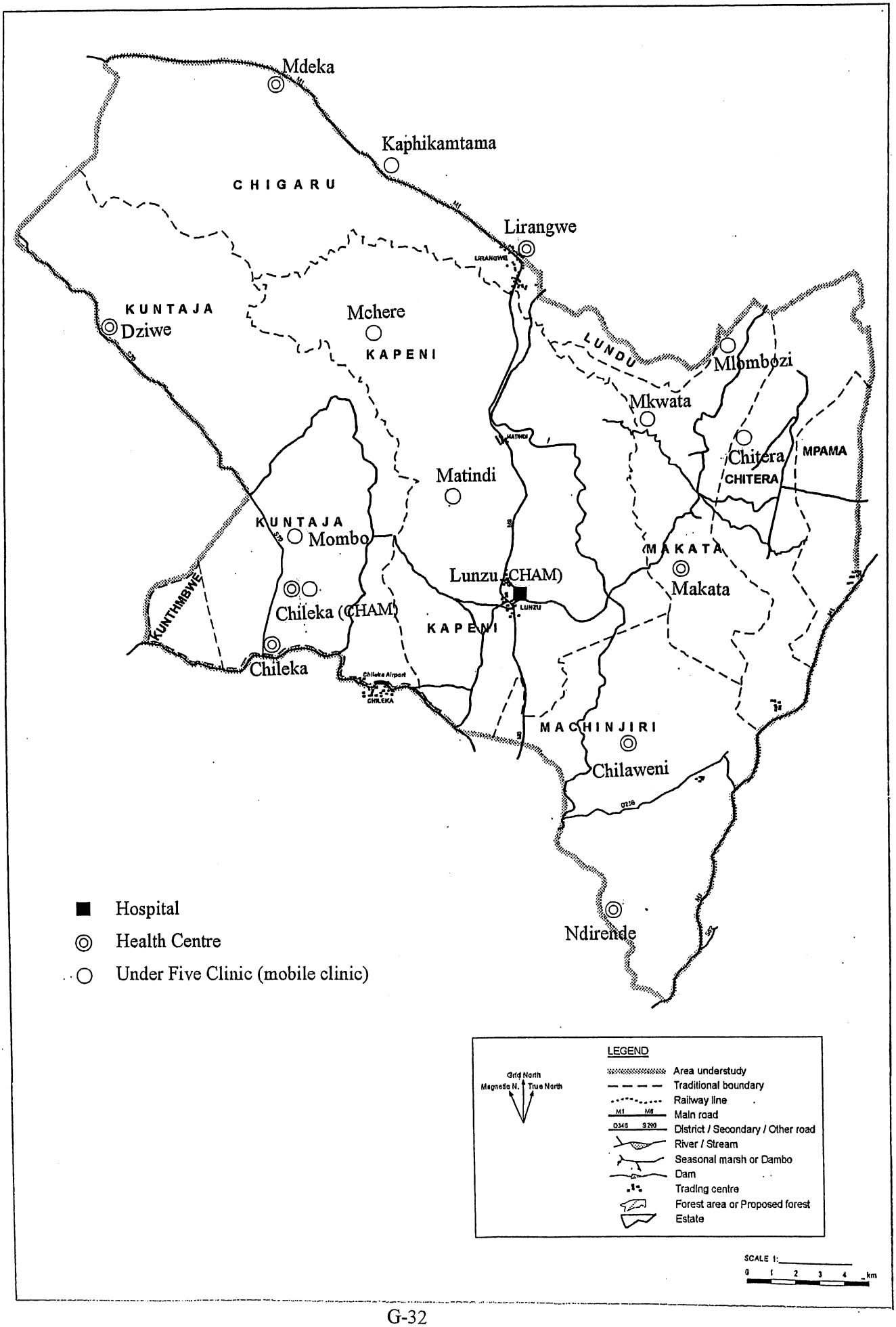
Annex G.7 Locations of Health Centres and Clinics in the SA



Annex G.8 Results from Household Survey

(a) General Information

- 56% of the respondents were female and 46% were male.
- The average age of the respondents was 47.8 years old with a range of 20 to 86 years old.
- Ethnically, 33% of the respondents were Yaos, 27% were Ngonis and 25% were Lomwes (Table G8.1).

Table G8.1 Ethnic Groups of the Respondents

Ethnic Groups	No. of Respondents	%
Yao	54	33.3
Ngoni	44	27.2
Lomwe	41	25.3
Sena	2	1.2
Chewa	8	4.9
Nyanja	6	3.7
Mang'anja	4	2.5
Tumbuka	2	1.2
Shona	1	0.6
Total	162	100

- 83% of the respondents were Christian and 14% were Muslim. The rest were non-believers.
- For the lineage system, 81% of the respondents were matriarchal and 18% were patriarchal (one respondent declined to answer).
- The household size ranged from 1 to 14 with the average of 5.2.
- 75% of the households were male-headed and the 25% were female-headed.
- The mean age of household heads was 51.4 years old.
- 56% of the respondents were born in the village of the current residence and the 44% who were not born in the villages came in mostly because of marriage as indicated in the table below (Table G8.2).

