, fruits are collected by women and considered abundant. Species include "mperemehe", "ubuyu", "nafuta", "mkapo", "mlutsi", "mgwelu", "mkwata", "mfundu", "msada", "mtafuta", "ukwaju", "udawi", and "mgandu". Also the leaves from the baobab tree is used for soup when the leaves are still young (November – December).

6.3 Pasture, pastoralists' cattle

The pasture for migrating pastoralists is considered scarce. However, the grazing is free and the pastoralists do not have to seek permission from anyone to enter the area. The resident users interviewed also had a large number of animals and their grazing is competing with the grazing of pastoralists.

6.4 Pasture, residents' cattle

Both men and women are involved in grazing the animals. The grass is considered sufficient. As the grass becomes less during the dry season the men takes the larger number of animals further away, while the women keep the cattle with milk.

6.5 Poles

Building poles are collected by both men and women and considered to be abundant. Tree species include "mkalah", "mkambala", "mkola", "mkapo", "mtema", and "mtati". There is no market for building poles but some people in the sub-village are involved in building houses for others. In these cases the contract covers fetching all poles, raising the walls and roof and plastering the walls. The construction consumes a considerable number of poles, since no bricks (burned or sun dried) are used. The cost of a house varies between TSH 10,000 – 50,000 depending on size.

6.6 Timber

Timber is collected by men from Mkulula and is considered sufficient. The people in the sub-village participate in the timber business by carrying the timber as headload or using bicycles to Mkulula. People do the pitsawing of the timber in the sub-village from Image Village (Mazombe Division). The people participating in the discussion expressed an interest in learning pitsawing for them to get more benefit from the timber collected in their area. The timber is used locally in Mkulula for furniture and window and doorframes. Tree species of timber are "myondo" and "mkongolo".

6.7 Hunting

Hunting is done only by men and is considered sufficient. The villagers hunt by using guns, traps, bow and arrow, spear, clubs and dogs. Game includes antelopes, dik-dik antelope, rabbit, guinea fowl, quail

and warthog. Also lions, cheetah and elephants are found in the sub-village, the first two being attracted by the cattle of the villagers.

6.8 Honey

Honey is collected by men and considered sufficient. The villagers collect honey from the trees and beehives. Five people have beehives with total number 35 beehives. Honey is sold at TSH 15,000 per 20 litres. The honey is used for food, local brew and medical purposes.

SOCIO-ECONOMIC VILLAGE PROFILE, NYANG'ORO VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Kihorogota VILLAGE: Nyang'oro

1.0 Implications for JFM

The village council administers the woodland. However, the woodland was previously farmland and woodland claimed by traditional landowners before the villagisation programme. Today the traditional landowners have started to cultivate their original farms in the hills/woodland because of land pressure. The village council has no say in this matter, which over time could both deplete the remaining woodland and complicate the continuation of the balanced grazing system shared between residents and migrating pastoralists.

The experience and the problems encountered by the tree sub-committee will be problems that a JMF initiative will equally have to face:

- ? Some firewood collectors claim that they come from the Catholic Mission and therefore has a permit to collect
- ? The committee has not been given tools/transport to be able to patrol the area which is far away from the village
- ? Timber cutting and commercial collection of firewood is often done in the night
- ? Permission to cut timber and commercial firewood was often given by the divisional forester without the knowledge and/or consensus of the tree committee
- ? Committee members were working on voluntary basis

Following the team's visit to the furniture school/workshop at the Catholic Mission in Ismani Tarafani the team recommends that the project follow up with awareness raising regarding the new forest policy and other relevant issues for young carpenters opening workshops in the area in future, see box text p. 10

2.0 Location and demography

Nyang'oro village is located along the Iringa – Dodoma main road 45 kilometres from Iringa town. The road is accessible throughout the year. The resident ethnic groups include: Wahehe, Wabena, Wakinga, Wasafa, Wanyakyusa, Wagogo, and Wawanji. Only the pastoralist ethnic group of Wamasai comes to the village to graze their cattle when there is no pasture in their area.

The land surrounding the village is characterised by gently undulating slopes with permanent cultivation of the entire agricultural land and the woodland today being depleted and further away from the village than before.

The table below presents the total population in Nyang'oro and its sub-villages of Luheko, Ndevelwa, Machinjioni, Kibalali, Kiya, Mangawe, Kibaoni, and Ngowo:

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|----------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Village: Nyang'oro | 2048 | 1998 | 538 | n.a. |

The Village executive officer said that the fall in population was caused by the many deaths in the community during this period.

3.0 Infrastructure

The infrastructure in Nyang'oro village includes: 1 primary school, a piped water supply scheme (gravity), 3 milling machines and a market (mainly livestock, clothes and furniture) which takes place in the village twice per month.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is the major economic activity in the village with the economic potential of the woodland being secondary. Most of the people in the community are involved in crop cultivation. Maize is the main food crop cultivated. Other minor food crops are sorghum, finger millet, beans, cowpea, bambara nuts, groundnuts and sweet potatoes. Sunflower and cotton are the two cash crop cultivated. Sunflower is the most profitable for the farmers who like in other communities are very disappointed with the income potential and actual benefits of their cotton cultivation. The farmers in Nyang'oro share their marketing arrangement with the villages of Usolanga, Mkulula and Mangawe.

Fingermillet cultivation and woodland:

Finger millet cultivation has contributed to the depletion of the woodland due to the practice of clearing new woodland every year. This practice involves cutting of trees and burning. The villagers said that burning the trees adds positively to the particular soil composition needed for cultivating finger millet. Some farmers claimed that the burning of trees could be substituted by burning large amounts on cow dung and later spreading the ashes on the finger millet field. This new technology is catching up due to the distance and lack of sufficient woodland. It also constitutes an interesting example of woodland management by substituting what is not any longer available. Fingermillet is mainly cultivated by men because it involves hard work of cutting tree, burning manure and spreading the manure on the field. Furthermore, the shift from woodland to manure when cultivating fingermillet means that the poor socio-economic group are prevented from continuing to cultivate the crop since they do not have the number of cows (manure) needed to produce the ashes or the money to buy the large amount of cow dung. Cow dung is sold in the community at TSH 10,000 – 30,000 depending on the size of the kraal where the buyer is permitted to collect.

The farming system is characterised by permanent cultivation of all village land using animal traction and tractors as the most common land preparation technology of the rich and middle socio-economic groups while the poor still uses the hand hoe. Due to the present technology it has become possible to cultivate the large tracts of land. Today land is scarce and young people in the community have to migrate to Mpwapwa District (Dodoma Region). Some of these young farmers are migrating in the farming season, while others have settled there permanently. Young men of landowners are in a better position than others, depending on the village government to provide them with land, since the landowners give priority to their own sons.

4.2 Animal husbandry

Woodland management, livestock and grazing:

Livestock also plays an important role in the farming system and is highly integrated into a) the crop cultivation and b) the grazing of migrating pastoralists cattle in the same area. The cattle of the residents grass from August until December on the crop residues on their fields. The migrating pastoralists enter

the area in September and graze their cattle in the woodland on the hills and have no access to the crop residues unless they are willing to pay the TSH 2,000 per acre of access. In the start of February the migrating pastoralists leave the woodland back to their original areas. At that time the residents will move their cattle into the woodland to graze on the fresh grass following the rains, and thereby leaving their newly cultivated fields without the damage caused by grazing animals.

The livestock owners said that following the opening up of the woodland there is considerable more grass in the woodland than before with the dense woodland. They further said that they do not deliberately practise thinning of the woodland for that purpose. The thinning is done by timber harvesting, harvesting of poles and firewood collection.

The number of cows owned by the residents have reduced over the past 15 years due to theft – and not the lack of grazing areas.

The number of goat and sheep has reduced. The reason is that the sheep and goats prefer eating the young leave of scrubs, trees and fruits. These are not found in the woodland to the same extent as before. Even the migrating pastoralists do not bring their sheep and goats any longer but graze these somewhere else.

The number of livestock owned by the various resident socio-economic groups is presented below:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--------------------------|----------------------------|--------------------------|
| 50 – 200 cattle | 20 – 40 cattle | 1 – 10 cattle |
| 10 – 20 goat/sheep | 5 – 10 goat/sheep | 1 – 5 goat/sheep |

4.3 Land tenure

The land tenure is characterised by land being owned by traditional landowners combined with the renting of village land by the Village Council. Seventy-five per cent of the land is owned by the traditional landowners while the village council only administers 60 acres. The traditional landowners rent out land at TSH 3,000 per acre per season. The village council rents out land at TSH 2,500 per acre per season. The price of renting traditional land has increased from TSH 1,500 in 1997, TSH 2,000 in 1998 to TSH 3,000 in 1999, which reflects the land pressure and demand for more agricultural land. Traditional landowners also sell land at TSH 15,000 – 20,000 per acre. The farmers who rent land from the village council are not sure of renting the same piece of land every year, meaning that the farmers do not inherit government land. A farmer can rent a maximum of 2 acres per season from the village council. The village council does not collect revenue or other taxes from the traditional landowners. Farm size varies considerably between rich, middle and poor socio-economic group and depending on the farmer's status as traditional landowner, occupant of village council land or tenant/farm labourer. Because the village council can not offer the land demanded by farmers several farmers are cultivating land depending on a combination of the different tenure systems.

