

E. Meri



MINISTRY OF WATER DEVELOPMENT, KENYA
MINISTRY FOR FOREIGN AFFAIRS, FINLAND

KENYA – FINLAND
RURAL WATER SUPPLY DEVELOPMENT
PROJECT IN WESTERN PROVINCE
OF KENYA

SOCIO ECONOMIC SURVEY
NORTH IDAKHO LOCATION
KAKAMEGA DISTRICT



KEFINCO

HELSINKI, FINLAND
KAKAMEGA, KENYA

W



MINISTRY OF WATER DEVELOPMENT, KENYA
MINISTRY FOR FOREIGN AFFAIRS, FINLAND

KENYA – FINLAND
RURAL WATER SUPPLY DEVELOPMENT
PROJECT IN WESTERN PROVINCE
OF KENYA

MINISTRY OF WATER DEVELOPMENT
P.O. BOX 30000, NAIROBI, KENYA
TEL: (070) 814011 ext. 141/142
FAX: (070) 814011 ext. 141/142
E-MAIL: info@kefinco.org
WWW.KEFINCO.ORG

IN: 44 0636
LO: 824 KE, WE 89

KENYA - FINLAND WESTERN
WATER SUPPLY PROGRAMME

SOCIO-ECONOMIC SURVEY REPORT
NORTH IDAKHO LOCATION

MARCH, 1989

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. ACKNOWLEDGEMENTS	2
2. INTRODUCTION	3
3. METHODOLOGY	3
4. BACKGROUND TO THE STUDY	3
5. JUSTIFICATION OF THE STUDY	4
(1) COMMUNITY DEVELOPMENT AND PARTICIPATION	
(ii) ROLE OF COMMUNITY IN THE DEVELOPMENT OF WATER SUPPLY	
(iii) HEALTH ASPECTS	5
6. SUMMARY OF FINDINGS	6
(a) WATER RESOURCES	
(b) INCOME GENERATING ACTIVITIES	7
(c) DEVELOPMENT PROJECTS	8
(d) WOMEN GROUPS AND THEIR ACTIVITIES	8
(e) RELIGIOUS GROUPS	9
(f) LOCALLY AVAILABLE RESOURCES	9
7. CONCLUSION AND RECOMMENDATIONS	13
8. ANNEXES:	
ANNEX Ia - e - GENERAL INFORMATION PER SUB-LOCATION	
ANNEX IIa - ECONOMIC ASPECTS/ACTIVITIES	
ANNEX IIb - (i) - (ii) - MARKETS AND FUNDIS	
ANNEX III- WATER SOURCES	
ANNEX IV - HEALTH AND SOCIAL ASPECTS	
ANNEX V - WOMEN GROUPS AND ACTIVITIES	
ANNEX VI - PEOPLE INTERVIEWED AND THEIR ORGANIZATIONS	
ANNEX VII - INDIVIDUALS INTERVIEWED AND THEIR ORGANIZATIONS	
ANNEX VIII - TERMS OF REFERENCE AND QUESTIONNAIRE	
ANNEX IX - BIBLIOGRAPHY	

1. ACKNOWLEDGEMENTS

This report could have been incomplete without the co-operation, thoughtful contributions and constructive suggestions from the following:-

- Programmes: - Kenya - Finland Western Water Supply Programme and Kenya - Finland Primary Health Care Programme Staff.
- Ministries: - Ministry of Water Development Officers for information on Water Supplies in Idakho Location.
- Ministry of Culture and Social Services for information on Women Groups and their activities in Idakho Location.
- Ministry of Planning for information on population.
- Office of the President - Provincial Administration staff who gave information on Administrative Structure of the Location and Development Projects.
- Field Staff - Extension Officers in Idakho Location (Veterinary and Agriculture)
- Locational Women Group Leaders for information on Women Groups.
- Community Development Assistant.
- Chiefs, Assistant Chiefs and Village Elders.
- Locational Representatives for Kefinco whose Organisation and Guidance was successful.
- Shitoli Water Supply - Water Operators.
- Communities: - Shimanyiro Women Group members.
- Mumbetsa Women Group Chair-lady.
- Shiseso Women Group members.
- Mutaho Water Project Committee.
- All respondents in the homes visited.

2. INTRODUCTION

This report is intended to highlight the hidden aspects of the Society which may be relevant to the introduction of a new Water Supply Scheme.

3. METHODOLOGY

The survey was conducted in all the five sub-locations of North Idakho Location. Five villages were identified and five homesteads were surveyed in each village giving a total of 25 homesteads per sub-location. The selection was done at random.