Table G8.2 Reason for moving to the current village

Reasons	Number and Percentage of Respondents					
	Male Respondents		Female Respondents		Total	
	No.	%	No.	%	No.	%
By marriage	30	69.8	10	35.7	40	56.3
Immigration	7	16.3	11	39.3	18	25.3
Others	6	14.0	7	25	13	18.3
Total	43	100	28	100	71	100

- Except one household in TA Machinjiri, all the sample households were engaged in either

subsistence or commercial farming.

- For the main occupation of the household heads, the majority (78%) indicated farming. Other major occupations were private business (8%), salary worker (7%) and non-farming casual labour (4%) while 10% of the household heads had no job. Among the household heads who had a side job the most common job was private business, though the majority (62%) had none. (Table G 8.3)

Table G8.3 Main and Side Occupations of the Household Heads

Occupation	Main Occupation		Side Occupation	
	No of respondent	%	No of Respondent	%
Farming	126	77.8	20	12.3
Private Business	14	8.6	24	14.8
Permanent Employment	11	6.8	1	0.6
Civil Officer	1	0.6	2	1.2
Casual Labour (farming)	1	0.6	6	3.7
Casual Labour (non-farming)	7	4.3	9	5.6
No Job	2	1.2	100	61.7
Total	162	100	162	100

- 25% of the household heads had no formal education at all. 69% had some primary education, though only 16% completed primary school (Table G8.4).

Table G8.4 Education Level of Household Head

Education Level	Male HH Head		Female HH Head		Total	
	No	%	No	%	No	%
No formal education	18	14.9	22	53.7	40	24.7
Some years in primary school	74	61.2	12	29.3	86	53.1
Complete primary school	19	15.7	7	17.1	26	16.1
Some years in secondary school	7	5.8	0	0	7	4.3
Complete secondary school	1	0.8	0	0	1	0.6
Complete vocational school	1	0.8	0	0	1	0.6
Don't know	1	0.8	0	0	1	0.6
Total	121	100	41	100	162	100

- Among the 835 household members (including the household heads) of sampled households, 40.3% were under the age 15 years old (Table G8.5) and 48% were either in school or below school age.

Table G8.5 Age Groups of Members of Sample Households

Age Group	Number of Household Members	%
Less than 4 years old	92	11.0
5 – 9 years old	95	11.4
10 – 14 years old	110	13.2
15 – 19 years old	118	14.1
20 – 24 years old	75	9.0
25 – 34 years old	61	7.3
35 – 44 years old	51	6.1
45 – 54 years old	62	7.4
55 – 64 years old	36	4.3
65 – 74 years old	24	2.9
75 – 84 years old	10	1.2
Over 85 years old	4	0.5
Don't know	97	11.6
Total	835	100

(b) Farm Economy

- The main sources of cash income included selling farm products, income from private businesses and wages from temporary jobs (Table G8.6).

Table G8.6 Sources of Cash Income

Source of Cash Income	Primary Income		Secondary Income		Third Income		Total		Mean Annual Income (MK)	
	No.	%	No.	%	No.	%	No.	%	MK	N*
Selling Farm Products	46	28.4	33	20.4	3	1.9	82	50.6	4900	76
Private Business	38	23.5	13	8.0	4	2.5	55	34.0	5300	49
Wages from Temporary Jobs	32	19.8	5	3.1	1	0.6	38	23.5	4400	33
Remittances from Family	9	5.6	16	9.9	3	1.9	28	17.3	2200	24
Selling Poultry/Livestock	7	4.3	15	9.3	4	2.5	26	16.0	2800	25
Salary from Permanent Jobs	16	9.9	1	0.6	1	0.6	18	11.1	16000	16
Selling Fish	2	1.2	1	0.6	0	0	3	1.9	3100	3
Selling other Products	7	4.3	6	3.7	2	1.2	15	9.3	4700	14
Others	5	3.1	6	3.7	1	0.6	12	7.4	5100	11
None	0	0	66	40.7	143	88.3	-	-	-	-
Total	162	100	162	100	162	100	-	-	-	-

"Primary Income" means the largest income source in the household. "No." indicates the number of households which had the primary income from the given source. "Secondary Income" means the second largest income source in the household. "Third Income" is the third largest. Not all the households had secondary or third income sources.
*N indicates the number of respondents who indicated the amount of cash income. The average income is calculated only with the amounts given by those respondents.

- The annual cash income of a household varied from MK550 to MK79,200 with an average of MK9,200 (among the 139 respondents who indicated the amount).
- 80% of the households had at least one member who was getting an income from sources other than farming.
- Income sources other than farming included small-scale income generating activities such as food

production (sweets and buns), beer brewing, poultry/livestock rearing, fuelwood and charcoal production, weaving mats and baskets, vendor activities and so on (Table G8.7).

Table G8.7 Income Generating Activities

Activities	Number of Household
Food Production (sweets, buns, etc.)	22
Poultry and Livestock Rearing	13
Beer Brewing	12
Selling Fuelwood	6
Charcoal Production	6
Handicraft (mats, baskets, etc.)	6
Vendor Business	4
Selling Fish	1
Brick Production	1

- For the household expenditures, food (MK4,400) was the highest item of expenditure for 88% of the households. Agricultural inputs (MK2,800) and repayment of debt (MK2,300) were the next highest in terms of cash amount. Food, clothes, medical expenses, agricultural inputs and children's education were mentioned as expenditure items by many of the households (Table G8.8).