Land size for the various socio-economic groups is presented below:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--|---|---|
| 50 - 80 acres | 10 – 20 acres | 1 – 5 acres |
| Rich farmers cultivate per year : | Middle farmers cultivate per year: | Poor farmers cultivate per year: |
| 50 - 80 acres | 10 – 20 acres | 1 – 3 acres |

As can be seen from the table above there is no fallow land in Nyang'oro. The rich and middle farmers are capable of cultivating the large land depending on a combination of renting land to other farmers and employing farm labourers from the poor socio-economic group. The cost of buying farm labour varies. In 1998/1999 the cost of hiring a farm labourer for weeding one acre went down from TSH 5,000 to TSH 1,000. The harvest had failed with huge economic problems for the poor socio-economic group

(without livestock to supplement their economy) whereafter they offered their work in larger number than usual:

“Umaskini ni ghali sana”
 (“It is very expensive to be poor”)
 J.K. Nyerere (1922 – 1999)

4.4 Other income generating activities

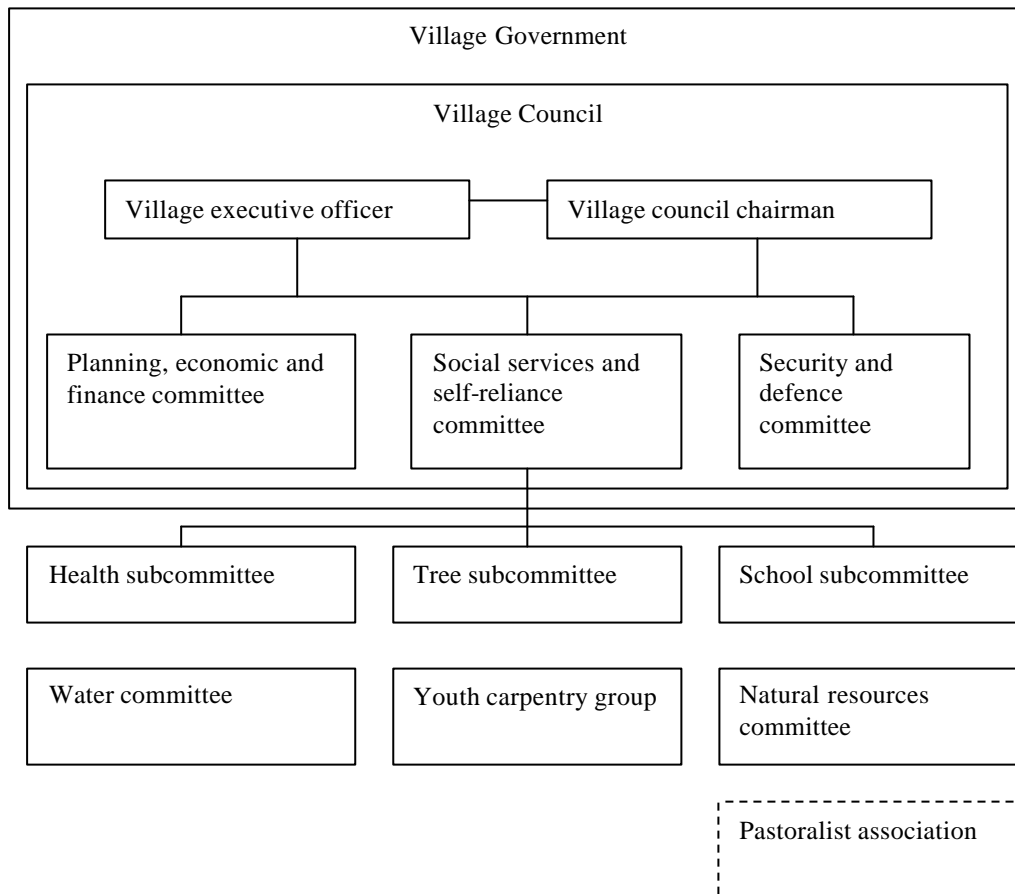
Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|--|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | | ! | ! | ! | ! |
| Making and selling of traditional stools | ! | | | | ! | | | ! |
| Selling of honey | ! | | | ! | ! | | ! | ! |
| Petty trading | ! | ! | | ! | ! | ! | ! | |
| Selling of firewood | ! | ! | | | ! | ! | ! | ! |
| Small shops, grocery | ! | | ! | | | ! | ! | ! |
| Farm labouring | ! | ! | | | ! | ! | ! | ! |
| Carpentry | ! | | | | ! | ! | ! | |
| Transport, donkey cart | ! | | | ! | | ! | ! | ! |
| Selling of timber | ! | | | ! | | ! | ! | |
| Selling charcoal | ! | | | | ! | | ! | ! |
| Brick making, selling | ! | | | ! | | ! | | |
| Canteen | ! | | | ! | | ! | | |
| Milling machine | ! | | ! | | | | ! | |
| Masonry | ! | | | | ! | ! | ! | |
| Selling of building poles | ! | | | | ! | ! | ! | |
| Pottery | | ! | | | ! | | ! | ! |

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. A new village council is going to be elected.

The organisational chart below presents the village organisations and their inter-linkages:



The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council. The standing committees have had no separate meetings this year and prepared no reports to the village council. The village council had planned to meet every month this year and has so far this year met five times. Subjects discussed during the meetings include repairs on the school staff quarters, construction of improved pit-latrines, school latrines and payment of school fees. In fact it was the active school sub-committee who called for most of the village council meetings and not the village executive officer. Only two persons from the opposition party TLP (Tanzania Labour Party) are presently members of the village council – but very active members.

The income of the village council comprises of development levy, income from the renting of village land. Previously they had a tractor, which used to be rented to villagers. However, it was beyond repair and the village council decided to sell it. They received 1,700,000 million, part of which was spent on building a village “pombe” club and maintenance of the school staff quarters. The team had difficulties in discussing account and finance of the village council. The participants in the meeting said that lack of transparency was an issue in the community.

Three subcommittees to the village council exist. These are the school committee, health committee and tree committee. The school committee has met five times this year mainly preparing the discussion to be held at the village council meeting. The health subcommittee met three times. The health sub-committee has mainly done two activities: follow up on the construction of the improved latrines and follow-up on children’s’ vaccination programme.

The tree sub-committee was initiated by CONCERN and is still functioning alongside the newly elected Natural Resources Committee. The activities and responsibilities of the sub-committee included tree planting (woodlot and school plantations), protection of woodland against illegal timber cutting, and

issuing permits to collect firewood by outsiders. Only the Catholic Mission in Luang'a has so far been issued with permit. They are paying TSH 1,000 per trip (no specification on amount of firewood). The tree committee was well aware of the problems facing them, and mentioned the following as the most important:

- ? Some firewood collectors claim that they come from the Catholic Mission and therefore has a permit to collect
- ? The committee has not been given tools/transport to be able to patrol the area which is far away from the village
- ? Timber cutting and commercial collection of firewood is often done in the night
- ? Permission to cut timber and commercial firewood was often given by the divisional forester without the knowledge and/or consensus of the tree committee
- ? Committee members were working on voluntary basis

Any JMF activity will have to face exactly the same problems.

The tree committee has been trained by CONCERN at Njombe Folk Development Centre, Njombe. They said they had an interest and something to offer to the Natural Resources Committee.

Actually one member of the tree sub-committee was elected to the Natural Resources Committee by the villagers but his candidature was turned down by the PRA facilitators, who said that no village council member could be allowed into the Natural Resources Committee. Meanwhile two women from the village council were also elected and permitted into the Natural Resources Committee – to ensure gender balance.

Other community committees, which are not linked to the village council, include the water committee, a youth committee and a pastoralist association. The water committee is linked to the water association. It collected TSH 85,000 in 1998, an amount submitted to the water association. The youth committee (youth carpentry group) has a workshop with tools donated by CCM who has also arranged for an instructor to facilitate the young men. The pastoralist association is dormant at the time of the study.

6.0 Woodland and Forest

The following data regarding the woodland was collected with a number of stakeholders including collectors/users and managers. However, the presentation below takes its point of departure in products collected with the analysis developing from that perspective. The users interviewed came from the sub-village Luhoko where a large number of collectors come from.

The village council administers the woodland. However, part of the woodland was previously farmland and woodland claimed by traditional landowners before the villagisation programme. Today the traditional landowners have started to cultivate their original farms in the hills/woodland because of land pressure. The village council has no say in this matter, which over time could both deplete the remaining woodland and complicate the continuation of the balanced grazing system shared between residents and migrating pastoralists.

Sacred groves:

Two sacred groves exist in the woodland in the mountains being fiercely protected by the villagers in Nyang'oro. These groves are characterised by thicker vegetation than the surrounding woodland. Especially the Mwamadege clan of the Wahehe, who is trusted with special powers connected with rainmaking, uses the sacred groves. Both men and women can visit the first grove to sacrifice animals asking the forefathers (rainmakers) who are buried in the grove to provide timely and sufficient rains. The animals slaughtered consist of a cow and a black sheep.

At the second sacred grove only women have access. The rituals performed there are also connected to rain making but has specifically to do with the wind. The wind blowing, which prevents the rainfall has

to be stopped before the rains will come. The ritual is facilitating this. Old women are performing the ritual but also younger women can participate in the ritual in the grove provided the woman has either given birth to a still-born baby or successfully given birth to twins.

These sacred groves are found in most villages inhabited by Wahehe. The implications of JMF concerning these sacred groves should be uncomplicated since the villagers are already fiercely protecting these and would never allow any interference in those places. The groves are rather small and characterised by an opening in the vegetation in the middle where a platform for the sacrifices is found and the graves of the rainmakers. Moreover, there are presently no collectors and users of the woodland who do not know the cultural tradition of the Wahehe.

