Tanzania Forest Conservation Group
Shirika la Kuhifadhi Misitu ya Asili Tanzania

TFCG Technical Paper 33

Baseline Survey for the project
'Improving livelihood security and sustainability for rural communities in the Eastern Arc Mountains Project'

By Susan Wagner and Simon Lugazo

November 2011
Dar es Salaam

Executive Summary

The Tanzania Forest Conservation (TFCG) was established in 1985. In Tanzania it is the leading national non-governmental organization focusing on the conservation of natural forests. Since 1997 TFCG has been working with communities in the West Usambara Mountains with the aim of enabling thousands of farmers to adopt more sustainable land use practices including agroforestry, soil conservation and watershed management. TFCG has also succeeded in promoting widespread tree planting with approximately half a million trees being planted with support from TFCG every year. These trees provide fuel wood, building materials and a cash income to farmers. The project operates within the governance structures and policies of the country. Furthermore TFCG's approach clearly articulates the linkages between effective forest management and the long-term sustainability in water supplies.

In September 2009, TFCG carried out a series of stakeholder consultations with community representatives, local government and other NGOs working in the West Usambaras with a view to evaluating their work in the area and identifying emerging priorities related to forest conservation. Based on the problems identified, TFCG requested support from Gorta to work with stakeholders at Kwebululu basin in Korogwe district, and the Mkolo/Kwemkulu basin in Lushoto. The aim of the project is to reduce poverty amongst people living in rural communities in the West Usambara Mountains and to enhance the benefits to rural communities from ecosystem services. The project has focused on three objectives

- *Women and men living in the West Usambara Mountains are benefiting from cleaner, more accessible domestic water supplies.*
- *The livelihoods of people living in rural communities adjacent to the Eastern Arc Mountain forests are more secure and sustainable.*
- *The impact and lessons learned from the project have been documented and shared with relevant stakeholders.*

The objective of this study is to describe conditions in the two landscapes at the start of the project as a baseline for determining the impact and effect of the project.

Data collection was conducted using household questionnaires in 15 of the 21 villages participating in the project in Lushoto and Korogwe Districts. Data was analysed using SPSS.

In terms of changes in food security as an indicator of the impact of the project, the main staple that is eaten is maize porridge (Ugali) usually served with beans and vegetables. 54 % of the respondents stated that they have meals twice a day and 40% stated that they have meals thrice a day with 6% stating that they have meals only once a day.

The main economic activity in the project areas is agriculture (99% of respondents). Crops grown include beans (37%), maize (21.5%), tea (17%), vegetables (12.3%), cardamom (5.3%), coffee (3.4%) and cassava (2.2%). 86% of respondents stated that they have access to a market for their crops and that they are paid immediately upon selling their crops. Monthly incomes ranged from TZS 10,000 (lowest), TZS 40,000 (median) and TZS 400,000 highest income per month. 5 % of respondents have fish ponds. 63% of the respondents received training while 37% had not received training but are interested of receiving training. 6 % of respondents practice bee keeping. 15% of respondents have access to microfinance services such as SACCOS and VICOBA. However, the respondents would like to be trained and gain better access the services.

In Tanzania, the traditional image of women as a mother, and housewife underlies a clear-cut division of labour between men and women. 23% mentioned that they do practice traditional division of labor while 77% stated that they do not practice this traditional division of labour. The position of women in their community in the decision making at the local leadership was ranked as satisfactory 90%, high 8% and low 2%. 63% of the respondents rely on water from the surrounding springs located in their respective villages; 19.5% of respondents stated that they rely on water from rivers or streams; and 12% rely on piped water. Rainwater harvesting is not practiced much except during the rainy season when a few people place buckets outside to collect the rainwater, however this is a temporary measure. 85 % of respondents stated that they face a problem of queuing and / or having to travel long distances. Furthermore it was mentioned that during the dry seasons it take as long as 2 hours to and from the sources. 80 % of respondents stated that the sources of water are not maintained and some are contaminated. The role of fetching water is

usually for women and children (77%), while 18% stated that it was the role of women only. In terms of the relationship between water quality and illness in households, 52% of the respondents assumed that there is a relationship between the quality of water and the illness in the households, while 47% believed that there is no relationship. The most prevalent diseases that affect both children and adults at household level are stomach fever 65%, typhoid 22%, Malaria 12% and diarrhea 1%.

The majority of the respondents have been involved in TFCG interventions of one kind or another such as receiving training on agro forestry, forest conservation, land management and practicing in the plots. Hence 77% of the respondents mentioned that they cultivate and leave weeds to decompose naturally, 20.5% plough without burning 1% practice minimum tillage. Due to scarcity of land, leaving land to fallow naturally is not practiced in the project area.

Deforestation around the village was reported as a problem by 29 % of respondents and 71% mentioned that it has been controlled by on-going TFCG initiatives (CBFM) groups and local government by-laws. Irrigation is practiced mainly for growing vegetables and tree planting. 75% of the respondents need water for irrigation. Limited extension services in agriculture, livestock and forestry are provided in villages which are under the TFCG project. All the groups in order to perform well need the close supervision of the extension officers. Unfortunately in the project area there are not enough extension officers and extension services do not reach targeted farmers as expected. Lack of sufficient extension services can be linked with the observed poor farming and poor crop yield in the project areas.

*52% of the households that were visited, use their farms as their source of fuel wood, 38.5% use wood from protected forests known as '**vibundu**' dried woods. 9% use wood from agroforestry trees which have been planted with TFCG assistance since the year 2000 and the trees are ready for harvesting. It was reported that each village has there turn every week to go the forests to fetch dried woods for firewood.*

About 92% of the respondents in the surveyed population, had education up to primary level, compared to 1.3% who had no formal education at all. Overall 98% of the respondents own the houses and plots according to the traditional customary laws. 89.3% are owned by men and 11% are owned by women. Supplementary income-generating activities that are engaged in by the community (besides their primary income) require microfinance and entrepreneurial skills to the community. The ultimate objectives of TFCG should be to ensure that overall incomes of the residents in the project areas are improved. From time to time, monitoring to evaluate changes in farming systems, in relation to quantity and quality of water supply and food security, should be conducted. This will bring to attention any farming practice which, if left to continue, will compromise the sustainability of the livelihoods of the communities of Lushoto and Korogwe districts.

Table of contents

LIST OF FIGURES

LIST OF TABLE

LIST OF ANNEXES

Acknowledgements

I would like to thank all those who played a part in the completion of this study. This study would have not been possible without the assistance of Lushoto and Korogwe District Council, Village Government Local Leaders, Political leaders, community groups, schools and Divisional secretaries who joined us in the field. I would like to thank the many people whom I met during the FGDs, household interviews and informal individual and group meeting. I am greatly indebted to all the respondents in all villages whose contribution was of great value. Without their responses, this work could have never materialized. We acknowledge the time spent by everybody in supporting our survey activities and providing useful information. Without the support we got from the local level, the accomplishment of this study could have been impossible. To all of you we thank you very much.

Many thanks also go to my assistants who worked tirelessly, day and night, in a tough environment, to make sure that everything went well. Great thanks are also extended to Lushoto and Korogwe District Executive Director offices District Water Engineer (DWE) and District Land and Environment Officer in availing some documents to support this study.

Finally, I would like very much to thank Mr. Revocatus Njau for his tireless efforts working with us around the clock to visit all the villages and show the team all the projects facilitated by TFCG. I sincerely value the contribution of Mr. Simon Lugazo in organizing the field survey.

List of acronyms

CBOs	Community Based Organisations
CBFM	Community Based Forest Management
DED	District Executive Director
DWE	District Water Engineer
FFS	Field Farm School
FGDs	Focus Group Discussions
LGA	Local Government Authority
MGDs	Millennium Development Goals
MKUKUTA	National Strategy for Growth and Reduction of Poverty
NAWAPO	National Water Policy
NGOs	Non Governmental Organizations
PADEP	Participatory Agricultural Development Program
PFM	Participatory Forest Management
RWSSP	Rural Water Supply and Sanitation Project
SACCOS	Savings and Credits Co-operative Societies
SIDO	Small Industries Development Organisation
TFCG	Tanzania Forest Conservation Group
VEO	Village Executive Officer
VICOBA	Village Community Bank
VNRC	Village Natural Resources Committee
VWC	Water User Group Committee
WEO	Ward Executive Officer
WUAs	Water User Associations
WUGs	Water User Groups

1.0 Introduction

The Tanzania Forest Conservation (TFCG) was established in 1985. It is the leading national non-governmental organizations focusing on the conservation of natural forests. Its mission is to conserve and restore the biodiversity of globally important forests in Tanzania for the benefit of the present and future generations. Since 1997 TFCG has been working with communities in the West Usambara Mountains and it has succeeded in enabling thousands of farmers to adopt more sustainable land use practices including agro forestry, soil conservation and watershed management. TFCG has also promoted widespread tree planting with approximately half a million trees being planted with support from TFCG every year. These trees provide fuel wood, building materials and a cash income to farmers.

The project operates in accordance with the governance structure and policies of the country. These include The National Strategy for Growth and Reduction of Poverty (known locally by its Swahili acronym – MKUKUTA) which identifies the availability of adequate and reliable water supplies as one of the most critical factors affecting both rural and urban levels of poverty across the country and as such has been prioritized as a key development strategy by the government. The strategy clearly identifies the links between water quality and supply with waterborne diseases such as cholera, typhoid, scabies, bacillary and amoebic dysentery and trachoma. Furthermore the strategy clearly articulates the linkage with the management of forests and watersheds as a means to ensure long-term sustainability in water supplies.

MKUKUTA has recently been reviewed and MKUKUTA II has been developed. In relation to the water sector, MKUKUTA II emphasises that access to water supply and sanitation is very important for improved quality of life and wellbeing, especially when linked with other social services, as well as economic growth. During the past five years, key structural developments were initiated in the water sector; these included the Water Sector Development Programme (WSDP) which started in July 2007. The WSDP is a twenty year nationwide programme for improving the provision of water supply and sanitation services, and ensuring water for productive activities through integrated water resource management for socio-economic development. For efficiency and effectiveness of interventions, the WSDP strives to strengthen the overall sector institutional and personnel capacity.

Agriculture is the lead sector in the Tanzanian economy accounting for 45 % of GDP and about 60 % of export earnings in the past three years. It is the source of food and raw materials for industries. It also provides livelihoods to 82 % of the population. As with water, support to agricultural development has been identified as a key development priority in MKUKUTA as a means to raise rural incomes and reduce vulnerability. In addition, the focus of the Agricultural and Livestock Policy of 1997 is to commercialise agriculture in order to increase income levels whilst recognising the need to promote integrated and sustainable use and management of natural resources such as land, soil, water and vegetation in order to conserve the environment.

1.1 Background to the Project

As expressed in the aforementioned policies in the above text and others like the National Forest Act 2002, communities have the right to manage forests on village land and to participate in the management of forests that are owned by the Government. Many communities in the West Usambara Mountains are practicing participatory forest management through the establishment of Village Forest Reserves. Many of these village forest reserves protect catchment forests around the water sources that the communities depend on. A key challenge that communities face in managing these forests is to secure long term support for their management, although most people are aware of the linkages between maintaining catchment forests and protecting water sources, mechanisms are rarely in place to translate that conceptual link into solid support for forest management. National Water Policy 2002, Tanzania has promoted the decentralization of management responsibilities in relation to water management. Nine major river or lake basins were gazetted with Basin Water Boards established for each of these basins to manage and allocate water resources. At a lower level, the National Water Policy provides for the establishment of Catchment forums linking water users and managers within a smaller area. The policy also promotes integrated river basin management.

In September 2009, TFCG carried out a series of stakeholder consultations with community representatives, local government and other NGOs working in the West Usambaras with a view to evaluating their work in the area and identifying emerging priorities related to forest conservation.

Based on these consultations and using TFCG's experience over the last 12 years of working in the West Usambara Mountains two key issues emerged:

- Many people living in the West Usambara Mountains do not have access to safe and reliable water supplies for domestic consumption.

- Many people are living on less than US$ 1 per day in the West Usambara Mountains because they are dependent on agricultural practices that do not generate a higher income and are often damaging to the environment on which they depend.

Both issues are closely related to ongoing deforestation and forest degradation such that:

i. poor agricultural practices continue to be a root cause for forest destruction and forest degradation as well as contributing to widespread poverty;

ii. despite efforts to protect the catchment forests, many communities do not have access to clean, accessible and reliable water supplies further contributing to poverty.

Based on the problems identified, TFCG has worked with stakeholders at Kwebululu basin in Korogwe district, and the Mkolo/Kwemkului basin in Lushoto district to develop a suite of activities that will significantly improve the lives of women and men living in the West Usambara Mountains.

The project builds upon the lessons learnt by other organisations with regard to the importance that communities also contribute to the construction of water infrastructure. For example, as is advised by Government guidelines, the communities will contribute at least 5 % of the value of the spring protection, shallow wells or boreholes either through labour, cash or materials including bricks, sand and gravel. Whilst the project will support the communities with the provision of the external inputs such as cement, pipes, pumps, transport, the technical support/expertise, training and the establishment of the Water User Groups.

The project includes a fund raising component through the participatory project evaluation meetings; stakeholders will have the opportunity to identify key areas where additional resources are required. From there, TFCG can assist other stakeholders to seek the resources required in order to achieve those actions. This is aimed at ensuring that initiatives supported by the project may be sustained even in the event that additional funds are needed.

The project is designed to promote techniques and technology for which technical support will be available locally thereby avoiding dependency on complex approaches for which technical support in the long term will be expensive and difficult to access.

In order to assess the results and impact of the proposed project 'Improving livelihood security and sustainability for rural communities in the Eastern Arc Mountains' required a baseline study; as such a consultant was recruited to undertake this work. The aims, methods and results of the baseline study are described in this report.