Table G8.8 Main Items of Household Expenditure

Expenditure Items	Number of Households					Mean Expenditure	
	Highest Expenses	Second Highest Expenses	Third Highest or Other Expenses	Total No.	Total %	MK	N*
Food	139	13	6	158	97.5	4400	138
Clothes	2	36	69	107	66.0	1000	94
Children's Education	9	24	35	68	42.0	1500	63
Medical Expenses	3	14	60	77	47.5	800	72
Repayment of Debt	0	4	8	12	7.4	2300	10
Agricultural Inputs	4	30	34	68	42.0	2800	62
Transport	1	4	45	50	30.9	1000	49
Others	6	32	33	71	43.8	1900	70

*N indicates the number of respondents who indicated the amount of cash income. The average income is calculated only with the amounts given by those respondents.

- The annual expenditure of the household varied from MK550 to MK71,800 with the average of MK8,760 (among the 140 respondents who indicated the amount).
- Credit schemes available in the SA were micro-finance, normally targeted to groups, such as farmers' clubs and income generating groups. Only 14% of the sample households were utilising credit systems excluding borrowing money from family and relatives (Table G8.9).

Table G8.9 Use of Micro-finance Schemes

Sources	No. of Household	%
MRFC (Malawi Rural Finance Company)	6	3.7
APIP (Agricultural Productivity Improvement Project)	5	3.1
FINCA (Foundation for International Community Assistance)	5	3.1
SEDOM (Small Enterprise Development Organization of Malawi)	3	1.9
NABW (National Association of Business Women)	2	1.2
WWB (Women's World Banking)	1	0.6
SMEF (Small and Medium Enterprise Fund)	1	0.6
(Sub total)	(23)	(14.2)
Loans from family and relatives	13	8.0
No Use	130	80.2
Total	162	100.0

- Credit was mainly used for agricultural inputs such as fertiliser and seeds, starting or expanding businesses and buying food (Table G8.10).

Table G8.10 Use of Credit

Use	Number of Households	%*
Starting or Expanding Business	12	33.3
Fertiliser	10	27.8
Food	8	22.2
Seeds	6	16.7
Medical Expenses	3	8.3
Children's Education	2	5.6
Repayment of Debt	1	2.8

*Among the 36 respondents who used credit schemes (including borrowing money from family and relatives).

- Among the 31 respondents who indicated the amount of money borrowed (including that from family and relatives), an average of MK2,100.was borrowed in the 1998-1999 period.
- The two major reasons stated for not using credit schemes were that people were afraid of borrowing and that no lending institution was available in the area (Table G8.11).

Table G8.11 Reasons for not Using Credit Schemes

Reasons	Number of Respondents	%*
Afraid of Borrowing	71	54.6
No Lending Institution in the Area	26	20.0
Bureaucratic Procedures	9	6.9
No Collateral	7	5.4
No Guarantor	1	0.8
Have Enough Money	1	0.8
Others	15	11.5

*Among the 130 respondents who did not use credit schemes (including borrowing money from family and relatives).

(c) Drinking and Domestic Water

- The main sources of drinking water were boreholes, rivers and shallow wells (Table G8.12). Over 40% of the households depended on rivers and shallow wells for drinking water.

Table G8.12 Sources of Drinking and Domestic Water

Sources	Rainy Season		Dry Season	
	Household No.	%	Household No.	%
Borehole	89	54.9	86	53.1
Shallow Well	20	12.3	23	14.2
River	45	27.8	45	27.8
Pond	1	0.6	1	0.6
Spring	1	0.6	1	0.6
Tapped Water	6	3.7	6	3.7
Total	162	100.0	162	100.0

- Only 19% of the respondents boiled water before use.
- Water collection was predominantly a job for women and girls, which was so for 96% of the households (Table G8.13).

Table G8.13 Responsibility of Water Collection

Responsibility	Number of Households	%
Man	1	0.6
Boy	3	1.9
Woman	106	65.4
Girl	45	27.8
Women and Girl	5	3.1
Not Fixed	2	1.2
Total	162	100

- The time used to go to a water source (one way) varied from 1 minute to 30 minutes with an average of 10 minutes. On average water had to be collected 4 times per day, meaning that an average of 80 minutes a day was used for fetching water excluding the time needed for water

collection at the source.

- 49% of the households indicated that water was sufficient throughout the year. For 42%, water was mostly sufficient but sometimes not sufficient, and the remaining 9% said that water was not sufficient most of the time.

(d) Home Energy

- The major fuels used were wood for cooking and heating and kerosene for lighting. For cooking, 86% of the households used fuelwood, 12% used plant residues, such as pigeon pea steams and maize stalks, and 2% used charcoal (Table G8.14).

Table G8.14 Energy Source

	Cooking		Heating		Lighting	
	Household No.	%	Household No.	%	Household No.	%
Fuelwood	140	86.4	139	85.8	0	0.0
Plant Residue	19*	11.7	20	12.3	0	0.0
Charcoal	3	1.9	3	1.9	1	0.6
Kerosene/Paraffin	0	0.0	0	0.0	161	99.4
Total	162	100.0	162	100.0	162	100.0

*Includes two respondents who used wood supplemented by plant residues.