The table below presents an overview of the forest users and product by gender and availability in Luheko sub-village:

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | ! | ! | | ! | |
| Firewood, domestic | ! | !! | ! | | |
| NWFP | | | | | |
| Mushrooms | ! | ! | | ! | |
| Medical plants/roots | ! | ! | | ! | |
| Fruits | ! | ! | | ! | |
| Grass for roofing | | ! | | ! | |
| Pasture, pastoralists' cattle | ! | | | ! | |
| Pasture, residents' cattle | ! | | ! | | |
| Charcoal | ! | | | ! | |
| Wood for brick burning | ! | ! | | ! | |
| Poles | ! | ! | ! | | |
| Timber | ! | | | ! | |
| Hunting | ! | | | | ! |
| Honey | ! | | | | ! |

6.1 Firewood for sale

Firewood for sale is collected by both men and women and considered sufficient. The firewood for sale is collected far away on the mountain. The collectors are paid TSH 6,000 to fill a 7 ton truck. That truck comes from Catholic Church in Ismani Tarafani. Otherwise the firewood is sold at TSH 200 – 300 per headload. All the firewood is sold in Nyang'oro. Tree specie is only "mkwee".

6.2 Firewood, domestic

Is mostly collected by women but men also assist. The firewood (domestic) is considered abundant. The firewood for domestic use is collected just around the house. Tree species include "mlama", "mlyasenga", "mkalala", "mpululu", "mkwee", "mpelemehe", "mgiha", and "myombo".

6.3 NWFP

Mushroom: Collected by both men and women and considered sufficient. Mushrooms are collected in the mountains and the fields. Species include “wisogoro”, “wilelema”, and “winyavigulu”. “Wisogoro” is the preferred specie. Two species, “wisogoro” and “winyavigulu” can be dried and stay for up to one year. “Wisogoro” is sold at the local market at TSH 50 for approximately 500 gram. The season for mushrooms is February - March.

Medical plants/roots: Collected by both men and women and considered sufficient. The medical plants are found on the mountains and on sandy soils. People from Izazi and Makuka and Mangawe come to collect, since the species of medical plants are many. Some of these include:

- ? “mhotaponzi” for diarrhoea
- ? “mkingiligi” and “mtunumbi” used to treat snakebites.
- ? “mlyatemi” used to treat abdominal pains.
- ? “mlyasenga” used to treat stomach worms.

Fruits: Collected by both men and women and considered to be sufficient. Fruit species include: “mfundu”, “mtovo”, “msasati”, “msambalawe”, “mperemehe”, baobab tree fruits and tamarind. The fruits are eaten in the field or woodland. Baobab fruits and tamarind fruits are mixed with porridge and used to make juice with. Some fruits are sold in the market, approximately TSH 20 (per teacup).

Grass for roofing: Collected only by women and considered sufficient. The grass is collected on the fields. A bundle of grass is sold at TSH 200 in Nyang’oro.

6.4 Pasture, pastoralists’ cattle

Men do the grazing of animals and the pasture is sufficient. The Wamasai come every year to Nyang’oro. Some of them are returning year after year while others are not. Some of the migrating pastoralists are involved in farming. They rent land from the traditional landowners at TSH 2,000 per acre per season. They have no right to rent village council land. Migrating pastoralists do not sell any farm produce but use all for food.

In general they have no rights to graze animals on the crop residues of the resident farmers. Conflicts with residents over grazing do not occur with regard to the pasture in the mountains but often when pastoralists graze the cattle without permits on the fields. Some of the pastoralists make agreements to graze on the fields and pay TSH 500 per acre. Other arrangements between resident farmers and migrating pastoralists include that some pastoralist leave a few bullocks with the farmer, who uses these for ploughing the fields. The farmer then has to either pay the pastoralist or give him part of the produce after the harvest. It is interesting how and why migrating pastoralists have a large number of trained bullocks, while actually theft of residents’ trained bullocks are plenty, to an extent where farmers have started to use donkeys (in Nyang’oro three years ago) instead of bullocks. The people with whom the team discussed the issue were not unfamiliar with the thought that they might use bullocks stolen somewhere else?!? Anyhow, it seems very strange why Wamasai should move around in the bush with an excess of bullocks since their agricultural activities are rather limited.

6.5 Pasture, residents’ cattle

Men graze the cattle and the pasture is considered abundant because the farmers can include the crop residues for grazing. Grazing in the farming season takes place up in the hills on the remaining woodland.

6.6 Charcoal

Men prepare charcoal and the wood for charcoal is considered sufficient. One tree specie is used for charcoal, “mkwee”, and this tree is only found on the hillsides. Charcoal is sold at TSH 1,200 for a sack. Charcoal is mostly sold in Ismani Tarafani. Charcoal is only used by women in Nyang’oro and the sub-villages for heating irons and sometimes for tea brewing.

6.7 Wood for brick burning

Men mainly collect Wood for brick burning while women assist. The wood for brick making is considered sufficient and the wood specie is only one – “mkwee”, which is collected on the hillsides. Sometimes people assist in filling pick-up cars from Ismani Tarafani. They are paid TSH 6,000 for a load of wood. Bricks are normally not sold in Nyang’oro. The activity only takes place when a households or government institution wants to build a new house. Brick burning is an increasing activity since the better off villagers are eager to construct more durable houses.

6.8 Poles

The building poles are cut by men and carried by women. Building poles are considered abundant and sold at TSH 500 – 700 depending on both size and tree specie. Tree species include “mkambala”, “mlama”, “muhwisa”, “mhavava”, and “mpululu”. All the species used is resistant to termite attack. Quality poles (and timber) is increasingly used for the iron-sheet roofs.

6.9 Timber

Only men collect timber, which is considered sufficient. The timber is collected on the mountain and the villagers also cross into the hills belonging to the village land of Izazi. The timber is pit-sawn in the mountains and the villagers in the sub-village had both the equipment and expertise to operate the saws. Pitsawing is done by 4 – 5 men working in a group, but with individual ownership to the produce. Crossing into other village land on the other side of the mountain does not cause conflicts with the people. The only conflict is with foresters. Several of the villagers participating in the discussion had been fined. The villagers have been caught by forester both in the mountains and on the road. A typical fine for a five tons lorry of timber is TSH 40,000 – 50,000. The timber is carried as headload to the road and from there transported to Nyang’oro by car or donkey cart.

The timber is bought by individuals in Nyang’oro and used for roof construction, door and window frames and furniture. The Catholic Mission in Ismani Tarafani also buys timber from the villagers. It operates a workshop/vocational centre for training youth in furniture making. The furniture is sold at the by-monthly market in Nyang’oro. The mission has a license to sell furniture but not to buy the timber. According to the users interviewed the mission tried once to get a timber permit from the village council. The agreement was never made, since the mission claimed that the permit fee was too high, whereafter they continued buying illegal timber from the villagers and “whitewashing” it into furniture for which they have a permit.

The village council request timber from the villagers when they need it for construction of buildings, school furniture or other community purposes. The village council does not pay the value of the timber but only an allowance of TSH 3,000 to the villagers collecting and pitsawing the timber.

The team finds it critical that the villagers directly involved in timber collection are sometimes requested by the village council to provide the council with timber and only paid a nominal fee, while at other times they have their timber confiscated by the village council when involved in their commercial timber business. Also the business ethic of the catholic mission seems bleak allowing their workshop to buy illegal timber but thereafter turning it legal with their furniture license. The villagers said that it was too complicated to obtain a license to collect timber. And why should they bother, if villagers from other villages are collecting timber in exactly the same area without permit.

Visit to the Catholic Mission in Ismani Tarafani:

The team went to interview the instructor of the furniture school/workshop in Ismani Tarafani. The instructor told the team that the school/workshop has ten apprentices. They stay at the mission for two years and graduate with a grade three trade test. The school is registered under the Vocational Training Centre in Iringa. The apprentices pay an annual fee of TSH 25,000 + 1½ bag of maize + 40kg of beans. The apprentices are boarding at the mission. The school/workshop's objective is to provide an education leading to job opportunities for primary school leavers.

While leaving the school the apprentices often open carpentry workshops in the villages in the area, or in nearby towns (Iringa, Mbeya).

A day in the school is divided between practical instruction in the workshop and theoretical learning in the school (carpentry theory, drawing and design, English, mathematics, and bible studies).

The apprentices get their practical training in the large carpentry workshop, which is connected to the school. The mission sells the furniture made by the students at the local markets. The timber used in the workshop is a mixture of softwood from Njombe and hardwood from the woodland. The instructor was first saying that only very little hardwood from the woodland was used in the workshop, but later said that the Father was much concerned that the hardwood used was officially stamped. However, the team saw both stamped and unstamped wood ("mninga" and "mkola"), and in the process of producing furniture the stamp could easily "disappear". Other channels how illegal hardwood enters the workshop is through the graduated apprentices who often come to use the workshop's machines while bringing their own timber. Moreover, the team saw an order for window frames to a secondary school, where the community had come with the hardwood. Finally, while the apprentices graduate they all establish their workshops in the area – all of which are using hardwood.

The team suggested that the MEMA project and the Catholic Mission could arrange a meeting together to inform the apprentices in the school about the new forest policy and the future of joint forestry management and its implications for timber at local furniture workshops. The instructor at the school found it a good idea and suggested that graduated carpenters and other carpenters in the area could also be invited to the meeting – and the possibilities for repeating the meeting at the similar school/workshop at the Catholic Mission in Migoli. The team recommends to the project to follow up on this challenge.

The villagers agreed that by all means the business was brisk and with benefits.

The species of timber include "mninga", "mkola", "myondo", "mkalala" and "mhembeti".

The timber is sold in Nyang'oro at TSH 1,200 - 1,500 for 1"8"/8 feet piece. At the catholic mission and in Ismani Tarafani the price is TSH 2,000 for the same piece. A 2"2"/8 feet piece is TSH 700.

6.10 Hunting

Men do hunting and the game is considered scarce. The depletion of woodland has contributed to the scarcity of game in the area. They use guns and bow and arrow for hunting. The hunters from the sub village cross the boundaries for hunting without any restriction to Izazi and Makuka. Also people from Mangawe and Chamdindi comes to hunt in their area. The game includes: dik dik antelope, rabbit, Greater Kudu, wart hog, wild pig, guinea fowl and quail.