The project runs from June 2010 – May 2013 in the West Usambara Mountains of Lushoto and Korogwe Districts, Tanga Region.

The project is financed by Gorta. Project implementation is being led by the Tanzania Forest Conservation Group working closely with the two District Governments and other related initiatives and NGOs working in the area.

1.2 Project Aim

The project aims to reduce poverty amongst people living in rural communities in the West Usambara Mountains and to enhance the benefits to rural communities from ecosystem services. During the first year, the project aims to carry out a baseline survey in order to be able to monitor and demonstrate the impact of the project. Data from the surveys will also be useful to evaluate the approach of the project and as a basis for sharing lessons learnt with other projects.

The Gross Domestic Product per capita for Tanzania is estimated at US$ 320 at 2005 prices. About 31 % of the population of Korogwe was living beneath the Tanzanian basic needs poverty line in 2001 / 02.

The main economic activities in Lushoto and Korogwe Districts are crop farming and livestock rearing. Both food and cash crops are cultivated – food crops include maize, beans, cassava, bananas, while the cash crops are beans, tea, coffee, cardamom, sugar cane and vegetables. Many people keep a few animals, and there are a few small business, mainly tiny shops. Forestry and beekeeping are two economic activities that are growing in importance.

In order to further enhance sustainability, the project aims to build linkages between the communities and other institutions thereby creating a network of support for the communities. In this way it is anticipated that the communities will gain the knowhow with regard to seeking technical support as well as networking with other communities undertaking similar activities. Key among these institutions will be local governments, who under on-going decentralization reforms are increasingly taking on the role of local level service delivery – a function that for many years was carried out by central government. The project will aim to link participating communities with key parts of their local district authority and identify ways in which their demands can be incorporated into ongoing development planning and budgeting processes.

1.3 Objectives of the Study

The consultant carried out the baseline study based on the following objective:

- To describe conditions in the two landscape at the start of the project as a baseline for determining the impact and effect of the project.

2.0 Methodology

Household questionnaires, literature review and field observations were used to compile the baseline.

2.1 Study area

Lushoto and Korogwe districts are located in Tanga region. Their economy is based on: agriculture, forestry, mining and tourism. Crop production, livestock husbandry and forestry generate the main source of income. The estimated per capita income of the districts are 180,000/- per annum. Both districts are famous for supplying fruits and vegetables to other regions in Tanzania, including to Dar es Salaam, Morogoro, Kilimanjaro and Arusha. Both food and cash crops are produced mainly on a small scale although there are some Tea Estates. The food crops grown include maize, rice, potatoes, beans, cassava and bananas while cash crops include vegetables, fruits, Irish potatoes, coffee, rice, tea, sisal and cotton. Some crop products, especially fruits and vegetables are facing storage, transport and marketing problems.

2.1.1 Population/Demographic Characteristics of the Project areas

The following is the population size of the 15 selected Villages on the project areas of both Lushoto and Korogwe Districts*.*

Table 1. Population size of the selected villages in the project area.

District	Wards	Villages	Population	Number of Households	Number of Sub Villages
Lushoto	Mayo	Mayo/Kizanda	3,800	450	15
		Kwabosa/ Bambaleta	4,400	550	13
	Mgwashi	Malomboi	2,532	553	5
		Mgwashi	3,220	880	6
		Sagara	2,683	577	5
Korogwe	Shemshi	Magundi	1,234	421	5
	Vugiri	Bagamoyo	2,800	450	5
		Mlalo	1445	332	5
		Vugiri	1447	281	5
		Mheza	3,000	420	5
		Makweli	850	205	5
	Bungu	Kieti	643	144	5
	Mpale	Tewe	2,000	344	5
		Mpale	3112	620	5
	Vuje	Vuje	2,400	350	5

Source: Village Exective Officers in Lushoto and Korogwe districts 2011

2.1.2 Survey Coverage and targeted group

The baseline study team conducted the household survey in the selected 15 villages out of 21 villages as shown on table 2. The selection of villages based on two criteria, that is those villages which are practicing Participatory Forest Management (PFM) and have knowledge of forest conservation and have connection of forest with water/agriculture practices. Also they do have water users groups and Farm Field Schools (FFSs). These villages are: Mheza, Vugiri, Bagamoyo, Kieti, Sagara and Mayo. Other villages including those, which have conducted many interventions such as tree planting, establishment of tree nursery, environmental education, establishment of water users groups/associations and Farm Field Schools. These villages are: Magundi, Mlalo, Makweli, Vuje, Mpale, Tewe, Malomboi, Kwabosa and Mgwashi.

Table 2. Timetable for the FGDs Meetings in Lushoto and Korogwe District

Date	District	Wards	Villages
22/08/2011	**Lushoto**	Mayo	Mayo
22/08/2011		Mgwashi	Kwabosa/Bambaleta
23/08/2011			Malomboi
23/08/2011			Mgwashi
24/08/2011			Sagara
25/09/2011	Korogwe	Shemshi	Magundi
25/08/2011		Vugiri	Bagamoyo
26/08/2011		Vugiri	Vugiri
26/08/2011		Bungu	Kieti
27/08/2011			Makweli
27/08/2011		Vugiri	Mlalo
28/08/2011		Mpale	Mpale
28/08/2011		Vuje	Vuje
29/08/2011		Vugiri	Mheza
29/08/2011		Mpale	Tewe

2.2 Sampling procedure

The household's questionnaire survey was carried out randomly in all 15 selected villages where the household's questionnaires were administered. The completed and filled questionnaires were checked by the consultant for their accuracy in the field before the enumerators was allowed to leave the area. Thereafter before data entry the questionnaire was checked again by the consultant to ensure the quality of the information gathered. Then statistical data entries were processed by using SPSS computer program for analysis and report writing.

Hence, based on the above coverage a total number of 225 questionnaires for household survey (15 heads of households for each village) were asked in the selected villages in the project area households of 10 villages in Korogwe District and 5 villages in Lushoto District. The selection of those villages was guided by the literature review and proposed villages were discussed and agreed upon by the consultant and project team. Table 3 below shows the number and percentage of women and men per village interviewed.

Table 3. Number of men and women interviewed per village.

			Gender of Respondent		
			Male	**Female**	**Total**
Mgwashi	Sagara	Count	8	8	16
		Percent	50.00%	50.00%	100.00%
	Mgwashi	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
	Malomboi	Count	5	10	15
		Percent	33.30%	66.70%	100.00%
	Total	Count	25	21	46
		Percent	54.30%	45.70%	100.00%
Mayo	Kwa bosa/	Count	9	5	14

			Gender of Respondent		
			Male	Female	Total
	Bambareta	Percent	64.30%	35.70%	100.00%
	Mayo/Kizanda	Count	10	5	15
		Percent	66.70%	33.30%	100.00%
	Total	Count	19	10	29
		Percent	65.50%	34.50%	100.00%
Mpale	Tewe	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
	Mpale	Count	8	7	15
		Percent	53.30%	46.70%	100.00%
	Total	Count	20	10	30
		Percent	66.70%	33.30%	100.00%
Vugiri	Makweli	Count	5	10	15
		Percent	33.30%	66.70%	100.00%
	Kieti	Count	4	11	15
		Percent	26.70%	73.30%	100.00%
	Mlalo	Count	13	2	15
		Percent	86.70%	13.30%	100.00%
	Vuje	Count	7	8	15
		Percent	46.70%	53.30%	100.00%
	Bagamoyo	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
	Vugiri	Count	5	10	15
		Percent	33.30%	66.70%	100.00%
	Total	Count	46	44	90
		Percent	51.10%	48.90%	100.00%
Bungu	Mheza	Count	9	6	15
		Percent	60.00%	40.00%	100.00%
	Total	Count	9	6	15
		Percent	60.00%	40.00%	100.00%
Kwashemshi	Magundi	Count	9	6	15
		Percent	60.00%	40.00%	100.00%
	Total	Count	9	6	15
		Percent	60.00%	40.00%	100.00%
Total		Count	128	97	225
		Percent	56.90%	43.10%	100.00%

3.1 Findings on all of the impact and effect indicators

3.2 Impact Indicator 1: Food Security

It should be noted that food production and food consumption estimates are two separate issues. Food stores usually suffer post harvest losses due to insect infestation and poor storage of grain. This study investigated storage facilities and food consumption patterns. During the main study dietary monitoring of calories intake per adult male/female will be considered as an important socio-economic aspect indicating family welfare. At this stage a 24 hour dietary recall, which inquired into the food eaten on the previous day, was used. All investigated were the staple foods and basic protein sources. The most common main dish eaten is maize meal (***Ugali***) with beans and vegetables as a relish. Villagers make use of a variety of dark, leafy vegetable that is cultivated and indigenous vegetables. Vegetables like spinach and cabbage are also eaten as relish. Dried fish and (rarely) meat as well as “Kweme” nuts are the main sources of protein.

The study further went on to establish the number of meals taken per day. 6 % of respondents stated that they have only one meal per day; 54 % of respondents stated that they have two meals per day; and 40% of respondents stated that they have three meals per day. One reason that was frequently cited, for having less than three meals per day, is that farms are distant from their homes and so they do not have time to return home for meals. However, food is left at home, usually just carbohydrates, for children. However it was stated that the high proportion of carbohydrates and starchy foods that are consumed relative to

protein and vegetables means that an increasing number of children and pregnant women are suffering from anemia.

In terms of overall food security, 4.5 % stated that their food security situation is good; 81 % of the respondents stated that their food security situation is satisfactory; and 14 % stated that their situation was poor. The proportion of respondents reporting that their situation was poor was higher for the Lushoto villages where 28 % stated that their food security situation was poor. The main cause of insufficient food was attributed to poor crop production due to low and unpredicatable rain fall in some years.

During shortage of food or during the poor crop yields 51.3% of the participants survive by selling livestock such as chickens, cows, pigs or goats which they raise mainly for selling in order to buy food. The other 49% of respondents stated that they work as casual labourers and use their wages to buy food. Vegetables also were reported to be potential for home consumptions and for cash. It was reported by the respondents that food shortages are mainly experienced during the months of June, July and August.

Table 4. Perceptions of food security in the project areas.

			The food situation in the households			
Ward			**Good**	**Satisfactory**	**poor**	**Total**
Mgwashi	Sagara	Count	2	9	4	15
		Percent	18.80%	56.20%	25.00%	100.00%
	Mgwashi	Count	0	7	8	15
		Percent	0.00%	46.70%	53.30%	100.00%
	Malomboi	Count	2	12	1	15
		Percent	13.30%	80.00%	6.70%	100.00%
	Total	Count	4	28	13	45
		Percent	10.90%	60.90%	28.30%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	1	13	1	15
		Percent	6.70%	86.70%	6.70%	100.00%
	Mayo/Kizanda	Count	0	11	4	15
		Percent	0.00%	73.30%	26.70%	100.00%
	Total	Count	1	24	5	30
		Percent	3.30%	80.00%	16.70%	100.00%
Mpale	Tewe	Count	5	10		15
		Percent	28.60%	71.40%		100.00%
	Mpale	Count	0	15		15
		Percent	0.00%	100.00%		100.00%
	Total	Count	5	25		30
		Percent	13.80%	86.20%		100.00%
Vugiri	Makweli	Count		15	0	15
		Percent		100.00%	0.00%	100.00%
	Kieti	Count		14	1	15
		Percent		93.30%	6.70%	100.00%
	Mlalo	Count		15	0	15
		Percent		100.00%	0.00%	100.00%
	Vuje	Count		15	0	15
		Percent		100.00%	0.00%	100.00%
	Bagamoyo	Count		11	4	15
		Percent		73.30%	26.70%	100.00%
	Vugiri	Count		11	4	15
		Percent		73.30%	26.70%	100.00%
	Total	Count		81	9	90
		Percent		90.00%	10.00%	100.00%
Bungu	Mheza	Count		13	2	15
		Percent		85.70%	14.30%	100.00%
	Total	Count		13	2	15
		Percent		85.70%	14.30%	100.00%
Kwashemshi	Magundi	Count		12	3	15
		Percent		78.60%	21.40%	100.00%

Ward			The food situation in the households			Total
			Good	Satisfactory	poor	
	Total	Count		12	3	15
		Percent		78.60%	21.40%	100.00%
		Count	10	181	32	223
Total		Percent	4.50%	81.20%	14.30%	100.00%

3.2 Household economic activities and household income (Impact Indicator ii)

3.2.1 Agriculture and livestock keeping

The main economic activities of the population in the project areas are subsistence farming and small livestock keeping. In terms of agriculture, both irrigation and rain-fed cultivation is practiced. Crops cultivated include maize, beans, banana, cassava, tea, coffee, sugar cane, cardamom and vegetables. Livestock kept are cattle, goats, sheep and pigs. Also small scale poultry keeping is practiced. According to the household survey carried out in the project areas the main economic activity in the project areas is agriculture (99%). Cultivation is practiced in all locations of the hill slopes and valley bottoms where the land is wet. Crops grown include beans (37%), maize (21.5%), tea (17%), vegetables (12.3%), cardamom (5.3%), coffee (3.4%) and cassava (2.2%) whereby 86% of the respondents stated that they have access to markets for their crops and are paid immediately upon selling the produce. 8.8% of the respondents stated that they have fairly good access to markets while 5% of resopndents stated that they have poor access to the market of their crops. Other crop such as sugarcane were reported as being a lucrative business in the area.

Figure 1. Major cash crops produced in the project area.

Cardamom farm

Tea farm

Cabbage farm

Other livelihood activities in the study villages include livestock keeping by few people (cow, goat, sheep, pigs and chicken). Selling of local brew was reported as another economic activity in the area. 62% of the respondents are satisfied with the current activities while 33% would like to embark on different activities due to the economic hardship in the area. 98.60% responded that if they had capital they would opt for other businesses such as selling second hand clothes and trading food items.