- 86% of those who used fuelwood obtained fuelwood from their own harvest (Table G8.15) and the rest mainly purchased it at MK23 a bundle.

Table G8.15 Sources of Wood

Source	Number of Households	%
Own Harvest	122	85.9
Purchase	18	12.7
Combination of Both	2	1.4
Total	142	100

- It takes an average of 3 hours per week per household to collect wood, though the time needed varies from 1 hour to 8 hours depending on the household. On average 2.7 bundles (34Kg) of wood are used per week per household for cooking and heating.
- As with water, wood gathering is predominantly a job for women and girls (Table G8.16).

Table G8.16 Responsibility of Wood Collection

Responsibility	Number of Household	%
Man	12	9.7
Boy	3	2.4
Woman	78	62.9
Girl	22	17.7
Women and Girl	3	2.4
Not Fixed	6	4.8
Total	124	100

- For the availability of fuelwood, 24.7% indicated that fuelwood is "easily available" while the rest indicated either "not so easy, but available" or "not sufficient" (Table G8.17).

Table G8.17 Wood Availability

Availability	Number of Households	%
Easily Available	40	24.7
Not so easy, but available	62	38.3
Not sufficient	57	35.2
Others	1	0.6
Don't know	2	1.2
Total	162	100

- The majority of the households (86%) knew about an improved ceramic cooking stove, though only 16% of the households were using one. The major reasons for not using it were "not available", "expensive" and "no need".

(e) Food

- The food subsistence level is low except for maize, which is the basic staple food of the country. 83% of the households indicated that maize come from their own production, and respectively for cassava, vegetables and fruit, 57%, 46% and 26% of the households were able to self-produce for family consumption (Table G8.18). For eggs, meat and fish, the figures were as low as 16%, 6% and 1%, respectively.

Table G8.18 Supply Food Items from Own Harvest

Food Items	Number of Households	%
Maize	134	82.7
Cassava / sweet potato	93	57.4
Rice	6	3.7
Vegetables	74	45.7
Fruit	43	26.5
Meat	9	5.6
Fish	2	1.2
Eggs	25	15.4

- The most common source of animal protein for the households was fish (this was mostly small fish like *kampeta*, *matemba* and *usipa*) followed by chicken, eggs and goat meat. On average animal protein foods were eaten twice a week.

(f) Sanitation, Health and Hygiene

- 91% of the households indicated that they had a toilet (pit latrine) within the house compound.
- The most common diseases were malaria, diarrhoea and coughing (Table G8.19).

Table G8.19 Diseases Household Members have Suffered for the Past One Year

Diseases	Number of Households	%
Malaria	127	78.4
Diarrhoea	85	52.5
Coughing (respiratory infection)	73	45.1
Headache	42	25.9
Cold	13	8.0
Skin Disease	13	8.0
Rheumatism	10	6.2
Cholera	7	4.3
Stomach-ache	5	3.1
AIDS	5	3.1

- 78% of recent child-births took place at a hospital or a clinic (Table G8.20) and 96% of the delivery (including home delivery) were assisted by a TAB or a trained midwife (Table G8.21).

Table G8.20 Place of Child Delivery

Place	Number of Households	%
Hospital/Clinic	75	78.1
Home	20	20.8
Others	1	1.0
Total	96	100

Table G8.21 Assistance with Child Delivery

Assisted by	Number of Women	%
Traditional Birth Attendant (TAB)	16	16.5
Trained Midwife	76	78.4
None	5	5.2
Total	97	100

- 26% of the sample households had at least one member who was currently practising a family planning method. The most common method was Depo Provera (31%) followed by traditional methods, surgical methods for women, condoms and pills (Table G8.22).

Table G8.22 Methods of Family Planning

Methods	Number of Households	%
Injection (Depo Provera)	13	30.2
Traditional Method	9	20.9
Surgical Method (women)	7	16.3
Condoms	5	11.6
Pills	4	9.3
Surgical Method (men)	1	2.3
Loop/Coil	1	2.3
Don't Know	3	7.0
Total	43	100

(g) Community Activities

- The most important organizations appeared to be different types of religious groups, followed by Village Development Committees (VDCs) and Farmers' Clubs (Table G8.23).

Table G8.23 Important Community Organizations

Organizations	Number of Households	%
Religious Groups	98	60.5
VDCs	55	34.0
Farmers' Clubs	38	23.5
Health Committees	22	13.6
Women's Groups	21	13.0
Political Parties	17	10.5
None	10	6.2

- 62% of the respondents indicated that they belonged to some of the organizations. 40.7% of them belonged to a religious group.
- High on the priority list of items to be improved in the community were the drinking water supply (65%) and health facility (65%), followed by the provision of credit schemes, improvement of agricultural technology, food security, road and bridges and afforestation (Table G8.24).

