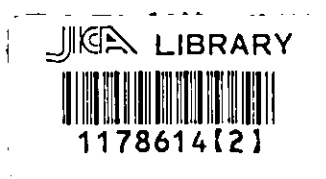


JAPAN INTERNATIONAL COOPERATION AGENCY

MINISTRY OF MINES, NATURAL RESOURCES
AND ENVIRONMENT, MALAWI

PILOT STUDY
ON
COMMUNITY VITALIZATION AND AFFORESTATION
IN MIDDLE SHIRE
IN
MALAWI

INVENTORY SURVEY



MARCH 2005

SANYU CONSULTANTS INC.

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Preface

The Study Team on Pilot Study on Community Vitalization and Afforestation in Middle Shire, longing for development of a Model of tree planting supported by income generating activities, decided to conduct an Inventory Survey on case studies and on-going projects related to this Model with a view to utilizing it for developing and managing the launched Model activities. The Survey works were sub-contracted to Christian Service Committee of Churches in Malawi (CSC) where Mr. Jacque Makoko and Mr. Geofery Meke were in charge of collecting information and data, as well as compiling the contents of the Survey.

A number of NGOs, institutes and educational organizations gave their warm cooperation for this Survey. The Study Team is grateful to the efforts of CSC and all the related organizations and institutes including ICRAF, Wild Life Society of Malawi (WESM), Magomero Community Development College, Malawi Industrial Research and Technology Development Centre (MIRTDC), Malawi Agroforestry Extension Project (MAFE), World Vision International (WVI), National Herbarium and Botanic Gardens, German Agency for Technical Corporation (GTZ), Department of Energy and Mining, Action Aid, PROSCAP, National Smallholder Farmers Association of Malawi (NASFAM), Hope Humana, Malawi Rural Finance Company (MRFC), Canadian Physicians For Aid and Relief (CPAR), Coordination Unit For The Rehabilitation of Environment (CURE), Enterprise Development and Training Agency (EDETA), Evangelical Lutheran Development Program (ELDP) and Greenline Movement and many individual contributors for accomplishing the fruitful survey results contained in this report. The Study Team made full use of the contents of this report in planning Study Tours, in collecting further references to the planned activities. The above mentioned cooperated entities again rendered warm hands of assistance to the visitors and the Study Team during the study tours.

Also, the Study Team revised the contents and added information on tree-planting activities through the assistance of Blantyre District Forestry Office headed by Mr. T. Mkwapatira. The Study Team acknowledges all these organizations and individuals for their precious help towards its survey.

Part I TEAM TREE PLANTING PROJECT

Part II INVENTORY SURVEY BY CSC

Part I TEAM TREE PLANTING PROJECT

TEAM TREE PLANTING PROJECT

LOCATION: Blantyre District: 3 villages in two Traditional Authorities as follows:

Group Village Headman Roben Nsambuzi in senior chief Kapeni and in Mbalame and Naluso villages in chief Machinjiri area.

PROJECT OFFICER:

Mr. R.G. Buckingham, P.O. Box 5600, Limbe.

The Project Officer's bureau is within the Limbe Leaf Buildings.

RELATED MINISTRY:

The Department of Forestry; the District Forestry Office (Blantyre) technical staff facilitate the implementation of the project offering their technical expertise.

FUNDING: The Tobacco Exporters Association of Malawi (TEAM), (Headquarters, Lilongwe).

PROJECT TERM:

- (i) The Roben Nsambuzi Participatory Team Tree Planting project is on a 2-year Pilot Phase, July 2003 to July 2005.
- (ii) The Sendekwe Team Tree Project at Mbalame and Naluso villages phased out. Project period was 3 years. 2000 – 2003. Post project activities involve community members to maintain woodlots and riverine reforestation belt.

BENEFICIARIES:

Community members in the three villages: Roben Nsambuzi in STA Kapeni and Mbalame and Naluso in TA Machinjiri.

BACKGROUND:

Drying up of Sendekwe river in TA Machinjiri during summer and fuelwood and Pole scarcity. TEAM which deals with tobacco trade, has been concerned with destruction of trees resulting in the deterioration of the environment so decided to approach the Blantyre Forestry Office to chose a suitable site to introduce TEAM Tree Project through rural clubs on self help basis. After meetings with the 2 communities, the project was launched.

R. Nsambuzi Project started after the VNRMC requested the District Forestry Office for assistance to expand their tree seedling raising and planting which they were doing on self help basis. Activities being established of a Village Forest Area, riverbank reforestation and homestead tree planting.

PROJECT TARGETS:

Sendekwe Project: 160,000 seedlings in three years

R. Nsambuzi Project: 90,000 seedlings in two years

NUMBER OF PARTICIPANTS:

- 60 households at Sendekwe, 30 per each of the two villages
- 267 prospective participants at R. Nsambuzi village

MOBILISATION OF PARTICIPANTS:

- Club Committees at Mbalame and Naluso backed their village headmen.
- VNRMC at R. Nsambuzi backed by the Group Village Head.

TECHNICAL ASSISTANCE:

Blantyre District Forestry Office technical staff.

ACTIVITIES

- Establishment and management of communal tree nurseries
- Communal riverine tree planting and woodlot establishment and management
- Individual homestead tree planting
- Village forest meetings; Project monitoring committee meetings
- Capacity building training facilitated by District Forestry training team

FORM OF ASSISTANCE:

- Material and technical support. Financial assistance in form of meal allowances during day training courses to community.
- Bicycle for Forest Guard and Fuel for District Forestry Office Pick-up
- Seed and fertilizer for a Communal garden where project participants plant maize and potatoes to back up project activities.

MAJOR TREE SPECIES USED:

- Albizia lebeck, Acacia polycantha, Faidherbia albida, Senna siamea, and spectabilis, Afzelia quanzensis, Eucalyptus.

SUPERVISION:

The VNRMC/Club Committees supervise their community members and are backed by Forestry Technical Staff.

PROJECT OBJECTIVES:

- Creating awareness to local communities on the role of tree to the environment
- Imparting knowledge and skills to participating communities on how to establish and manage tree nurseries and woodlots
- Developing a spirit of self-help afforestation projects to alleviate wood shortage problems.
- Educating communities in soil fertility improvement trees

EVALUATION:

Mid-year and annual evaluation of project activities are done by the VNRMC and the Project implementation and monitoring committee which includes the project officer, appointed District Technical Staff, the Group village headman and three VNRMC members and a representative of the whole community.

ESTIMATED BENEFITS:

- Availability of Fuelwood and Poles
- Improved riverine vegetation cover and reduction in river siltation
- Soil fertility improvement through growing of Agroforestry tree species

COMMUNICATION:

Verbal discussion at meetings, lectures and group dynamic exercises during training and issue of handout 'Printed Notes' for reference.

METHOD OF DRIVING BENEFICIARY:

Mutual solidarity and appreciation.

PROBLEMS TO COPE UP WITH:

Poor rainfall, low illiteracy levels, poor turn up for work due to hunger and numerous funeral, in ability by VNRMC to assert its authority effectively.

NORM: Individuals are assigned specific duties and tasks to achieve targets.

TRADITIONAL KNOWLEDGE:

- Encouragement of natural regeneration and enrichment planting.

CONTACT PERSONS:

- (i) R.G. Buckingham, TEAM TREE PROJECT, P.O. BOX 5600, LIMBE.
Office at Limbe Leaf Company. Phone 01640244, Cell 09236078.
- (ii) P.M.H. Mkwapatira, Assistant District Forestry Officer, P.O. Box 51780,
Limbe at Kanjedza next to Police Training School. Phone 01644986, Cell 80867647.

Part II INVENTORY SURVEY BY CSC

**CHRISTIAN SERVICE COMMITTEE OF CHURCHES
IN MALAWI (CSC)**

**AN INVENTORY SURVEY ON PILOT PROJECT ON
COMMUNITY VITALIZATION AND AFFORESTATION IN
MIDDLE SHIRE IN MALAWI**

FOR

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

**CONDUCTED AND PREPARED
BY**

Jack Makoko and Geoffery Meke

August 2002

ACKNOWLEDGEMENT

The Survey Team would like to acknowledge that this inventory report results from a learning interaction process with a number of individuals and institutions to whom we are heavily indebted. Among these were Funding institutions, facilitating agencies, clubs and associations. Particular thanks go to Nobel Moyo of COMPASS, Nelly Nofng'of of OXFAM and Emmanuel Mlaka of EDETA for linking us to a number of Non Governmental Organisations (NGOs), Community Based Organisations (CBOs), Committees, Clubs and other community based structures whom they support or collaborate with.

We would also like to thank the following institutions for assisting survey team with details and information on their activities and technology: Forestry Research Institute of Malawi (FRIM), International Centre pa nchito Study of Agroforestry (ICRAF), Wild Life Society of Malawi (WESM), Magomero Community Development College, Malawi industrial Research and Technology Development Centre (MIRTDC), Malawi Agroforestry Extension Project (MAFE), World Vision International (WVI), National Herbarium and Botanic Gardens, German Agency for Technical Corporation (GTZ), Department of Energy and Mining, Action Aid, PROSCAP, National Smallholder Farmers Association of Malawi (NASFAM), Hope Humana, Malawi Rural Finance Company (MRFC), Canadian Physicians For Aid and Relief (CPAR), Coordination Unit For The Rehabilitation of Environment (CURE), Enterprise Development And Training Agency (EDETA),Evangelical Lutheran Development Program (ELDP), Greenline Movement.

In the course of the study we were assisted in one way or another by a number of individuals, too many to be mentioned here. However we feel obliged to mention Contact persons who provided information that is the hallmark of this report.

Last, but in no way least, we would like to thank JICA Study Team for choosing Christian Service Committee to undertake this challenging assignment. More especially we would like to acknowledge the advice and guidance from Mrs. Ogawa and Mr. Shibata during the period of survey.

We sincerely hope that you all learnt something through this process. We certainly did.

Ntokhoza kofmbili

List of Abbreviations.

COMPASS	Community Partnership for Sustainable Resource Management in Malawi
NGO	Non Governmental Organisation
CBO	Community Based Organisation
ICRAF	International Centre for Research in Agroforestry
FRIM	Forestry Research Institute of Malawi
WSM	Wildlife Society of Malawi
MIRTDC	Malawi Industrial Research and Technology Development Centre
WVI	World Vision International
MAFE	Malawi Agroforestry Extension project
GTZ	German Agency for Technical Corporation
PROSCAP	Promotion of Soil Conservation and Rural Production
NASFAM	National Small Farmers Association of Malawi
MRFC	Malawi rural Finance Company
CPAR	Canadian Physicians for Aid and Relief
CURE	Coordination Unit for the Rehabilitation of Environment
EDETA	Enterprise Development and Training Agency
ELDP	Evangelical Lutheran Development Program
IGA	Income Generation Activity
SADC	Southern Africa Development Community
UNICEF	United Nations International Children Education Fund
AYISE	Active Youth Initiative in Sustainable Environment
NICE	National Initiative for Civic Education
MANASO	Malawi National Aids Support Organisation
TA	Traditional Authority
VNRC	Village Natural Resource Committee
BLM	Banja la Mtsogolo
PAC	Public Affairs Committee
NORAD	Norwegian Agency for Development Corporation
NHBG	National Herbarium and Botanic Gardens
VSO	Voluntary Service Organisation
DAPP	Development Aid from People to People
CARD	Churches Action for Relief and Development
CDA	Community Development Assistant
DCO	District Community Officer
VH	Village Headman
ADP	Area Development Programme
SARNET	Southern Africa Root Research Network in Tropics
PAMET	Paper Making Education Trust
USA	United States of America
EPA	Extension Planning Area
NABW	National Association of Business Women

Table of Contents

1.	EXECUTIVE SUMMARY	5
	1.1 Objectives of Study	5
	1.2 Methodology	5
	1.3 Technologies	6
	1.3.1 Environmental Rehabilitation	6
	1.3.1.1 Agroforestry Practices	6
	1.3.1.2 Afforestation	6
	1.3.2 Resource Saving Activities	6
	1.3.3 Income Generating Activities	6
	1.3.4 Inventory Findings	6
	1.3.5 Conclusions	7
2.	MAJOR STUDY FINDINGS	8
	2.1 Introduction	8
	2.2 Environmental Rehabilitation	8
	2.2.1 Agroforestry	8
	2.2.2 Afforestation	9
	2.3 Resource Saving Activities	10
	2.4 Income Generating Activities	10
	2.5 Role of Institutions	10
	2.6 Approaches	11
3	RESULTS FROM THE INVENTORY SURVEY	12
	3.1 Environmental Rehabilitation: Agroforestry Practices/Afforestation	12
	Matiand Youth Organisation	12
	Greenline Movement Environmental Rehabilitation	15
	Kam'mofmba Sustainable Management of Indigenous Forests Programme	18
	Mphuka Area Development Programme	22
	Kachera Farmers' Club	25
	Chiradzulu Community Herbal Gardens Project	28
	National Herbarium and Botanical Gardens	31
	3.2 Resource Saving Activities	32
	Chikankheni Briquette Making Club	32
	3.3 Income Generating Activities	35
	Chikwekwe Bee Keeping Club	35
	Chitsanzo Bee keeping Club	37

	Magomero Food Processing Project	39
	Mofmbananji Trickle Up Club	42
	Katunga Fish Farming Project	46
	Mboftalika Fish Farming Project	47
	Madalitso Enterprise Mushroom Club	50
	Khumbo Oil Refinery	52
	Kachera Treadle Pump Club	54
4	EXPERIENCES IN OTHER COUNTRIES	56
	4.2 Agroforestry	56
	4.3 Improved Cooking Stove	58
5	SUMMARY OF INVENTORY FINDINGS	60
	5.1 Related Ministries	60
	5.2 Project Objectives	60
	5.3 Technical Assistance	60
	5.4 Personnel Mobilisation	60
	5.5 Communication System	60
	5.6 Project Evaluation	61
	5.7 Benefits	61
	5.8 Management	61
	5.9 Problems	61
6	CONCLUSIONS	62
7	APPEANDCES	63
	7.1 Literature Cited	59
	7.2 List of People Interviewed	64
	7.3 Terms of Reference	66

1. EXECUTIVE SUMMARY

This source book results from an inventory survey exercise carried out in such districts as Blantyre, Chiradzulu, Thyolo, Zomba, Machinga, Balaka and Mofnza in the south and Dedza, Lilongwe and Doof in the central regions.

1.1 Objectives of Study

A pilot Study on community vitalization and afforestation in Middle Shire expects a rural development for rehabilitating deteriorated environment. This will be on a pilot basis and is scheduled to run from 2002 to 2004 covering 24 villages in Traditional Authorities Kuntaja and Kapeni. In order for the Project Implementation Unit of this programme to work efficiently there will be need for a source book and a manual.

The aim of Study therefore is to

- a) collect data and information on useful modern traditional skills and knowledge successful and failed or stagnant cases in the following areas: -
 - agroforestry practices
 - reforestation activities
 - resource saving activities
 - income generating activities
 - traditional knowledge
- b) prepare a source book of appropriate technologies for village natural resource management
- c) prepare manuals of technologies useful and appropriate to pilot project implementation.

The area of Study covered a wide range of issues on such implementing structures like Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs), community structures such as clubs, committees, associations etc. The Study sought to learn Background information such as the history behind the activity and Funding sources including type of assistance, targeted beneficiaries and collaborating partners, field of operation and materials used, beneficiary participation and estimated benefits, management of project, problems encountered and how to solve such problems.

1.2 Methodology

The contractor adopted and followed an interactive and participatory approach that used a simple questionnaire, semi-structured interviews and focus group discussions. Appropriate data collection instruments were identified and a checklist developed that helped to capture relevant information systematically. The instruments were pilot tested to check on validity.

1.3 Technologies

1.3.1 Environmental Rehabilitation

1.3.1.1 Agroforestry Practices

The Study found a number of technologies being practiced by communities through sponsorship and Funding of various organisations. Contour ridging, alley cropping, homestead boundary and woodlot planting, contour marker ridge protection were some of technologies being practiced in this field. Some households were practicing live fencing using such tree species like tephrosia vogelii and sisal. There is, however, low adoption rate on most of technologies.