3.2.2 Household Income

Respondents were asked to provide their monthly incomes. In household surveys, income data is usually very difficult to obtain with high reliability due to the sensitivity of the information. Most respondents underestimate their incomes for fear of being asked to pay taxes or just because they have no income records. For this reason, it is important to interpret data on income very cautiously. The monthly income that were reported range from Tshs. 10,000 lowest, Tshs. 40,000 medium and Tshs 400,000 highest income per month.

Table 5. Household monthly Income in all the villages.

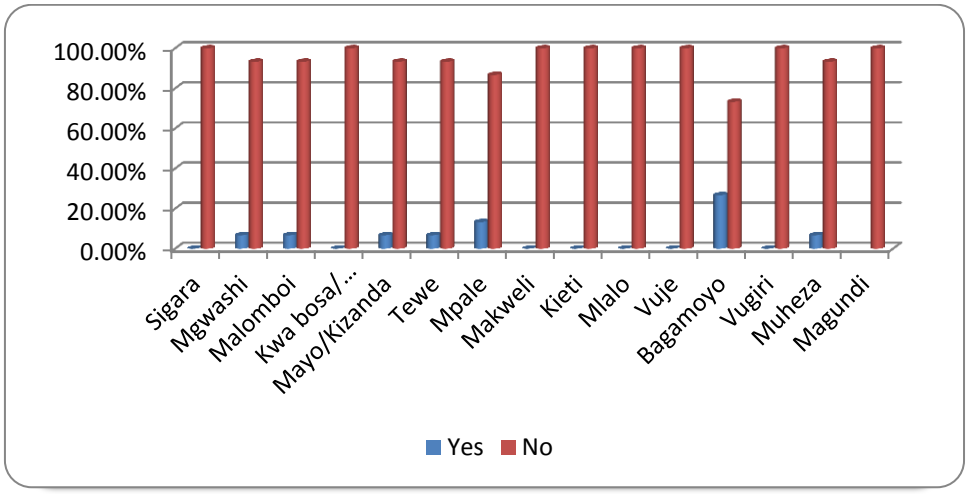
		Monthly income			
District	Village	Minimum	Maximum	Mean	Median
Lushoto	Sagara	10,000	140,000	37,000	30,000
	Mgwashi	30,000	50,000	36,429	37,500
	Malomboi	15,000	300,000	56,000	30,000
	Kwabosa / Bambaleta	20,000	60,000	34,643	30,000

Monthly income					
District	Village	Minimum	Maximum	Mean	Median
	Mayo/Kizanda	25,000	400,000	57,667	30,000
	Tewe	30,000	60,000	35,333	30,000
	Mpale	20,000	160,000	46,000	40,000
	Makweli	10,000	50,000	26,071	22,500
	Kieti	20,000	100,000	37,857	30,000
	Mlalo	20,000	90,000	34,000	30,000
	Vuje	20,000	120,000	41,538	30,000
	Bagamoyo	10000	300000	47857	30000
	Vugiri	20,000	90,000	38,571	35,000
	Muheza	20,000	180,000	39,000	30,000
	Magundi	5,000	100,000	38,333	30,000
Total		5,000	400,000	40,506	30,000

3.2.3 Fish Ponds Project

95% of the respondents stated that they do not have fish ponds. 77% are interested in having a fish pond, while 23% stated that they were not interested to have a fish pond. Some of the reasons cited for not wanting to have a fish pond were that the fish are frequently taken by birds; that the fish become infertile and that access to fishing gear is a problem. 63% of the respondents stated that they had received some training on fish ponds while 37% had not received training but are interested in receiving training.

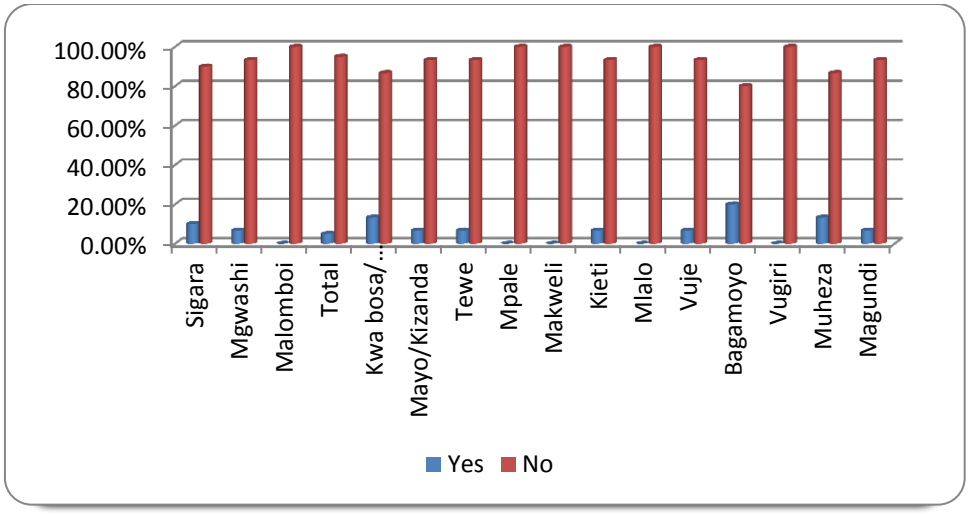
Figure 2: Graph shows percentage of respondent practicing fish farming



3.2.4 Beekeeping

94% of the respondents stated that they do not practice beekeeping. Only in Bagamoyo and Tewe did respondents report that they are practicing bee keeping for domestic consumption, whilst in other areas, beekeeping is intended for income generation rather than subsistence consumption. 99% of the respondents stated that they would like to have a beekeeping project and to receive training.

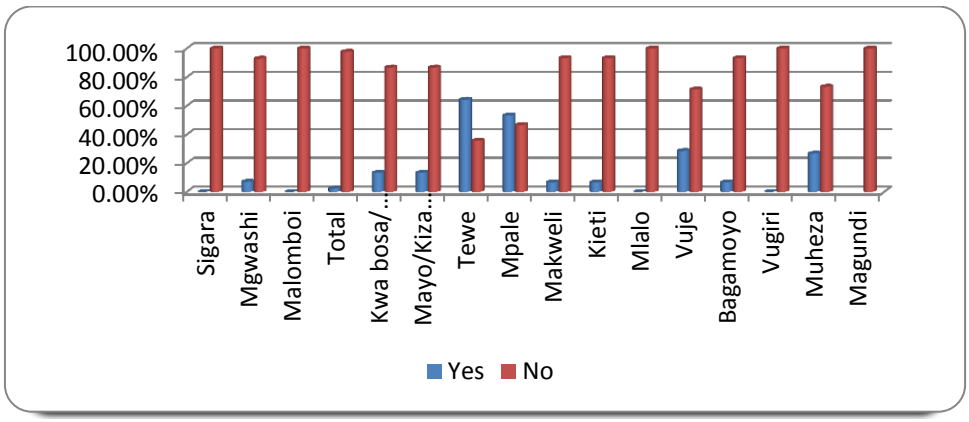
Figure 3. Graph shows percentage of respondent practice in beekeeping



3.2.5 Access to Microfinance services

Within resource poor small scale holders farming systems, provision of credit is said to break the poverty circle by acting as an investment in the production process. The microfinance services such as SACCOS and VICOBA only cover 15% of the people in the village. In Sagara, Malomboi, Vugiri, Mlalo and Magundi villages the survey find out there was no body accessing the microfinance services. However, the respondents would like to be trained and access the services. The respondents who are willing to get credit majority want credit to purchase farm inputs such as fertilizers, seed and pesticides also other want credit for starting business. It was further reported that the SACCOS is operating at Divisional level while VICOBA is operating at village level.

Figure 4. Graph shows percentage of respondent who have access to credit



3.3 IMPROVEMENT AND ACCESS TO WATER SUPPLY WOMEN AND MEN (Effect Indicator 1)

3.3.1 Assessment on water supply and consumption

Lack of clean and safe water is a determinant of poverty and is devastating to many households. Lack of water inhibits their capacity to protect their families' health and enhance their productivity. Thus, equitable access and sustainable supply of water to the poor are fundamental to the goal of eliminating poverty.

Respondents were asked to cite the sources of water that they use for their household consumption. 63% of the respondents rely on water from springs located in their respective villages. 19.5% rely on water from rivers/stream and 12% rely on piped water. Rainwater harvesting is not practiced much except during the rainy period when people collect water from their roofs using buckets. However the supply of water from this sources does not last long. 59% of respondents stated that they are members of water users groups as mentioned on the table below.

Table 6. Primary sources of water.

Ward	Village		Primary sources of water				Total
			Piped water	Rainy	Rivers/Streams	Springs	
Mgwashi	Sagara	Count	0	0	15	0	15
		Percent	0.00%	0.00%	100.00%	0.00%	100.00%
	Mgwashi	Count	12	0	2	1	15
		Percent	80.00%	0.00%	13.30%	6.70%	100.00%
	Malomboi	Count	14	2	0	0	15
		Percent	93.30%	6.70%	0.00%	0.00%	100.00%
	Total	Count	26	1	18	1	46
		Percent	56.50%	2.20%	39.10%	2.20%	100.00%
Mayo	Kwa bosa/ Bambareta	Count				15	15
		Percent				100.00%	100.00%
	Mayo/ Kizanda	Count				15	15
		Percent				100.00%	100.00%
	Total	Count				30	30
		Percent				100.00%	100.00%
Mpale	Tewe	Count			0	15	15
		Percent			0.00%	100.00%	100.00%
	Mpale	Count			1	14	15
		Percent			6.70%	93.30%	100.00%
	Total	Count			2	28	30
		Percent			3.40%	96.60%	100.00%
Vugiri	Makweli	Count			0	15	15
		Percent			0.00%	100.00%	100.00%
	Kieti	Count			6	9	15
		Percent			40.00%	60.00%	100.00%
	Mlalo	Count			0	15	15
		Percent			0.00%	100.00%	100.00%
	Vuje	Count			0	15	15
		Percent			0.00%	100.00%	100.00%
	Bagamoyo	Count			6	9	15
		Percent			35.70%	64.30%	100.00%
	Vugiri	Count			3	12	15
		Percent			14.30%	85.70%	100.00%
	Total	Count			13	75	88
		Percent			14.80%	85.20%	100.00%
Bungu	Mheza	Count				15	15
		Percent				100.00%	100.00%
	Total	Count				15	15
		Percent				100.00%	100.00%
Kwashe mshi	Magundi	Count			11	4	15
		Percent			73.30%	26.70%	100.00%
	Total	Count			11	4	15
		Percent			73.30%	26.70%	100.00%
Total		Count	26	3	44	152	225
		Percent	11.80%	0.50%	19.50%	68.30%	100.00%

77% of the respondents stated that they have received training on improved catchment and water supply management especially for those who will benefit from the WRSSP financed by World Bank. The community faced a problem of queuing and having to travel long distances to collect water (85%). It was stated that during the dry season it take up to 2 hours to travel to and from the sources as shown on the table below.

Table 7. Time taken to collect water in minutes.

District	Village	Minimum (minutes)	Maximum (minutes)	Mean (minutes)	Median (minutes)
	Sigara	15.0	301.0	73.5	30.0

District	Village	Minimum (minutes)	Maximum (minutes)	Mean (minutes)	Median (minutes)
	Mgwashi	2.0	6.0	2.7	2.5
	Malomboi	5.0	60.0	24.0	20.0
	Kwa bosa/ Bambareta	5.0	40.0	18.7	10.0
	Mayo/Kizanda	15.0	60.0	30.7	30.0
	Tewe	10.0	301.0	53.3	30.0
	Mpale	20.0	60.0	32.7	30.0
	Makweli	10.0	60.0	31.3	30.0
	Kieti	10.0	120.0	29.3	30.0
	Mlalo	20.0	120.0	38.7	30.0
	Vuje	30.0	180.0	67.0	60.0
	Bagamoyo	5.0	60.0	32.3	30.0
	Vugiri	10.0	120.0	46.7	30.0
	Muheza	10.0	180.0	48.3	30.0
	Magundi	10.0	120.0	50.3	30.0
Total		5	301	40	30

The role of fetching water is usually for women and children (77% or respondents), while 18% of respondents stated that it is for women only as shown on the table 8.

Table 8. The role of fetching water in household.