6.11 Honey

Honey is only collected by men and is considered scarce. The majority use clay pots as beehives and very few (5 people) wooden beehives. The people have the expertise in making beehives but fear doing so as forest extension workers and the wildlife squad has fined the collectors and confiscated beehives since these are made for from timber species. Men store honey by using clay pots covered by several pieces of cloth to prevent attacks by ants and mice. The stored honey can stay for a year without being fermented. One litre of honey is sold at 200 – 250. Honey is used for food, mixed with tea, porridge and

local brew. The season for collecting honey is the month of June. The users asked if the team had any idea of a market for bee wax, as the bee wax from the honey production is wasted at present.

PROFILE OF UDEKWA VILLAGE

WEST KILOMBERO FOREST RESERVE

District: Iringa (R) **Division:** Mahenge **Ward:** Udekwa **Village:** Udekwa

Potential for JFM

Udekwa is a very isolated community, but appears to have a strong sense of community. The nearby Ndunduru Forest Reserve (FR) is relatively intact and borders the Udzungwa Mountains National Park (UMNP). Researchers have used this forest over the past few years, attesting of its quality and relative access. UMNP has maintained a strong presence in management of this forest, as it is a buffer for National Park.

There may well be potential for JFM considering the two forest together, limited legal access with management for example responsibilities in the Nyumbanitu Forest Reserve and reserve “eco-tourism” as local benefits with no use rights in the Ndunduru Forest Reserve.

Traditional beliefs appear to have played a crucial role in protecting the forest. Such institutions merit official recognition since they have no damage yet effective in forest management.

1.0 Introduction

1.1 Background

Udekwa village is a traditional village that had its people being scattered in the area living in their traditional clans. It was until 1974 when the villagization started with what is commonly referred in the village as Operation *Sogeza*. During that operation people were moved to one place as center of the village so as they could be provided with social services like education and health. The village was officially registered in 1975.

The local tribe is Wahehe but in 1997 some Wachagga moved into the village to cultivate coffee which is a newly introduced crop in the area. The Wachagga were brought into the area so as to be model farmers in coffee cultivation. Apart from that there is minimal interaction in the village due to remoteness and poor accessibility.

1.2 Location and Demography

The village is located at about 124 km North East of Iringa municipality. It is on a very rough road about 3 hours off the main road to Dar es Salaam. It is bordering the West Kilombero Forest Reserve (Ndunduru) to the south. On the west is Ifuwa village, and to the NorthEast is Ikula village, while to the north it is bordering Mtandika and Mahenge villages. There are six sub-villages of Ilawa ‘A’, Ilawa ‘B’, Vikoga, Msogoli, Mdugi and Vitubi.

There are 2271 inhabitants in the village living in 325 households based on 1999 local census. The population composed of 1008 women and 784 men. Children below 5 years are 479 of which 278 are girls and 201 are boys. There are 5 – 7 individuals per household. Polygamy is practiced, with up to 4 wives, and wives may live in separate households.

1.3 Village Infrastructure

There is one **primary school** in the village started in 1956 with class I to IV. It was until 1973 that the school started to have classes I to VII. Currently, the school has total number of 301 pupils; these include 142 girls and 159 boys. There are 7 teachers all men. A school extension of two classrooms and store has been built by UMNP under Self-Community Initiative Project (SCIP).

There is one **access road** that connects the village to the nearby town centre of Ilula where there is a tarmac road to Iringa. The road to the village is not easily accessible especially during the rain seasons. It is rough and stony and connected with weak timber bridges. Due to this situation there is no public transport to the village and vehicles rarely go to this area. Most of the time the villagers walk for about 6 hours to Mahenge village which is the Divisional Headquarters and there is public transport to Iringa town.

The villagers have tried to construct several kilometres of a road to connect Udekwa to Mahenge village. However, these efforts have not borne any fruit, as capital for finalising the construction work is not available.

Water primarily is obtained from the surrounding river streams that include Rivers: Mlawi, Mkiga, and Kitete. The villagers reported to have sufficient water supply, but the water is not safe. There is an ongoing health campaign to educate the villagers to use boiled water for drinking.

There is no **dispensary** in the village but the service is available in the neighbouring village (Ifuwa) which is about 20 km away. In Udekwa there are two local health attendants a man and a woman and 18 traditional midwives. All these have attended primary health training.

Other services, all of which are privately owned, found in the village include: 3 diesel engine maize mills, 3 kiosks and 2 *pombe* shops.

2.0 Village Organization

2.1 Village Government (VG)

The village government has positions as shown in figure 1. The Village Council (VC) is composed of 25-elected members and 2 other members representative of the religious groups. The 25 members are elected from the village assembly, including the village chairperson. Elections are on a 5-year basis and next election is scheduled for

November 1999.

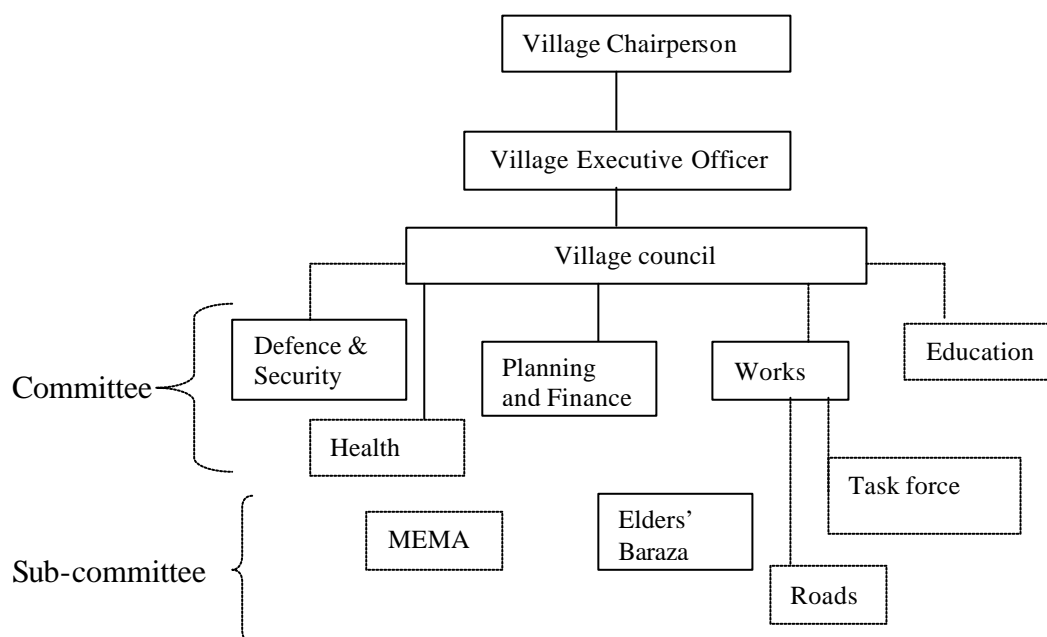
The Village Council reported to have five standing committees according to 1975 system, as shown in Figure 1. It seems there is some confusion about sub-committees and standing committees. Each of the committee is composed of 5 members. The environmental sub-committee has come up as a result of request from TANAPA (Tanzania National Parks) and MEMA.

The environmental committee has 11 members. It was started by TANAPA, with 10 members. When MEMA suggested a committee and another person was elected to the TANAPA committee so that there would not be a draw vote. There is one chairman who represents this committee for both TANAPA and MEMA.

Aside from the village council there is Elders' *Baraza*, which resolves problems and family conflicts. There is also a Task Force committee (ad hoc), which is temporary, and comes together when there is a need such as trying to increase their agricultural activities. Also there is a road committee which co-ordinates road repairs.

As shown in the organisation chart there are solid and dotted lines which indicate presence of strong and weak or undefined linkages respectively.

Figure 1: Village Organization Chart



The study team was informed on the following village meetings:

- ? Village council meets after every three months. However during this year village council had two meetings, main issues discussed were:
 - ? building class rooms for primary school and houses for teachers and,
 - ? road repairs and collection of stones for building bridge,
 - ? cultivation of commercial crops.

Village government also said that during this year had several ad-hoc meetings initiated by visitors. Two classrooms were constructed under (SCI) and stones were collected for road repair.

? Road sub-committee had three meetings in this year and main issue discussed was on road repair that connects Udekwa and Mahenge.

2.2 Village By-laws

In Udekwa village the Village Council drafts by-laws. The VC said that they then present the by-laws to village assembly, and when accepted they use them. VC stated that they don't use the district by-laws. There is some confusion over procedure and understanding the whole process of by-laws. They say that people are fined TSH 2,000 for an offence. These offences range from setting fires to not attending village development activities. Apart from the by-laws, there are also traditional laws whereby elders resolve some family conflicts. This is a remnant of the old style of governance.

Other organisations in the village include Roman Catholic and Lutheran church organisations. There are also CCM political party organisations: youth, women and parents divisions. There are no NGOs currently operating in the village and farmers stated that nobody have assisted the village with the exception of UMNP.

2.3 Linkages between District and Village Government

Ward Executive Officer facilitates the linkage between the District and Village Government. He is a caretaker for the two villages of Ifuwa and Udekwa. He is employed by the District Council to administer local government activities in the Ward. The VC reported to have an agricultural Agriculture Extension worker in the village.

There is Ward Development Committee meeting which draw members from villages who are village chairpersons, VEOs, sub-village chairpersons, Ward councillors, heads of government and non- government institutions. Main issues discussed include emphasis on village development activities, assessment of village activities, give District directives like, collection of development levy, school fees, torch contribution, by-laws preliminary discussions and clarifying on the use and implementation of District by-laws.

Divisional Development Committee meeting met twice this year and draw members from villages comprise Village chairpersons, VEOs, WEOs, Ward Councillors, sub-village chairpersons, heads of government institutions and non-government organisations. Sometimes if there are special issues to be addressed in the meeting, District officials participate. Issues discussed are directives from the district, development activities, etc.