1.3.1.2 Afforestation

In afforestation the Study found communities appreciating the idea of afforestation as they felt that it is their responsibility to replace lost vegetation. NGOs and government are promoting afforestation in sensitising and training communities and facilitating the provision of inputs or different resources. Type of crops played a role in dictating type of afforestation activity. Activities included tree nursery establishments, communal and individual woodlot establishments, rehabilitation of bare hills, river-banks, grave-yards, planting of herbal tree species, institutional woodlots establishments and preservation of natural trees.

1.3.2 Resource Saving Activities

The technology is generally accepted by communities although in some cases this technology is part of an integrated basket of interventions. Two main technologies were commonly in use; the production and use of briquettes and that of clay stoves. There is however low coverage for the briquette technology. The use of stoves is at minimum level since NGO propagating these had specific areas in mind. Also traditionally the use of mbaula seemed to be taken as an alien technology.

1.3.3 Income Generating Activities

A number of people are indulging in agro-based Income Generating Activities such as seed multiplication, vegetable growing and fruit growing. However it is the team's observation that those IGAs that were natural resource oriented seemed to be the result of a top down approach from the sponsors and most of them were being undertaken by women. The majority these were being carried out through loans. It is fascinating to notice that although under normal circumstances these would be male dominated activities it turned out that the majority of those visited were being run by women. From the responses given it is the Study team's view that most of activities have helped raise the standard of life of communities.

1.4 Inventory Findings

Different government ministries, departments and donor agencies are involved in different ways with community structures, CBOs and NGOs in their main objective of rehabilitating the environment. This involvement ranges from providing technical as well as material support. Technical assistance comes in the form of training and other extension services provided by government personnel and sometimes by NGOs to community structures. Both government and

NGO technocrats have provided different technical assistance and advice through mostly extension services. Material support on the other hand has come in the form of agricultural inputs as well as financial packages as loans or grants from donor agencies mostly.

Service providers and beneficiaries have communicated through meetings and verbal contacts and this has taken place mostly during meetings, project monitoring and evaluation exercises. Results from evaluation of most projects have indicated marked improvement in the rehabilitation of environment but also increased cash income for households. Management of programmes has differed from project to project. While some have solely been managed by project committees others have been dictated to by those that have provided resources. Most of problems that the Study team came across were to do with sustainability and this is in terms of community capacity to manage the programme as well as financial sustainability.

1.5 Conclusions

Agroforestry activities have offered the potential to alleviate many of problems brought about by population problems that have eroded the productivity of agriculture and natural resources in Malawi. However for agroforestry activities to be sustainable there is need to involve those affected - communities, at the very beginning of intervention and throughout the project cycle. Where IGAs are an integral part of intervention there is need for a common understanding regarding the potential for viability on relevant IGAs.

2. MAJOR STUDY FINDINGS

2.1 Introduction

Links between Sustainable Village Natural Resource Management and the livelihoods of present and future generations manifest themselves in the economic, social and environmental context in which the majority of people depend for their well being which is from the productive use of rural natural resources. Smallholder farmers, it has been claimed, mismanage the resource base and as such they are both agents and victims of soil erosion, degradation and deforestation.

It has lately been acknowledged that most policies on agriculture and natural resources have not achieved the desired goals due to failure in incorporating local communities in planning and implementing programmes. The top-down tendency that has been the approach whereby communities were simply told what to do without seeking their opinion resulted in resistance among the local communities to fully comply with what the policies stipulate.

During the course of this Study it became more and more apparent to the Study team that if people have to adopt a programme innovation, they need to be convinced that it meets an important felt need. On the hand it became clear to the Study team that not all interventions were a response to a felt need from the communities. Inevitably development institutions that have adopted an integrated approach to development were guilty of introducing certain packages without properly consulting with the communities to assess their needs.

2.2 Environmental Rehabilitation

Environmental problems in Malawi are negatively affecting the lives of population. People depend on food, fuel and water from natural resources within their reach thereby making the community the main stakeholder in the management of resources such as forests, tress, the soil and water. The urgent need to combat rural poverty and to regenerate the deteriorated resources has stimulated a number of NGOs as well as government departments to actively search for new kinds of development and resource management strategies. The Study team therefore found that technologies and related practices are being tried and tested to improve the management and conservation of natural resources in order to address the inter-related problems of soil erosion and water runoff, declining soil fertility and crop yields, wood shortages and deforestation being promoted through the following activities:

2.2.1 Agroforestry

For smallholder farmers the main thrust in agroforestry remains the improvement of soil productivity, production of fuel wood for energy and domestication of indigenous fruit trees for improved nutrition and cash income. Communities were practicing a number of technologies such as homestead boundary woodlot planting, Alley cropping with *Tephrosia vogelii* and contour vegetation strips using vetiver grass and elephant grass. It is however observed that this is common in farmers' gardens and they were actively involved with the particular institution promoting the technology. In most gardens especially vegetable, maize, tobacco, gardens orchards farmers were practicing live fencing using sisal (*Agave*), *Leucaena* and *Tephrosia*.

It is however observed that contour ridging, alley cropping and systematic tree intercropping technologies had very low adoption rate amongst farmers although they were available in a number of farmers' fields. With contour ridging which involves construction of contour ridges

and re-aligning of planting ridges households found the technology labour intensive. On the other hand systematic tree intercropping which involves such tree species like *Faidherbia albida* is found to give long lasting benefits due to sluggish growth in most parts of areas visited. However the tree would grow faster in low-lying areas (especially in Dimba, or marshy land patches).

Households also did not seem to know amount and frequency of application of biomass in the planting stations and the magnitude of yield levels were not appreciated by many. Perhaps this is due to the farmers being used to chemical fertilizer. Another reason cited especially in the southern region is land pressure since the technology requires ample land to be made available. With regard to *Tephrosia vogelii* some households felt that it did not give them much benefit in terms of by products.

Considering that most of agriculture activities in Malawi are done by women whose opportunities to engage in productive work are limited due to competing demands on their time in terms of child care, household tasks, and their responsibilities as the main economic providers, alley cropping, which involves raising of tree seedlings, plucking of leaves, storage, and burying of biomass among other activities is considered to be rather too labor intensive and so had low adoption rate. The other factor for low adoption rate for the above technologies had to do with the fact that some were project driven. Therefore, after the project has phased out beneficiaries either become less interested in the activity or abandon it completely.

2.2.2 Reforestation

The Study team saw a number of communal woodlots in the villages, graveyards, river banks even in marginal lands and steep slopes. There were also some individual as well as institutional woodlots. The establishment of tree nurseries with production of tree seedlings in nurseries is one of main activities done by both individuals as well as communities. Discussions with farmers revealed that initially the idea on reforestation came from Forestry Department although eventually communities appreciated having woodlots in the villages due to scarcity of fuel wood, loss of permanent water sources, soil degradation and erratic rainfall pattern. Some communities were motivated in the monetary aspect of technology. Others admitted having been involved through the annual tree planting week event. There were also homestead woodlots that provided them with fuel wood and shelter but in some cases acted as homestead fencing.

A number of communities mentioned lack of seed, equipment such as watering tins and wheel barrows as some of problems they faced. fuel wood requirements did not match the rate of reforestation due to the demand. One observation the team made is the low level of male participation in the activity. It is observed that most people's interest is in growing food and cash crops other than trees. In some cases it is the village headman's lack of interest to mobilize the community for action and this led to a number of villagers leaving their village to join in a reforestation activity in another village. In other cases it is the institution that insisted that communities should be involved in a reforestation activity in order to benefit from a particular project. For example people were asked to establish a nursery close to where a borehole would be sunk so that water from the borehole could run through the nursery.

However the team is able to observe that there is active participation by the communities in afforestation activities. Another observation is that mostly it is the exotic type of trees that were being planted on wider scale. It is however observed that with the fuel wood scarcity situation people opted for faster growing exotic types, to the slow Indigenous ones. There were evident benefits from those involved in the practice in terms of constant supply of fuel wood for

household use from tree branches. Poles from the trees provided material for construction of houses, kraals, and tobacco barns. In other cases farmers planted some indigenous fruit trees such as *masuku* (*Uapaca kirkiana*) while in other cases the trees helped in arresting soil erosion. There were cases where the trees provided river-bank protection while some provided herbal medicine.

2.3 Resource Saving Activities

One of Objectives of agroforestry as well as the reforestation programmes is to solve the problem of fuel wood scarcity amongst households. Resource saving activities look at sustainable utilization of fuel wood in terms of fuel consumption rate, - how much fuel wood is consumed. Secondly resource saving activities look at alternative sources of fuel. The Study team observed two main activities in this area – fuel-efficient clay stoves and the use of briquettes as source of fuel. Beneficiaries using both clay stoves and briquettes as energy saving devices confirmed that they were able to save time they would otherwise spend going to look for firewood. Such time, they said, is now being used for other household activities. Using fuel-efficient clay stoves, it is learnt, reduces the amount of fuel wood that would be used for cooking. In turn this leads to less trees being cut down but also reduces the amount of time spent.

2.4 Income Generating Activities

Natural resource management without alternative ways of enabling communities earn income from the forests is considered insufficient. Most of Income Generating Activities the team visited had to do with natural resource utilisation. These IGAs included bee keeping, guinea fowl rearing, Indigenous fruit processing, rabbitry, fish farming, vegetable growing, mushroom production and oil extraction. Most farmers growing vegetables were using watering cans however there were some who had acquired treadle pumps on loan. It is the Study team's feeling that for treadle pumps to be used to maximum advantage one needed to operate on a fairly large piece of land.

Income levels at household level seemed to have been increased as a result of communities being involved in these activities. Most families were also food secure as proceeds from the IGAs were used to purchase either agricultural inputs or food supplement. These activities were also responsible for change of people's status in terms of lifestyles. Most of activities were initially done at group level but later on individually some people embarked on individual basis. It is also noted that finding for these IGAs came from those institutions promoting natural resource management programmes. People's attitude towards natural resource management changed for the better influenced by benefits gained from IGAs.

It is the team's observation that some IGAs were donor driven while others were demand/community driven and that IGAs such as bee keeping, guinea fowl rearing, plant oil extraction and mushroom growing had the potential for viability but that this also depended on where they were being carried out. Some activities such as bee keeping and guinea fowl rearing were male-specific while mushroom production and oil extraction required substantial investment. Fish farming, on the other hand, seemed labor intensive initially, because of investment costs.

2.5 Role of Institutions

Different institutions were playing different roles amongst the communities. Development institutions brought in interventions that addressed people's felt needs. This, it is expected, would be done in close collaboration with the beneficiaries in a participatory manner. In some cases however it is observed that participatory approaches to the introduction of an intervention were

not complied with. This is generally the case where institutions introduced conditions for beneficiaries to benefit from an intervention. There were cases where beneficiaries had to grow some crop, such as Soya for example, in order to benefit from an intervention where the Soya did not address the beneficiary's felt need.

Discussing with research institutions that are propagating technologies it is observed that the local farmers viewed chemical fertilizer as the quickest solution to their food security problems. There is, however, apparent desire for both parties to come to a compromise with respect to the practicability, viability in terms of boosting farmers' production levels, sustainability in terms of farmers being able to continue and share the technology with others after assistance has been phased out. According to the farmers the issue of land investment; how much land had to be put to a new technology, is justified only in terms of expected benefits from the technology.

2.6 Approaches

The team observed that technologies were first being tried at institutional level where there were demonstration plots. The second stage is where these demonstration plots were being mounted at selected farmers' fields, where other farmers would learn from, before the technology is shared with the rest of farmers.

3. RESULTS FROM INVENTORY SURVEY

3.1 Environmental Rehabilitation: Agroforestry Practices/Afforestation

MATINDI YOUTH ORGANIZATION

Location:	Blantyre district: 6 villages of Jamuson, Masangano, Kajawo, Kaponof, Makofle and Maleule in TA Kapeni
Representative:	Francis Kalonga, P.O. Box 240, Lirangwe Cell: 938349/918591, E-mail: f_kalonga@ofhoo.co.uk
Related ministries:	Dept. of Forestry, Ministry of Agriculture, Ministry of Health, Ministry of Gender, Youth and Community Services, CURE, COMPASS, OXFAM, AYISE, UNICEF, NICE
Funding sources:	UNICEF, OXFAM, COMPASS, GTZ, MANASO, Umoyo Network, Family Planning International (through Banja la Mtsogolo) and Malawi Germany Programme for Democracy and Decentralization.
Project term:	2000 - 2002
Beneficiaries:	Matindi Youth Organization. Communities from 6 villages of Jamuson, Masangano, Kajawo, Kaponof, Makofle and Maleule in TA Kapeni, Blantyre District
Background:	Initiative by youth to rehabilitate the environment, practice agroforestry and horticulture. This is prompted by low crop production, loss of valuable tree species and lack of fuel wood in the area. The donors' policy is to fund activities only and not overheads or administration costs.
Project objectives:	Conserve and rehabilitate the environment, improve socio-economic status of community and HIV/AIDS awareness raising.
Project targets:	A total of 150 farmers from 6 villages to practice agroforestry by August 2002, 120,000 trees to be planted by community. By October 2002, 1,700 women and 800 men and 500 youth to be trained in Human Rights, 15 out-of school-youth HIV/AIDS clubs to be formed and out of 450 youths to know the relationship between HIV/AIDS and Human Rights.
Number of participants:	5000 people approximately 250 households
Groups:	6 VNRC, one youth steering committee and HIV/AIDS clubs. These are supervised by a project management committee in collaboration with implementers
Activities:	Production of seedlings and fruit tree seedlings.
Form of assistance:	Financial, material and technical support
Annual fund amount:	K697,780 donation in cash and in material one megaphone, 3 bicycles and office furniture.
Technical assistance:	Technical transfer by Dept. of Forestry, Ministry of Agriculture and GTZ.
Personnel mobilization:	Extension workers from Dept. of Forestry and Ministry of Agriculture, Officials from ministry of Health and NGOs (BLM and PAC NICE)

Fields covering: Materials used:	Agroforestry, community forestry and group nursery. Indigenous trees species (mbawa, mngongomwa), exotic tree species (bluegum), hybrid fruit seedlings (mangoes, oranges, tangerines).
Participants burden share: Communication system:	Cash (through annual membership fee), human labor and land. Villager-cadres communication is verbal through meetings, role play and drama. Between cadres and NGOs it is through meetings, correspondence and phones. Between cadres and sponsors it is through meetings, correspondence and phones while between beneficiaries and offices communication is done through meetings.
Supervision system:	Within the group supervision is done by committee members, at village level it is done by the village headmen, for the entire impact area supervision is done by the steering committee members whilst the board of trustees supervise the board.
Project evaluation:	There is participatory evaluation by donors, chiefs, cadres and project management staff and assessment method is by both achieved quantity and mutual comparison. Evaluation results were less than anticipated and the results were fed back to those concerned through reports, meetings and correspondence.
Estimated benefits:	Environment through use of compost manure, 150 farmers practicing agroforestry and 120,000 trees raised with 15,000 planted. Improved fruit tree multiplication (19 youths trained in grafting and budding).
Causative factors: Incentives given: Methods of driving beneficiaries: Management form:	Commitment and solidarity as well a spirit of appreciation and ownership. Awards in form of certificate of merit and self motivation by members. By mutual solidarity and appreciation. Managed by the project management committee. The project management team meets weekly for decision making while other members meet once a month and attendance to such meetings is 85%
Problems to be resolved:	Lack of infrastructure, fund sustainability (98% donor dependence), conflict of interests, mistrust and poor flow of information. Inadequate skills in agroforestry and afforestation on the part of community, lack of alternative source of income which makes the dependence on charcoal selling difficult to curb.
Measures to cope with problem:	Capacity building (participatory methodologies) for project committee and input injection
Responsibility:	No particular norm

Relationship with other projects:

The project relates with Department of Forestry and Natural Resources, Agriculture, Health, Gender Youth and Community Services, NGOs such as CURE, COMPASS, OXFAM, AYISE, NICE, National Youth Council of Malawi

Traditional Knowledge

Tree/fruit tree *nurseries* are not common amongst local communities. Traditionally people collect or uproot tree seedlings mostly from wherever they have sprung up whether from underneath the parent tree, from refuse disposal areas or by path sides where the seed has been disposed off after eating the fruit. People uproot the seedling and then transplant it straight into the desired place without using polyethylene tubes. In some cases with certain types of trees people use tree stems to transplant. In an attempt to protect the young trees from such animals as goats and cattle people have used droppings from the goat. The droppings are applied on to the leaves by rubbing them against the leaves which in turn produce a repellent smell that prevents the animals from feeding on the leaves.