Table G8.24 Facilities Needed in the Communities

Facility	First Priority		Second Priority		Third Priority		Total	
	No	%	No.	%	No.	%	No.	%
Drinking Water Supply	70	43.2	23	14.2	12	7.4	105	64.8
Health Facility	40	24.7	44	27.2	21	13.0	105	64.8
Credit Scheme	9	5.6	11	6.8	29	17.9	49	30.2
Agricultural Technology	10	6.2	20	12.3	13	8.0	43	26.5
Food Security	13	8.0	10	6.2	16	9.9	39	24.1
Road and Bridge	8	4.9	8	4.9	11	6.8	27	16.7
Afforestation	1	0.6	7	4.3	14	8.6	22	13.6
Maize Mill	3	1.9	5	3.1	12	7.4	20	12.3
Security	1	0.6	7	4.3	9	5.6	17	10.5
Education Facility	2	1.2	10	6.2	5	3.1	17	10.5
Transport	4	2.5	4	2.5	6	3.7	14	8.6
ADMARC	0	0	4	2.5	6	3.7	10	6.2

- Among assistance organizations, MASAF was ranked highest, followed by FINCA, World Vision, NABW, MRFC and governmental organizations.

(h) Landholding and Land Tenure

- Villagers had no accurate knowledge or concern on the size of their land. They usually answered in such a way as "one acre" or "two acres". As the survey did not include the actual measurement of the respondents' land, the following results should be treated cautiously. Their stated area appeared to be larger than the actual.
- Of the 145 respondents who indicated the total amount of their land, the average total landholding per household was 1.6 ha (Table G8.25).

Table G8.25 Average Landholding Size by Male-headed and Female-headed Households

Male-headed Households		Female-headed Households		Total	
Mean Landholding Size (ha)	Number of Households	Mean Landholding Size (ha)	Number of Households	Mean Landholding Size (ha)	Number of Households
1.78	109	1.25	33	1.60	142

- The average size of farmland was 1.1 ha.
- Around 40% of the respondents had a dambo (a low lying area usually with high water table along a river) while only 18% had an area of grass field and woodlot (Table G8.26).

Table G8.26 Type of Land and Mean Landholding Size

Type of Land	Mean Landholding Size (ha)	Number of Respondents
Farmland	1.08	146
Dambo	0.08	152
Grass Field	0.16	156
Woodlot	0.08	156
Homestead	0.2	148
Non-arable Land	0.004	162
Others	0.02	162

- 78% of the respondents indicated that they had enough land to support the family.
- . Land was mainly inherited from the mother of the respondent (46%) and from the mother-in-law (16%). 14% of the respondents, mainly those who had immigrated to the village, stated that the land was given to them by the village headman/woman.
- 14% of the respondents rented a plot of farmland. Of those who rented land, 45.5% rented from other villagers and 40.9% rented from family or relatives.
- Land boundaries were mainly identified through history/custom (51%) and by physical marks (48%).

(i) Agriculture

Livestock

- The most common livestock kept were goats and chickens. 42.0% of the households kept (usually 3 or 4) goats and 61.7% kept chickens. The number of chickens kept was usually less than 10, though one farmer in TA Chigaru kept over 500 chickens. Only 14 households kept cattle, 15 households some pigs and 14 households some pigeons. Some livestock theft cases including cattle and goats were reported. (Table G8.27)

Table G8.27 Livestock

Type of Animal	Number of Households (1)	Number of Animals Kept		Average Number of Animals Kept for	
		Minimum	Maximum	(1)	All Households
Cattle	14	1	10	4.1	0.36
Goat	68	1	10	3.6	1.50
Sheep	2	2	7	4.5	0.05
Pig	15	1	6	2.2	0.20
Turkey	4	1	5	3.0	0.07
Pigeon	14	2	40	11.0	0.95
Chicken	100	1	535	14.7	9.07
Duck	13	1	9	3.7	0.30
Rabbit	2	2	6	4.0	0.05
Guinea Pig	1	8	8	8	0.05

Wet Season Farming

- The average farmland was 1.1 ha and the planted area was 1.0 ha, implying that there was almost no room to let any of the farm plot to remain fallow in order to recover its fertility.
- The most common crops grown were maize (local and hybrid) together with pigeon peas and/or groundnuts and/or soy beans (mixed cropping). Various other crops, such as sorghum, cassava, sweet potatoes, tobacco and vegetables, were also grown by some households.
- Irrigation was not practised during the wet season.
- Maize grown in the wet season was mainly for home consumption unless there was a surplus, while other crops were often for sale.

Dry Season Farming

- 39.5% of the households stated that they cultivated a very small area (usually less than 0.2 ha) in the dry season.
- Mostly, vegetables, sweet potatoes and sugar cane were grown by using rivers and wells for irrigation.
- In most cases a part, if not all, of the irrigated products are sold, indicating that dry season farming is generally an income generating activity.

General Farming

- The majority of the households had their field on a gentle or steep slope (Table G8.29).

Table G8.29 Location of Crop Fields (multiple answer possible)

Location	Number of Households	%*
On Gentle Slope	97	60.2
On Steep Slope	52	32.3
Only on Flat Land	44	27.3

*Among 161 households who engaged in farming.