3.0 Economic Activities

3.1 Agriculture

Subsistence agriculture is the main economic activity in Udekwa village. There is only one farming season. The crops are cultivated for both domestic and sell the surplus. The main crops are beans and maize. Minor crops are cowpeas, finger millet, sweet potatoes, cassava, banana, groundnuts and a bit of coffee. The newly introduced coffee crop has not done well so far, few coffee plants survived and. Old coffee trees are also not well maintained. If coffee is possible in the area, there may be a problem with markets because of the road. At this point, the quantity of coffee is not sufficient to encourage traders to collect. Even if the villagers cultivate and invest in their crops, there is no place to sell the produce. So they make local brew and sell locally. There has been a low agricultural harvest in the past year because of heavy rains. (El Nino).

The farming system is characterised by continued cultivation over one plot for many years. The VC say that they can crop a field for 15 years and it remains fertile. Fallow are also present as there is plenty of land. They have permanent plots for maize and beans. Inter-cropping is practised for vegetables such as pumpkins and cowpeas. Cultivation is done using hand hoe. The whole family men, women and children cultivate together.

Udekwa has plenty of land, and it seems to be difficult for them to measure fertility of the soils and crop productivity. It is said that soil on the slopes gets depleted quickly, but in the valley bottom is fertile.

Villagers have varied farm sizes and scattered farm fields. The smallest size is 2 acres and the largest is 20 acres. A household might have 20 acres scattered over a large area into a number of plots. Households have between 3 – 7 plots.

3.2 Animal Husbandry

Currently, the people in Udekwa do not keep any livestock. The villagers say that back in 1949, there was an Anthrax outbreak, where all the cattle died. Since then they have not tried livestock keeping. They tried pigs, but there was no food for them. They keep free-range poultry, for domestic consumption and sometimes sell it locally.

3.3 Tenure

The Village Council recognises and respects traditional land. The Village government controls a great deal of land, and they state that there is no shortage of land. There is an Allocation Committee (fused in the planning and finance committee), whose members usually demands to be paid something for the service of going out to do land allocation. The land, once allocated the owner has ownership rights and the owner may sell the land. The Village government will give land to anyone. The VC reported that land in Udekwa village could be rented and borrowed as well. There is an interesting case in this regard where Mohamed Enterprises was given a piece of land for growing coffee. However, the Village government decided to take the land back because they believed there might be a shortage of land in the future.

Women have land for subsistence use, and men have land for development (commercial) purposes. Women cannot use the crops from the development farm for brewing without permission from husbands.

3.4 Income Generating Opportunities

Circulation of money in the community is very low because of remoteness, isolation, and inaccessibility to markets. The women make cookies and sell them locally. The nearest market is Ilula, which is about 60 km. away. There has been an attempt to make charcoal, which has been tried by old people but have difficult time of selling it because the demand is low.

Local brewing is interesting and complex. Women prepare the local brew (Pombe), and men might buy it from the women and sell it to others. Local name for the system is known as “*Kuboa*”. On the other hand, women might sell it themselves. There is a great deal of beer brewing after harvesting, from August to November. Table 2 summarises the income generating activities.

Table 2: Income generating activities

| Income Source | Gender | | Economic Group | | |
|------------------------------|--------|------------------|----------------|--------|------|
| | Male | Female | Rich | Medium | Poor |
| Local brewing | Sell | Prepare and sell | | | * |
| Maize mill | * | | | * | |
| Basket making | | * | | | * |
| Mats making | * | * | | | * |
| Charcoal burning and Selling | * | | | | * |
| Day labour | * | * | | | * |
| Cookies | | * | | | * |
| Running kiosk | * | | | * | |
| Selling of firewood | * | | | | * |

The village council collects revenue by charging development levy of TSH 4,000 per individual (work force). Out of the levy TSH 1,500 is deposited as village educational fund, 30 percent of the balance (TSH 2,500) is deposited to village development account. There is livestock levy of TSH 500 per head of cattle, TSH 250 per head of goat and sheep. Other sources of income are such as charging fee for selling local brew - TSH 100 per 20 litres of *pombe*, revenue from buying crops by middlemen, which is TSH 100 per bag of maize or beans.

Box 1: UMNP - An Essential Partner in JFM

It was clear to the study team that TANAPA was an important partner present in Udekwa. Recently, TANAPA had caught poachers from the village with meat. They had arrested one, and three others ran away. Some people thought the study team was from TANAPA, and are probing for the poachers.

The VC stated in the map-rebuilding exercise that there were two distinct areas: the Forest Reserve area was TANAPA area, and the woodland was MEMA area.

From the villagers' perspective: TANAPA has made a deal with them. They are given incentives to help manage the adjacent Forest Reserve. These include two-room extension on the school and tree seedlings for planting around school compound and homesteads. On the management part, the villagers participate in fire fighting and control of any illegal activities in the forest and apprehend offenders. The committee is not paid for these efforts, and has been told that it is their responsibility.

TANAPA has conducted two awareness creation seminars in Udekwa, where participants were paid allowances of THS 5,000 as sitting allowance. The study team had discussion with the in-charge of western part of UMNP.

The in-charge seems does not know the boundaries between UMNP and Ndunduru forest reserve because he claimed that the forest reserve bordering Udekwa village is part of UMNP. However, the team was informed about the ongoing UMNP plans for community conservation in Udekwa. Among others things will be to encourage villagers in Udekwa to keep small animals as source of protein and in turn this will reduce poaching in the forest reserve/UMNP.

The team was also told that the UMNP Master Plan is under preparation and will be operational by June 2000. According to information given there is a possibility to extend the community conservation initiative to Ifuwa village, which borders Nyumbanitu forest reserve, although it is not bordering UMNP.

4.0 Woodland and Forest Use

The user group meeting was held at the school compound in the village. There were 24 men and 7 women. The group comprised of different users/collectors mostly middle and old aged people who came from the six sub-villages. It was also of interest that none in the user group meeting knew about MEMA, although there had been 4 days of PRA, and the Village Council was well aware of it. Nevertheless, the study team received some interesting information and analysis. An overview of forest products identified by users is given in Table 3.

Table 3: Products Identification, Preference by Gender and Availability

| Products | By Gender and Preference | | Availability | | |
|------------------|--------------------------|-------|--------------|------------|--------|
| | Female | Male | Abundant | Sufficient | Scarce |
| Collecting honey | | * III | | | * |
| Hunting | * | * | * | | |

| | | | | | |
|--------------------|-------|------|---|---|---|
| Charcoal | | * | | | |
| Firewood selling | * | * | | * | |
| Firewood domestic | * II | * | * | | |
| NTFP: Medicines | | | | | * |
| Mushrooms | * I | * I | * | | |
| Thatch grass | * | * | * | | |
| Fruits | | | | | * |
| Mill | | | | | * |
| Building poles | | * II | | * | |
| Rituals | * III | | | * | |

Note: I– III indicates product preference.

4.1 Non-Wood Forest Products (NWFP)

The NWFP were the number one choice of both men and women, mainly because there were too many products on the same card and it was quantity of NWFPs that solidified their choice. Within the card, the number one in importance was medicines because it is far to the clinic and medicines are expensive. Apart from that, medicines were more important for women because of their role of taking care of the family. **Traditional medicines** were spoken of frequently, and are probably highly used. It is a 4 -5 hour walk to the nearest clinic in Ifuwa, and there is no transportation in Udekwa. Another product of importance within the card of NWFPs was **thatch grass** because they need it for shelter, and third choice was *milulu*, which is used for mats and baskets. *Milulu* is most important for woman because they are responsible for providing bedding. The mushrooms and fruits were not very important to them, but are collected.

The participants treated each NWFP separately in terms of scarcity, sufficient or abundance. The medicinal plants were stated as scarce in terms of variety in the woodland and abundant in the high forest. It was reported that collecting medicinal plants from forest reserve takes about 6-hours round trip. Medicinal plants from the woodlands are found near-by. The thatch grass and **mushrooms** were both in abundance, but mushrooms relied on the rains. Thatch grasses are found within the surrounding woodland areas. The *milulu* is found in the high forest and is abundant there, but scarce in the woodlands. They have transplanted some to the riparian areas around the village, which indicates a management for scarcity due to lack of access to the high forest. Wild fruits were stated to be abundant in the woodlands.

The women added the product card, **rain ritual** in Udekwa. This is more of a service, but shows that there are sacred spaces in the forest, which must be considered. There were four *Wazee wa Matambiko* (tradition medicine men) at the meeting: the elder and his two followers who were responsible for the high forest rituals and another old man who was responsible for the woodland rituals.

Rain making ritual was third in importance for women because they wanted rains so that they could have crops and have enough food for their families. There are special

places in the forest reserve and the woodlands for these rituals, and a sheep is slaughtered. The elder man is in charge of the ritual.

Women users rated the ritual as sufficient because when they want to go to the forest to do their rituals, there is no problem with access.

Users stated that although there were many bees in the woodland, this resource has not been exploited to its fullest capacity. Even though the **honey collection** is not sufficient. They confirmed that they do not know traditional beekeeping management. Bees are many in the woodland areas. Users reported that there are a lot of tree species and flowers in the forest reserve, and if they were allowed access they could do practice beekeeping.

There were many villagers who hunt, but because it is illegal, it was not put as a high priority use. Animals hunted are buffalo, dik-dik, wild pigs, bush rats, tree hyrax, etc. **Hunting** methods are mainly by snares, pits and musket. Users admitted only to hunting around their woodlands for dik-dik, hare, antelopes and vermin animals (baboons).