			Who fetch water in household					
Ward	Village		Male	Female	Children	Children and female	Male, Female, Children and Hired staff	Total
Mgwashi	Sagara	Count		2	0	13	1	16
		Percent		12.50%	0.00%	81.20%	6.20%	100.00%
	Mgwashi	Count		5	0	10	0	15
		Percent		33.30%	0.00%	66.70%	0.00%	100.00%
	Malomboi	Count		5	1	9	0	15
		Percent		33.30%	6.70%	60.00%	0.00%	100.00%
	Total	Count		12	1	32	1	46
		Percent		26.10%	2.20%	69.60%	2.20%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	0	6	0	9	0	15
		Percent	0.00%	40.00%	0.00%	60.00%	0.00%	100.00%
	Mayo/Kizanda	Count	3	3	1	7	1	15
		Percent	20.00%	20.00%	6.70%	46.70%	6.70%	100.00%
	Total	Count	3	9	1	16	1	30
		Percent	10.00%	30.00%	3.30%	53.30%	3.30%	100.00%
Mpale	Tewe	Count		0		14	0	14
		Percent		0.00%		100.00%	0.00%	100.00%
	Mpale	Count		5		8	1	14
		Percent		35.70%		57.10%	7.10%	100.00%
	Total	Count		5		22	1	28
		Percent		17.90%		78.60%	3.60%	100.00%
Vugiri	Makweli	Count		1	1	13	0	15
		Percent		6.70%	6.70%	86.70%	0.00%	100.00%
	Kieti	Count		2	0	13	0	15
		Percent		13.30%	0.00%	86.70%	0.00%	100.00%
	Mlalo	Count		3	0	12	0	15
		Percent		20.00%	0.00%	80.00%	0.00%	100.00%
	Vuje	Count		2	0	13	0	15
		Percent		13.30%	0.00%	86.70%	0.00%	100.00%
	Bagamoyo	Count		3	0	12	0	15

Ward	Village		Who fetch water in household					Total
			Male	Female	Children	Children and female	Male, Female, Children and Hired staff	
		Percent		20.00%	0.00%	80.00%	0.00%	100.00%
	Vugiri	Count		3	0	11	1	15
		Percent		20.00%	0.00%	73.30%	6.70%	100.00%
	Total	Count		14	1	74	1	90
		Percent		15.60%	1.10%	82.20%	1.10%	100.00%
Bungu	Mheza	Count				15		15
		Percent				100.00%		100.00%
	Total	Count				15		15
		Percent				100.00%		100.00%
Kwashemshi	Magundi	Count		1		14		15
		Percent		6.70%		93.30%		100.00%
	Total	Count		1		14		15
		Percent		6.70%		93.30%		100.00%
		Count	3	41	3	173	4	224
Total		Percent	1.30%	18.30%	1.30%	77.20%	1.80%	100.00%

75% of the respondents do not have a rainwater harvesting system in their households whilst 25% of respondents stated that they do have a system of collecting rain water by using roofing drops. The provision of new and better water supply facilities closer to family homes according to the National Water Policy (NAWAPO) and the National Water Act 2003 means that households should get water within 400 meters. In this way people can save their resources that would have been previously devoted to the arduous task of collecting water. Now at least some of the time and energy will go into education, leisure and productive pursuits. Improved water supplies will, in particular, benefit girls and women who bear the brunt of collecting water. Indeed, it is likely that some of the saved time and energy will be released for increased education of girls who would otherwise have been kept from school for the purpose of collecting water for the family.

3.3.1 Hygiene, Sanitation and Health

Under the above heading, perceptions on cleanliness of water, treatment of water, problems encountered in accessing water, sanitation facilities and water borne diseases were captured. Perceptions on cleanliness of water, about 66% of the respondents perceive that the water they use is clean and safe as compared to 33% who perceive that it is not clean and safe while less than1% did not know whether the water is clean and safe. When further asked what they do with unsafe water before drinking, 40% said they boil, 58% do nothing about it. Those who do nothing to their drinking water mentioned that it is very expensive to boil water and that it does not taste good. Therefore the study shows that a number of respondents did not know the consequence of drinking unclean water. This is an area where the TFCG need to create awareness campaign of the safety of water and its use.

Table 9. Shows the water consumption perceptions.

Ward	Village		Water using is clean and safe			Total
			Yes	No	I don't know	
Mgwashi	Sagara	Count	1	15	0	16
		Percent	6.20%	93.80%	0.00%	100.00%
	Mgwashi	Count	9	5	1	15
		Percent	60.00%	33.30%	6.70%	100.00%
	Malomboi	Count	12	3	0	15
		Percent	80.00%	20.00%	0.00%	100.00%
	Total	Count	22	23	1	46
		Percent	47.80%	50.00%	2.20%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	14	1		15
		Percent	93.30%	6.70%		100.00%
	Mayo/Kizanda	Count	8	7		15
		Percent	53.30%	46.70%		100.00%
	Total	Count	22	8		30

Ward	Village		Water using is clean and safe			Total
			Yes	No	I don't know	
		Percent	73.30%	26.70%		100.00%
Mpale	Tewe	Count	10	4		14
		Percent	71.40%	28.60%		100.00%
	Mpale	Count	11	4		15
		Percent	73.30%	26.70%		100.00%
	Total	Count	21	8		29
		Percent	72.40%	27.60%		100.00%
Vugiri	Makweli	Count	13	2		15
		Percent	86.70%	13.30%		100.00%
	Kieti	Count	10	5		15
		Percent	66.70%	33.30%		100.00%
	Mlalo	Count	13	2		15
		Percent	86.70%	13.30%		100.00%
	Vuje	Count	15	0		15
		Percent	100.00%	0.00%		100.00%
	Bagamoyo	Count	5	10		15
		Percent	33.30%	66.70%		100.00%
	Vugiri	Count	6	9		15
		Percent	40.00%	60.00%		100.00%
	Total	Count	62	28		90
		Percent	68.90%	31.10%		100.00%
Bungu	Mheza	Count	14	1		15
		Percent	93.30%	6.70%		100.00%
	Total	Count	14	1		15
		Percent	93.30%	6.70%		100.00%
Kwashemshi	Magundi	Count	8	7		15
		Percent	53.30%	46.70%		100.00%
	Total	Count	8	7		15
		Percent	53.30%	46.70%		100.00%
		Count	149	75	1	225
Total		Percent	66.20%	33.30%	0.40%	100.00%

In terms of the relationship between water quality and illness in households, 52% of the respondents assumed that there is a relationship between the quality of water and illness in the households, while 47% believed that there was no relationship. 4% did not know whether there was a relationship. The most frequently mentioned diseases that affect both children and adults at household level are stomach fever (diarrhea related diseases) 65%, typhoid 22%, Malaria 12% and diarrhea 1%.

Due to the problems around water quality and prevalence water borne diseases, the water users groups training should be complemented by a hygiene education component targeting those who apparently do not treat water and do not know the relationships between the unclean water and the prevalence of waterborne diseases. Most of the people use pit latrines in their households. Sanitation services could notably improve the well being of women, men and children of the project areas and will be an important factor in poverty reduction of the target population.

3.3.2 Sanitary facilities (Pit latrines)

Water supply is known to have important benefits to health, sometimes regarded as being more important than time savings. Most rural communities and towns suffer from endemic diarrhea, dysentery, malaria and periodic typhoid and/or cholera. Health effects of improved water supply are bound to be significant again underscoring the fact that the economic viabilities of improved water supplies as analyzed above are understated.

Some of households in the project areas have unlined open roofed pit latrines with walls made up of different types of leaves. The pit latrines are not durable and pose a threat to human life as they usually collapse and overflow, especially during rainfalls. In many times people use pit latrines as bathrooms. At

the household level, poor hygiene practices were observed, like no hand washing or leaving opened water buckets to flies before consumption.

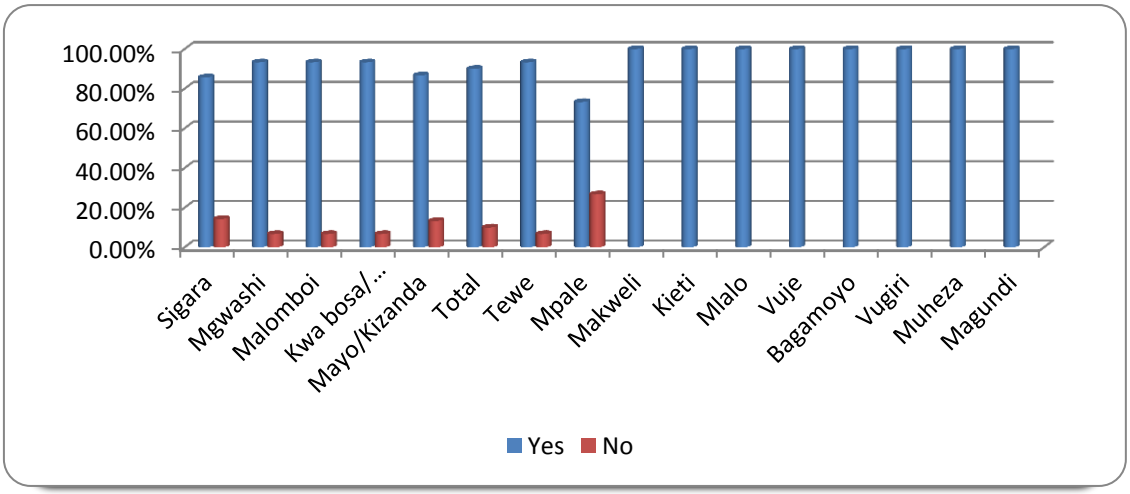
Most villages depend on rivers and streams for domestic water. Due to poor water quality, a number of health problems are experienced

Likewise this project to incorporate sanitation improvements for schools and at the household levels. The above analysis also omits sanitation which is known to have substantial conservation nature of the above economic analysis and increases confidence in the conclusion that the project option is economically viable.

3.4 ADOPTION OF AGROFORESTRY AND IMPROVED AGRICULTURAL PRACTICES (Effect Indicator 2)

In both districts, the majority of people depend on the natural resources of the surrounding forests for their livelihoods, the respondents were asked whether they practice agro forestry and improved agriculture, agro forestry is used as method of fertility restoration of the soil then 95% mentioned that they do practice agro forestry and improved agriculture. The majority of the respondents in one way or another are the members of TFCG intervention and have received training on agro forestry conservation management and practicing in the plots.

Figure 5. Agro forestry and improved agriculture in the project area



It was reported that most of the farmers are using hand hoes for farm preparation. Reasons that were cited include: the topography for most villages does not favor tilling by tractors. The current traditional practice of cultivating and leaving weeds to decompose naturally, mixing cereal crops such as maize with legume plants leads to sustainable crop production. Hence 77% of the respondents mentioned that they cultivate and leave weeds to decompose naturally, 20.5% plough without burning 1% practice minimum tillage. However there are a few who are still practicing slash and burn (1%) although it was reported that burning has been prohibited by the village government by laws and it is a by-law not to burn to clear farms. Due to the scarcity of land, leaving land to fallow naturally is not practiced in the project area. 91% experienced land scarcity due to the topography of the area and dominated by permanent crops such as tea and forest reserve.

3.4.1 Soil erosion

Soil erosion is a major hindrance to land availability. Erosion is mainly caused by heavy rains, poor soil structures and inappropriate farming techniques. The land terrain in the project areas are undulating with gentle to steep slopes. Due to high rainfall, and low tree coverage, the area is prone to severe land degradation if appropriate conservation measures are not followed. Physical observations by the consultant was that, agricultural activities are undertaken on either flat, gentle or steep slopes and valley bottoms. In most cases vegetables, potatoes and maize are planted in the valley bottoms particularly during the dry season as shown on the photographs below. In other types of terrain, no specific crop(s) are allocated with

due consideration to slope percentage according to land classification standards. This poses several subsequent dangers associated with soil degradation.

Figure 6. Types of agricultural practices in the project area

Surface irrigation vegetables farms practiced on the bottom valley

Hilltops tilled by using terracing

Example of unprotected farm with soil erosion in one of the village

Based on the above land terrain 39.4% of the respondents experience soil erosion in their farms and 61% do not experience soil erosion this could be attributed to the fact that most of them are practicing either traditional or other means of control erosion by TFCG. Traditionally bananas and sugarcane were planted to control soil erosion and conserving water. Trees are also planted to control landslides. The group of environment mentioned four most commonly methods of environmental degradation are tree planting, terracing, minimal tillage and prevention of bush fires. Hilltops are tilled by using terracing to protect soil erosion and better yields.

Table 10. Experience of soil erosion in farm plots.

Ward	Village		Experience soil erosion in farm plots		Total
			Yes	No	
Mgwashi	Sagara	Count	2	14	16
		Percent	12.50%	87.50%	100.00%
	Mgwashi	Count	8	6	14
		Percent	57.10%	42.90%	100.00%
	Malomboi	Count	7	7	14
		Percent	50.00%	50.00%	100.00%
	Total	Count	17	27	44
		Percent	38.60%	61.40%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	4	11	15
		Percent	26.70%	73.30%	100.00%
	Mayo/Kizanda	Count	5	9	14
		Percent	35.70%	64.30%	100.00%
	Total	Count	9	20	29
		Percent	31.00%	69.00%	100.00%
Mpale	Tewe	Count	3	12	15
		Percent	20.00%	80.00%	100.00%
	Mpale	Count	7	5	12
		Percent	58.30%	41.70%	100.00%
	Total	Count	10	17	27
		Percent	37.00%	63.00%	100.00%
Vugiri	Makweli	Count	8	7	15
		Percent	53.30%	46.70%	100.00%
	Kieti	Count	3	12	15
		Percent	20.00%	80.00%	100.00%
	Mlalo	Count	8	6	14
		Percent	57.10%	42.90%	100.00%
	Vuje	Count	2	12	14
		Percent	14.30%	85.70%	100.00%
	Bagamoyo	Count	9	6	15

Ward	Village		Experience soil erosion in farm plots		Total
			Yes	No	
		Percent	60.00%	40.00%	100.00%
	Vugiri	Count	6	9	15
		Percent	40.00%	60.00%	100.00%
	Total	Count	36	52	88
		Percent	40.90%	59.10%	100.00%
Bungu	Mheza	Count	6	9	15
		Percent	40.00%	60.00%	100.00%
	Total	Count	6	9	15
		Percent	40.00%	60.00%	100.00%
Kwashemshi	Magundi	Count	8	7	15
		Percent	53.30%	46.70%	100.00%
	Total	Count	8	7	15
		Percent	53.30%	46.70%	100.00%
Total		Count	86	132	218
		Percent	39.40%	60.60%	100.00%

3.4.2 Deforestation around the villages

Various forest reserves and small village owned indigenous and exotic forests exist in the project area. Many people in the village surveyed are against forest clearing because they mentioned that the forests are a source of rain and rivers. They further mentioned that forests are major sources of building poles, timber, medicine, firewood and other biodiversity. However, understanding of the importance of tree planting is still low in some villages probably because of lack of knowledge on management of tree nurseries and poor supply of seedlings. Planting of useful indigenous tree species is being encouraged by the TFCG project which provide seedling and awareness. Generally, the issue of conservation with utilization concept is highly appreciated.

Deforestation around the village was reported as a problem by 29% of respondents and 71% mentioned that it has been controlled by on-going TFCG initiatives (CBFM) groups and local government by-laws.

3.4.4 Irrigation practicing

Irrigation is practiced mainly for cultivating vegetables and tree planting. 75% of the respondents need water for irrigation. The irrigation methods used mainly is surface 94% and a few (5.9%) are using sprinklers mainly for vegetables.