- 71.4% of the respondents indicated that they used chemical fertilizer for maize, though it was mainly because of the Starter Pack, a free distribution of fertilizer and hybrid maize seeds by the government, which started in 1998. Organic fertilizer was used by 27.3% of the households for maize. (Table G8.30) The main reasons given for not using organic fertilizer were that "they were not available" (46%) and that "organic fertilizer was not effective" (16%).

Table G8.30 Use of Fertilizers by Crop (multiple answers possible)

Crop	Chemical Fertilizer		Organic Fertilizer	
	Number of Households	%*	Number of Households	%*
Maize	115	71.4	44	27.3
Vegetables	14	8.7	24	14.9
Tobacco	3	1.9	1	0.6
Others	3	1.9	3	1.9

*Among 161 households who were engaged in farming.

- The use of insecticides and herbicides was minimal.
- The majority (95%) of the households practiced mixed cropping of maize and leguminous plants, such as pigeon peas and river beans (Table G8.31).

Table G8.31 Mixed Cropping of Maize and Pigeon Peas / River Beans

Mixed Cropping	Number of Households	%*
All the Field	100	62.1
Part of the Field	53	32.9
No Mixed Cropping	8	5.0
Total	161	100

*Among 161 households who were engaged in farming.

- The common farming techniques were an application of cut residues of previous year's crops and farmyard manure, and construction of ridges with hoes (Table G8.32).

Table G8.32 Cultivation Techniques (multiple answers possible)

Techniques	Number of Households	%*
Apply Cut Residues of Previous Year's Crops	161	100
Apply Farm Yard Manure	55	34.2
Apply Straw or Grass Mulch to Cover Field	7	4.3
Incorporate Woodlot Litter, Green Leaves, etc.	2	1.2
Make High Ridges with Hoe	133	82.6
Make Low Ridges with Hoe	76	47.2
Burn the Field before Cultivation	5	3.1

*Among 161 households who were engaged in farming.

- 40.3% of the households indicated that they hired some farm labourers (Table G8.33). Farm labourers were mainly hired for land preparation and weeding (Table G8.34). They were normally hired on a contract basis (a fixed charge for a certain job).

Table G8.33 Hiring of Farm Labourers

Hiring of Farm Labourer	Number of Households	%*
Only Men	44	27.3
Only Women	1	0.6
Both Men and Women	20	12.4
None	96	59.6
Total	161	100

*Among 161 households who were engaged in farming.

Table G8.34 Task for Hired Labourers (multiple answers possible)

Task	Number of Households	%*
Land Preparation	53	81.5
Weeding	40	61.5
Harvesting	6	9.2
Pest Control	2	3.1
Others	3	4.6

*Among 65 households who hired farm labourers.

- For the source of agricultural technology, the majority (87%) of the respondents relied on the knowledge inherited from their parents or their own experience. Only 11.2% indicated that extension workers were the important source of agricultural technology. (Table G8.35)

Table G8.35 Important Sources of Agricultural Technology

Sources	Number of Households	%*
Parents	89	55.2
Own Experience	51	31.7
Agricultural Extension Worker	18	11.2
Others	3	1.9
Total	161	100

* Among 161 households who were engaged in farming.

- 33.5% of the households indicated that there was a tendency for their field harvest to decrease year by year (Table G8.36).

Table G8.36 Change of Crop Harvest

Sources	Number of Households	%*
Fairly constant	12	7.5
Changing but little	38	23.6
Variable by weather	41	25.5
Decrease year by year	54	33.5
Increase due to fertilizer application	14	8.7
Others	2	1.2
Total	161	100

* Among 161 households who were engaged in farming.

Soil Erosion

- Soil in the fields was often observed to be washed away notably in the rainy season (Table G8.37).

Table G8.37 Observation of Soil Erosion

Observation	Number of Households	%*
Often observed in the rainy season	93	57.8
Observed but seldom	23	14.3
No, because the field is flat	18	11.2
No, because of high ridging	23	14.3
No, because of other reasons	4	2.5
Total	161	100

* Among 161 households who were engaged in farming.

Shelling and Grinding Maize

- The most commonly used methods for shelling maize were by hand (87.6%), followed by use of a sheller (Table G8.38).

Table G8.38 Method of Shelling Maize

Method	Number of Households	%*
By Hand	141	87.6
By Sheller (machine)	16	9.9
By Threshing Stick	4	2.5
Total	161	100

* Among 161 households who were engaged in farming.

- Grinding of maize was mostly done with an engine mill (69%), followed by the use of a pestle to pound manually (Table G8.39).

Table G8.39 Method of Grinding Maize

Method	Number of Households	%*
By Engine Mill	111	68.9
Manually by Pestle	45	28.0
Both	5	3.1
Total	161	100

* Among 161 households who were engaged in farming.

Marketing

- 43% of the households did not sell their farm products.
- Among those who sold farm products mostly did so at their farm/home (Table G8.40).

Table G8.40 Places for Selling Crops (multiple answers possible)

Place	Number of Households	%*
At the farm/home	49	53.8
At the market	35	38.5
At ADMARK	16	17.6

* Among 91 households who sold farm products.

- Among the 48 households who transported their products to the market, 45.8% carried them by hand or on their head, 33.3% used a bicycle (Table G8.41).