GREENLINE MOVEMENT ENVIRONMENTAL REHABILITATION PROGRAMME

Location:	Chingale Turn Off, T A Stola, Machinga
Representative:	BW Chalendera (Chairperson), Village Headman Mliwo, T A Stola, Machinga
Contact person:	David F Chitedze (near Chingale Turn Off), P.O. Box 16, Machinga, Tel.549203.
Related Ministries:	Department of Forestry and Ministry of Agriculture
Funding:	OXFAM
Project term:	April 2002 to March 2003
Beneficiaries:	55 households in five villages
Background:	The request came from subjects of Group Village Headman Liwuand who had requested to plant nutrient giving trees in the fields, fruit trees such as in the homes and such trees as along such rivers as Mtubwi and Kanjedza
Project objectives:	The planting of trees along rivers would ensure perennial rivers while the planting of fruit trees in the homes would bring some income and the planting of nutrient giving trees in the gardens would ensure soil conservation as well as soil fertility.
Project targets:	To cover 5 kilometres of Mtubwi river with 3000 Indigenous tree species, enable each of 55 households to conserve at least 0.1 ha with agroforestry tree species, establish 5 communal nurseries with about 50,000 tree species raised and conduct AIDS awareness campaigns.
Number of participants:	55 farming families with an average of 8 people per household.
Organization/Groups:	There are five committees with 10 members in each committee, one committee in each village. Supervision is provided by an agriculture personnel working in the project as a volunteer.
Activities:	Conservation of natural environment by planting trees along rivers and around wells, constructing of marker ridges and ridge re-alignment and conducting environmental education visitations to schools. Afforestation that includes nursery establishment and awareness campaigns, tree planting towards end of rainy season to avoid wash away of young trees by running water and tending the trees.
Assistance:	Seed-money and capacity building.
Annual fund amount:	K486,019
Technical assistance:	Extension services are provided by Ministry of Agriculture while CURE provided a motor bike and polythene tubes.
Personnel mobilization:	There are short time attachments to the project by students from Bunda College, ICRAF organizes visits to project farmers while the department of forestry provides transport for seeds.

Fields covering:	Agroforestry: promoting Indigenous technologies in propagation of agroforestry species such as <i>Gliricidia sepium</i> in the farmers' gardens. Group nursery and community forestry: planting trees in river-banks, In income generation activities; which involves producing and selling vegetables and granadillas.
Materials used:	Indigenous tree species such as mbawa, mchonya, mtangatanga and naphini. Exotic tree species such as acacia, indya, mangoes, pawpaws, granadilla
Participants contribution:	Participants' form of burden sharing is in labor and time.
Communication systems:	Between villager and cadres there is verbal communication while between cadres and NGOs there are meetings which take place and these are almost weekly. The interaction with sponsor happens once a year through visits and meetings.
Supervision:	Within a group the chair of VNRC is responsible for supervising while within the village it is the village headman. There is a main committee that is made up of members from the village committees that is responsible for overseeing work at beneficiary level.
Evaluation:	Evaluation is done by sponsors and assessment by comparison although the results showed that the quality of work in agroforestry is not good. Feedback for such exercises is done through meetings.
Estimated/ Benefits:	There is improved productivity in the form of maize yield from the gardens of those doing agroforestry than those using chemical fertilizer. Improved vegetation along river banks resulting in more months of running rivers than before.
Causative factors:	Seed inputs which were not there as well as training provided.
Incentives given:	Higher income as well as pride.
Methods of driving beneficiary:	Mutual solidarity
Management form:	Both the committee and the office of Greenline Movement manage the project. The committees meet every two weeks and there is normally 50% attendance.
Problems:	There is political interference and high staff turn over of extension volunteers.
How to cope with problems:	Meeting and discussing with politicians through Traditional Authorities. Need for capacity builder to train more people on the ground.
Norm/ Responsibility:	Specific individuals assigned specific duties and there are normally targets set for fulfilling tasks.
Relationship:	Tree nurseries established where MASAF have sunk boreholes. Seeds are given to Forestry department e.g. mchonya seed. Project is member of District Executive Committee and District Aids Committee

Traditional Knowledge

The area is famous for wood-carving and the most ideal tree from which these carvings are made is the *mchonya* tree specie. The project collects the seed from the forest reserve nearby and grows it in large numbers. Some of seed is supplied to Forestry Department.

KAM'MWAMBA SUSTAINABLE MANAGEMENT OF INDIGENOUS FORESTS PROGRAMME

Project activity:	Indigenous Fruit Processing, Bee keeping, Guinea Fowl Rearing, Cane Furniture Making and Fire Briquette making
Location:	Mwanza East: Kam'mwamba, Gobede, George, Manyenje and Chikwekwe villages
Representative:	Traditional Authority Symon Mr. Shortex Roling Zimba, Chairperson (Project Steering Committee)
Contact person:	Kam'mwamba Village, TA Symon, Mwanza Mr. Rankin Mwamadi, Field Coordinator, Tel. Number, 912632 Fax. Number 643765, E-mail Address, wsm@malawi.net
Related ministries:	Department of Forestry, Tourism Parks and Wild Life, Natural Resource, Environmental Affairs, Agriculture and Irrigation, and Ministry of Health
Funding sources:	The German Agency for Technical Co-operation (GTZ) under SADC (FSTCU) through Wild Life Society of Malawi
Project Term:	1997 - 2006
Beneficiaries:	Communities in 13 villages in TA Symon in Mwanza East with 6,154 ha
Background:	The project is instituted by Wild Life Society to ensure sustainable management of available natural resource forests. The area is experiencing deforestation at a fast rate due to big demand for charcoal and fuel wood trade. The donor's policy is to fund an integrated development project that would fund community related projects.
Project objectives:	The objective is to manage natural resources sustainably (environmental) and to empower local communities with income generating activities (IGAs) so as to ensure better living standards in the project area.
Project targets:	Increase participation/involvement of community members in project activities by putting in place a well defined institutional structure, setting aside more land as forest areas or woodlots and decreasing charcoal/fuel wood production in the area where charcoal and firewood production is a major activity.
Number of participants:	70% of population of 4,000 are taking part (2,800 people)
Groups:	There are 42 Guinea fowl clubs, 17 bee keeping clubs, 18 tree nursery establishment clubs and 5 Briquette making clubs. There are 8 Village Natural Resource Committees and one Steering Committee.
Activities:	Bee keeping (Production and sales of honey), production and sales of Bwemba/Mlambe fruit juices, rearing and sales of guinea fowls and eggs, making and selling cane furniture and raising and selling of tree seedlings. There is civic education provided on the environment.

Type of assistance:	Grant and technical transfer. Forestry department and Research institutions (FRIM/UNIMA) play an advisory role while Wild Life Society as the executing agency supervise the activities.
Technical assistance:	Bee keeping and guinea fowl rearing techniques extension and technology transfer while equipment is supplied by both Wild Life Society and GTZ.
Personnel mobilization:	Government Officials from Ministry of Agriculture and Dept. of Forestry, extension workers from Wild Life Society, staff from NGOs such as World Vision International and volunteers are involved in the project.
Fields covering:	Agroforestry, group nursery raising, food processing, guinea fowl rearing, community forestry, cane furniture making and bee keeping.
Material used:	Indigenous tress (mbawa, mtangatanga, mpakasa, tsanya, mkunkhu, mlombwa, msangu and mngongomwa). Exotic trees (bluegum, indya, <i>Gmelina</i> , <i>Cassia siamea</i> , <i>Leucaena</i> , <i>Gliricidia</i> , <i>sepium</i> , <i>Tephrosia</i> , <i>vogelli</i> and <i>ombwe</i>). Grass (<i>Vetiveria zizanoides</i> for soil and water conservation).
Rental equipments:	Initially the stock animals (guinea fowls)
Participants burden Share:	Labor, time and trees for hanging bee hives
Communication systems:	Between villager and cadres - through meetings and verbal, between cadres and NGOs through meetings and correspondence, between sponsors and cadres through meetings, correspondence, telephones, e-mail and fax. Communication between beneficiaries and offices is done through meetings and verbally.
System of supervision:	At group level this is done by the committee especially the chairman, within the village this is done by the village head, at beneficiary level there is an impact area project management committee while at supervisory board level the project steering committee is responsible.
Project evaluation:	There is a participatory evaluation process that involves WSM staff, chiefs and beneficiaries. Assessment is done by both achieved quantity and mutual comparison and the results were as expected. The way to feed back results from the evaluation is through meetings.
Estimated benefits:	Improvement in environment, increased vegetative coverage, increased income per household.
Causative factors:	Incentives in the form of training, acquisition of technologies in bee keeping management and mere appreciation.
Incentives:	Awards in the form of plates, maize seed, cash, certificates of merit
Methods of driving target beneficiaries:	By mutual solidarity, by competition and enforcement of by-laws to protect trees.

Management form:

By both local committee and project office type. Decision making is done through meetings which are held twice a month for committees and the whole group (100% attendance) while with donors once a month.

Problems still outstanding:

Inadequate equipment such as bee hives, bee uniforms and lack of leadership skills by some leaders

Measures to cope with problem:

Local resources to be used to purchase additional bee hives and uniforms and request for training from supporting institution.

Norm/ Responsibility:

Setting target norms for group members and sharing of Responsibilities.

Relationship with other projects:

This is an integrated programme that relates with a number of institutions and NGOs such as Ministries of Forestry and Natural Resources, Parks Tourism and Wild Life, Agriculture and Irrigation, Health and Wild Vision International.

Traditional Knowledge

***Mlambe* fruit juice**

To make *malambe* fruit juice break the shell and get the fruit out and soak it in a cup of water this can be done with either warm or cold water. When warm water is used it takes about one hour for the fluff covering the seed to be dissolved into the water. Sometimes cold water is used in which case it takes more time somewhere between two to three hours for the fluff to dissolve before both the seed and fibber are removed from the cup. Sugar is then added to the juice and stirred before being consumed directly. Sometimes people use the juice instead of water to prepare porridge from maize flour, this is regarded as being nutritious for children or expectant mothers. As for now soft seed that is removed it is either consumed directly as well, given to animals such as cattle, goats or pigs or it is simply thrown away.

For children *malambe* (fruit of mlambe, Baobab tree, *Adansonia digitata*) eating can be fun. A hole is made through the outer shell; water is then poured into it, stirred with a tree branch or simply shaken to separate the fluff from the seed. The outer shell of mlambe fruit is normally preserved and used as alternative source of fuel.

In order to break dormancy of mlambe seed it is soaked into water and dried again. This process is done several times till wrinkles appear on the skin of seed before it can be sown.

***Bwemba* (Fruit of Tamarind, *Tamarindus indica*) fruit juice**

Normally the outer skin of fruit is peeled off using hands and the fruit is soaked in a cup of water where it is left soaked for between six to eight hours. Later the seed is squeezed to get the *bwemba* juice. Both seed and fibber are removed and thrown away. The juice is

consumed or used to make porridge that is considered nutritious for children, older people, expectant mothers or the sick.

Guinea fowl

The traditional way of domesticating guinea fowls is when people go out into the bush looking for places where the guinea fowl have laid their eggs. These are then collected and given to a brooding chicken for hatching sometimes mixing them with the chicken's own eggs. When this happens guinea fowl eggs are given to the chicken eight days earlier than its own eggs at the start of brooding period. Normally the guinea fowls are reared on a free-range basis.

MPHUKA AREA DEVELOPMENT PROGRAMME

Project location:	Mphuka ADP, Bvumbwe
Representative:	Mr. Goloof, Programme Manager, World Vision International P.O. Box 23-94 Phone 643444
Contact person:	Mr. Henry Ofla, Project Officer, Po Box
Related Ministries:	Ministries of Agriculture, Health, Forestry and Natural Resources, Department of Fisheries,
Funding sources:	World Vision German through World Vision International (Malawi)
Project term:	1994-
Beneficiary name:	Farmers from 36 villages (49 VHs) in Mphuka area, T/A Bvumbwe, Thyolo in District
Background:	WVI conducted a survey in the area around 1990s and discovered that the area had the following problems: Food shortage due to land degradation, land pressure due to high population density and commercial farming activities by tea growers, Lack of lending institutions, Low population of small livestock. They came in with a view to promote soil and water conservation technologies/agro forestry, introduce fish farming, small livestock production, promote income generating activities and promote afforestation activities
Project objective:	Promote agroforestry practices and the planting of trees, improve food security at household level, introduce IGAs through fish farming, and livestock rearing and build capacity of beneficiaries in a number of developmental skills.
Project targets:	70% of population in 36 villages to be food secure after WVI services.
Number of Participants:	40 youths and Farmers from 36 villages in Mphuka Area.
Organization/Groups:	There are 30 groups doing different activities such as farming, fish farming, youths, poultry and supervision is done by WVI staff and ADP Executive Committee.
Activities:	Soil and water conservation, production and sales of livestock and aquaculture products, construction of educational infrastructure.
Form of assistance:	Technical transfer in terms of skills training, crop production, agroforestry and afforestation, fish farming and small livestock production and credit supply.
Technical assistance:	Extension: Agriculture, health, ICRAF, SARNET, MAFE Technology transfer: Agriculture, ICRAF, SARNET, MAFE Equipment supply: WVI
Personnel mobilisation:	Ministries of Agriculture, Health, Fisheries Dept., Forestry and Natural Resources, Bvumbwe Research Station. MAFE, ICRAF, NASFAM, SARNET, ICRAF, CSC
Fields covering:	Agro forestry, Community Afforestation, Group nursery, Micro financing. Food processing, Gender, HIV/Aids

Materials used:	Indigenous trees: Mtangatanga Exotic: <i>Gliricidia</i> , <i>Tephrosia vogelii</i> , <i>Faidherbia albida</i>
Participants burden sharing:	Through manual labour
Communication system:	Between village and cadres through meetings and verbally Between cadres and NGOs through meetings, verbally and telephones Between beneficiary and offices through meetings and verbally.
Supervisory system:	Within a group it is WVI staff, committee members particularly Chairman. Within the village it is the village headman and committees and at whole beneficiary it is ADP executive committee. They also act as grass root extension workers
Project evaluation:	Chief/Cadres, WVI Staff and Donors and the assessment methods is by achieved quantity and mutual comparison. Evaluation results were as expected and the feedback is through monthly, quarterly and annual reports. Feedback of evaluation is through monthly, quarterly and annual reports
Estimated benefits:	Over 100 ha of land has been conserved by constructing marker ridges with 50 ha ridges realigned. Since 1999 a total of 105,000 seedlings have been raised and 16,000 were planted agroforestry has promoted planting of shrubs such as <i>Gliricidia sepium</i> , <i>Tephrosia vogelii</i> and <i>Faidherbia albida</i> The project has promoted the rearing of chickens, rabbits and fish farming. It has also introduced the growing of Irish and sweet potatoes and cassava using high yielding cultivars such as Rosenna Bvumbwe, manyokola and Kenya
Causative factors:	The provision of seed inputs such as tree seed, annual crop seed, fish fingerings, chicks, rabbits, and skills training has brought about these benefits. The other factor is the prudent use of financial resources to purchase seed inputs for farmers and meet operation requirements. There has also been commitment from the community and collaboration among the stakeholders.
Incentives:	Better inputs supply on the form of tree and annual crop seed, the introduction of high yielding Irish and sweet potato and cassava varieties.
Methods of driving target beneficiaries:	Communities appreciate the need to participate in food security and environmental rehabilitation
Management form:	Almost all activities are centrally controlled and directed by the institution at Head Office while the ADP does the implementation and monitoring. There is the ADP committee which is the main structure and collaborates with the project office at Bvumbwe. There are several meetings that take place such as staff meetings, committee and beneficiary meetings held at ADP office but also in the villages/communities. The attendance to these meetings is between 80-100%. The meetings are held in a democratic manner.
Problems/Issues:	The allowance syndrome by project staff especially from government. They also demand transport to go for monitoring

fish farming activities. There is high demand for fish fingerings with limited sources. There is also lack of training in fish farming technologies. There is also limited Funding as there is only one donor. Poor management and lack of technical expertise have also led to diseases in the chickens. Mobility is also a problem since there are four project staff but only two motor cycles.