3.4.5 Extension services

Limited extension services in agriculture, livestock and forestry are provided in villages which are under the TFCG project. The main cause of lack of extension services were reported to have only one extension worker per ward and sometimes per division who has no transport to enable him/her visit all the scattered villages in the undulating hills.

All the groups in order to perform well need the close supervision of the extension officers. Unfortunately in the project areas there are not enough extension officers. 68% of respondents stated that extension officers visit them to provide advice 'rarely' and 28% were visited 'frequently'. Not all the villages were covered. In general, extension services do not reach targeted farmers as expected. Lack of sufficient extension can be linked with the observed poor farming and poor crop yield in the project areas. In this juncture, for a sustainable agricultural undertaking in the project areas, this study suggests that, efforts to have at least one agricultural extension officer to regulate and advice on matters related to agricultural activities per village is important for the project's sustainability. The table below shows the frequency of the agricultural officer's visits in the villages.

Table 11. Agricultural workers visit in the Villages.

Ward	Village		How often do Extension workers visit you					Total
			Frequently	rarely	Not at all	Moderate	No this category of staff	
Mgwashi	Sagara	Count	2	4				6

Ward	Village		How often do Extension workers visit you					Total
			Frequently	rarely	Not at all	Moderate	No this category of staff	
		Percent	33.30%	66.70%				100.00%
	Mgwashi	Count	5	4				9
		Percent	55.60%	44.40%				100.00%
	Malomboi	Count	6	3				9
		Percent	66.70%	33.30%				100.00%
	Total	Count	13	11				24
		Percent	54.20%	45.80%				100.00%
Mayo	Kwa bosa/ Bambareta	Count	4	4				8
		Percent	50.00%	50.00%				100.00%
	Mayo/Kizanda	Count	2	4				6
		Percent	33.30%	66.70%				100.00%
	Total	Count	6	8				14
		Percent	42.90%	57.10%				100.00%
Mpale	Tewe	Count	1	12				13
		Percent	7.70%	92.30%				100.00%
	Mpale	Count	2	13				15
		Percent	13.30%	86.70%				100.00%
	Total	Count	3	25				28
		Percent	10.70%	89.30%				100.00%
Vugiri	Makweli	Count	3	4		1	1	9
		Percent	33.30%	44.40%		11.10%	11.10%	100.00%
	Kieti	Count	4	11		0	0	15
		Percent	26.70%	73.30%		0.00%	0.00%	100.00%
	Mlalo	Count	6	8		0	0	14
		Percent	42.90%	57.10%		0.00%	0.00%	100.00%
	Vuje	Count	6	7		0	0	13
		Percent	46.20%	53.80%		0.00%	0.00%	100.00%
	Bagamoyo	Count	3	5		0	1	9
		Percent	33.30%	55.60%		0.00%	11.10%	100.00%
	Vugiri	Count	0	13		0	0	13
		Percent	0.00%	100.00%		0.00%	0.00%	100.00%
	Total	Count	22	48		1	2	73
		Percent	30.10%	65.80%		1.40%	2.70%	100.00%
Bungu	Mheza	Count		9	3			12
		Percent		75.00%	25.00%			100.00%
	Total	Count		9	3			12
		Percent		75.00%	25.00%			100.00%
Kwashemshi	Magundi	Count		7				7
		Percent		100.00%				100.00%
	Total	Count		7				7
		Percent		100.00%				100.00%
Total		Count	44	108	3	1	2	158
		Percent	27.80%	68.40%	1.90%	0.60%	1.30%	100.00%

3.4.6 Access to Wood Supplies and Tree Planting

The communities in the project areas depend on firewood as source of energy for cooking, house heating, brewing and other uses. Several sources of firewood such as own farms, public land and own woodlots are used. 52% of the households that were visited, use their farms as their source of fuel wood, 38.5% use from protected forests known as '***vibundu***' dried woods and 9% from agro forestry trees which was facilitated by TFCG since the year 2000 and the trees are ready for harvesting. It was reported that each village has there turns every week to go the forests to fetch dried woods for firewood. It was reported that,

58% of the village do own their private wood lots against 42% who do not own wood lots. In the FGDs and during the interview with the key informants, it was reported that, although there are CBFM committees in each villages but still there are some unfaithful people encroach in the forest reserve for firewood, the main culprits are local brewers. 77% of the respondents reported to be members of tree planting project and 93% have received training from TFCG.

It was further reported that, traditionally, men are responsible for planting trees since they are the owner and controller of the properties. However, of late there are a big number of households where tree planting is a family issue. This change needs TFCG's continued support. Increased efforts should be made to encourage women to participate in tree planting and environmental management activities. This encouragement has already started in most of the TFCG projects whereby several women environment conservation groups are actively operating.

Figure 7. Women tree Planting Groups and Schools Environmental Clubs Nurseries.

Tree planting and Nursery for women groups

Tree planting and environmental education in schools

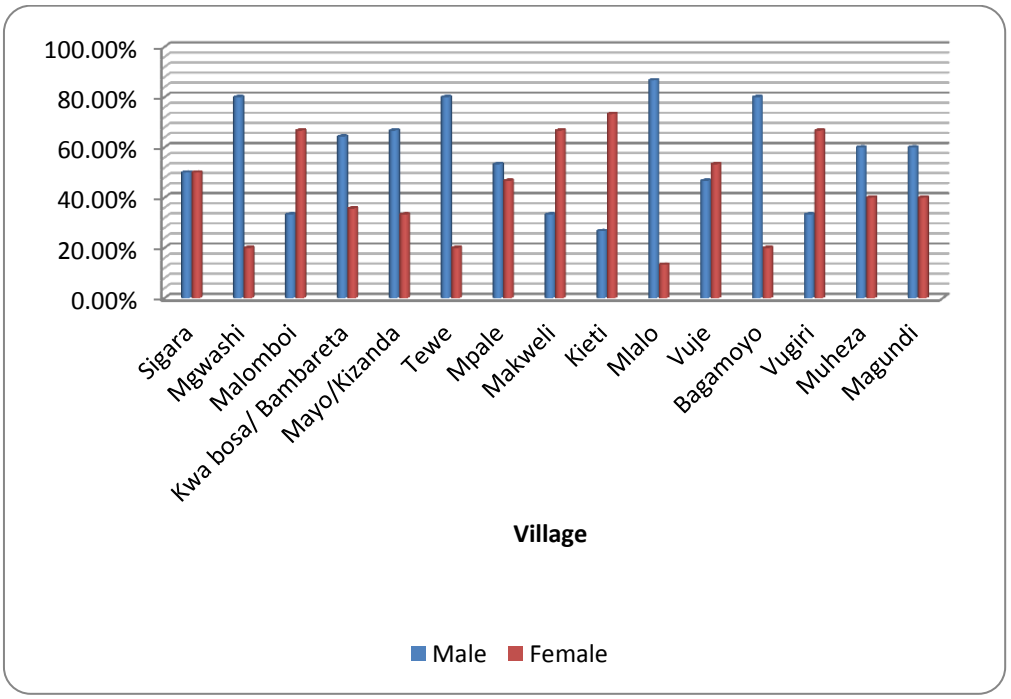
Tree planting serves the life of species like camilian and others

3.5 DESCRIPTION OF OTHER BASELINE INFORMATION

3.5.1 Demographic Information

During the household survey the selection of the interviews were random sampling, but it happens that the majority of the people interviewed were men (57 %). This could be attributed to the culture whereby the spokesmen of the household is a man. Figure 8 below shows gender of the respondents in both districts.

Figure 8. Graph shows gender of the respondents.



During the survey the interviewers made sure that the respondents are above 18 years of age and are a resident in that particular household. It appears that the age distribution of the majority of the respondents (28.4 %) fall within the most economically active age category (36 – 45 years old) and 13.3% were above 56 years old as shown in table 13.

Table 12. Age distribution of the respondents.

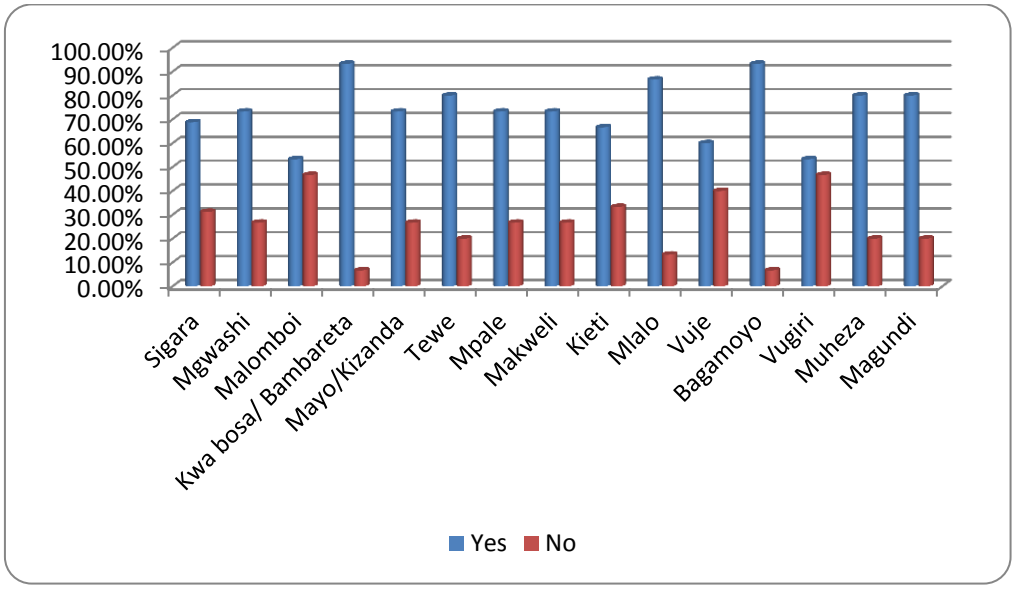
			age recoded					
Ward	Village		18-25	26 - 35	36 - 45	46 - 55	Greater or equal 56	Total
Mgwashi	Sagara	Count	4	1	6	3	2	16
		Percent	25.00%	6.20%	37.50%	18.80%	12.50%	100.00%
	Mgwashi	Count	3	3	3	3	3	15
		Percent	20.00%	20.00%	20.00%	20.00%	20.00%	100.00%
	Malomboi	Count	1	6	3	2	3	15
		Percent	6.70%	40.00%	20.00%	13.30%	20.00%	100.00%
	Total	Count	8	10	12	8	8	46
		Percent	17.40%	21.70%	26.10%	17.40%	17.40%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	1	6	3	5	0	15
		Percent	6.70%	40.00%	20.00%	33.30%	0.00%	100.00%
	Mayo/Kizanda	Count	0	1	3	7	4	15
		Percent	0.00%	6.70%	20.00%	46.70%	26.70%	100.00%
	Total	Count	1	7	6	12	4	30
		Percent	3.30%	23.30%	20.00%	40.00%	13.30%	100.00%
Mpale	Tewe	Count	2	2	5	2	3	14
		Percent	14.30%	14.30%	35.70%	14.30%	21.40%	100.00%
	Mpale	Count	1	6	4	3	1	15
		Percent	6.70%	40.00%	26.70%	20.00%	6.70%	100.00%
	Total	Count	3	8	9	5	4	29
		Percent	10.30%	27.60%	31.00%	17.20%	13.80%	100.00%
Vugiri	Makweli	Count	0	4	5	5	1	15
		Percent	0.00%	26.70%	33.30%	33.30%	6.70%	100.00%
	Kieti	Count	2	3	5	3	2	15
		Percent	13.30%	20.00%	33.30%	20.00%	13.30%	100.00%
	Mlalo	Count	0	3	8	4	0	15
		Percent	0.00%	20.00%	53.30%	26.70%	0.00%	100.00%
	Vuje	Count	3	2	5	4	1	15
		Percent	20.00%	13.30%	33.30%	26.70%	6.70%	100.00%
	Bagamoyo	Count	1	7	2	3	2	15
		Percent	6.70%	46.70%	13.30%	20.00%	13.30%	100.00%
	Vugiri	Count	3	3	1	4	4	15
		Percent	20.00%	20.00%	6.70%	26.70%	26.70%	100.00%
	Total	Count	9	22	26	23	10	90
		Percent	10.00%	24.40%	28.90%	25.60%	11.10%	100.00%
Bungu	Mheza	Count		2	9	3	1	15
		Percent		13.30%	60.00%	20.00%	6.70%	100.00%
	Total	Count		2	9	3	1	15
		Percent		13.30%	60.00%	20.00%	6.70%	100.00%
Kwashemshi	Magundi	Count	1	3	2	6	3	15
		Percent	6.70%	20.00%	13.30%	40.00%	20.00%	100.00%
	Total	Count	1	3	2	6	3	15
		Percent	6.70%	20.00%	13.30%	40.00%	20.00%	100.00%
Total		Count	22	52	64	57	30	225
		Percent	9.80%	23.10%	28.40%	25.30%	13.30%	100.00%

The study results show that 74% of the respondents were men as head of the households and 36% are women as head of the households. Usually, women as head of households could be widows or single mothers. It was further revealed that 98% of the respondents are permanent residents in that particular village.

The study established the main factors impacting the demographic developments whether it is increasing or decreasing. The overall 98% respondents revealed that the population is increasing through birth. 13% of Mlalo village the population is increasing through immigrants and are those labourers who are working at

the tea estates. 6.7% of the respondents are those who are working in the educational institution at Magundi village.

Figure 9. Graph shows the head of household by gender.



3.1.1 Education Level

Education is an important modernization factor which influences people's behaviour and knowledge of environmental conservation issues. This aspect is important in assessing the effectiveness of using printed materials of the education information communication on conservation related issues and sending message across the population. Although most of the villages in the project areas do have primary schools, many are facing severe shortage of teacher; classrooms; sanitation facilities; water and access raods. On average there is one secondary school in each ward and at least one primary school in each village.