4.2 Firewood

Women had this as a second in importance because it is their responsibility to provide firewood for the family. It is used for cooking, heating, and making local brew. Women and children collect firewood, and it is deemed important because of cooking. It was observed that cooking is on three stone fires within an enclosed separate hut beside the home. They do not use *mikusu* (*Uapaka kirkii*) because of low calorific value. Firewood for domestic use was stated to be abundant and it was available close to the homes.

Villagers in Udekwa do not use the forest reserve as a source of firewood, but think that they can and will use it if the woodland supply becomes scarce.

There are only two people in the community who sells firewood. Given the abundance, availability and proximity to the homestead and the poor access to markets, this is not surprising.

4.3 Building Poles

This was second preference of men because it is their duty to build the houses. They used to get good and sufficient poles for building in the woodlands, but the quality is decreasing over time. Users reported those straight poles, and good timbers are found in the forest reserve. In the past years, (1970's) with village afforestation, they were given seedlings of Eucalyptus. They now harvest these for building poles, but there are not enough. There are some species not indigenous to the area (e.g. lemon, guava) that was brought by a forester during village afforestation. There are also cypress trees around the school as a boundary.

Box 2: FRONTIER: An Excellent Opportunity

Frontier is the NGO contracted by MEMA to provide the biophysical baseline, as well as take part in the JFM negotiations and agreements. The study team met with them on the 30th of October at their base camp, in Ndundulu Forest Reserve. Frontier has a unique approach of partnering with national researchers and an excellent use of volunteers' students, mainly from the UK. The students pay their own expenses (approximately \$5000 US), which suggests that there is indeed a potential for "Eco-tourism"

This unique form of "Eco-tourism" might be further enhanced by offering a holistic experience, combining local scientific knowledge and modern scientific methodologies. There is a system in Udekwa Village of the elder *Wazee wa Tambiko* (Ritual elders) training younger men, who could potentially, twin with the students from the UK and Dar Es Salaam Universities. This would provide educational opportunities as well as local employment, on-going research in the forest and incentives for local and national forest conservation.

SOCIO-ECONOMIC VILLAGE PROFILE, USOLANGA VILLAGE

DISTRICT: Iringa DIVISION: Ismani WARD: Malenga-Makali VILLAGE: Usolanga

1.0 Implications for JFM

The village council is very weak and has little planning and budgeting experience. With the natural resources committee having only members outside the village council it will have no formal links to village council. The village council said that the MEMA facilitators had explained the role of the village council as corrective, once the natural resources committee did not perform or committed offences. It is not the team's mandate to recommend structural changes to the project set-up - even at village level. However, the team wants to suggest that there is no need for more control functions in the community and that the joint management responsibilities of the woodland should perhaps be "joined" and not separated internally in the village. While general capacity building in management at community level is not the objective of the project, the village (!) in general could benefit if members from the village council could have a more positive role to play inside the natural resources committee from the planned and future training programmes for the natural resources committee.

The agricultural land surrounding Usolanga is extensive and the crop cultivation intensive. The land is very fertile and nearly exclusively owned, controlled and managed by the traditional landowners. The village council only has administrative rights to the mountain ridge stretching along the village to the north – an administration that is guided by a bylaw forbidding agricultural activities at that same mountain ridge. Nevertheless, this is the only place where newcomers are allowed to farm by the landowners and where they can escape the renting fee of the landowners on their land. The village council has allowed them to farm without the village council's involvement in management and control of the extent to which the agriculture takes place. The result is that the hillsides are depleted for its woodland on an escalating rate and no one in the village seems to be able to or ready to interfere in the practise, since everyone sees the woodland as highly potential agricultural land. This perception of the woodland is both logical and economical from the villagers' point of view since no market exists in the village for woodland products, e.g. charcoal burning does not take place. This situation gives any JMF a rather complicated nature. The village has chosen their management plan from a purely economical point of view which is hard to argue against since all farmers in the community are profiting and claiming that the community's need for fuelwood and poles is solved due to the regeneration of wood products on fallow land.

The team finds that although the data on regeneration of woodland under cultivation (both valley and hillside) is substantial another study (one – two days) could further confirm and add to the already existing information. The study should take its departure in defining "depletion" and "usage" as seen by the users and managers in the village and not the natural resources office, since only this way can a conceptual starting point for JMF be established.

2.0 Location and demography

The village of Usolanga is situated 15 kilometres from a junction on the main Iringa – Dodoma road. The dirt road leading to the village is in a bad condition, but is accessible all year.

The village lies in a valley between two mountain ridges. The land in the valley is very fertile and agriculture (crop cultivation and livestock) is the absolute main stay for the people in Usolanga. The team considers the village comparatively affluent. Among other things this is reflected in the building styles of the houses, some of them featuring timber doors and window frames and glass windows.

The ethnic groups of the resident population include Wahehe, Wadena, and Wakinga. The ethnic groups of the migrating pastoralists seasonally entering the area to graze their animals include only Wamasai.

The table below presents the population structure and changes in the village. The village council gave the information.

| NAME OF VILLAGE/SUBVILLAGE | TOTAL POPULATION 1988 | BEST ESTIMATE 1999 | NO. OF HOUSEHOLDS 1999 | NO. OF WOMEN HEADED HOUSEHOLDS 1999 |
|-----------------------------|-----------------------|--------------------|------------------------|-------------------------------------|
| Usolanga, total population | 1319 | 1533 | 315 | 57 |
| Sub-village: Kawemba | 340 | 376 | 79 | 11 |
| Sub-village: Usolanga Kati | 373 | 380 | 71 | 12 |
| Sub-village: Ihumbiliza "a" | 236 | 316 | 78 | 13 |
| Sub-village: Ihumbiliza "b" | 370 | 461 | 87 | 21 |

3.0 Infrastructure

The infrastructure in the community include:

1 primary school, 1 kinder garden, 1 health centre, a vocational centre (run by the Catholic Church) which offers training in tailoring, 7 milling machines, and a market once per month mainly selling clothes. The drinking water supply of the village is piped with several water points in the village and sub-villages. The water system is part of the Ismani gravity scheme.

Moreover three tractors are found in the village used for agriculture and transport.

4.0 Economic activities

4.1 Agriculture, crop cultivation

Agriculture is the main economic activity of the villagers with the woodland having less economic importance, except from the fact that the land of the woodland, especially in the valley is very fertile. Moreover, the land on the mountain slopes has an agricultural potential. The farming system is characterised by rain fed crop cultivation with livestock being integrated in that system in a way where grazing in the dry season to a large extent depends on the crop residues left on the fields.

Until 1974 the woodland still surrounded the community and the cultivated area much smaller than today, where there is little left of the original woodland in the valley. In 1974 animal traction and tractors were introduced which enabled farmers to cultivate a larger area of the fertile land. Previously, farmers had only used hand hoe, which limits the ability for expanding the acreage of the individual farmer.

The main domestic crops in the village include maize, sorghum and other domestic crops including ground nuts, beans, cowpea, sweet potatoes, finger millet, green grams, bambara nuts, and pigeon pea. Both men and women are cultivating maize and sorghum. Moreover, only women cultivates ground nuts, bambara nuts, pigeon pea, cow pea, and sweet potatoes.

Cash crops in the village include sunflower and cotton. The sunflower cultivation started in 1977 and was marketed through Gapex, a parastatal organisation involved in export of the sunflower and other crops. Gapex continued to operate until 1982 when Imucu (a co-operative society based in Iringa) took up the buying and marketing of the produce. Imucu continued their operations until 1987 when "Tako" – a private businessman from Iringa continued the business. Cotton cultivation started in 1994 with Moprocu being the buyer for that first year whereafter the cultivation stopped until 1997, when "Tako" encouraged the farmers to continue their cotton cultivation.

Farmers said that the most profitable crops are maize and sunflower, while cotton cultivation is far less profitable. However, the farmers are still cultivating the cotton since the district council will fine them if they fail to do so. There is in other words a strange relation between “Tako”, the district council and the farmers. The farmers have been told that the cotton cultivation is the government’s response to “poverty reduction”. The farmers do not perceive the issue like this and know that the cotton farmers in Mbeya receive more money for the cotton than they do. The farmers in Usolanga have been told to form a cotton association but have not done so, since they actually have doubt about the cotton cultivation in general. This example shows that privatisation of the agricultural sector is far from private – and not to the benefit of the primary producers. It also shows a negative and top-down approach by government agencies operating in rural communities.

4.2 Land tenure

Seventy-five percent of the land is traditional land (“malungulu”) and the remaining 25 per cent being village land administered by the village council. The land of the village council is mostly marginal land on the mountain slopes apart from a historical 40 acre Ujamaa-farm, which today is not communally cultivated but rented out in pieces by the village council to individual farmers at the cost of TSH 2,000 per acre per season. The village council agreed that they had no say in land matters in the community apart from being involved in solving a rather large number of land conflicts and participating as witnesses when traditional land owners are selling their land to individuals. Land conflicts are many and do not concern ownership to woodland but are mostly boundary disputes between individual farms. Some of these cases have gone to court in Iringa while others have been solved locally. The farmers are advised to plant trees to demarcate their farms in order to reduce the number of land disputes.

The nearly exclusive traditional ownership to land is also characterised by huge variation in farm size, which is reflected in the table below. However, even poor farmers have rather large land holdings and cultivated areas compared to other communities in the area of study:

| | | |
|--|--|--|
| Rich farmers own: 800 acres (only two farmers) | Middle farmers own: 30 – 50 acres | Poor farmers own: 5 – 10 acres |
| Rich farmers cultivate per year: 200 acres | Middle farmers cultivate per year: 10 – 20 acres | Poor farmers cultivate per year: 1 – 5 acres |

The table above shows that land is lying fallow for 2 – 4 years, which has importance for the continued fertility of the land but also for the regeneration of tree species (woodland) used for poles and firewood. More information on regeneration of woodland is provided in section Woodland and Forest. The farmers in Usolanga are able to cultivate the large farms by employing farm labourers. Farm labourers come seasonally from the communities Dodoma and also some poor farmers in the community farm labour. The payment for weeding one acre is TSH 4,000. The farm labourers from Dodoma live in the farmers’ houses for which they work. Some of the farm labourers from outside decide to stay permanently. These farmers are either renting traditional land at TSH 3,000 per acre per season or cultivate land on the mountain slopes.