Measures to cope with problems:

Encourage the sharing of knowledge from farmer to farmer. Farmers should try to source fish fingerings from fellow farmers. To address the issue of diseases there will be need to strengthen collaboration with relevant experts. In collaboration with government introduce small scale irrigation at the southern part of project area which is in the lower Shire.

Norms/responsibility:

WVI does set targets for beneficiaries although it encourages the sharing of responsibilities amongst Participants. Period for fulfilling targets given is done at project management level.

Relationship with others:

The integrated nature of programme make it interact and collaborate with a number of institutions and government ministries such as Ministries of Health, Education and other players.

Traditional Knowledge

Due to land pressure communities practice intercropping in which a number of crops are planted in the same area.

Meat from livestock can also be preserved traditionally by slicing it into pieces, applying either salt or traditional soda and then sun dry it. Normally more salt is applied than the amount taken during a meal. Because meat treated in this way is tasty it is normally kept by the mother where it cannot be easily reached by other members of family until when it is due for use.

When a hen is brooding there is need for warmth traditionally this warmth is provided by placing eggs inside a ring made from grass, leaves or pieces of old cloth. The hen sits on top of eggs and this ensures that the eggs are, not only safe, but that the warmth generated by the hen is maintained.

One way the community has attempted to restore soil fertility in their gardens has been by growing *Faidherbia albida*. However in order to break dormancy of seed farmers have fed *Faidherbia albida* fruit to cattle. They have then confined the cattle to the targeted grazing area/field. Dung from the cattle has resulted in haphazard germination of seed in the field. These seedlings are tended and protected and let to grow naturally. Sometimes thinning of tree seedlings is done to create space and where necessary transplanting is done of thinned seedlings.

KACHERA FARMERS' CLUB

- Location:** Msampha Village, T/A Chiseka, Lilongwe
- Representative:** Mrs. Falesi Chalendeof, (Chairperson) Msampha village, c/o Mwenda F P School, P.O. Box 755, Lilongwe
- Contact person:** Mr. Peter Njikho, Project Coordinator, NASFAM, Lilongwe South Association, Management Centre, Box 9, Nathenje
- Related Ministries:** Department of forestry, Ministry of Agriculture
- Funding sources:** PROSCARP through Forestry Department, NASFAM, Ministry of Agriculture
- Project Term:** From 1993 on going
- Beneficiaries:** Smallholder farmers from Msampha, Mwenda and Khundu villages
Maize 0.2 ha., Vegetables 0.2 ha, Cg7 Groundnuts 2.3 ha, Beans 1.7 ha., Total: 4.8 ha.
- Background:** It all started with Home Economics activities in 1992 when a Home Craft Worker from Lilongwe District Council visited the village. A women group is set up and trained in nutrition, knitting and embroidery and house keeping. These activities required materials such as cooking oil, vegetables, tomatoes, onions, knitting, wool, cloth, needles and others. There is need for money to purchase these. She asked women to open a communal garden in the village where vegetables could be grown on a demonstration plot while selling the produce. 1993 - started communal vegetable growing 1994 communal a forestation, 1999 ginger growing and 2000 - started growing CG7 Groundnuts and beans. On a forestation it is the same story. Cooking require firewood which is scarce in the area. The group used to contribute firewood but it is observed that it is not sustainable. A forest assistant is deployed in the area to assist people in afforestation activities in 1994. The policy of donor is that payment should be in kind or cash at 1 to 1 repayment rate
- Project objectives:** To manage natural resources sustainable, establish communal and individual woodlots undertake soil and water conservation activities and engage in IGAs. Ensure food sustainability by growing winter maize and vegetables through irrigation
- Projects targets:**
- | Period | Target sets |
|------------|---------------------|
| 2000 -2001 | 56,000 (trees) |
| 2001 -2002 | 75,000 |
| 2001 -2002 | 115 per individual. |
- The group targets the following for annual tree planting: Communal woodlots (Kachera and Kambewe magaof) grave-yards, homestead, schools (primary)
- Number of Participants:** 91 Participants (87 women and 4 men), however men participate in afforestation through other groups in the villages. There are 88 households
- Organisation/Groups:** Farmers have formed groups to undertake their activities effectively.

Activities:	These groups have elected committees to manage them.
Form of assistance:	Supervision is done by committees, village headman and extension workers from NASFAM, Forestry and Agriculture Afforestation, dimba crop production and selling of produce Technology transfer in tree nursery establishment, woodlot management, crop production (canal irrigation) also knitting and embroidery, Home economics and soil and water conservation. Equipment: The group has been given watering cans, wheel barrow, panga knives, a rake, hoes, polythene tubes, and free seed. Additionally, a windmill has been erected at their project site.
Annual fund amount:	The group does not know how much is allocated to their project
Technical assistance:	Extension from Ministry of Agriculture, Forestry and NASFAM Technological transfer - from Ministry of Agriculture and Department of Forestry
Personal mobilization:	Ministry of Agriculture Field Staff and Department of Forestry provide extension services while PROSCARP provide seed input and equipment and facilitate technology transfer trainings. NASFAM provides training and facilitates establishment of groups and markets and links to credit institutions and also sells inputs.
Fields covering:	Community Forestry, Group nursery, irrigation/drainage, agronomy improvement and water and soil conservation. The group/club is doing Communal afforestation, small-scale irrigation (maize and vegetable growing)
Material used:	Indigenous trees, mbawa, mlombwa, mtangatanga Exotic: <i>Cassia/senna siamea</i> , Bluegum, <i>Tephrosia vogeli</i> Grass - vetiver and elephant grass, Nsenjere
Participants burden-sharing:	Labour, land and, time
Communication system:	Villager - cadres meetings once a week, credit group no scheduled time but combine agenda during other meetings.
Supervising system:	Within a group it is the committee, village headman, and extension staff. Within the village it is the village headman
Project evaluation:	Evaluation involves the committees, extension workers as well as the NGOs and the village headman and assessing method is by both achieved quantity and mutual comparison. Results on afforestation were less than expected. CG7 production is less than expected 2000-2001 - 2000 KG with a target of 3500 kg
Estimated benefits:	Farmers have openly indicated that on NASFAM loans (CG7 seed) has not been helpful to them, as it is not providing cash they were looking for. All the seed is used for credit repayment. Over 200,000 trees have been planted in area since 1994. Trees have been planted on bare land, grave-yards, schools and homesteads. Firewood/fuel wood scarcity has been reduced from 80% to almost 50% Vetiver grass has been planted along the marker ridges and elephant grass/nsenjere has also been planted in several designated places like dambos and around dimba. Seedlings and tree sales have increased household income in recent years except this year 2002 (tree seedlings).
Causative factors:	Seed inputs and equipment and commitment

Incentives given:	Words of encouragement from visitors
Driving target beneficiary:	Mutual solidarity and imposing penalties
Management form:	a local committee manages the project and meetings are held once a week, member attendance to the meetings almost 90%. Frequency of contacts with sponsors/donors twice a month. There are deliberate efforts to create a bottom up management style
Problems to solve:	Lack of markets for seedlings, lack of farm inputs, lack of credit facilities to initiate IGAs, inadequate CG7 G/nuts seed, high repayment rate 1:1 and high annual club fee (K600.00)
How to cope with problems:	Allocate more seedlings to communal forests, market identification to be done in a participatory manner. Communities to participate in most project activities that institutions are doing like production of quality seedlings, publicity, identification of markets, deliveries and collection of funds. As for lack of farm inputs and credit facilities identify lending institutions but also promote local contributions and intensify use of compost/manure. Ask NASFAM to increase quantity of input from 2kgs to 10-20 Kgs Ask NASFAM to reduce interest rate and reduce annual club fee.
Norm/Responsibility:	Community sets norms and members are given responsibilities while some norms are imposed on club members by NASFAM for example the annual subscription and repayment rate.
Relationship with other projects:	The afforestation activity is a follow-up project from a Home craft Project in 1994 and has strong relationships with school projects in supplying fuel wood for brick burning and PROSCARP activities dimba activity has a close relationship with DANIDA small-scale irrigation in the area.

Traditional Knowledge

Women produce more vegetables than they can consume or sell. To preserve the vegetables they are cooked, sun dried and restored into sacks or a container called *chikofu*. These containers are normally stored in the kitchen roofs where the vegetables can be preserved for over twelve months. With some vegetables like the okra species these are simply pruned from their source and sun dried and preserved in some leaf pockets or clay drums where they can be kept for up to a year. It is important to keep the drums in cool dry places.

Women in Msampha said they no longer use hybrid maize seed but the local variety that they preserve in the kitchen by hanging maize cobs in the roof. Sometimes even green maize is also preserved by cooking it and keeping it inside roofs of main house or hung on a tree in an open space. This maize is retrieved cooked during and partaken at the time when green maize is off season.

To restore soil fertility green grass is buried together with maize stalks soon after harvest. Also mixed agroforestry has been practiced in swamps with pigeon peas in order to restore soil fertility in vegetable gardens. There is also self-collection of most vegetable seeds from the gardens although this leads to deterioration in seed quality and forces the community to purchase seed every year.

CHILADZULU COMMUNITY HERBAL GARDENS

Location:	Chiradzulu (34 villages)
Contact person:	Jimmy Geoffrey Katuma, Assistant Programme Manager, Private Bag 342, Chichiri, Blantyre 3, Cell: 950890, Fax: 678056, E-mail: hopem@sdpn.org.mw
Related ministries:	Department of Forestry, Ministry of Health, Wildlife Society
Funding source:	COMPASS through Hope Humana and DAPP
Project term:	2000 - 2004
Beneficiaries:	34 villages in Traditional Authority Mpama, Likoswe and Kadewere
Background:	This is the result of a Study by National HIV/AIDS Commission which revealed high prevalence of HIV/AIDS cases and the need to use locally available resources to treat Aids related diseases. People in the villages have to walk long distances to health centres and medical services at the closest health facilities are not for free. The other motive is to replenish medicinal tree species in the area.
Project objectives:	The project has both environmental as well IGA Objectives since it encourages growing herbs that grow into trees. Beneficiaries are also given vegetable seeds so that as they water the herbs they water vegetables which are later sold.
Project targets:	To cover 60 villages by the end of current phase and to plant 30 000 trees.
Number of Participants:	2,500 Participants involving 500 households.
Groups:	There is a committee in each of current 34 villages and supervision is done in a participatory manner involving programme staff and some members of project committee.
Activities:	These involve orientation training and meetings before the seed is procured ten nurseries are established before planting and tending. Other activities include vegetable growing and selling.
Type of assistance:	A grant from COMPASS and awareness creation activities by DAPP. There were also some implements that were given. These are watering canes, panga knives, water storage containers and polythene tubes
Annual fund amount:	For 2 years the Funding amounts to US\$15, 000 from COMPASS and \$8, 000 from DAPP.
Technical assistance:	Guidelines on treatment of seed provided by FRIM while Wildlife and Environment Society facilitated trainings on herbal tree seedlings production. National Herbarium provided information on type of diseases herbs could cure, Department of Forestry advised on sustainable management of herbal trees and provided skills on tree seedling production.

Personnel mobilization:	Staff from the National Herbarium, FRIM, ICRAF, Wildlife Society and COMPASS all were involved in the project in one way or another. Traditional and political leaders campaigned for community participation and against vandalism and theft since some people uprooted the herbs to plant for private purposes.
Fields covering:	Agroforestry in which herbal species are propagated but there is also food processing - the production and preservation of vegetables. There are also group nurseries.
Materials used:	Indigenous trees such as msangu, msambamfumu, aroyi, mwanamphepo, mpungabwi, malambe, <i>Vongelia fosita</i> , masawu and lemon grass (<i>Cimbopogon citratus</i>) for respiratory disorders.
Participants' contribution:	Manual labor, time and land for nursery establishment and planting.
Communication system:	Between villagers and cadres there are bi-weekly meetings and monthly reportings by project officers to the institution while there are quarterly reports from the office to donors. The project officer visits the community on weekly basis. Between cadres and donors communication is through meetings and visits that take place every three months.
System of supervision:	Within the group the committee chair, secretary and treasurer are responsible while within the village the committee and the village head are responsible. At beneficiary level the project officers supervise the work.
Project evaluation:	This is done by communities, the office and the donor separately and then they share the findings. This is done at project activity phase e.g. making nurseries and planting is considered one phase but the donor does it every 6 months. The method followed is by comparison of plans against achievements. The results were more than expected. This is evidenced by the beneficiaries demanding more herbal variety and visits to the project by other institutions such as Project Hope and VSO. The feedback is done through discussions from the office down to the communities through quarterly progress meetings.
Estimated benefits:	Promotion of positive attitude on protection of environment and treatment of 60 people on different ailments including snake bites.
Causative factors:	Strong traditional beliefs in traditional medicine and long distances to hospital and the closest is a paying hospital.
Incentives given:	None
Methods of driving target beneficiary:	The programme has 75% women participation and mostly it is women who care for the sick in the home therefore there is self interest to get involved in the programme. Also the gardens are for the community and

if people do not take part they are not allowed to access them.

Form of management:

local committees are in the fore front in managing the project while programme officers play a low profile only providing advisory services and playing a facilitating role. There are weekly meetings and attendance is about 80% with 70% being women. Meetings with donors happen every three months. The bottom up approach is so much encouraged through the involvement of communities in all the project cycle stages.

Problems:

Inadequate finding that is due to lack of clear government policy on herbs. There is also low male participation.

Measure to cope with issues:

There is need for the National Herbarium and other stakeholders to push for legislation that would legalize use of herbal medicine so that its linkage to Home Based Care programme is made clear for donor understanding and support. There is need for civic education on male participation and need for policing and campaigns by both politicians and chiefs on vandalism.

Norm/Responsibility:

Communities have given themselves responsibilities on individual activities such as watering of gardens, records keeping, issuing of tools etc.

Relationship with other projects:

There is a strong relationship between this project and the Home Based Care activities in the provision of medicine to the chronically ill.

Traditional Knowledge

Herbal medicines are prepared and processed traditionally. In order to combat dehydration a tree bark called *muwawani* is used. The bark is cut into small pieces and soaked in water for about twenty minutes and the water is taken three to four times a day. The process is recycled twice or three times and is normally stopped when the bitter taste from the water reduces. Half a litre of water with few pieces of bark is considered enough dosage. This is the same treatment that is used for de-worming.

Preservation of tomato or cucumber seed is done through pressing ripe tomato seed out and smearing it on to walls. The preservation of seed for the mustard seed is done by cutting off the upper stem and hanging it in the kitchen rafters.

NATIONAL HERBALIUM AND BOTANIC GARDENS

- Project Location:** Box 528 Zomba. Tel. 265525/388, near old Parliament building.
Contact person: Dr Augustin Chikuni, Acting Executive Director
GTZ 1998-2001/2. Conservation of Biodiversity in protected areas GEF. 1998-2002 Southern Africa Botanical Network. A regional Capacity Building Project
- Background:** It is a non-profit making government parastatal established in 1987 by Act of Parliament with the merger of herbal and botanic gardens. It is established as a plant data bank for the flora of Malawi. The motive is to bring under one roof for effective management the different institutions on grass species, tree species, pathogens and crop that were scattered all over the country.
- Project objectives:** To serve as centres for conservation of rare plants, provide horticultural and landscape management services and environmental education. To conduct traditional medicine research - in collaboration with traditional healers in Malawi. To provide technical information on Indigenous tree species
- Beneficiaries:** NGOs, Govt. Departments individuals, researchers, herbalists, pupils and students. Supervision is decentralized in regional offices. It is this office that supervises and monitors activities at regional level.
- Contents of activities/services:** There are 9-core activities: -
Collecting and preserving plant specimens
Collecting and disseminating ethno botanical information
Systematic botany research
In-sites and ex-sites conservation
Vegetation surveys
Environmental education and environmental impact assessments.
Teaching and supervising undergraduate and graduate students
Plant identification services
Landscape management and horticultural services.
- Mobilization:** Government Officials, from FRIM, Dept. of Environmental Affairs, Agriculture, Health Education, Transport and Public Works, Fisheries, Water Development, ICRAF, HOPE Humana etc.
- Fields covering:** Agro forestry, Community forestry, group nursery
Materials used: Indigenous trees, Muofofni, Thombozi, Gondolosi, Likodza, Mofnaligone, Chimphakasa and several others.
- Relationship with other projects:** It collaborates with a number of other institutions such as those dealing with environment, research of plants and crops, those dealing with matters of health etc.