The survey revealed that, a relatively large proportion, comprising of about 92% of the respondents in the surveyed population, had education up to primary level, compared to 1.3% who had no formal education at all. Whilst, the overall of 7% of the respondents had up to secondary education level. Here Mgwashi village is leading of having 13.3% of the respondents without education.

Hence given the existing education levels in the project areas, the use of printed materials as a way of communication can be limited to a certain proportion of the population. Other ways of communication with the villagers such as the ordinary village government system through sub-village and party leaders, religious institutions and discussion meetings need to be used to reach the people.

Table 13. Education level of the respondents by villages.

Ward	Village		Level of education				Total
			Never attended	Primary education	Secondary, O- level	Secondary A-level	
Mgwashi	Sagara	Count	0	14	2		16
		Percent	0.00%	87.50%	12.50%		100.00%
	Mgwashi	Count	2	10	3		15
		Percent	13.30%	66.70%	20.00%		100.00%
	Malomboi	Count	1	13	1		15
		Percent	6.70%	86.70%	6.70%		100.00%
	Total	Count	3	37	6		46
		Percent	6.50%	80.40%	13.00%		100.00%
Mayo	Kwa bosa/ Bambareta	Count		15	0		15
		Percent		100.00%	0.00%		100.00%
	Mayo/Kizanda	Count		14	1		15

Ward	Village		Level of education				Total
			Never attended	Primary education	Secondary, O- level	Secondary A-level	
		Percent		93.30%	6.70%		100.00%
	Total	Count		29	1		30
		Percent		96.70%	3.30%		100.00%
Mpale	Tewe	Count		14	0	1	15
		Percent		93.30%	0.00%	6.70%	100.00%
	Mpale	Count		12	3	0	15
		Percent		80.00%	20.00%	0.00%	100.00%
	Total	Count		26	3	1	30
		Percent		86.70%	10.00%	3.30%	100.00%
Vugiri	Makweli	Count		15	0		15
		Percent		100.00%	0.00%		100.00%
	Kieti	Count		14	1		15
		Percent		93.30%	6.70%		100.00%
	Mlalo	Count		13	1		14
		Percent		92.90%	7.10%		100.00%
	Vuje	Count		15	0		15
		Percent		100.00%	0.00%		100.00%
	Bagamoyo	Count		15	0		15
		Percent		100.00%	0.00%		100.00%
	Vugiri	Count		13	2		15
		Percent		86.70%	13.30%		100.00%
	Total	Count		85	4		89
		Percent		95.50%	4.50%		100.00%
Bungu	Mheza	Count		15			15
		Percent		100.00%			100.00%
	Total	Count		15			15
		Percent		100.00%			100.00%
Kwashemshi	Magundi	Count		14	1		15
		Percent		93.30%	6.70%		100.00%
	Total	Count		14	1		15
		Percent		93.30%	6.70%		100.00%
Total		Count	3	206	15	1	225
		Percent	1.30%	91.60%	6.70%	0.40%	100.00%

3.1.2 Land Tenure and settlement patterns

In principle, the groups interviewed have lived in the area for a long time and acquired land through allocation by their parents (inheritance) and most commonly through marriage. Others acquired it as a result of colonial and post-colonial policies. Since villagisation people have acquired land by a variety of ways including through the legal system of village government and national development policies. It was noted that, although village government has authority over land, in practice land belongs to an individual lineage which has power over re-allocation and even in determining which areas can be given to strangers and which cannot due to the scarce nature of land in the mountains.

Hence, majority of the respondents own their property which could be an indicator of their wealth and livelihood, the overall 98% of the respondents own the houses and plots in traditional customary laws. 89.3% owned by male and only 11% owned by female. The impression we got from the village leaders was that there was no land conflict but that land was already becoming a scarce commodity due to the fact that the nearby forest reserves took chunks of their village land as did crops such as Tea which cannot be mixed with other crops have taken a massive space and also population increase through births are making their village to have scarcity of land for farming.

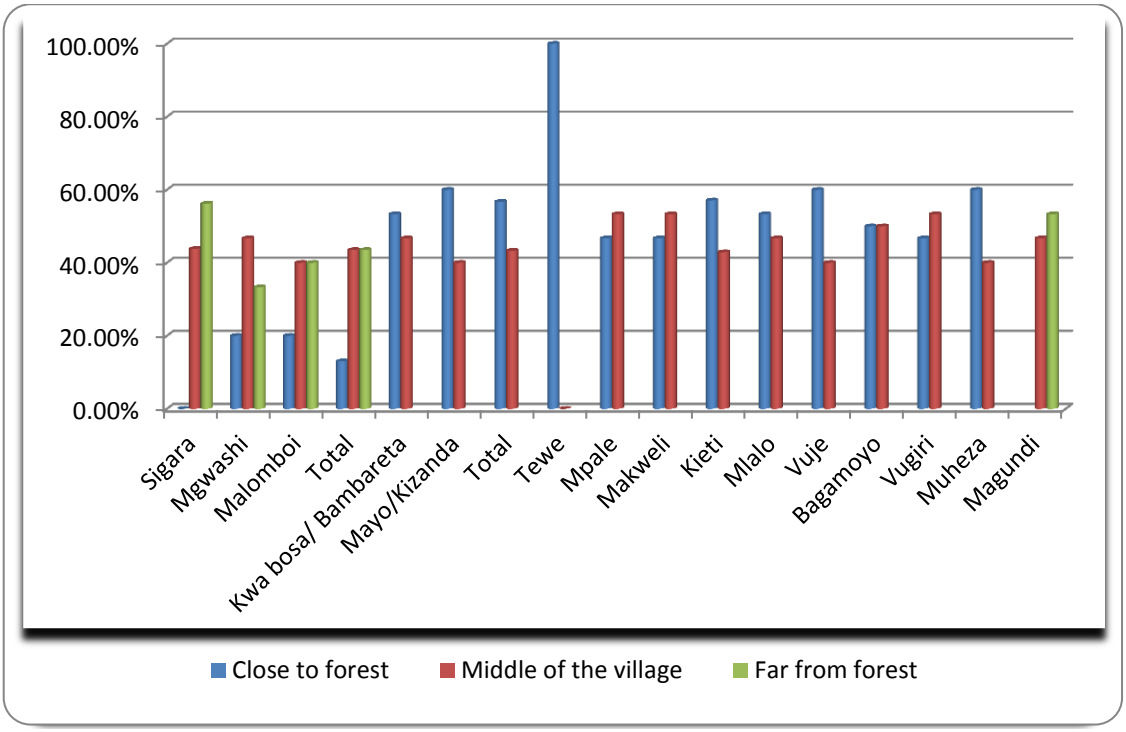
Table 14. Land ownership by Gender.

Ward	Village		Ownership by gender		Total
			Male	Female	
Mgwashi	Sagara	Count	13	3	16
		Percent	81.20%	18.80%	100.00%
	Mgwashi	Count	15	0	15
		Percent	100.00%	0.00%	100.00%
	Malomboi	Count	13	2	15
		Percent	86.70%	13.30%	100.00%
	Total	Count	41	5	46
		Percent	89.10%	10.90%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	14	1	15
		Percent	93.30%	6.70%	100.00%
	Mayo/Kizanda	Count	13	2	15
		Percent	86.70%	13.30%	100.00%
	Total	Count	27	3	30
		Percent	90.00%	10.00%	100.00%
Mpale	Tewe	Count	15		15
		Percent	100.00%		100.00%
	Mpale	Count	15		15
		Percent	100.00%		100.00%
	Total	Count	30		30
		Percent	100.00%		100.00%
Vugiri	Makweli	Count	11	4	15
		Percent	73.30%	26.70%	100.00%
	Kieti	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
	Mlalo	Count	15	0	15
		Percent	100.00%	0.00%	100.00%
	Vuje	Count	13	1	14
		Percent	92.90%	7.10%	100.00%
	Bagamoyo	Count	15	0	15
		Percent	100.00%	0.00%	100.00%
	Vugiri	Count	11	3	14
		Percent	78.60%	21.40%	100.00%
	Total	Count	77	11	88
		Percent	87.50%	12.50%	100.00%
Bungu	Mheza	Count	13	2	15
		Percent	86.70%	13.30%	100.00%
	Total	Count	13	2	15
		Percent	86.70%	13.30%	100.00%
Kwashemshi	Magundi	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
	Total	Count	12	3	15
		Percent	80.00%	20.00%	100.00%
Total		Count	200	24	224
		Percent	89.30%	10.70%	100.00%

3.1.3 Location of the village

The survey found that 45% of the respondents are close to forest reserves, 43% are located in the middle of the village and 12% are far from the forest. Tewe village responded to be within the forest 100%.

Figure 10. Graph shows location /status of the house.



3.1.4 Type of building materials and wealth indicators

The overall 68% of the houses in the project areas are constructed with corrugated roofs with mud walls and 22% of the houses are Grass roofing with mud walls while only 9% of houses are constructed with corrugated roofs with concrete walls. The types of houses are the one of the wealth indicators of the livelihood of the community. The FGDs was able to lay down the wealth indicators within their village communities. The discussions revealed that the rank the wealthiest individual/households as the one who own the housing facilities built of use of cement/bricks blocks and roofed using corrugated iron or tiles materials.

Another wealth indicator identified on the basis of the discussions as for an individual/household is to be able to pay for social services such as paying school fees for their children and medical charges. During the physical observation the consultant was able to see some of these wealthiest individual also own things such as solar power panel, TV dishes, diesel generators, large crops farms

3.2.6 Gender and division of labor

In Tanzania, the traditional image of women as a mother, and housewife underlies a clear-cut division of labour between men and women. Women perform the bulk of household work. During the focus group and in-depth discussions, women mentioned that although a husband and wife sometimes discuss the question of the size of the family the final decision usually rests with the husband. One Muslim man (key informant) mentioned that, the Koran says that men are the heads of the family and are responsible for making all the final decisions in the household. He further said if a woman insists on family planning (that is having a small number of children), the husband simply takes another wife who will be prepared to bear more children. Some women mentioned that precaution such as contraceptive is taken secretly at risk of a marriage crisis when the man discovers it. In the same discussions as it was revealed that women are the ones who are responsible for taking the children to the clinic and hospital when they fall sick. It means that a woman with more children has a bigger burden compared to her counterpart. Women who are pregnant, lactating or with young children have to struggle harder to accomplish their domestic rounds as well as being commercially productive for her livelihood.

When it comes to socialization men have more time to socialize than women. The only time when women socialize it is when they go to the weddings, funeral ceremonies and markets.

The respondents were required to mention whether they practice traditional division of work according to gender and age, 23% mentioned that they do practice while 77% do not practice. The position of women in their community in the decision making at the local leadership was ranked as satisfactory 90%, high 8% and low 2%. Due to the traditional image of a woman in the society as a mother, housewife, child caring and at the local leadership women are mostly given position of secretary to take notes. However, due to the existence of norms and values toward the role of a woman in the society it is not easy for them to recognize and feel gender inequality in their daily routines. Gender daily division of labour at each step is an area of further intervention during the project period to include gender study in the program.

Table 15. The position of women in the community.

			Position of women in the community			
Ward	Village		High	Satisfactory	Low	Total
Mgwashi	Sagara	Count	1	13	2	16
		Percent	6.20%	81.20%	12.50%	100.00%
	Mgwashi	Count	5	10	0	15
		Percent	33.30%	66.70%	0.00%	100.00%
	Malomboi	Count	4	10	0	14
		Percent	28.60%	71.40%	0.00%	100.00%
	Total	Count	10	33	2	45
		Percent	22.20%	73.30%	4.40%	100.00%
Mayo	Kwa bosa/ Bambareta	Count	3	11		14
		Percent	21.40%	78.60%		100.00%
	Mayo/Kizanda	Count	3	12		15
		Percent	20.00%	80.00%		100.00%
	Total	Count	6	23		29
		Percent	20.70%	79.30%		100.00%
Mpale	Tewe	Count		14		14
		Percent		100.00%		100.00%
	Mpale	Count		15		15
		Percent		100.00%		100.00%
	Total	Count		29		29
		Percent		100.00%		100.00%
Vugiri	Makweli	Count	1	14	0	15
		Percent	6.70%	93.30%	0.00%	100.00%
	Kieti	Count	0	15	0	15
		Percent	0.00%	100.00%	0.00%	100.00%
	Mlalo	Count	1	12	1	14
		Percent	7.10%	85.70%	7.10%	100.00%
	Vuje	Count	0	15	0	15
		Percent	0.00%	100.00%	0.00%	100.00%
	Bagamoyo	Count	0	15	0	15
		Percent	0.00%	100.00%	0.00%	100.00%
	Vugiri	Count	0	15	0	15
		Percent	0.00%	100.00%	0.00%	100.00%
	Total	Count	2	86	1	89
		Percent	2.20%	96.60%	1.10%	100.00%
Bungu	Mheza	Count		15		15
		Percent		100.00%		100.00%
	Total	Count		15		15
		Percent		100.00%		100.00%
Kwashemshi	Magundi	Count		15		15
		Percent		100.00%		100.00%
	Total	Count		15		15

Ward	Village		Position of women in the community			Total
			High	Satisfactory	Low	
		Percent		100.00%		100.00%
		Count	18	201	3	222
Total		Percent	8.10%	90.50%	1.40%	100.00%

4.0 Conclusion and recommendations

The baseline study documented the conditions in 15 villages in the West Usambara Mountains in Korogwe and Lushoto districts, with regard to food security, poverty reduction, water supply and household income.

- Low income levels in the target communities may be attributed to lack of productiveness in agriculture, non-performance of various economic ventures, and environmental degradation.

- Women and men in the project area generally have primary education but only 7% have had secondary education. Women were reported to have poorer education than men.