The traditional land dominating the farming system also dominates the land tenure system. Traditional land is only inherited through male members of the particular family, while both men and women inherit the village land. Single women can rent land from the traditional owners or (if any land) be given land by the village council.

4.3 Animal husbandry

Also livestock plays an important part of the household economy. However, the number of livestock owned by the various socio-economic groups has declined over the past years. One reason for this is theft; another is that farmers have been forced to sell in times of hardship, while another factor is the reduced area for grazing once the woodland has been cut down. The table below presents number of livestock distributed among the resident socio-economic groups:

| Rich farmers own: | Middle farmers own: | Poor farmers own: |
|--------------------------|----------------------------|--------------------------|
| 50 cattle | 25 cattle | 1 – 5 cattle |
| 80 goat/sheep | 30 goat/sheep | 1 – 10 goat/sheep |

The livestock owned by migrating pastoralists entering the village seasonally is shown in the table below:

| Rich pastoralists own: | Middle pastoralists own: | Poor pastoralists own: |
|-------------------------------|---------------------------------|-------------------------------|
| 200 cattle | 150 cattle | 20 – 75 cattle |
| 300 goat/sheep | 200 goat/sheep | 10 – 50 goat/sheep |

The few landowners with approximately 800 acres run their farms as commercial farms. No commercial farms are established by outsiders in the community.

4.4 Other income generating activities

Income generating activities in the village include those presented in the table below:

| Income generating activities | By gender | | Economic Group | | | Age Group | | |
|------------------------------|-----------|--------|----------------|--------|------|-----------|--------|-----|
| | Male | Female | Rich | Middle | Poor | Youth | Middle | Old |
| Local brewing | ! | !! | | | ! | ! | !! | ! |
| Selling of food | | ! | | | ! | ! | | |
| Selling of honey | ! | | | | ! | !! | ! | ! |
| Shops/kiosk | ! | | | ! | | ! | | |
| Petty trading | | ! | | | ! | ! | ! | |
| Hunting | ! | | | | ! | !! | ! | |
| Selling firewood, local | ! | !! | | | ! | ! | ! | ! |
| Carpentry | ! | | | | !* | ! | | |
| Owners of mills | ! | | ! | | | | ! | |
| Selling of timber | ! | | | | ! | ! | | |
| Blacksmith | ! | | | | ! | | | ! |
| Selling grass for roofing | ! | ! | | | ! | ! | ! | |
| Masonry | ! | | | | ! | !! | ! | ! |
| Pottery | | ! | | | ! | ! | !! | ! |
| Brick making | ! | | | | ! | ! | | |

* labour only, since the persons who want the job done, brings his own timber

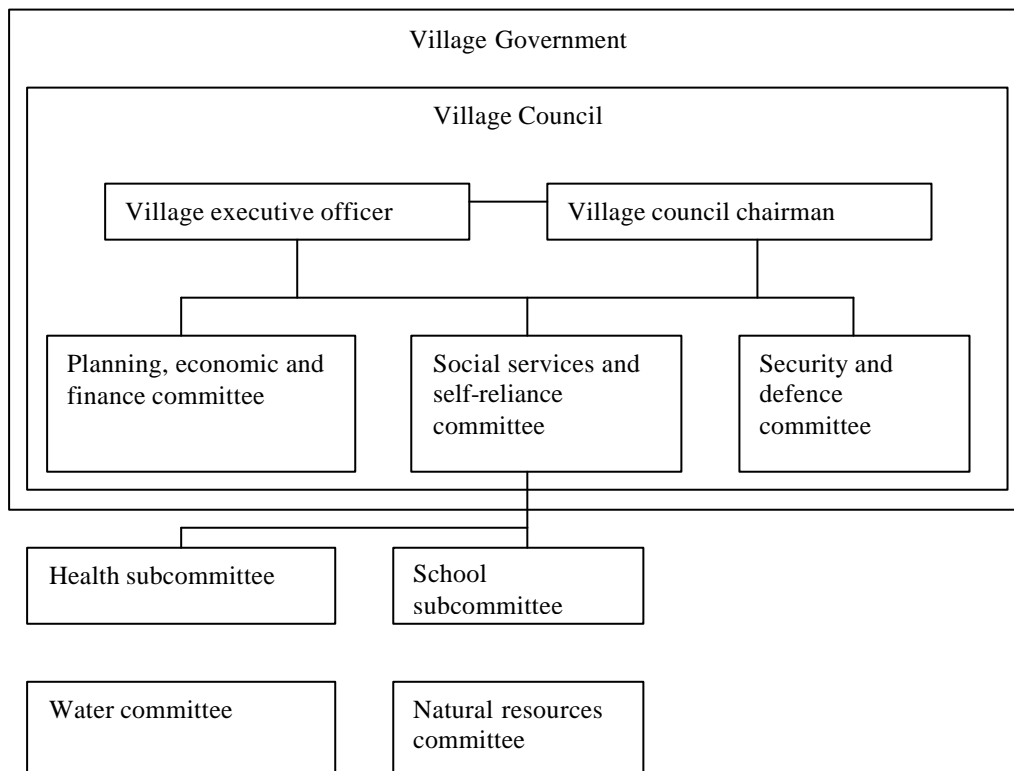
The table above clearly shows that agriculture has the interest of and benefit for the middle and rich people, who get their income from these activities more than other income generating activities. Mostly poor people with less land and money to cultivate their land are involved in income generating activities.

5.0 Village Organisations

The village council comprises of 25 elected members with all sub-villages being represented. Active members were nine. The village council and its standing committees have had no meetings this year. They have only met when MEMA were conducting PRA studies and when this baseline study took place. The affairs of the village councils seem to be managed by the chairman and the village executive officer.

The village council has three standing committees: planning, economic and finance committee; social services and self-help committee; and security and defence committee. All members of those standing committees are elected members of the village council.

The organisational chart below presents the overall structure of the community organisation:



Two subcommittees to the village council exist. These are the school committee and health committee. The school committee had two meetings this year discussing the dropout problem of teenage girls becoming pregnant, school fees and maintenance repairs of the school building. The health committee has not met this year.

Three community committees exist. The water committee (user area management committee) has had no meetings and was newly elected. The water committee is linked to the water users association with no direct linkage to the village council. Seventy percent of the funds collected are submitted to the water users association. Thirty percent are distributed among fee collectors (10 per cent), scheme attendant (10 per cent) and water committee itself (10 per cent). The natural resources committee has 11 members (a larger number than the active members of the village council!) and all members are non-members of the

village council. The village council expressed that both the number and the criteria for election (permanent resident in the community, should be married, should be literate, should be ready to work hard and voluntarily) were determined by the facilitator. Two members of the natural resources committee expressed that they did actually not know their function but were waiting for more information. Previously there was a tree committee (CONCERN), which ceased to exist when CONCERN left. Today there is one group of four women practising community forestry including operating a nursery. The forest officer had taken the initiative to form the group. Interestingly, none of the members of this group had been elected into the natural resources committee. However, the team had a chance to discuss their work and access their capacity during its users' meeting.

Moreover, the churches have a number of activities. The Lutheran Church is involved in honey collection and has 200 beehives, and the Catholic Church has activities around their vocational training centre.

Two bylaws exist in the village. One is originating from the district council and has the objective of stopping bush fires. Bush fires have actually been reduced in the area, which often happens, when agricultural activities intensify in an area. The second bylaw concerns a stop to agricultural activities on the mountain hills. This bylaw is originating from the district council. The village council is supposed to enforce the bylaw, but has not done this so far. One reason being that the only land available for young indigenous farmers and newcomers are the hillsides of the village land, since all the land in the valley is controlled and owned by the traditional landowners, regarding farming on the hill sides see box text under Woodland and Forest.

The village council in Usolanga and the whole village organisational structure is very weak and with limited experience in planning and budgeting. Only new members of the village council following elections can vitalise the otherwise dormant village council. The team discussed this situation. The community has no doubt economic resources and strong opportunities, but the community spirit seems to be lacking for community planning and action.

6.0 Woodland and Forest

In general there is no outside market for woodland products in Usolanga. Timber, poles for construction and firewood is collected and used locally for manufacturing furniture, window and door frames and roof construction of houses. The team was informed that the original woodland in the valley has disappeared over the last fifteen years since the land is used for agricultural purposes. The land is fertile and very suitable for agriculture, wherefore the farmers recognise the economic potential of the woodland as agricultural land. Whether the woodland is actually being depleted depends on the extent, nature and speed of the natural regeneration – and whether the future manager sees the usage of the woodland for agriculture as a depletion!?! The team's interview with users indicates that the villagers do not see the utilisation of the woodland for agricultural purposes as depletion. They said that within the three - four years of fallow the following species would fully regenerate: “mgandu”, “mlama”, “mbumila”, “mtinula”, “muwisa”, and “mtumba”. Species that do not regenerate include “mkambala”, “mubimbi”, “mninga” and “mkongolo”. The conclusion is that the villagers have their firewood and most of their poles still being collected on the land fallowed, when this land is cleared again for cultivation. The farmers said that this data on regeneration only concerns the valley and NOT the hillsides where regeneration of the woodland is far less “sustainable”. On hillsides several species do not regenerate at all and the team observed that only grass with a very few trees are seen on the hillside land being previously cultivated.