3.2 Resource Saving Activities

CHIKANKHENI BRIQUETTE MAKING CLUB

Activity:	Briquette making
Location:	Chiradzulu, Chikankheni, Ngumwiche 1, 2 and 3, Malika, Malika Mpenya, Jana, Yasini, Nkwanda, Walala, Kedzombe, Jekete, George villages in TA Mpama
Representative:	Mrs. Scolastica Njete, Chikankheni Village, TA Mpama, Chiradzulu
Contact person:	Moses Binali - Project Coordinator, C/o PAMET, P.O. Box 1015, Blantyre, Telephone Number 623895, Fax Number 01623895, E-mail: pamet@sdpn.org.mw
Related Ministries:	Department of Forestry, Ministry of Gender, Youth and Community Services
Source of funding:	OXFAM
Project term:	October 2001 to September 2003
Beneficiaries:	Chikankheni Women Group. Women groups in twelve villages (15 women per village/group) in TA Mpama in Chiradzulu.
Background:	Chiradzulu is one of most densely populated districts and so hard hit by fuel wood shortage. The community has difficulty in sourcing fuel wood and so the community readily accepted the idea of the project when PAMET held some consultations with it.
Project Objectives:	Initial objective is as a source of income but there is no market survey to determine the viability of project. Now the briquettes are used more as source of fuel energy to be used in the home and to a less extent as an income generation activity.
Project targets:	The project is to train 20 groups (one group per village) in 3 years.
Number of Participants:	There are 180 involved in the activity although over 60 households are benefited from the project.
Groups:	There are 12 groups with a committee in each group with the village chief being the supervisor.
Activities:	Waste paper is supplied by PAMET who bring it to the project site. First the waste paper/saw dust is soaked in a drum in the evening and left overnight. In the morning it is taken out and pounded in a mortar before being pressed using a screw press. Then it is taken out to sundry and this takes about five days on a sunny day.
Assistance:	Assistance is in the form of technical transfer which involves training the communities on how to make the briquettes.
Annual fund:	Through the cost of training the beneficiaries (food and refreshments)
Technical assistance:	At the initial stage of project each group is given equipment such as screw press, one full drum and one half drum, 2 mortars, 2 bicycles and

	then the raw materials in the form of waste paper or saw dust.
Personnel mobilization:	At first Community Services were involved in identifying the beneficiaries and project sites.
Fields covering:	Energy substitution
Material used:	Waste paper and saw dust
Participants' contribution:	In cash each beneficiary contributes K5 every month and also time beneficiaries spend in going to pick raw materials (wastepaper/saw dust) from where it is dropped by the assisting agency. Beneficiaries also contribute manual labor during the process.
Communication systems:	Between villagers and cadres communication is verbal and through meetings while the sponsors visit the project.
Supervising system:	A committee led by the chairperson supervises the group while within the village the village headman is responsible for overseeing the activities. Project officers make regular weekly visits to the project area.
Project evaluation:	An evaluation is done by the sponsors who looked at what had been achieved against set targets and the results less than expected. It is discovered that sustainability of project could not be guaranteed especially in sourcing raw materials by the beneficiaries. This resulted in donating bicycles to the beneficiaries to help in transporting sawdust and waste paper. There is no formal feedback to the results to either the implementing agency or the beneficiaries.
Estimated benefits:	Energy and time spent to go and collect firewood is now spent on other activities and there is some income from sale of briquettes.
Causative factors:	Resource utilization
Incentives given:	Better input supply in the form of raw materials.
Methods of driving target beneficiary:	Competition by neighbouring beneficiary groups in using raw materials.
Management:	Although there are local committees there is an apparent dependency by the groups on the facilitating agency.
Unsolved problems:	Lack of pestles to use in pounding the raw materials and the need for a shed to operate from. There is also irregular supply of raw materials which seems to be due to the facilitating agent's logistical problems (insufficient vehicles for delivery of raw materials).
Measures to cope with problems:	Beneficiary to operate with borrowed pestles in open air. The issue of vehicle to transport raw materials will persist.
Norms:	The committee meets every Friday and any absentee is charged K5.00 while those absent for more than three times without proper reason are expelled.

Relationship: Responsibilities rest in the hands of committee members.
Independent project that relates with Community Services and Ministry of Gender, Youth and Community Services.

Traditional Knowledge

Animal dung especially from cattle or goat droppings has also been used as alternative sources of fuel. Dry animal dung or droppings are used more especially by young boys herding cattle or goats at the *dambo*.

3.2 Income Generating Activities (IGA)

CHIKWEWE BEE KEEPING CLUB

Location:	Chikwekwe B Village. Traditional Authority Symon, Mofnza East
Project name:	Chikwekwe Bee Keeping
Representative:	Mr. Samson Nedi; C/O Kasenjere F P School, P.O. Box 62, Phalula
Contact person:	Mr. Rankin Mwamadi, Field Coordinator, Tel. Number 912632, Fax Number 643765, E-mail Address: wsm@malawi.net
Activity:	Bee Keeping
Related ministries:	Department of Agriculture, Department of Forestry
Funding sources:	GTZ through Wildlife and Environment Society of Malawi (WESM)1998-2002
Project term:	1998-2002
Background:	Degradation of natural resources, extensive soil erosion and poverty were some of problems that people of area faced . After awareness campaigns Wildlife Society of Malawi initiated an integrated natural resources management programme The motives were poverty reduction and rehabilitation of environment
Project objectives:	Environmental and income generating
Project targets:	Construction of a central market near Zaleof Road for marketing and displaying fruit juice products, honey, guinea fowl, briquettes and cane furniture produced in the area by the year 2006. Installation of electricity at the fruit juice-making block by 2006. Employ 14 full time workers for fruit juice making by the year 2006. Recruit 1 bee-keeping specialist (community based) by 2006. Raise and plant 4,000 seedlings.
Number of participants:	Not provided and number of households -not provided
Organisation/ Groups:	22 clubs and supervised by VNRCS housekeeping Committee
Activities:	Bee keeping and honey production and selling.
Form of assistance:	Grant and technical transfer
Annual fund amount:	Not known
Technical assistance:	Technological transfer and equipment supply
Personnel mobilization:	Ministry of Agriculture, Department of Forestry, WSM, WVI
Fields covering:	Bee keeping and honey processing
Material used:	Bee hives, gloves, protective clothes, sieves and processing material such as bottle, bucket, comb presser, labels
Form of Participants burden sharing:	Labour, trees for hanging bee hives and time.
Communication system:	between Village and cadres through meetings, verbal individual

	contacts. Between cadres and NGOs through meetings and correspondence, between cadres and sponsors through meetings, correspondences, telephones, e-mail, fax and between beneficiaries and offices through meeting and, individual contacts (verbal)
Supervising system:	Within the group the committee supervises led by the chairman. Within a village it is the village head and at whole beneficiary level it is the impact area project management. At supervisory board level it is the project steering committee.
Project evaluation:	WESM staff, chiefs, beneficiaries evaluate the project and the assessing method is by achieved quantity as well as mutual comparison. The results were as expected and the feedback is through meetings
Estimated benefits:	Increased income per household
Causative factors:	Incentives in the form of training and acquisition of technologies in bee keeping management and mere appreciation
Incentives given:	Awards in the form of plates, maize seed, cash, certificate of merit.
Methods:	Competition enforcement of by laws to protect trees.
Management:	The local committee manages the project. Meetings are conducted twice a month for committees and attendance is 100% while meetings with donors and WSM are done once a month
Problems/issues to solve:	Inadequate equipment such as bee hives and bee uniform
Measures to cope with problems/issues:	The group will use group subscriptions to purchase additional beehives and uniform from honey sales.
Norm/responsibility:	Beneficiaries set targets for activities and give each other tasks to do with target dates. Group members elect leaders democratically
Relationship with other projects:	80% independent project but the group also participates in afforestation activities.

Traditional Knowledge

For beehives people have used aged log drums especially of *miombo* type. These are normally hung between tree branches. To attract bees into the hives people seek the assistance of traditional medicine men. To harvest bees people use dry grass which is burned to kill or smoke out the bees, this is normally done after dark. Later the honey/combs are boiled for between half to an hour then sieved using local sieve called *khuntho*. This technology however encourages deforestation.

CHITSANZO BEE KEEPING PROJECT

Location:	Lilongwe Natural Sanctuary
Representative:	Mrs. Irene Ndlovu, Chairperson C o National Parks and Wild Life, P.O. Box 30131, Lilongwe 3 Tel. 757499
Contact person:	Mr. K Lipiof, National Parks and Wildlife, P.O. Box 30131, Lilongwe 3. Tel. 775499, Fax 757584
Related ministries:	National Parks and Wildlife Compass and Mafe.
Funding sources:	COMPASS
Project term:	2001 -2002
Beneficiary name:	Chitsanzo Beekeeping and Plant Propagation Project, Kaofle, Chilinde and Mchesi townships, T A Tsabango, Lilongwe.
Background:	The project is started when a group of women from Kaofle, Chilinde and Mchesi approached Nature Sanctuary Officials for assistance to rear Guinea fowls. A proposal is submitted to COMPASS who looked at it as a way of preserving the sanctuary but also to assist the women in income generation. COMPASS provides short-term small grants to IGA oriented community projects that have natural resource management element in them.
Projects objectives:	<i>Planting of trees and conservation of already existing ones in the Nature Sanctuary, Income generating and production of honey for sale</i>
Projects targets:	Purchase and hang 20 beehives, produce 40 Kg of honey per hive and raise about 10000 seedlings.
Participants:	10 (7 women and 3 men) in 7 households
Organization / Groups:	A group of 10 have formed a Committee and supervision is by the Local Committee, Chairperson in particular and her Secretary and Treasurer but also Lilongwe Nature Sanctuary Staff also involved.
Contents of activities:	Training in Beekeeping (Management and Skills), preparatory stage which involves purchasing of equipment, identification of sites, observation of flowering calendar, hanging of beehives, tending, rebating, harvesting and processing
Form of assistance:	Seed money to the group
Annual fund amount:	K404,000
Technical assistance:	National Parks and Wildlife provided extension and skills training in bee keeping, external specialists provided skill training, equipment
Personnel mobilization:	Government Officials - staff from National Parks and Wildlife, NGOs MAFE. Volunteers from National Parks and Wildlife Headquarters and few officers from Lilongwe Nature Sanctuary Work with the group on Voluntary basis.
Fields covering:	Community Forestry - trees around the nature sanctuary are planted on group basis, Group nursery is established, food processing -honey processing.
Material used:	Indigenous trees: Mlombwa, mngongomwa, mtangatanga,

mthethe, msambamfumu

Form of participants burden sharing:	Manual labour for raising and planting of tree seedlings, making of fire breaks, hanging of bee hives and cleaning of beehives surroundings such as grass.
Communication system:	Personal contacts meetings once a month but sometimes are unplanned due to labor or activity demand - daily in certain cases. Cadres - sponsors - meetings once every 2 months frequent when disbursing funds, correspondences, phones, fax, e-mail.
System of supervision:	At group level this is done by the committee especially the chairman and the secretary. However Nature Sanctuary staff also assists in supervision of activities the group is undertaking.
Project evaluation:	There is no Official project evaluation conducted, however National Parks and Wildlife Staff at the regional office (centre) in conjunction with the group leaders conducted the exercise in April 2002. The results were less than expected because out of 20 beehives hung only 5 were colonized, allegedly due to poor positioning of beehives.
Estimated benefits:	The group has managed to plant over 8,000 tree seedlings but honey harvesting has not yet been done. It has been delayed by poor beehive colonization.
Incentives given:	Incentives in the form of training and tours to Nyika National Park September 2001, Monkey Bay 2001, food allowances, accommodation and refreshments were provided. Refreshments and lunch is also provided when the group is holding a day-long meeting. Since members of this group come from distant areas, transport is provided to and from their areas from project funds.
Methods of driving target beneficiaries:	By enforcement of by-laws.
Management form:	A local committee runs the project and decision making is done through meetings held once a month for the whole group with attendance of 70 - 80%. The group rarely achieves 100% attendance because some members are engaged in other businesses locally and outside the country.
Problems still outstanding:	Poor beehive colonization, inadequate fund to continue the planned activities and provision of bus fares.
Measures to cope with problems:	The group will conduct colonization review training with a beekeeping expert. On Funding the group will ask COMPASS for additional money
Responsibility:	The group set target norms and share responsibilities on yearly basis except for regular reporting on funds and activities which have been imposed on them by COMPASS.
Relationship with other projects:	The project is complementing activities such as re-forestation, civic education and firebreak making. Lilongwe Nature Sanctuary is implementing a project of similar nature funded by GTZ before and this one has just taken off from the previous project the only distinctive feature being that the current one is community based.

MAGOMERO FOOD PROCESSING PROJECT

Location:	Magomero Community Development College
Representative:	Alexandra Schomburg (VSO), Food Processing Advisor, Magomero Community Development College SADC-ICRAF- AF Project, Makoka Agricultural Research Station, P.O. Box 134, Zomba. Tel. 534277/250 Fax. 534283/298
Related ministries:	Agriculture, Gender Youth and Community Services
Funding sources:	COMPASS, DCO/Dutch Society
Project term:	May 2002 - May 2003
Beneficiary name:	Women from Masuku, Katopola and Nacho Villages in T/A Chitera.
Background:	<p>The area produces the following types of fruits e.g. mangoes, avocados, guavas, tangerines, oranges, peaches, mulberries, bananas, paw paws and a number of wild fruits such as masuku, masawo, mateme and many others. When fruits are abundant, there is excessive loss as there is no way of preserving them coupled with lack of lucrative local market. Food Processing Advisor and the Community appreciated the natural fruit shortage and wastage during certain periods of year.</p> <p>With HIV/AIDS prevalence patients need balanced diet.</p> <p>The idea is to preserve both natural and exotic fruit using low cost technologies and increase number of households accessing fruits throughout the year.</p> <p>The policy of donor is to provide small grants to communities that carry out natural resource oriented projects that generate income for a period of one year. Requires projects reports periodically that accompany explicit financial statements.</p>
Project objectives:	<p>Promote conservation and planting of natural trees and to empower women to start their own businesses. The group also works together with the village headmen to sensitize people in protecting existing Indigenous fruit trees and planting more in the area. Through the IGAs improve food security at household level. Build the capacity of beneficiaries by training group members and local leaders various skills in food preservation.</p>
Project targets:	<p>2002-2003 10 women trained in food preservation in 3-4 villages around Magomero Community Development College and extend skills to over 200 households.</p>
Number of participants:	100 women - 10 households
Groups:	Women groups from Masuku, Katopola and Nacho villages who are supervised by the committee headed by the groups' chairpersons but avoid giving more powers to the chairpersons and management focuses community ownership.