- Health services, roads and communication infrastructure are poor and inadequate in the project area.

- Communities have a high dependence on the forest reserves for the production of building poles from trees, for the production of fuel for cooking (firewood), which points to the fact that conservation of the environment in the study area is of utmost importance to the economic well-being to the surrounding communities.

5.2 Recommendations

- TFCG should formulate appropriate education awareness programme on type of farming practices which are required in the project areas. Participatory training programmes specific to particular villages should be conducted. The study has revealed that proportionately few women have attended formal education, therefore during undertaking this task, special attention to women participants should be made.

- Educational campaign on entrepreneurship. Value Chain skills and income generation activities that satisfy the requirement of TFCG project objectives on the other hand without compromising farmer's goals and objectives is vital. It is genuinely recommended to TFCG to liaise with other players such as SIDO who are very conversant in such activities in the Country.

.

- There are many possible solutions to environmental problems as suggested by the communities. A few solutions were suggested recurrently for several problems. These were to enforce the relevant laws, educate people, strengthen the leadership, and get advice from experts.

- From time to time, monitoring and evaluation to assess changes in the project implementation in relation to its specific objectives of improving quantity and quality of water supply and food security should be conducted. There should be a monitoring and evaluation set up that allows project modification geared towards learning lessons so that the project moves effectively towards its goal, purpose and objectives.

- All the participants were very enthusiastic about learning beekeeping and suggested if possible to start immediately. Few were interested with fish farming since they had similar project and did not do well due to the theft and the yield deteriorated day after day. At the Division Level there is SACCOS with very few members (unknown) and VICOBA at village level with unknown number of members. TFCG should establish awareness campaigns and training on the importance of the aforementioned projects which are have substantial important to the food security and poverty reduction.

Tanzania Forest Conservation Group
Kikundi Cha Kuhifadhi Misitu ya Asili Tanzania

Baseline data collection in the West Usambara Mountains

Household questionnaire for West Usambara and Korogwe Water Supply Project

_____

Date of Survey; _____ Questionnaire Number …..
Name of interviewer: _____ Name of interviewee:
_____
DISTRICT_____DIVISION_____ Ward_____ Village _____Sub Village_____

Part 1: Questionnaire

- First introduce yourself.
- Explain that you are doing the household questionnaire on behalf of TFCG.
- Explain about the project which is aiming of improving livelihood security and sustainability for rural communities in the Eastern Arc Mountains'. The project runs from June 2010 – May 2013 in the West Usambara Mountains of Lushoto and Korogwe Districts, Tanga Region. The project is financed by Gorta. Project implementation is being led by the Tanzania Forest Conservation Group working closely with the two District Governments and other related initiatives and NGOs working in the area.
- The respondents must be the residents above 18 years old only.

DEMOGRAPHIC INFORMATION:

Q1 Gender of Respondent (Male = 1; Female = 2) _____
Q2 Age of Respondent: _____
Q3 Is the respondent head of the household? (Yes = 1; No=2)
Q4 How many people are living in this household?
TOTAL -----
(a) Males >18 years _____
(b) Females >18 years _____
(c) No. of minors < 18 years _____

Q5 How long have you been living here? Permanent resident =1, More than 1 year =2, Temporary resident =3

Q6 What level of education do you have?

Never attended school	=1
Primary education	=2
Secondary Level	=3
Advanced Level	=4
Others	=5 _____

Q7 Main factors having an impact upon demographic developments: (please list factors/reasons: Eg. Immigration, jobs, birth rate):_____

HOUSEHOLD CHARACTERISTICS

Q8 General Location of the house: (enumerator to observe):
Close to forest =1, Middle of the Village =2, Far from the Forest = 3 _____

Q9 Type of building Materials:
1 Grass roofing with mad walls; 2 grass roofing with concrete walls
3. Corrugated roof with mud walls 4 corrugated roofs with concrete walls

Q10 What is the land tenure status of the house?
Own property =1
Shared with relatives =2
Traditional Land (family land) =3
Rented from government institution =4
House warming (caretaker) =5

Q11 Land ownership: Male =1; Female =2; 3 Both ( ) ____

FOOD SECURITY (questions related to Impact Indicator 1)

Q 12 How is the food situation in your household?
1 Good ( ); 2 Satisfactory ( ); 3 Poor ( )

If poor: what are the causes? (Explain).....
.....

Q 13 How many meals do you take every day? 1 three meals ( ); 2 two meals ( ); 3 once ( )

Q 14 How is the food situation in this village for the past three years? 1 Good( ); 2 Sometimes in bad years ( )

List the causes? (Explain).....
.....

Q 15 What do you do when you are faced with food shortage?
1._____
2._____
3._____

HOUSEHOLD ECONOMIC ACTIVITIES AND HOUSEHOLD INCOME (Impact Indicator 2)

Q 16 The project being a rural and agricultural setting what cash crop do you produce? Please List the cash crops:

_____ _____ _____ _____
_____ _____

Q 17 List other major occupations of your household members:

_____ _____ _____ _____
_____ _____ _____ _____

Q18 How many members contribute to the household income?
Number of male ____Number of female _____ Total _____

Q19 What is the approximate monthly earning from these activities? Tshs_____

Q 20 Do you intend to embark on new economic activities in the near future?
1. Yes ( ); 2 No ( ); 3 Not yet decided ( )

Q 21 If Yes, What are they? _____

Q 22 Do you have access to markets for the following products?

Crops	Markets Access *1 = good 2= average*	Buyer *1=Private 2=cooperative 3=others*	Payments *1=immediately 2=delayed*	Prices *1= good 2=poor*

	3= poor			
Maize				
Cardamom				
Tea				
Peas				
Beans				
Banana				
Coffee				
Sugar Can				
Vegetables				
Others				

FISH FARMING (Impact Indicator 2)

Q. 23 Do you practice fish farming (owning a fish pond)? 1. Yes ( ); 2. No ( )

If no: are you interested of having one? 1. Yes ( ); 2 No ( )

Q24 Have you received any training on fish farming? 1 Yes ( ); 2 No ( )
If no: do you think it is a good idea to be trained and get involved? 1. Yes ( ); 2 No ( )

BEEKEEPING PRACTICES (Impact Indicator 2)

Q 25 Do you know anything about beekeeping? 1 Yes ( ); 2. No ( )

If no: are you interested in the activity? 1. Yes ( ); 2 No ( )

Q 26 Are you a member of beekeeping group? 1 Yes ( ); 2. No ( )

If Yes: How many hives do you have? _____

How much do you earn per year? ----------

Q 27 Have you received any training on beekeeping 1 Yes ( ); 2 No ( )

ACCESS TO MICROFINANCE (Impact Indicator 2)

Q28 Do you have any access to serving credit (saccos vikoba) 1. Yes ( ); 2. No ( )
If Yes: Give detailed information about it below:

_____

GENDER ISSUES (Impact Indicator 2)

Q 29 Do you practice traditional division of work according to age and gender in your community?
1 Yes ( ) 2 No ( ) How? _____

Q 30 What do you consider are three major gender related problems faced by your community?

Problems	*Reason*
_____	_____
_____	_____
_____	_____

Q 31 How could rate the position of women in your community?
1 high ( ); 2 satisfactory ( ); 4 Low ( )

Q 32 Could you mention some of the leadership posts headed by women in your community?
_____ _____ _____

ACCESSS TO WATER SUPPLY AND CONSUMPTION (questions related to Effect Indicator 1)

Q 33 What are your primary sources of water for domestic daily uses?
1 Piped water ( ); 2 Rain Harvesting ( ); 3 Rivers/streams ( ); 4 Springs ( ) 5 Others (mention)

Q 34 How long does it take to collect water to and from, in terms of minutes/hours
_____minutes

Q 35 Does your household need to store water at any time? Yes = 1 No = 2
If yes. Why? Explain _____

Q 36 Are you a member of Water users Group/Association? 1. Yes ( ); 2 No ( ) _____

Q 37 Have you received training on improved catchment and water supply management? :
1 Yes ( ); 2. No ( )

Q 38 Which problem does your household experience in relations to domestic water supply?

Problem	*Cause*
_____	_____
_____	_____

Q 39 In your household, who usually fetch water?

Male	=1	Female	=2	Children	=3
Children and female	=4	others specify		=5	

Q 40 Do you have any system to collect rainwater harvest? 1. Yes ( ); 2 No ( )
If Yes: How do you collect rainwater harvest?
_____

HYGIENE, SANITATION AND HEALTH (questions related to Effect Indicator 1)

Q41 a) Do you think the water you are using is clean and safe?
(Yes =1; No =2); I don't know =3

b) If the answer is No, how do you treat water that you think is unsafe to drink?

Boiling	=1
Filtering	=2
Chemical treatment	=3
Nothing	=4
Others (specify)	= 5

c) Is there any relation between the quality of water and the illness in your household?

(Yes =1; No =2 I don't know = 3) _____

Q42 Which type of excreta disposal facility do you have?

Flush toilet	=1
Pit latrine	=2
Both pit latrine and flush toilet	=3
Pit latrine in the neighbourhood	=4

Help in the bush =5

Q 43 What common diseases affect most members of the household?
_____

Q 44 Who are most affected people (Children = 1; Adult = 2); Both = 3

Q 45 What do you think could be done to solve the problem?

ADOPTION OF AGROFORESTRY AND IMPROVED AGRICULTURAL PRACTICES (Question related to Effect Indicator 2)

Q46 Do you practice agro forestry and improved agriculture? 1 Yes ( ); 2 No ( )

Q 47 In this village do you have farmers Association? 1. Yes ( ); 2 No ( ); 3 Don't know ( )

Q 48 If Yes: Are you a Member? 1 Yes ( ); 2 No ( ) _____

Q 49 Have you heard of conservation agriculture? 1 Yes ( ); 2 No ( ) _____

Q 50 If Yes, are you practising conservation agriculture? 1Yes ( ); 2 No ( ) _____

Q 51 Which method of removing weeds do you use when preparing your farm?

1. Slash and burn ( )
2. Burn bush then cultivate ( )
3. Cultivate and leave weeds to decompose ( )
4. Plough without burning ( )
5. Minimum tillage ( )
6. Mulching ( )
7. Others: explain_____

Q 52 Do you practise fallowing? 1 Yes ( ); 2 No ( )

Q 53 Give reason for your reply_____

Q 54 Do you experience any land shortage? 1 Yes ( ); 2 No ( ) If yes why_____

Q 55 Do you experience soil erosion in any of your farm plots?
1 Yes ( ); 2 No ( ); 3 Partially ( )

Q 56 If Yes what kind of soil erosion do you experience?

1. Sheet erosion ( )
2. Rill erosion ( )
3. Gullies ( )
4. Land Slides ( )

Q 57 How do you control soil erosion in your plot? _____

Q 58 Do you experience deforestation around your village?
1 yes ( ); 2 No ( ); 3 dont know ( )

Q 59 Do you use water for irrigation? 1 Yes ( ); 2 No ( )
If Yes: which of the following methods of irrigation do you practice?
1 Surface (furrow) irrigation ( ); 2 sprinkler ( ); 3 drip ( ) 4 flooding ( ); 5 others specify.....

Q 60 How often do the following extension workers visit you?

No	Extension workers/volunteers	Frequently	Rarely	Not at all	Moderate	No this category of ext. Staff
1	Agricultural					
2	Livestock					

3	Comm. Development					
4	Foresters (TFCG staff)					
5	Others					

ACCESS TO WOOD SUPPLIES AND TREE PLANTING (Question related to Effect Indicator 2)

Q 61 What are the main sources of energy in this family?

1. Firewood ( ) 3. Kerosene ( )
2. Charcoal ( ) 4. Others (specify)_____

Q 62 What are the sources of Firewood?

1. Public land ( ) 2. Personal woodlot ( ) 3. From agro forestry trees ( )
1. Protected Forests ( ) 5.Others (specify) _____

Q 63 Do you have a woodlot or other source of firewood that you own? 1. Yes ( ); 2 No ( )

Q 64 Are you a member of tree planting group? 1. Yes ( ); 2 No ( ) _____

Q 65 Have you received any training on tree planting from TFCG? 1. Yes ( ); 2 No ( )

Thanks you for your cooperation. Do you have any question?

Annex 1: Dodoso la Kaya kwa ajili ya Mradi wa Maji wa Usambara Magharibi na Korogwe

Tanzania Forest Conservation Group
Kikundi Cha Kuhifadhi Misitu ya Asili Tanzania

Tathmini ya Washikadau na Ukusanyaji wa taarifa ya awali kwenye maeneo Mradi wa maji ya Milima ya Usambara Magharibi

Dodoso la Kaya kwa ajili ya Mradi wa Maji wa Usambara Magharibi na Korogwe

Tarehe ya Zoezi; _____ Namba ya Dodoso …..
Jina la anayehoji: _____ Jina la anayehojiwa: _____
Wilaya_____Tarafa_____ Kata_____
Kijiji_____Kitongoji
Part 1: Dodoso

- Kwanza jitambulishe mwenyewe.
- Eleza unafanya hili zoezi kwa niaba ya Kikundi cha Kuhifadhi Misitu ya Asili Tanzania (TFCG).
- Elezea kuhusu huu mradi ambao unakusudia kuongeza usalama wa chakula na hali ya maisha endelevu kwa jamii ya vijiji vinavyozunguka pembezoni mwa milima ya Usambara Magharibi. Mradi huu ulianza toka Juni 2010 hadi Mei 2013 kwenye milima ya Usambara Magharibi eneo la wilaya za Lushoto na Korogwe, Mkoa wa Tanga. Mradi huu Umefadhiliwa na Gorta. Mradi inatekelezwa na kuongozwa na Kikundi cha Kuhifidhi Misitu ya Asili Tanzania (TFCG) na wanafanya shughuli zao kwa ukaribu kwa kushirikiana na Serkali za Lushoto na Korogwe pamoja na mikakati mingine ya jamii yakiwepo asasi zisizoza kiserkali kwenye eneo la mradi.
- Waelezee ni nini unaenda kuwauliza: “Tumekuja hapa kuwauliza maswali kuhusu hali halisi ya upatikanaji wa maji hapa kwenu na maswali ya kiuchumi na kijamii ambayo yataisaidia TFCG kuweza kuwapatia mradi wa maji hapa kwenu”
- Wahojiwa ni lazima wawe watu wazima na wenyeji wenye zaidi ya miaka 18.