Table G8.41 Types of Transportation

Types	Number of Households	%*
Hand/head Carry	22	45.8
Bicycle	16	33.3
Pick-up	6	12.5
Truck	3	6.7
Bus	1	2.2

* Among 48 households who sold farm products.

(j) Agroforestry

- The concept of agroforestry was reportedly known by 59.3% of the households (Table G8.42), though among them only 14% acknowledged practising it (Table G8.43). Common types of agroforestry techniques were alley cropping and mixed cropping of maize with leguminous plants such as pigeon peas, *kalongonda* or *nsangu* (Table G8.44).

Table G8.42 Knowledge of Agroforestry

Knowledge	Number of Households	%
Do know the concept of agroforestry	96	59.3
Do not know the concept of agroforestry	66	40.7
Total	162	100

Table G8.43 Practice of Agroforestry*

Practice	Number of Households	%
Do practice	14	14.6
Do not practice	82	85.4
Total	96	100

Table G8.44 Techniques of Agroforestry (multiple answers possible)

Techniques	Number of Households	%*
Alley Cropping	5	35.7
Planting Farmland Hedge Trees	4	28.6
Planting Pigeon Peas, *kalongonda* or *nsangu*	5	35.7
Others	1	7.1

* Among 14 households who practised agroforestry.

- Trees and plants planted for agroforestry were listed in Table G8.45.

Table G8.45 Names of Agroforestry Trees and Plants

Local Name	English Name (Latin Name)	Number of Household
Nandolo	Pigeon Peas	3
Kalongonda	(stizolobium aterrimum)	3
Jelehele	River Beans	3
-	(glicidia sepium)	2
Bluegum	Eucalyptus	1
Mswaswa	(lenchocarpus capassa)	1
-	Lilac	1
Msangu	(acacia albida)	1
Mango	Mango	1

- The benefits of the plants, as given by the respondents, were presented in Table G8.46 together with the mean income generated by agroforestry.

Table G8.46 Benefit of Agroforestry (multiple answers possible)

Benefit	Number of Households	Mean Income	
		MK	N*
Fruit	5	300	3
Fuelwood	7	400	5
Protection from soil erosion	6	NA	-
Preserve soil humidity	2	NA	-
Preserve soil fertility	7	NA	-

* Number of respondents who indicated the amount.

- According to the respondents, it appeared that not many organizations were developing agroforestry (Table G8.47).

Table G8.47 Organizations for Developing Agroforestry

Organizations	Number of Households	%*
RDP	3	21.4
NGO	3	21.4
None	8	57.1
Total	14	100

* Among 14 households who practised agroforestry.

- Among those who practised agroforestry, complement planting, lower storey cutting and replanting were the common ways of maintaining agroforestry (Table G.48).

Table G8.48 Methods of Maintaining Agroforestry

Methods	Number of Households	%*
Complement Planting	5	35.7
Lower Storey Cutting	3	21.4
Replanting	3	21.4
Weeding	1	7.1
Coppicing	1	7.1
Watering Seedlings	1	7.1
Total	14	100

- Among 148 respondents who did not practice agroforestry, 53% had intentions of starting agroforestry. The main reason for not wanting to start agroforestry was their lack of knowledge in agroforestry (Table G8.49).

Table G8.49 Reasons for not wanting to start agroforestry

Reasons	Number of Households	%*
No knowledge	48	68.6
No land space	9	12.9
No seedlings	5	7.1
Because of termites	3	4.3
Others	5	7.1
Total	70	100

* Among 70 households who did not want to start agroforestry.

(k) Forestry

- 47.5% of the households indicated that there was a forest or woodlot that they had a right to use. Common types of forest were their own forest and community forest (Table G8.50).

Table G8.50 Types of Forest Used by Villagers

Types of Forests	Number of Households	%*
Community Forest	22	28.6
Customary Land	13	16.9
Own Forest	39	50.6
Others	3	3.9
Total	77	100

* Among 77 households who had a right to use a forest/woodlot..

- Apart from fuelwood, the most common benefits from the forest were poles and medical plants (Table G8.51).

Table G8.51 Benefits from Forests (multiple answer possible)

Benefit	Number of Households	%*
Poles	62	80.5
Medical Plants	31	40.3
Grass	9	11.7
Selling Wood and Charcoal	5	6.5
Hunting	4	5.2
Fruit	1	1.3
Bee Hives	1	1.3

* Among 77 households who had a right to use a forest/woodlot..

- Although not many respondents knew the size of the forests or the number of trees in the forest, the mean size of the forests was 1.17 ha (N=30) and the mean number of trees was 1220 (N=18). The names of trees found in those forests were listed in Table G8.52.