During clearing of the land all trees are removed (for firewood and poles) except from “mkungugu”. This specie is nitrogen fixating and benefits the soils – which was experienced by the farmers at the user's meeting, who said that the crop performance was better near these trees than elsewhere on the field. Land preparation of land, which is already under cultivation also includes burning of the remaining crop residues left after grazing the animals. Also maize and sorghum stocks from the last farming season is uprooted and burned. This practise – instead of recycling the crop residues as organic material - is justified by the farmers saying that the stocks from last year houses termites, which will disturb crop production in the coming season. They also claimed that the low rainfall reduces the

composting process on the fields. Burning of crop residues and uprooting of stocks have nothing to do with the technology of using animal traction.

Fields are cultivated up to seven seasons without fallow and without using fertiliser or systematic manuring. This means that the fallow period for some of the agricultural land could actually be longer than the above mentioned 2 – 4 years depending of the individual farmers annual farming capacity and the size of the land he owns. The team finds that although the data on regeneration of woodland under cultivation is substantial another days study could further confirm and add to the already existing information. The study should take its departure in defining “depletion” and “usage” as seen by the users and managers in the village and not the natural resources office, since only this way can a conceptual starting point for JMF be established.

Farming activities on the hillsides:

The team observed that cultivation takes place on the hillsides to a large extent. Land is cleared through burning at this particular time of the year (October) and at several places in the mountains smoke could be seen as well as dark patches of land already burned. Moreover, patches of very few trees with grass underneath can be seen in the hills where farming has already taken place and depleted the woodland.

In Usolanga all the land except from 40 acres are owned by traditional landowners. The village council only has rights to administer the land on the hills. A bylaw regarding the protection of woodland on the hills exists but is hardly enforced. One reason being that the village council has no other land to give to newcomers to the village and that the village council is weak in general. Moreover, the village council has a different perception of “depletion” and “usage” of the woodland than the district natural resources office might have.

The people cultivating on the hillsides are migrants from Dodoma, Njombe and Makete and belonging to the Wabena, Wagogo and Wakinga ethnic groups, which are not among the indigenous ethnic groups in the village. They started coming to the area even before the Ujamaa period and have remained there. They cultivate on the hill slopes to avoid the rent of the land being owned by the traditional landowners in the valley and because there is no more land to cultivate in the valley. This fact is also reflected by young men of the indigenous people in the village moving up in the hills to find farming land. A man is supposed to get his own farm at the age of twenty. Today the number of farmers cultivating on the hillsides increase also including farm labourers who have decided to stay and discontinue their migration and settle in the area. The village council does not control the land in the hills or manage the allocation of land there. Every person finds his own suitable land there for farming.

The villagers said that the land in the hills is virgin woodland and very fertile and even with a higher yield per acre than in the valley. However, the land gets easily eroded and can only be cultivated for two years whereafter new woodland on the hills will be cleared. The users of the woodland also said that the trees on the woodland on the hills did not regenerate - unlike the woodland in the valley; a point confirmed by the team’s observations.

The following data regarding the woodland was collected with several stakeholders including collectors/users and managers (the village council).

The collectors/users were interviewed in the sub-villages of Usolanga Kati, Ihumbiliza “a” and Ihumbiliza “b” Luganga (b)/Malekani, since the collectors/users mainly come from there, while the managers (village council) and buyers were interviewed in Usolanga village.

The meeting with the users was successful and unusual in a way where the chairman of the village council had deliberately selected only a few not very vocal men or men involved in the timber collection at all. Meanwhile, this gave an excellent opportunity for the outnumbering women to exercise their knowledge and awareness regarding the usage of the woodland. The table below presents an overview of the forest users and product by gender and availability in the sub-villages of Usolanga Kati, Ilumbiliza “b” and Ilumbiliza “a”.

| Users and products from woodland/forest | By gender | | Availability | | |
|---|-----------|--------|--------------|------------|--------|
| | Male | Female | Abundant | Sufficient | Scarce |
| Firewood, for sale | !! | ! | | | ! |
| Firewood, domestic | ! | ! | | ! | |
| NWFP | | | | | |
| Mushrooms | ! | | | ! | ! |
| Medical plants/roots | ! | | | ! | |
| Fruits | | ! | | ! | |
| Grass for roofing | ! | ! | | | ! |
| Pasture, pastoralists' cattle | ! | | | ! | |
| Pasture, residents' cattle | ! | ! | ! | | |
| Wood for brick burning | ! | ! | ! | | |
| Poles | ! | ! | | ! | ! |
| Timber | ! | | | | ! |
| Hunting | ! | | | | ! |
| Honey | ! | | | | ! |

6.1 Firewood, domestic

Firewood is collected by both men and female and is considered sufficient. The women collects firewood for cooking whilst the men collects big pieces of wood for preparing local brew. Species include “mnusi”, “mkungugu”, “mtema”, and “mpelemehe”. These species are found in the hillside.

Before 1985 the firewood was collected near their homestead, but today some villagers might have to collected firewood on the hillside, if the regenerated wood on their farms is not sufficient.

6.2 Firewood, selling

Collected by both men and women and considered scarce. The explanation given for the scarcity was that firewood being sold has to be high quality and not any specie. Only the two species “mkambara” and “mkungugu” are collected as firewood for sale. These species are found further away than the domestic firewood. Firewood being sold in the village is a sign of the richer villagers having money, since firewood is rarely sold in villages in the area to indigenous people for domestic use.

6.3 NWFP

Mushrooms: mushroom was considered both scarce and sufficient by the collectors who are men. Then reason for scarcity was the distance to the mountains and also those mushrooms have its season. However, during the season which coincides with the rainy season mushrooms are also found on the fields and therefore sufficient since distance is no longer a limiting factor. The collectors had observed that the intensive farming prevents the growing of mushrooms. Mushroom species include “wilelema”, “wisogolo”, “winyakigulu”, “winyakapulikilo”, and “winyawisako”

Grass for roofing is considered scarce and collected by men and women. However, the users said that it is only this year that the grass is scarce, due to lack of rain. Grass species suitable for roofing include “maperere”, “lusige” and “likuvi”. Grass for roofing it also sold at TSH 200 per bundle.

Fruits are collected by women and considered sufficient. Fruit species include “mifudu”, “msambakwe”, “ukwadju”(tamarind), “mkwata” and baobab fruits. The last two mentioned fruits have nutritional value as well as medical, where they are used for fever, stomach pains and malaria. Fruits are not sold in the village but consumed by the users.

Medical plants, roots and bark are collected by men only and considered sufficient. Species include “neem”, “mgombwale”, and “msakasaka”. Today many young men do not know the medical plants, and often modern products substitute the usage of the plants.

6.4 Pasture, pastoralists’ cattle

Only men graze the animals and the grass is considered sufficient. Migrating pastoralists are not allowed to feed on farmers’ crop residues but only on grass outside the cultivated areas. Only if they pay TSH 2,000 per acre they will get permission to graze. If violating this rule by allowing cattle to graze on farmland, the offender will have to compensate the landowner by TSH 50 per stock consumed by the cattle. This regulation of grazing pastoralists’ cattle is not found in many communities included in the socio-economic baseline study, especially not when the majority of the population of the villagers is settled pastoralists.

6.5 Pasture, residents’ cattle

Men and women share the grazing responsibility of the cattle. It seemed during the discussion that this fact was not really appreciated by the men, who hold the traditional responsibility for grazing the animals. Meanwhile, the women insisted that they had a considerable job, grazing animals.

6.6 Wood for brick burning

Both men and women are involved in collecting wood for brick burning. The species used for burning bricks include only “mnusi” and “mkungugu” and should of a certain size and green. These species are found in the gullies and on the hillsides. The individual household establishes a brick kiln when it wants to build a new house. Only sometimes bricks are sold at TSH 7 – 10 per brick depending on size. Using burned bricks in the community is a relatively new practise.

6.7 Poles

Poles are collected by both men and women and considered sufficient. Actually the users first claimed that the poles were abundant. This was later corrected since the mount of poles might be sufficient but not abundant as before. Five years ago, poles were in abundance. However, the growing population demands more poles for house construction. Poles are also being sold locally at TSH 150 – 300. Species for poles include “mkambala”, “muhwisa”, “mlama”, “mbumila”, “mtumba”, “mbimbi”, “mtanula” and “mgandu”

6.8 Timber

Timber is collected by men only and considered scarce. The timber collected is only used locally. Tree species include “mninga”, “mhembeti” and “mkola”. Often the timber is collected on the other side of the mountain since timber species has been harvested on Usolanga village land. However, other people from other nearby villages (Mangawe and Migoli) also come to the Usolanga village land to harvest timber. The timber is pit-sawn in the mountains and taken out as headload. Timber extraction only started in 1997, and the timber is used locally for furniture and window/door frames. Timber is sold at TSH 1,500 – 2,000 per piece.

6.9 Hunting

Only men hunt and game is considered scarce. Households only occasionally consume game meat. The game has become scarce due to the opening up of woodland. Villagers also cross into the village land of Mangawe and Migoli. Hunting is done using guns, bow and arrow, dogs, spears and traps – but not burning, which is interesting – because people in Migoli claims that bushfires occur when people from Usolanga and Mangawe hunts in their area!?! As a matter of fact, the mountain hills above the woodland being used for cultivation seem to be a rather free access by all users. Game species include antelope, wart hug, rabbit, dik-dik antelope, quail and guinea fowl.

6.10 Honey

Only men collect honey, which is considered scarce. The men sell the honey that is not consumed in the household at the price of TSH 12,000 per 20 litres. About five villagers have beehives while others collect directly from the trees. Honey is used for food, baby food, medical purposes and most important for brewing. Some villagers carve the baobab trees on their farms for attracting bees. These trees become private property. People also hang beehives in the woodland but never far away since the beehives and the honey often get stolen if far away.