Contents of activities:	Fruit production processing using solar drying technology besides other Indigenous technologies which will play complementary role. Conservation awareness meetings with its members are conducted regularly
Form of assistance:	Seed-money from Compass (over million Kofcha), there is also technical transfer through VSO Volunteer, ICRAF, Magomero Community Development College, Agriculture
Annual fund amount:	Over 1 million MK donated by COMPASS
Technical assistance:	Extension by Ministry of Agriculture and Technology Transfer by VSO Volunteer /ICRAF and Magomero Community Development College while Chancellor College trains the group in basic computer skills. Development of fruit processing manual in English and Chicheof by DCO/Dutch Society. Equipment purchased with funds from COMPASS.
Personnel mobilization:	ICRAF, DAPP, CARD, WVI, Interaid, Government ministry of Agriculture CDAs from Magomero Community Development College Extension workers and Ministry of agriculture Volunteers: VSO 1 Miss Alexandra Schomburg
Fields covering:	Agroforestry - farmers encouraged to incorporate fruit trees in their farming systems. Community Forestry - Communities plant and care for regenerating Indigenous trees. Group nurseries - establish to raise seedlings for agro-forestry and afforestation. Food processing - preservation of fruits using solar drier, Indigenous technologies such as sun drying on traditional palm leave mats and basket covers, making of juices, marmalade and jam. Indigenous fruit trees such as Masuku, Mateme, Masawo Exotic fruit trees such as Mangoes, avocados, guavas, tangerines, oranges, peaches, mulberries, paw paws and bananas
Material used:	
Participants' burden sharing:	Through manual labour
Communication system:	Individual contacts, meetings held daily except weekends. The group communicates with COMPASS by phones, reports and formal meetings.
Supervising system:	Within a group - Chairperson and committee, within a village it is village headmen
Project evaluation:	It has just started but will involve all stakeholders.
Estimated benefits:	Not yet.
Methods of driving beneficiary:	Mutual solidarity
Management forum:	Managed by local committee and meet once a week with all members Attending. The beneficiaries have only met donors once since

Problems to solve:	the project started in May. During meetings members are encouraged to give their views on how the project should run. Petty jealousy amongst the women by fellow women within and outside the group. Communication breakdown within the group due to cultural influence. The tendency of women to express their concerns outside the group. Poor technology transferring system by researchers/institutions.
Measures to cope with problems:	Intensify civic education on commitment, cooperation, transparency and accountability. Promote openness/create conducive environment for sharing ideas. Lobby researchers /institutions to make sure that the developed technologies are passed on to farmers.
Norm/ responsibilities:	The groups agree on tasks to be done and the committee elected by the group members. COMPASS has set deadlines for other activities, report writing and accounting for the project funds.
Relation with other projects:	It interacts with other institutions like ICRAF which provides fruit tree seedlings but also trains them in fruit tree propagation technologies.

Traditional Knowledge

Cassava preservation

When the cassava is mature it is uprooted and immediately the outer skin is either peeled off or scraped off using a knife. It is then cut into pieces, sun dried either on a mat or on the roof top of a grass-thatched house for a couple of weeks before being stored away in sacks or drums. Later the dried cassava, called *makaka* is either pounded into flour using a mortar and a pestle and then sieved so that fine powder is produced. It is this powder that is used for making a local dish of dish called *kondowole*. Sometimes the dried cassava is simply cooked like that, salt added and then taken as a meal. Dried cassava flour has also been used as one of ingredients for local beer brewing.

Sweet potato preservation

To preserve sweet potatoes they are dug out, collected and stored in a pit, ash is then sprinkled on top of each layer of potatoes that is put in the pit. The potato can last for a full season. The problem with this kind of preservation comes up when water finds its way into the pit; this makes that potato rot or go bad, also when ants find their way into the pit they destroy the potatoes.

MWAMBANANJI TRICKLE UP CLUB

Location:	Mofmbananji village, TA Chikowi, Zomba
Representative:	Mrs. Asani- Chairperson, Mofmbananji Village P.O. Box 227, Zomba
Contact person:	Staiford Kausiof, Project Officer, ELDP, P.O. Box Zomba, Cell. 933982
Related ministries:	Gender, Youth and Children Affairs
Funding source:	Trickle Up (USA) through Evangelical Lutheran Development Programme
Project term:	Since 2000
Beneficiaries:	Ofnikani Women's Club -Mofmbananji Village, T A Chikowi, P.O. Box 227, Zomba. A group of 15 women.
Background:	The request is sent to Evangelical Lutheran Development Programme of Evangelical Lutheran Church in Malawi. Previously the only avenue for the women in the village of raising money is through sale of vegetables. The women had problems in sending their children to school and keeping them in school. The grant is to benefit only women and that they should not be involved in the same type of business to avoid flooding the market. Other activities includes production and use of efficient clay stoves.
Project objectives:	This is an Income Generation project whose objective is to make the women self reliant/support.
Project targets:	The project started in 2000 and intends to enable the women support their families in their basic family needs but also be able to lead a relatively comfortable life.
Participants:	Currently only 15 women from 15 households are taking part in the Programme.
Groups:	A group of 15 women is supervised by the village lady chief and the chairperson.
Activities:	The women are engaged in such businesses as baking and selling scones, buying and selling beans, maize, fish, firewood, salt, rice, sugar, tomato, fire wood, running a hawker and tailoring. The commodities are sold within the village. While each woman has opened her own account the group also maintains a group bank account to which each one contributes K100 every month.
Form of assistance:	Trickle up assisted the women with a grant while Community Services provides business management training.
Annual funding:	In 2000 and in 2001 each woman is given \$50 (K3,900 and K3074 respectively)
Technical assistance:	Training in business management before disbursement of funds
Personnel	

mobilization:	The involvement of Ministry of Gender and Community Services in imparting business management skills.
Field of activity:	Micro-finance, clay stove production and afforestation
Materials used:	Clay for stoves and tree seedlings.
Participants burden share:	They all contributed in cash ranging from K200 to K600 into the business start up while others contributed in kind in commodity form e.g. rice
Communication system:	There is verbal communication but also weekly meetings amongst the beneficiaries with regular visits by the project coordinator.
Supervision system:	The chairperson oversees the group while at village level the lady chief is takes charge of group and the project coordinator is overall supervisor on the beneficiaries.
Project evaluation:	Will involve all stakeholders and assess quantity
Estimated benefits:	There is marked increase in household income resulting in improvement in living standards (better dressing for entire family, iron thatched houses, rearing of livestock).
Causative factors:	Every month they appraise their business records and performance and advise/encourage each other.
Incentives for efforts:	Not as yet but will consider
Methods of driving target beneficiary:	Openness with each other's business performance which has led to relevant business advices being given. The K100 contribution to the pull fund at the bank is irrespective of individual business performance. K10 fee is paid by those who do not attend meetings
Management form:	Project managed by committee which meets weekly with 100% attendance.
Problems to be solved:	High price paid for goods leading to low profit margin. Sometimes over production of goods by others outside the club. There is also a lot of stealing of animals so people are discouraged from rearing animals.
Measures to cope with problems:	Little can be done about prices paid when buying goods. The issue of over production can be solved by taking goods to other places for sale and not within same village. There is need for community police to safe guard people's property.
Norm/Responsibility:	Absentees to meetings to be penalised and monthly contribution towards the committee bank account is mandatory.
Relationship	

with other projects:

There is an adult school to those who never had the chance to go to school. The committee also takes part in afforestation activities in the area

Traditional Knowledge

There is a traditional way of baking the type of doughnut called *chikondamoyo* in which women use ingredients like maize flour called *mgayiof*, water, salt, traditional soda called *chidulo* and some sugar. These are mixed into desired amount and poured into the pot or pan. A little cooking oil is applied onto the inside of pot to prevent the final product from sticking on to the sides of pot. The pot is put into a clay oven. It takes one to two hours for the baking to be completed after which the product is emptied into a basket to cool down before it is cut into pieces. This is either consumed in the house or sold. However the *chimimina* type of doughnut is cooked, not baked, adding neither sugar nor soda, not even oil, it only involves bananas and maize flour and takes a shorter period to cook.

Most of products in the businesses are normally sold by the road side in the village or at local primary schools. This is however a limited type of business as sales depend on purchasing power of village clientele and on the school calendar. There are also those who are engaged in selling fish and rice. These buy their products from Kachulu, a market near Lake Chilof. It takes them two to three days to go and fetch their merchandise. It is discovered that in the women's traditional way of calculating profit they overlooked most of overheads such as transport costs, the cost of meals and accommodation.

KATUNGA FISH FARMING PROJECT

Location:	Zomba
Representative:	Mr. M Nachimbwe (Chairman), Chikala FP School, Box 503, Zomba
Contact person:	Staiford Kausiof, ELDP, P.O. Box, Cell: 933982
Related ministries:	Departments of Forestry and Fisheries, Ministries of Agriculture & Health
Funding sources:	OXFAM through ELDP
Project term:	June 2000 to May 2003
Beneficiaries:	Community of Katunga village in TA Chikowi covering 0.2ha
Background:	As the people are not far from Lake Chilof they face problems when the lake is closed for breeding so this is an alternative source of supply for the fish which is also to be a source of income. The Village Headman visited some fish ponds in Dzaone and appreciated the need to revive the old fish ponds in the area constructed by a Mr. Malikebu.
Project objective:	This is to be both an environmental as well as an income generation activity project.
Project targets:	Construct 4 fish ponds by 2003
Number of participants:	There are 11 Participants (7 men and 4 women) from 11 households.
Groups:	The beneficiaries are organised into a committee and the village headman and the project committee supervises the activities.
Activities:	Fish farming in this area involves selecting a site where there is perennial water, clearing and digging the dam, letting in water and dropping in the fingerings. Feeding is done twice a day and harvesting is done once in a year.
Form of assistance:	The supporting institution ELDP bought and brought the fingerings and also provided maize bran to feed the fingerings.
Annual fund amount:	
Technical assistance:	None for the current group but are using knowledge handed down from previous group who ran a similar project.
Personnel Mobilization:	Ministry of Agriculture and Domasi Fisheries
Fields covering:	Agroforestry and inland fisheries.
Material used:	Hybrid crops and vegetables such as rape, turnips, tomatoes, Chinese cabbage etc.
Participant burden sharing:	This is in the form of labour for digging the ponds and feeding the fingerings and also time spent on the project.
Communication system:	Between the villagers and the rest of stakeholders there are regular meetings while between cadres and NGOs there are meetings as well as

Supervision:	written communication. The sponsor normally visit the project. Within the group the village head and the committee are responsible for supervising the project while within the village it is the village headman who oversees. The project staff supervise the whole project at whole beneficiary level.
Project evaluation:	The evaluation involved donors, project staff and chiefs. Assessment is by achieved quantity and the results were as expected. The results were shared through both meetings and individual contacts.
Estimated benefits:	There has been significant increase in the household incomes of about 30%.
Causative factors:	Commitment and interest by communities around.
Incentives:	None
Methods of driving beneficiary:	Mutual solidarity.
Management:	The local committee is responsible for running the project and meetings are held twice a month and when need arises.
Problems to be solved:	Scarcity of fish due to seasonal harvesting and communal ownership of dams. Fish farmers are not properly trained to run the fish farming project.
Measures to cope with problems:	Increase intake of fingerings request relevant institutions for skills training in the project.
Responsibilities/ Norms:	Members share responsibilities and positions are contested for.
Relationship with other projects:	Project members are also involved in the afforestation project.

MBWATALIKA FISH FARMING PROJECT

Location:	Mboftalika, Maliro afundanji and Nofngu villages T/A Maliri, Lilongwe District
Contact person:	Mrs. AB Chikofti, Development Officer, Mpingu EPA 2, Mboftalika Village T/A Malili, P O Mpingu, Lilongwe
Representative:	Mrs. Jenala Ziyenda, Mboftalika Village P.O. Box 16 Mpingu, Sinumbe Section EPA 2, Mpingu, Lilongwe
Related ministries:	Agriculture, Forestry and Natural Resources (Fisheries Department)
Funding sources:	CPAR direct to the committees
Project term:	2000-2001 now continued on their own assisted by Ministry of Agriculture extension staff
Beneficiaries:	6 groups (91) women from Mboftalika, Maliro afundanji and Nofngu villages in T/A Maliri in Lilongwe District.
Background:	The project is initiated by CPAR to provide fish to communities for nutritional improvement and source of income at household level. The area experienced lack of animal protein and alternative source of income after tobacco industry decline. CPAR policy is to fund self-help projects and health related initiatives.
Project objectives:	The objective is to promote fish farming activities in the area for food and income generating to improve nutritional and socio-economic status at household levels.
Project targets:	The project set 7 fishponds to be dug by women groups by the year 2000. It also aimed at increasing rural women participation in socio economic activities.
Number of participants:	91 women from 3 villages
Groups:	There were 6 groups for 7 fish ponds (Tiyesere, Tione, Tikondane Mazizi, Madalitso, Madalitso)
Activities:	There are a number of activities such as training of farmers in fish farming technologies, practical site selection, setting out/ lay out- this involves measuring pond size and designing, actual digging of pond, filling of fingerings in the pond, feeding, pond management/ carryout of maintenance work, harvesting and marketing
Type of assistance:	CPAR purchased fingerings provided technical knowledge and fishing nets
Annual fund amount:	
Technical assistance:	CPAR and Ministry of Agriculture extension staff, Fisheries Department, provide extension services and technology transfer. Fishing nets are also provided to the groups.
Personnel mobilisation:	Ministries of Agriculture, Forestry and Natural Resources (Fisheries Department) and CPAR Extension staff are involved in the project.

Field covering:	Inland fisheries
Material used:	Hoes, measuring tapes, ropes, rulers, pangas, buckets, shovels, fishing nets, plates.
Rental equipments:	Fishing net from CPAR
Participants burden share:	Labour, material (hoes, pangas, buckets, etc), feeds, land
Communication system:	Between village cadres-through meetings and verbal, Between cadres and NGOs through meetings and correspondence Between sponsors and cadres through meetings, correspondence, telephones Between beneficiaries and offices is done through meetings and verbally (EPA 2 Mpingu Agriculture office)
System of supervision:	At group level this is done by the committee especially the chairman and the secretary and at village level, the village head does this. There are plans to put in place a main committee at area level in the near future.
Project evaluation:	There is participatory evaluation process that involves CPAR and Agriculture staff, village heads and beneficiaries. Assessment is done by both achieved quantity and mutual comparison and the results were less than expected. Out of 7 dams only one is doing well. Farmers managed to harvest some fish.
Estimated benefits:	Increased income through fish sales and increased vegetative coverage through growing of vegetables around the fish ponds
Causative factors:	Incentives in the form of training, food allowances and refreshments.
Methods of driving the beneficiaries:	By mutual solidarity
Management form:	A local committee manages the project office type. Decision-making is done through meetings, which are held when the need arises in most cases once a month but sometimes is dictated by events. There is average attendance of 70-85%. Donors used to visit the group twice a month but nowadays its Ministry of Agriculture that visits the groups fortnightly.
Problems outstanding:	Low fish multiplication in the ponds. Farmers haven't established the cause but others suspect large number of males as compared to females. There are a lot of milamba (mudfish) in the ponds that predate the desired fish species. Harvesting in certain dams is long overdue due to lack of fishing equipment (fishing net). The net is withdrawn from them sometime back.
Measures to cope with problem:	CPAR, Fisheries Dept. and the farmers will undertake investigation to establish the exact cause of low fish multiplication in the ponds. As for the fishing net, farmer have

Responsibility: approached CPAR. Activities are done haphazardly, there are target norms set in most cases. Sharing of responsibilities is done through local polls within the group. The incorporation of vegetables and fruit tree growing is CPAR's initiative.

Relationship with other projects: The project is working directly with department of fisheries (social forestry project, food for work project) by raising tree seedlings using water from the fishponds. Ministry of agriculture is implementing a GTZ horticulture programme that involves raising of fruit trees and growing of vegetables using water from the fishponds.

Traditional Knowledge

There are a number of ways of traditionally catching fish from rivers/ponds. Fishing baskets called *mono* are sometimes used. At other times fish is caught using a hook and bait although the amount of fish caught in this manner is relatively small. At other times especially when there is a lot of fish in the pond people use sacks. Two people hold the sack on each side with the mouth open and drag across the pond. Another way of catching fish is by using tubers called *Katupe*. These are wild tubers which are crashed and then taken to the pond and squeezed inside mixing it with the water. The juice from the tubers makes the fish float drowsily on top of water. The biggest setback for this technology is that it destroys both adult fish as well as the fingerlings including the breeding stock. It also leads to water pollution which affects aquatic life.

Fish can be preserved traditionally by sun drying or smoking it. With the smaller fish these are sometimes boiled before being dried. Sometimes to preserved sun-dried fish especially where the weather is normally hot traditional soda called *chidulo* is sprinkled on to the fish. This increases the period the fish is preserved.