Table G8.52 Types of Trees found in the Forest

No.	Scientific Name	Local Name	Number of HH
1	Brachstegia speciformis	Mchenga	14
2	Bauhinia petersiana	Mphando/Mphandula	16
3	Dalbergia melanoxylen	Phingo	4
4	Brachystegia boehmii	Mombo	9
5	Combretum zehri	Chinama	6
6	Pterocarpus rotundaifolius	Mbalitsa	5
7	Lenchocarpus capassa	Chimphakasa/Chipakase	7
8	Ximenia americana Ximenia caffra	Mpinjipinji	2
9	Lenchocarpus capassa	Mswaswa	5
10	Combretum spp.	Kakunguni	1
11	Margarreta rosea	Mchenje	21
12	Eucalyptus spp	Bluegum	31
13	Afzelia quanzensis	Mkongomwa	1
14	Cordila africana	Mtondo	1
15	Ficus vali-scodae	Thundu	1
16	Cendrela toona	Sindilela	1
17	Acacia polycantha	Mthetho	1
18	Pterocarpus angolensis	Mlombwa	12
19	Senna sengueana	Mpatsolimbe	1
20	Pinus spp	Paini	2

No.	Scientific Name	Local Name	Number of HH
21	Cussonia spp.	Chamdimba	1
22	Terminalia sericea	Naphiri	17
23	Ficus sycomorus	Nkuyu	3
24	Albizia atunesiana	Mpepe	3
25	Senna simea	Keshya	6
26	Strychnos spp.	Mtsukamino	1
27	NA	Chisamba	2
28	Comretum collinum	Mdama	1
29	NA	Tsatsanje	2
30	Ricinus Comunis	Phalika	1
31	Securidaca longepedunculata	Bwazi	1
32	Albizia antunesiana	Mpepe	0
33	Brachystegia bussei	Mtwana	4
34	Pseudolachynostylis maprouneifolia	Nsolo	4
35	Melia adedracht	India	4
36	Diplorhynchus condylocarpon	Mtombozi	20
37	Acacia niegrescens	Nkunkhu	2
38	Kirkia acuminata	Mtumbu	4
39	Julbernadia grobiflora	Kokola/Nsesa	1
40	Brachystegia speciformis	Tsamba	4
41	Gliricidia sepium	Lilac	1
42	Sclerocarya birrea	Mfula	4
43	Burkea africana	Mkalati	0
44	Acacia albida	Nsangu	1
45	Lannea discolor	Chumbu	4
46	Brachystegia boehmii	Njombo	4
47	Bautinia thonningii	Chitimbe	3
48	Cussonia arborea	Mbwabwa	1
49	Lonchocarpus capassa	Mpakalasa	5
50	Pericopsis angolensis	Mbonga/mwanga	1
51	Digitaria milanjiana	Pusu	1
52	Lanchocarpus capassa	Mbakasa	2
53	Widdringtonia nodiflera	Mkungudza	1
54	Afzelia quanzensis	Ngongomwa	2
55	NA	Msambati	1
56	Kirkia acuminata	Mitumbu	1
57	Steanotaenia araliancea	Mpolowoni	2
58	Senna siamea	Keshia	3
59	NA	Kadumbe	1
60	NA	Mkoka	3
61	NA	Nazimba	1
62	Psychotria spp	Nsambe	1
63	Lonchocarpus capassa	Pakasa	1
64	Lematopsis scabiosifolia	Nakhuri	1
65	Psidium guavana	Guava	1
66	Carica papaya	Pawpaw	1
67	Mangifera indica	Mango	2
68	Avocado pears	Avocado	1
69	Vapaca kirkiana	Masuku	1
70	Litchi chinensis	Eden	2
71	Avocado pears	Pears	1

- As most of the forests were individual woodlots (not communal), they were managed by family members. For the maintenance of forests, 50.6% of the households indicated that no special care was done, though others indicated some measures of maintenance were undertaken (Table G8.53).

Table G8.53 Maintenance Methods for Forests (multiple answers possible)

Methods	Number of Households	%*
Lower Storey Cutting	14	18.2
Thinning	5	6.5
Clear Cutting	2	2.6
Complement Planting	5	6.5
Replanting	5	6.5
Weeding	5	6.5
Making Fire Breaks	10	13.0
Copicing	4	5.2
Pruning	1	1.3
Others	3	3.9
Nothing Special	39	50.6

*Among 77 households who had a right to use a forest/woodlot..

- 84.6% of the households indicated that they would like to plant more trees and the main reasons for this were to obtain fuelwood for cooking and poles for construction (Table G8.54).

Table G8.54 Purposes of Planting More Trees (multiple answer possible)

Purposes	Number of Households	%*
Fuelwood for Cooking	127	92.7
Production of Wood Poles	115	83.9
Improving Soil Conditions	66	48.2
Fuelwood for Selling	43	31.4
Fuelwood for Home Heating	42	30.7
Production of Fruits	16	11.7
Others	16	11.7

*Among 137 respondents who indicated that they would like to plant more trees.

- The major reason for not wanting to plant more trees was the lack of space for planting trees (Table G8.55).

Table G8.55 Reasons for not Planting More Trees

Purposes	Number of Households	%*
No Space for Planting	15	60
No Seeds	4	16
No Seedlings	3	12
Termites	2	8
Others	1	4
Total	25	100

*Among 25 respondents who indicated that they did not want to plant more trees.

- Though people had different opinions on the main causes of forest fire, the majority indicated "intentional fire" as being the main cause (Table G8.56).

Table G8.56 Cause of Forest Fire

Cause	Number of Households	%*
Intentional Fire	84	51.9
Accidental Fire	63	38.9
Slash and Burn	5	3.1
Others	3	1.9
Don't Know	7	4.3
Total	162	100