Taarifa za Maisha:

Q1 Jinsia: (Mme = 1; Mke = 2) _____

Q2 Umri wa anayehojiwa: _____

Q3 Je mhojiwa ni mkuu wa kaya? (Ndiyo = 1; Hapana=2)

Q4 Watu wangapi wanaishi katika hii kaya?
Jumla _____

(a) Wanaume > miaka 18 _____
(b) Wanawake > miaka 18 _____
(c) Watoto < chini ya miaka 18 _____

Q5 Umeishi hapa kijijini kwa miaka mingapi?
Mwenyeji=1, Zaidi ya mwaka 1 =2, Muda mfupi =3

Q6 Kiwango cha elimu yako

Sijaenda Shule =1
Shule ya Msingi =2
Kidato cha Nne =3
Elimu ya juu =4
Nyingine eleza =5 _____

Q7 Vipengele vikuu vinavyosababisha idadi ya watu kuongezeka katika kijiji hiki (eleza kila kipengele na sababu zake) Kwa mfano: Uhamiaji, ajira na watu kuzaliana)_____

MFUMO WA KAYA

Q8 Mahali nyumba iliko: (Mtafiti kuchunguza):
Karibu na Msitu =1, Katikati ya kijiji =2, Mbali na msitu = 3 _____

Q9 Aina ya ujenzi wa nyumba ya anayehojiwa

1. Paa la nyasi na ukuta wa tope 2.Paa la nyasi na ukuta wa tofali
3. Paa la bati na ukuta wa tope 4. Paa la Bati na ukuta wa tofali

Q10 Hali halisi ya umiliki wa nyumba
Anaimiliki =1
Anaimili na ndugu zake =2
Amepanga =3
Amepanga kutoka kwa taasisi =4
Mlinzi =5

Q11 Jinsia ya Mlimili: Mme =1; Mke =2

UHAKIKA WA UPATIKANAJI WA CHAKULA

Q 12 Hali ya upatikanaji wa chakula ikoje kwenye kaya yako?
1 Nzuri ( ); 2 Inaridhisha ( ); 3 Mbaya ( )

Kama ni mbaya : Ni nini chanzo chake? (Eleza) what are the causes?
.....
.....

Q 13 Unapata milo mingapi kwa siku? 1 Mara tatu ( ); 2 Mara mbili ( ); 3 Mara moja ( )

Q 14 Kwa kipindi cha miaka mitatu iliyopita hali ya chakula kilikuwaje hapa kijijini? How is the 1 Nzuri ( ); 2 Miaka mingine mbaya ( )

Eleza sababu ya uhaba wa chakula.....
.....

Q 15 Unafanya nini wakati wa uhaba wa chakula?
1._____
2._____
3._____

SHUGHULI ZA KIUCHUMI NA KIPATO CHA KAYA

Q 16 Ukizingatia kwamba mradi uko maeneo ya vijijini kwenye shughuli za kilimo, je ni mazao gani ya biashara unalima? Tafadhali yaorodheshe:

_____ _____ _____ _____
_____ _____

Q 17 Shughuli kuu ya kiuchumi familia yako inayojishughulisha nayo ni ipi?

_____ _____ _____ _____
_____ _____ _____ _____

Q18 Kwenye kaya yako ni watu wanangapi wanachangia kipato?
Namba ya wanaume ____Namba ya wanawake _____ Jumla _____

Q19 Kutokana na shughuli zako za kiuchumi, kipato chako kwa mwezi ni shilingi ngapi? ____

Q 20 Je unampango wa kubadilisha shughuli zako za kiuchumi na kufanya kitu kingine hapo baadaye?
1 Ndiyo ( ); 2 Hapana ( ); 3 Sijaamua bado ( )

Q 21 Kama jibu ni ndiyo, Shughuli ipi?

_____

Q 22 Una soko la uhakika la mazao yafuatayo?

Mazao	Upatikanaji wa Soko *1 = Nzuri 2= Wastani 3= Mbaya*	Wachuuzi *1=watu binafsi 2=Ushirika 3= wengine*	Malipo *1=Hapo kwa hapo 2= yanachelewa*	Bei *1= nzuri 2= mbaya*
Mahindi				
Iliki				
Chai				
Njegere				
Maharage				
Ndizi				
Kahawa				
Miwa				
Mbogamboga				
Nyingine				

UFUGAJI WA SAMAKI

Q. 23 Je una mabwawa ya samaki 1. Ndiyo( ); 2. Hapana ( )

Kama hapana : Unayo nia ya kufuga? 1. Ndiyo ( ); 2 Hapana ( )

Q24 Ulishawahi kupata mafunzo ya ufugaji wa samaki? 1 Hapana ( ); 2 Ndiyo ( )
Kama hapana : Unadhani ni wazo zuri na ungependa kushiriki? 1. Ndiyo ( ); 2 Hapana ()

Ufugaji wa Nyuki

Q 25 Unajua chochote kuhusu ufugaji wa nyuki ? 1 Ndiyo ( ); 2. Hapana ( )

Kama hapana: Ungependa kujishughulisha na ufugaji wa nyuki? 1Ndiyo ( ); 2 Hapana ( )

Q 26 Wewe ni mwanachama wa kikundi cha wafugaji nyuki ? 1 Ndiyo ( ); 2. Hapana ( )

Kama ndiyo: Unayo mizinga mingapi? _____

Unapata shilingi ngapi kwa mwaka kutokana na bidhaa za nyuki? ----------

Q 27 Ulishapata mafunzo ya jinsi ya kufuga nyuki? 1 Ndiyo ( ); 2 Hapana ( )

UPATIKANAJI WA MIKOPO MIDOGOMIDOGO

Q28 Unashiriki kwenye mikopo midogo midogo kama (saccos vikoba) 1. Ndiyo ( ); 2.Hapana ( )

Kama hapana: Toa maelezo kuhusu hiyo mikopo hapo chini;

_____

MASWALA YA JINSIA

Q 29 Je mnaendeleza mfumo wa asili wa ugawaji wa majumu kwa kufuata umri na kinsia kwenye jamii yenu?
1 Ndiyo ( ) 2 Hapana ( ) Kwa vipi? _____

Q 30 Je unafikiri ni matatizo yapi ya kijinsia mnayokumbana nayo katika jamii yenu?

Tatizo	*Chanzo cha tatizo*
_____	_____
_____	_____
_____	_____

Q 31 Unaweza kuweka nafasi ya mwanamke kwenye ngazi ipi katika jamii yenu?
1 Juu ( ); 2 inaridhisha ( ); 3 Chini( )

Q 32 Unaweza kuorodhesha nafasi za uongozi walizonazo wanawake hapa kijijini kwenu?
_____ _____ _____

UPATIKANAJI NA MATUMIZI YA MAJI

Q 33 Ni kipi chanzo chako cha maji ya matumizi ya nyumbani kila siku?
1 Maji ya bomba ( ); 2 Maji ya mvua ( ); 3 mtoni/vijito ( ); 4 Chemchem ( ) 5 Nyingine (Eleza)
_____

Q 34 Inakuchukua masaa mangapi kuchota maji kwenda na kurudi?
_____Dakika

Q 35 Kuna wakati kunahifadhi maji kwenye kaya yako? Ndiyo = 1 Hapana = 2
Kama ndiyo. Kwa nini? Eleza _____

Q 36 Wewe ni mwanachama wa kikundi cha watumiaji maji? 1. Ndiyo ( ); 2 Hapana ( ) __

Q 37 Umeshapata mafunzo yeyote yahusuyo usimamizi wa vyanzo vya maji na jinsi ya kusimamia usambazaji wa maji?
1 Ndiyo ( ); 2. Hapana ( )

Q 38 Matatizo gani kaya yako inapata kutokana na upatikanaji wa maji?

Tatizo	*Chanzo cha tatizo*
_____	_____
_____	_____

Q 39 Kwenye kaya yako ni nani anachota maji?
Mme =1 Mke =2 Watoto =3
Watoto na wanawake =4 wengine eleza =5

Q 40 Una mfumo wa kuvuna maji ya mvua? 1. Ndiyo ( ); 2 Hapana ( )
Kama ndiyo: Unavunaje maji ya mvua?
_____

USAFI WA MAZINGIRA NA AFYA YA JAMII

Q41 a) Unadhani maji unayotumia ni safi na salama?
Ndiyo =1; Hapana =2); Sijui =3

b) Kama jibu ni ndiyo. Ni jinsi gani unafanya maji ambayo si safi na salama kabla ya kunywa

Kuchemsha	=1
Kuchuna	=2
Kuweka dawa	=3
Sifanyi chochote	=4
Nyingine (eleza)	= 5

c) Je unafikiri kuna mahusiano kati ya ubora wa maji na maradhi unayoyapata kwenye kaya yako?

(Ndiyo =1; Hapana =2 Sijui = 3) _____

Q42 Unatumia choo cha aina ipi katika kaya yako?

Choo cha ndani	=1
Choo cha shimo	=2
Choo cha ndani na cha shimo	=3
Choo cha shimo kwa jirani	=4
Maporini	=5

Q 43 Ni maradhi gani yanawasumbua familia yako yatokanayo na matumizi ya maji?

_____

Ni naji waathirika wakuu (Watoto = 1;watu wazima = 2); wote = 3

Q 45 Ni ni kifanyike ili kutatua hili tatizo?

MATUMIZI YA KILIMO MISITU NA ONGEZEKO LA MATUMIZI YA KILIMO CHA KISASA

Q46 Je unalima kilimo misitu na kilimo cha kisasa? 1 Ndiyo ( ); 2 Hapana ( )

Q 47 Kwenye kijiji hiki kuna vikundi vya wakulima? 1. Ndiyo ( ); 2 Hapana( ); 3 Sijui ( )

Q 48 Kama jinu ni ndiyo, wewe ni mwanachama? 1 Ndiyo ( ); 2 Hapana ( ) _____

Q 49 Umeshasikia kuhusu uhifadhi wa kilimo cha kisasa? 1 Ndiyo ( ); 2 Hapana ( ) _____

Q 50 Kama ndiyo, je unajihusisha na kilimo cha kisasa cha kuhifadhi mazingira?
1 Ndiyo ( ); 2 Hapana ( ) _____

Q 51 Mbinu gani unatumia kutoa magugu kwenye shamba lako kabla ya kupanda mazao?

1. Kufyeka na kuchoma ( )
8. Kuchoma na kuotesha ( )
9. Kulima na kuacha magugu yaoze ( )
10. Kulima bila kuchoma ( )
11. Kulima kwa kawaida ( )
12. Kutandika majani ( )
13. Nyingine (eleza) _____

Q 52 Unalima kilimo cha fallowing? 1 = Ndiyo ( ); 2 Hapana ( )

Q 53 Eleza sababu ya kutumia fallowing_____

Q 54 Kuna uhaba wa ardhi kwenye kijijini chenu? 1 Ndiyo ( ); 2 Hapana ( )

Kama ndiyo, kwa nini? _____

Q 55 Kunatokea mmomonyoka wa ardhi kwenye shamba lako?

1 Ndiyo( ); 2 Hapana ( ); 3 Wakati mwingine ( )

Q 56 Kama ndiyo, ni uharibifu gani wa ardhi unatokea?

1. Sheet erosion ( )
5. Rill erosion ( )
6. Gullies ( )
7. Mmomonyoko wa ardhi ( )

Q 57 Unazuiaje shamba lako? _____

Q 58 Kuna uharibifu wa misitu kwenye kijiji chenu?

1 Ndiyo ( ); 2 Hapana ( ); 3 Sijui ( )

Q 59 Unatumia maji kwa kilimo cha umwagiliaji? 1 Ndiyo ( ); 2 Hapana ( )

Kama ndiyo, ni mbinu zipi unatumia kwa ajili ya umwagiliaji?

1 Surface (furrow) irrigation ( ); 2 sprinkler ( ); 3 Matone ( ) 4 mafuriko ( ); 5 Nyingine Eleza_____

Q 60 Je maafisa wagani wafuatao wanawatembelea mara kwa mara?

No	Maafisa wagani/wakujitolea	Mara kwa mara	Mara chache	Hakuna	Kiasi	Hakuna maafisa wa namna hiyo
1	Kilimo					
2	Ufugaji					
3	Maendeleo ya Jamii					
4	Misitu(watumishi wa TFCG)					
5	Wengine					

UPATIKANAJI WA KUNI NA UPANDAJI WA MITI

Q 61 Ni nini chanzo kikuu cha nishati kwenye familia yako

1. Kuni ( ) 3. Mfuta ya taa ( )
3. Mkaa( ) 4. Nyingine (Eleza)_____

Q 62 Ni nini chanzo kikuu cha kuni?

2 Ardhi ya kijiji ( ) 2. Sehemu binafsi ya kuni ( ) 3. Msitu uliooteshwa ( )
2. Hifadhi ya misitu ( ) 5.Nyingine (Eleza) _____

Q 63 Je una sehemu yako binafsi ya kupata kuni? 1. Ndiyo ( ); 2 Hapana( )

Q 64 Je wewe ni mwanachama wa kikundi cha upandaji miti? 1. Ndiyo ( ); 2 Hapana ( ) ____

Q 65 Je umewahi kupata mafunzo kuhusu upandaji miti kutoka TFCG?

1. Ndiyo ( ); 2 Hapana ( )

_____

Asante kwa ushirikiano wako, Je una swali lolote au maoni?