MADALITSO ENTREPRENEURS MUSHROOM GROWING CLUB

Location:	Chiwembe Township in Blantyre
Representative:	Mrs. Eunice Banda, Chairperson, P.O. Box 51808, Limbe
Contact person:	Emmanuel Mlaka, EDETA, P.O. Box Cell phone 09911097
Related ministries:	Ministry of Commerce and Industry and Commerce, Bvumbwe Agriculture Research Station
Funding source:	COMPASS through EDETA.
Project term:	Funded for 2000 but project on going and is meant to be self sustaining.
Beneficiaries:	A total of 75 women in Chiwembe, Bangwe, Manja and Andrande Townships and Manase Location and Mpemba and Machinjiri in Blantyre district and Mofnza district.
Background:	The request came from the women groups some of whom were involved in selling cooking oil previously but found that they could not make a profit because the market used to be flooded. They found a lot of potential in mushroom growing but at the same time discovered that in growing mushrooms they would use water hyacinths and so would help in environmental protection. The policy of donor (COMPASS) is to fund environmental related projects.
Project objectives:	The project Objectives were both environmental (getting rid of <i>Namasupuni</i>) as well as income generation activities.
Project targets:	To produce maximum of 1400kg in a year
Number of participants:	11 women from Chiwembe from 11 households
Organisation/Groups: Activities:	The women are organised into a club called Dalitso Entrepreneurs Construction of shades, collection of media, treatment of media (sterilisation), sowing spores, inspecting progress of plant, harvesting, weighing, packing, and marketing
Form of assistance:	Seed money and technical transfer by EDETA
Annual fund amount:	K183,000
Technical assistance:	Technology transfer, extension
Personnel mobilization:	Commerce and Industry, City of Blantyre, Chancellor College, Ministry of Agriculture, EDETA.
Fields covering: materials used:	Micro-financing Namasupuni, poles, cotton waste, soap, briquettes, drum, scale, plastic paper and rented/hired boat
Participants burden sharing:	Time, labour, cash, and land.
Communication system:	Meetings and personal contracts, correspondence, reports, workshops.

Supervision:	The group and the committee
Project evaluation:	Self-evaluation by members, COMPASS does it through monthly reports on progress and financial books
Estimated benefits:	Increased income per household.
Causative factors:	Prudent use of resources, commitment and mutual solidarity, acquisition of production skills relevant to the activity
Incentives given:	High price for product
Methods of driving target beneficiary:	Enforcement of bylaws and mutual solidarity.
Management form:	Entrusted to a CBO. They meet once a week although dictated by events depending on production activities. Attendance is 100% and the meet with donors once a month.
Problems:	Delay in seed supply, limited source of seed.
Measure to cope with problems:	Agreement signed between EDETA and Chancellor college. Government to establish more seed production units and train more technicians in mushroom seed production. The seed production units to keep updating mother cultures.
Norms/relationships:	Group members set norms but responsibilities come through elections. Sometimes the target norms are dictated to by mushroom cycles. There are also imposed norms by the donors and NGO/CBO such as opening of bank account.
Relationship with other projects:	Natural resource conservation in using briquettes to treat the seed and so saves fuel wood and water conservation through removal of <i>namasupuni</i> . Contributes towards starting of micro projects.
Traditional Knowledge	
	To help in the colonization of mushroom seed the project uses water hyacinths and cotton waste which are good substrates for mushroom growing. However in order to produce the amount of steam that is required to sterilize the hyacinths a lot of firewood is used. This in turn encourages deforestation.

KUMBO OIL REFINERY

Location: Michiru, T/A Kuntaja, Blantyre

Contact person: Mr. Emmanuel Mlaka, EDETA
Cell. 09911097

Representative: Mrs. Annie Sheira Bonomali, Khumbo Oil Refinery,
C/o Mr. D A Bonomali, P.O. Box 21, Blantyre. Cell: 948469

Related ministries: Trade, Commerce and Industry, Agriculture.

Funding sources: Family Savings, husbands' salary and sales of knitting business

Project term: Unspecified

Beneficiary name: Mrs. Annie Sheira Bonomali, Michiru, T/A Kuntaja, Blantyre

Background: She applied for training in oil processing and later trained in 1996 by MRTDC. She is driven by lack of alternative sources of income but also because she could not easily gain access to credit facilities because of conditions attached to such loans.

Project objectives: The Objectives were to generate income and create employment for other people and contribute to the socio-economic development of country.

Project targets:

Number of participants: It is a family business

Organization/Groups: Family undertaking

Supervision: Mrs. Bonomali manages and directs the business assisted by the husband

Contents of activities: Oil extraction from groundnuts and moringa orifera involves purchase of groundnuts, selection of good nuts, weighing, shelling, drying, grading, reweighing, machine/ram presser lubrication, pressing, refining, bottling/labeling, packing and then making door to door sales, factory retailing.

Form of assistance: Trained by MIRTDC.

Annual fund amount: K100,000

Technical assistance: Malawi Industrial Research and Technological, Chancellor College, Malawi Bureau of Standards (MBS), EDETA, NATIONAL Association of Business Women (NABW), MAFE, MIRTDC sold a ram presser to Mrs. Bonomali

Personnel mobilization: EDETA, MAFE, *International Eye Foundation* and University of Malawi.

Fields covering: Material used: Indigenous trees. Baobab, neem, rubber oil, jestropha, trichilia emetica, castor. Hybrid Crops: CG7 seed Groundnuts.

Communication system: through individual contacts, phones, correspondences and meetings

Project evaluation: She conducts self evaluation and her husband also act as an external evaluator and assessment method is by achieved quantity of oil produced.

Estimated benefits:	The project increased income for household. She gets income from build iron sheets roofed house, purchase a 7 tone-lorry for transportation of raw materials, acquire 3 ram pressers Her income is around K300, 000/annum (minimum). Other benefits include being hired out by several NGOs and Education Institutions to sensitize and train people oil production skills.
Causative factors:	the urge to succeed in life, resource utilization
Incentives:	no incentives - it is a family business
Problems/issues to be solved:	Local negative attitude towards the oil, jealousy, skills and knowledge not fully utilized by trained Participants. Funding by institutions limited to training only and not equipment, transportation of raw materials from source is expensive. Lack of adequate market. Lack of proper infrastructure to operate from. Operating ram presser manually is tough and therefore high labor turn over.
Measures to cope with problems/issues:	Intensifying civic education amongst local people, lobby for Funding of capital investment and aggressively market product. Also obtain loans for infrastructure.
Relation with other Projects:	It is purely a single independent project.

Traditional Knowledge

Castor jelly produced traditionally is done by first collecting dry castor seeds that have fallen from tree branches. They are then fried/roasted in either a pan or a pot before being pounded in a mortar to turn into paste. This paste is stored into animal horns or gourd and is used as medicine for sores or applied on to drum tops that are normally made from cowhide. The belief is that when castor jelly is stored in animal horn it is more effective than would be if it were kept elsewhere. Sometimes women apply the jelly on to a newly born baby's naval to prevent infection.

To produce castor oil the dry seeds are pounded extensively without roasting/treating them. When fully crashed the staff is put in water and decanted (sieved through). The oil is then put into containers such as gourds and used for either treatment for ear problems or as skin oil/lotion.

KACHERA TREADLE PUMP CLUB

Location:	Msampha 1 Village, T/A Chadza, Lilongwe South
Representative:	Mr. Bita Kambaika - Vice Chair - Kachera Treadle Pump Club, Msampha Village T/A Chadza, Lilongwe
Contact person:	Mr. Mphongolo, Chitsime EPA, P.O. Box 9, Nathenje
Related ministries:	Ministry of Agriculture
Project term:	1999 -
Beneficiary name:	25 people from 6 villages, Kumzinda, Msampha, Nofle, Mng'ondzo, Mzingo, Msampha 2. Planted 6,000 trees this year
Funding source:	Danida, received 25 treadle pumps
Background:	It all started with women's problems to find relish in the area coupled with the desire to grow maize a number of times in a year to be food secure.
Project objectives:	Be food secure by planting maize and vegetable for sale three times in a year.
Project targets:	To be able to grow maize three times a year to raise income.
Number of participants:	25 people from 6 villages and 25 households
Organisation:	25 people organised into 6 clubs and supervised by members.
Activities:	Erect hedge round the dimba to avoid animals coming in, dig up the soil and make beds in the right measurement so that there is provision for water passages, fix the treadle make sure of right gradient and that there are no weeds coming into the pipes.
Form of assistance:	Treadle pumps on credit and technical transfer.
Annual fund:	bean seed (5kg), ground nuts seed (8kg), soya seed (5kg). All these to be paid back twice the amount received.
Technical assistance:	Technology transfer on the use of treadle pump and sound agricultural practices. Equipment supplied on credit.
Personnel mobilization:	Department of Forestry, NASFAM (marketing and training), PROSCARP (training in seed multiplication)
Fields covering:	Agroforestry, community woodlots, irrigation, group nurseries.
Materials used:	Indigenous species such as msambamfumu, kankhamde, mithethe, msangu, lemon grass. Hybrid maize, beans, peas, ground nuts, cassava potatoes.
Participants burden share:	All inputs on loan
Communication system:	Meeting twice a month between villager and cadre, with NASFAM once a month and with Agriculture twice a week and once in three months with PROSCARP.
Supervision system:	Committee leaders, the village headman are both responsible for supervision.
Project evaluation:	Done by outsiders
Estimated benefits:	There has been an increase in income per household, some

Causative factors:	people have bought goats others bicycles, others radios but also there has been increased productivity per household yield Following advices, positive attitude and interest and because of seed input though on loan
Incentives:	Honour
Methods of driving target beneficiary:	Competition and established norms
Management form:	The local committee runs the project
Problems:	Lack of markets, lack of maize mill and problem of movement due to lack of bridges.
Coping with problems:	Linked with NASFAM and looking for lending institution for maize mill loan
Responsibilities:	There are shared responsibilities amongst members
Relationship:	With Ministries of Health and Water and Irrigation

Traditional Knowledge

Where hills or mountains have provided water sources communities have dug drainages down the slope and opened them into their gardens to let the water pass through their vegetable/crop dimbas. This kind of technology however is gradient dependent and requires perennial water from the source.

4. EXPERIENCES IN OTHER COUNTRIES

4.1 Agroforestry

1) Agroforestry in Japan

Large scale:

According to the data of all prefectures surveyed in 1936 by the Forest Department of Ministry Agriculture and Forestry, there were around 80,000 ha shifting cultivation fields in Japan. The forty percent of them were only for agriculture and the rest sixty percent of them were agroforestry, which purposed both agriculture and forestry plantation. The reforestation area of private forest depended on mainly by agroforestry plantation, because the annual reforestation area reached about 100,000 to 150,000 ha in Japan in those days.

Background: Land tenure and lots of rural farmers

It is the important basic point for forestry plantation in Japan that the land allocation and land tenure policy had established between 1876 and 1881. Japanese whole forestland is approximately shared with thirty-percent national forest, fifteen-percent public forest and fifty-five-percent private forest. Due to the high population density and the seventy-percent of Japanese whole land covered with steep mountainous area, there were a lot of small-scale farmers, who had to cultivate for their own food and crops on tenant fields. On the other hand, there were lots of forestland owners, who had to reduce plantation cost on their own forestland. Between small-scale farmers and forestland owners, they closed mutual contracts of agroforestry tenant farming system.

Agroforestry tenant farming system:

Usually tenant shifting cultivation farmers cultivated buckwheat, millet and beans farming on borrowed field in three years. After shifting cultivation they planted with Japanese cedar, cypress and pine trees on their tenant finished land under the contract. Those forestland owners could practice reforestation without their own work and cost for plantation land treatment, plantation and weed. This tenant system contributes much to reforestation in Japan.

2) Home garden and agroforestry in Java Island of Indonesia

Tenant farming contract for agroforestry:

Tenant farming contract for agroforestry is introduced from Burma to Indonesia in the latter half of nineteen-century. The name is Taunya in Burma and Tumpangsari in Indonesia. In these systems the forestland owners are forest offices. The similar contracts as in Japan are closed between forest offices and landless people.

Limited area of Tumpangsari:

Java is one of highest population pressure areas in the world. Rural poor farmers have both sides' characters, one is cheap tenant farmer with forest offices and other is severe invader surrounding forests. Therefore, the sphere of Tumpangsari is limited within the area under the control of forest offices. Tumpangsari can not be made good efforts of agroforestry beyond the control of forest office, degraded land is continuing to expand more and more in Java, same like as in other developing countries.

Home garden: Pecarangan

Every farmer needs forest products as timber, fuel wood, fodder, fruits for his life. If there is not good forest surroundings he lives, he has to grow trees by himself. Moreover, he must plant trees in the areas, where he can protect his plantation areas against invaders and thieves some products. He should select the plantation areas in his homestead. He plants not only trees for timber, fuel,

fruits and fodder, but also shrub, vegetable, grass and herb. He practices his home garden like as agroforestry in the areas of forest office. Basically the technique of Pecarangan and Tumpangsari is same as agroforestry; the difference of these two systems is a point of landowner.

3) Homestead forest in Bangladesh

Degraded forest:

Bangladesh, with high population density (866 persons /km² in 1998), is facing an acute crisis for timber and fuel wood. According to World Bank statistics, 83% of Bangladesh's people (1992) live in rural areas of which 46% are living below poverty line. The increasing population continuously reinforces pressure on available agricultural land resources, thus compelling people to encroach into forestlands.

Villagers in Bangladesh used to laugh at the idea of having to pay for firewood in order to construct plantation for firewood forests in cooperate: trees were in plentiful supply and wood is there for the taking. But now in the same areas, even the straw left in the fields after harvest is sold; especially it is severe condition in northern Bangladesh. Due to over-exploitation by rural people and no control by forest offices, government forests surroundings villages are degraded and diminished.

Homestead forest:

The role of homestead forest is thus important in supplying the timber. It meets a major portion of requirement of swan wood and fuel wood of country. The use of village timber is mostly based on the traditional experience and conventional practice. Mango (*Mangifera iandca*) and jackfruit (*Artocarpus herterophyllus*) are Representative species of villagers' homestead forests. Farmers consume fruits for their self-consumption and also sell timber for furniture and construction in the local market. Leaves and bark are important material for farmers as fodder and fuel.

Miserable forest management:

Facing with the huge population pressure, government forests have been cleared and exploited for agricultural purpose. If farmers had tried to manage surroundings forests in cooperate as well as their homestead forests, they would not suffer from shortage of forest products. But in last few decades population increasing and deforestation in Bangladesh were passed too rapidly, it likes as other lots of developing countries. Forest management systems in developing countries have not developed at all.

4) Participatory forest management projects in northern Thailand:

Hill-Tribes:

The hill-tribes live in the highlands of northern Thailand. Traditionally their way of life centred on subsistence agriculture based on shifting cultivation. The only cash crop of any significance is opium poppies. This situation posed various problems.

The last 30 years:

In an attempt to overcome these problems, a number of comprehensive development projects have been carried out over the last 30 years. These projects have focused on construction of improved access to the hill-tribe villages as well as provision of water supply systems, electricity and so on. In addition, various projects have sought to improve the agricultural systems employed by the hill-tribe people, notably by introducing viable alternative cash crops which can be grown in fixed plots. This approach has the effect of improving the wealth of villagers, reducing the extent of shifting cultivation (and thereby lessening the amount of forest degradation and soil erosion), as well as decreasing the dependency on opium poppies as a cash crop.

Conservation their environment by themselves:

In general the development projects have resulted in significant improvements in all major aspects of lifestyle of hill-tribe villages that have been the subject of such projects. It appears that this success has largely been due to three factors, namely: the projects were comprehensive development projects, aimed at improving the life of villagers yet protecting their culture; the importance of project sites is demonstrated by agencies requesting technical experts to reside in the villages; and implementation is based on spontaneous participation by local villagers.

4.2 Improved Cooking Stove (Kenya)

Due to the scarcity of wood resources in dry areas in Kenya, fetching firewood is time-consuming work for women, and its condition is getting worse year by year due to population pressure. Many households in the area use a traditional three-stone fireplace for cooking. An improved cooking stove, therefore, can be installed to save energy and to fulfill many others. Enzaro Jiko, which can save a considerable amount of firewood and introduced by the Population Education Promotion Project in the model village Enzaro and expanded later to other areas, will be introduced in the followings as one of alternatives to save firewood.

Followings are the advantages and disadvantages of Enzaro Jiko. They will be explained to women before installing one.

Advantages

1. Materials are locally available
2. It can save a considerable amount of firewood (about two thirds are saved)
3. Water can be boiled since there are extra fireplaces
4. It can save cooking time as there are three fireplaces and create extra time
5. Food can be kept clean since cooking place is high
6. It can keep children away from fire
7. It can ease back pain since one can stand while preparing food.

Disadvantages

1. It cannot warm house since fireplace is not open
2. It cannot be moved to other place
3. It requires more space
4. It requires maintenance
5. And others?

Construction of Jiko

Followings are the guide to construct an Enzaro Jiko.

1) Materials

1. Mud (sticky soil such as anthill soil and clayey soil is appropriate)
2. Water
3. Stones/Bricks

2) Construction Procedure

1. Make the base with mud and stones. Prepare mud base first and stone/brick layer next. Build the base with these layers up to appropriate heights.
2. Prepare top fireplace with stones and cover with mud.
3. Smoothen the surface with mud.
4. Wait for a week or so. Cracks should be smeared with mud mixed with cow dung.
5. If it dries completely, one can start using it.

3) Notes

1. Keep a distance of at least 90cm from the ceiling to avoid a fire
2. If the owner does not have enough space to install full size of Enzaro Jiko, or has difficulties to prepare water to maintain, she can construct a small sized one as seen in the picture below.

4) Maintenance

Enzaro Jiko requires regular maintenance, especially rim of fireplaces, otherwise it starts cracking and falling down. Maintenance is done by smearing the Jiko with soil mixed with cow dung. Once-a-week maintenance is good enough for keeping the Jiko in sound condition. The regular maintenance requires, besides soil and cow dung, about five liters of water. This could be a critical impediment to carry out the regular maintenance in ASAL areas. In very dry area, small sized Jiko should be explored.

5. SUMMARY OF INVENTORY FINDINGS

5.1 Related Ministries

Most of communities structures as well as NGOs and CBOs who were involved in Agroforestry and afforestation interacted with Ministry of Agriculture and Ministry of Forestry and Natural Resources especially the Forestry Department. The Ministry of Agriculture provides extension services that disseminate technical information about forestry and imparts to farmers agroforestry skills. They also play a role in mobilising communities acting as a link between NGOs and other government departments or other development institutions. On the other hand the Department of Forestry assists in training communities in forestry and afforestation technologies including forestry extension services. They also provide community mobilisation and are involved in collaborating with other institutions in doing research work. They provide inputs such as seed, watering canes and polythene tubes especially under the social forestry programme. Forestry department also plays a role in the promotion of apiculture by providing technical skills and advice to those involved in bee keeping.

There are also some government departments that are involved in the technology transfer. Extension staff from these departments are involved in training communities and staff from NGO or CBO institutions. Forestry and Natural Resources, especially the Department of Forestry and Natural Resources, provide technological transfer through of communities in forestry and fisheries technologies. Ministry of Gender, Youth and Community Services also play a role in the economic empowerment of women through IGAs.

5.2 Project Objectives

Most of activities look at environmental rehabilitation while most of IGAs come in as part of a programme package or as follow up activity. In other cases, the objective is both environmental as well as offering alternative source of income for low income groups.

5.3 Technical Assistance

Government and NGO extension staff disseminate information to farmers through interaction with community structures. In technology transfer, particular technologies are imparted to the beneficiaries through training or on field instructions. This is done either by Government or NGO extension staff. In other cases an expert is hired to teach the technology. Technical assistance sometimes is in the form of equipment supply such as wheel barrows, polythene tubes, seeds, bee hives, treadle pumps windmills, screw and ram pressers.

5.4 Personnel Mobilisation

Government Officials from ministries of Agriculture, Forestry, Community Services, Fisheries and Health have played different roles in providing technical support or advice through their extension staff or personnel. NGOs staff have provided technical as well as financial support. Foreign Volunteer support is also provided but mostly attached to institutions. In other cases individuals from communities work on voluntary basis.

5.5 Communication System

The most common way of communicating between villagers and cadres, between cadres and

NGOs is through meetings but also through verbal communication. Between cadres and NGOs and between cadres and sponsors communication is through correspondence but also through meetings and verbal contacts. Sometimes the later communicate through workshops or written reports. Between sponsors and cadres communication has sometimes been through visits. Between beneficiaries and offices communication is through field visits and meetings.

5.6 Project Evaluation

In most cases evaluation has involved most of structures involved in the project. Assessment methods have been both on achieved quantity while at the same time comparing with past records where applicable. Evaluation results have been communicated back to those concerned through meetings in some cases and in other cases through reports or review workshops.

5.7 Benefits

There has been substantial improvement in the environment as well as vegetative coverage, some bare hills were seen planted with trees but also some river bank rehabilitated. People have been able to access fuel wood because of established woodlots. River bank rehabilitation has ensured the availability of water for a longer period. Other benefits have been increased cash income per household through IGAs or sale of forestry and agroforestry products. Some families have been food secure either through improved production levels of cash income that has enabled them to buy food and other domestic requirements.

5.8 Management

Management of activities is at various levels. In some cases activities are solely carried out and controlled by project committees with institutions simply providing logistical support or playing a facilitating role. In other cases project activities are in the hands of Community Based Organisations with activities being departmentally controlled. In the third case all the activities of a project are in the hands of an NGO. However sometimes project management style is dictated by donors or sponsors. In most cases project meetings are done at least once a month although project visits would be more regular. Attendance to project meetings is normally high. The attendance for meetings with projects run by local committees is good due to code of conduct established. Contacts between project committees and sponsors or donors are normally at three months intervals, during project visits or during monitoring. Attempts to create bottom up approaches to project management are encouraged.

5.9 Problems

Apparent lack of techno-transfer sharing amongst the communities. It is observed that there is weak burden sharing in most of projects especially where there is little contribution/input from beneficiaries at the start of project. Ineffective management is evident where there is little emphasis on building the capacity of project committees or where capacity building is not part of project design document. Low cost effectiveness is being affected by such issues as labour intensity, yield per unit area, coverage area and land pressure.

It is clear from most of them that there is inadequate Funding for projects. For most of projects, sustainability of project especially after Official Funding phase seemed not to have been taken into account.

6. CONCLUSIONS

Population problems in Malawi seem to be eroding the productivity of agriculture and natural resources. In turn this has serious implications for the economy and the ability on the country to feed itself. There have been shrinking land holdings, so that it has not been easy for communities to be food secure throughout the year. There has been marked decline in traditional practices that preserved the integrity of natural resource base. In the struggle to survive it has been difficult for communities to make critical trade-off between sustainable resource use and immediate short-term needs. On the other hand agroforestry activities have offered the potential to alleviate many of these concerns by integrating trees and conservation practices with farming to improve productivity, diversification and natural resource management.

The involvement of communities at the very beginning of an intervention has to be nurtured if community based natural resource management programmes are to be meaningful. This involvement is being called for at all stages of project cycle. Those institutions involved in technology research need to intensify on farm demonstrations so that farmers can also express their views and suggestions from their experience and to minimise the in-acceptability of a technology by the farmers.

Where institutions need to introduce Income Generating Activities as a way of economically empowering communities there is need for a common understanding regarding the potential for viability on relevant IGAs. The issue of compatibility of specific activity to particular population sector, availability of raw materials, markets and even methods of preserving perishable commodities need to be critically looked into. Development agencies running integrated programmes need to seriously think about including capacity building as part of integrated approach if community based natural resource management is to make communities food secure and improve their income earning potential.

7. APPEANDCES

7.1 Literature Cited

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- iv. Mauambeta, D., et al (2000) The Detailed Study of Socio-economic Conditions for the Phase II of Master Plan Study of Watershed Rehabilitation in Middle Shire, Blantyre District: Model Area Village Inventory and Rapid Rural Appraisal
- v. Bohringer, A., et al (1999) Achievements in Agroforestry Research and Development in Malawi
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7.2 List of People Interviewed

- | | |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------|
| 1) Daulos Mauambeta | Executive Director- Wild Life Society of Malawi |
| 2) Rankin Mofmadi | Field Coordinator - Wild Life Society of Malawi |
| 3) Yohane Juof | Extension worker - Wild Life Society of Malawi |
| 4) Francis Kalonga | Executive Director - Matland Youth Organisation |
| 5) Alexander Schomburg | VSO - Food Processing Advisor - ICRAF |
| 6) Dr Augustin Chikuni | Act. Executive Director - NHBG |
| 7) Mr. Henry Ofla | Project Officer -WVI |
| 8) Mr. Bonaventure Chidzaro | Executive Director -PAMET |
| 9) Moses Binali | Project Coordinator -PAMET |
| 10) Ms. Veronica Kinjiraga | Project Trainer Worker-PAMET |
| 11) Loyd Bakuof | Project Officer -PAMET |
| 12) Staiford Kausiof | Project officer -ELDP |
| 13) David Chitedze | Executive Director -Greenline Movement |
| 14) Jimmy Katuma | Assistant Programme Manager - Hope Humana |
| 15) Emmanuel Mlaka | Executive Director -EDETA |
| 16) Ms AB Chikofti | Development Officer -Mpingu EPA |
| 17) Mr. K Lipiof | Parks and Wild Life Officer -Tourism and National
Parks and Wild Life Headquarters -Lilongwe |
| 18) Mr. S A Mng'omba | Horticulture Officer-GTZ Lilongwe |
| 19) Pearson Namachotsa | Principal -Magomero Comm. Deve. College |
| 20) Mr. Peter Njikho | Project Coordinator -NASFAM |
| 21) Ms. Mary Msusa | Policy Officer -NASFAM |
| 22) Nobel Moyo | Extension Specialist -COMPASS |
| 23) Ms. Nelly Nofng'of | Programme Officer -OXFAM |
| 24) Mr. Halex K Mtegha | Deputy Director -ELDP |
| 25) Gerald S Meke | Principal Forest Research Officer -FRIM |
| 26) Ms. Agnes Mofngwela | Lecturer in Food Science-Bunda College |
| 27) Dr Henry S K Phombeof | Resource Centre Coordinator-MAFE |
| 28) Elium N Ngoma | Marketing Officer -PAMET |
| 29) Dr Andreas Borringer | Senior Scientist -ICRAF |
| 30) Peter Chisambilo | Publications Officer-ICRAF |
| 31) Mr. Kondofni Mililima | Research Economist -MIRTDC |
| 32) Mr. S Mhango | Regional Manager -MRFC |
| 33) Mr. Edson Musopole | Policy Coordinator -Action Aid |
| 34) Mr. D Cham'mangomo | Technical Associate MAFE |
| 35) Ms. E Katole | Farm Home Assistant Lilongwe ADD |
| 36) Mr. KM Lungu | Economist -Energy and Mining Lilongwe |
| 37) Mr. K Mayuni | Economist -Energy and Mining |
| 38) McKeinzie Quoto | Programme Manager -CPAR |
| 39) Mr. John Dickenson | Project Manager -PROSCARP |
| 40) Tadeus Shaba | Executive Director -CURE |
| 41) Mr Shotex Zimba | Chair person Project steering Committee -
Kam'mofimba Sustainable management of Indigenous
Forests Programme |
| 42) Mr. Samson Nedi | Chairperson Chikwekwe Bee Keeping Club |
| 43) Ms. Fales Chalendeof | Chairperson Kachera Farmers Club |
| 44) Ms. Scolastica Njete | Chairperson Chikankheni Briquette Making Club |
| 45) Ms. Asani | Chairperson Mofmbananji Triple Up Programme |

- | | |
|--------------------------|---------------------------------------------------|
| 46) Mr. M Nachimbwe | Chairperson Katunga Fish Farming Project |
| 47) Ms. Eunice Banda | Chairperson Madalitso Entrepreneurs Mushroom Club |
| 48) Ms. Jenala Ziyenda | Chairperson Mbofotalika Fish farming Project |
| 49) Ms Irene Ndlovu | Chairperson Chitsanzo Bee Keeping Project |
| 50) Ms. Anne Bonomali | Managing Director - Khumbo Oil Refinery |
| 51) Jumpha | Village Cassava Seed Multiplication Group |
| 52) Ms. E Dauda | Madalotso Mushroom Growing Club |
| 53) Neboti Chazama | Mbavi Horticulture Project |
| 54) Ms. Mary M Nansubuga | Operations Manager - FINCA |
| 55) Bitu Kambaika | Vice Chair - Kachera Treadle Pump Club |

7.3 Terms of Reference

Objectives of Inventory Survey

The purpose and Objectives of community vitalisation and afforestation inventory survey in the designated areas were: -

- 1.2.1 Collect data and information on useful modern traditional skills and knowledge successful and failed or stagnant cases.
- 1.2.2 Prepare a source book of appropriate technologies for village natural resource management
- 1.2.3 Prepare manuals of technologies useful and appropriate to pilot project implementation.

Inventory Checklist

Key information were captured through an inventory checklist as outlined below.

Sheet 1 of Inventory for Reference of Activities

1. Project Name				
2. Place of Office				
Name of Representative	Name:	Tel.	Fax.	E-mail
3. Related Ministries				
4. Funding sources	International	Bilateral	NGO	Others (specify)
5. Project Term (years)	from		to	
6. Beneficiary name acreage covered ha	District:	TA:	Villages:	
7. Background	Requested from:		Motives:	
	Problems faced:		Donor's policy:	
8. Project Objectives	Environmental conservation	Income generating activities	Other means of poverty alleviation	Other Objectives (specify)
9. Project targets	Period:	Targets set		
10. Number of Participants		Number of households		
11. Organization/groups	Beneficiary:		Supervision:	
12. Contents of Activities of what?	Production:	Sales:	Conservation:	Saving:
13. Form of assistance	Credit supply	Seed-money	Technical transfer	Others (specify)
14. Annual fund amount	Credits:	Donated:	In kind:	Others (specify)
15. Technical Assistance	Extension:	Technology transfer	Equipment supply	Others (specify)
16. Personal mobilization	Gov. Officials	Extension workers	NGO staff	Volunteers
17. Fields covering: (specify if other fields than listed in the right are included)	Agroforestry	Community forestry	Fuel improvement	Energy substitution
	Group nursery	Irrigation/ drainage	Agronomy improvement	Savings
	Micro-finance	Livestock rearing	Inland fisheries	Handcrafts
	Food processing	Cooperative sale	Mutual coordination	pottery
18. Material used (specify the names)	Indigenous trees	Exotic trees	Grasses	Hybrid crops
Rental equipments	Implements	Hand tools	Seed / tubers	Stock animals
19. Form of participant's burden sharing burden-sharing	In cash:	Through manual labour	In kind contribution:	Others (specify)
20. Communication system (meeting, verbal, telephone)	Villager- cadres	Cadres- NGOs	Cadres- sponsors	Beneficiary- offices

Sheet 2 of Inventory for Reference of Activities

21. Supervising system of Participatory activities	Within a group	Within a village	Whole beneficiary	Supervisory board
22. Project evaluation	Evaluators:	Assessing methods:	Evaluated results	Feed-back system
	Chief/cadres	By achieved quantity	More than expected	
	NGO staff	Mutual comparison	As anticipated	
	Officials/Donors		Less than expected	
23. Estimated benefits generated from the project	Improvement in environment	Increased vegetative coverage	Increased income per household	Improved productivity
24. Causative factors influencing the project fruit	Incentives:	Seed inputs:	Resource utilization:	Others (specify)
25. Incentives given to the efforts of Participants	Awards	Better Input supply	Honor	Higher income
26. Methods of driving target beneficiary	By competition	By imposing penalty	By mutual solidarity	Others (specify)
27. Management form (meeting, decision making)	Project office type	Entrusted to NGO	Local committee	Other forms (specify)
	Frequency of meetings	Member attendants to the meetings	Frequency of contacts with sponsors/ donors	Efforts of bottom-up creation
28. Problems/ issues remaining to solve	Fund sustainability	Lack of leadership	Weak techno-transfer	Weak solidarity
	Weak burden sharing	Management failure	Low cost-effectiveness	Others (specify)
29. Measures to cope with Problems /issues	(Re)Training	Input injection	Reorganization	Resetting targets
	Culling defaulters	Study tour	Electing leader	Others (specify)
30. Norm/ responsibility	Setting target norms for Participants	Sharing responsibility among Participants	Only date/ period for fulfilling targets given	No particular norm imposed on them
31. Relationship with other projects	Single independent project	Having character of follow-up project	Joint one with other project(s)	Others (specify)