A questionnaire was used in these homesteads and in addition to the use of the questionnaire Chiefs, Assistant Chiefs, Women Groups, Locational Leaders, Agricultural Extension Officers, District Development Officer, Provincial Statistical Officer, Social Development Officer and Assistant Hydrologist from Ministry of Water Development were interviewed. Lastly relevant materials from the Project were utilised. Trained Survey Assistants were hired to administer the questionnaires.

The data is based on 1979 census, with teh 4% growth rate projected to 1989.

3. BACKGROUND TO THE STUDY

" It is the long-term aim of the government to provide the whole population of the country with a safe adequate supply of portable water by the year 2000. The Kenya-Finland Western Water Supply Programme aims to reach the national target in teh programme area.

The overall objective of teh Programme is to improve the Water Supply situation in the Programme area in order to achieve an improvement in General Health and Economic Development. The more specific objective is to consolidate the existing Water Supply facilities and to provide 400,000 additional inhabitants with safe, sustainabel Water supply which are compatible with the Kenya guide-lines and meet the relevant needs of local

consumers."

Reference: Programme Document December, 1988)

North Idakho being a new location in the Programme area it became important to carry out a Socio-economic Survey of this location so as to identify the Social and Economic aspects which may be relevant to the potential effects of the introduction of new Water Supply Schemes in the area.

This Socio-economic survey is intended to highlight the following aspects already listed in the terms of reference. (See Annex viii)

6. JUSTIFICATION OF THE STUDY

(i) Community Development and Participation

North Idakho is a development conscious location with several development projects whose community participation is commendable. Isulu - Shiseso Bridge was constructed by the community with some assistance from the Government.

Shiseso Health Centre was started by the Community on a harambee basis where the people contributed money, material (sand, stones etc.), ferrying water to the construction site and their labour. It was later completed by funds from West Germany. Khayega - Shimanyiro road construction was done by the community who also maintain it. Bushiangala Polytechnic was constructed and is maintained by the church of God.

Mumbetsa Polytechnic is maintained by the Community and the Ministry of Culture and Social Services. Several schools such as Mukoyani Primary and Shiamusinjiri Secondary schools were constructed on harambee basis.

From the survey findings it is evident that this location has started and continues to run several Development Projects and can therefore be relied on to provide the necessary participation to the Water Project.

(ii) Role of Community in the Development of Water Supplies

In North Idakho Location there are 3 Water Projects
namely:-

Shitoli Water Supply
Mutaho Water Project
Mukongolo Water Project

There are also 5 boreholes, 5 hand dug wells, 18 protected
springs, and 56 unprotected springs.

In Shitoli Water Project the community dug the trenches and
carried the pipes to the site. A few individuals have
been able to extend private lines to their respective homes.
They pay promptly for their water bills.

Mutaho Water Project was constructed by the Catholic Relief
Services with the community contributing money for purchase
of chemicals and maintenance.

Mukongolo Water Project was purely a self - help Project
constructed by the community.

For the few water points installed by Kenya-Finland Western
Water Supply Programme (See Annex III), the committees are
active and maintenance funds are paid in promptly.
Cleanliness around the water points is satisfactory. It
is therefore evident that the community is capable of
maintaining their water supplies.

(iii) Health Aspects

There are 2 VIP latrines constructed at Mumbetsa and
Shimanyiro Schools. The rest of the location has semi-
permanent latrines which are not very effective due to
odour that comes out as a result of poor ventilations of
the latrines. In the effort to control the Hygiene element
of every home need to have a latrine has been taken very
seriously with the help of the Chiefs Office and the Health
Officers in the area.

5. SUMMARY OF THE FINDINGS

North Idakho is in Ikolomani Division of Kakamega District. The area is hilly with Loam Soils. It has 3 main rivers with 19 tributaries.

Idakho Location is divided into five sub-locations, 50 villages with 50 village elders. The population of the location with its specific breakdown are as follows:-

POPULATION:

44,818 persons

Location - North Idakho - Chief - Mr. Caleb Itemere

<u>SUB-LOCATION</u>	<u>ASSISTANT CHIEF</u>	<u>POPULATION</u>
SHIBUNAME	MR. JOAB SHIVACHI	7,265
SHIKULU	MR. LAWRENCE KHAMATI	8,200
MUSOLI	MR. ROBERT INGONGA	7,784
SHIVAKALA	MR. LAWRENCE LUYEKU	11,285
SHISESO	MR. JOAB KHIVACHI (Ag)	10,283

WATER RESOURCES

The following are water resources from the survey findings in Idakho Location:

3 Water Projects

Shitoli Water Supply	- Ministry of Water
Mkongolo Water Project	- Community
Mutaho Water Project	- Community
Protected Springs	- 18
Unprotected Springs	- 56
Boreholes	- 5 KEFINCO
Shallow Wells	- 5 KEFINCO

Income Generating Activities

The survey findings reveal that the community is involved in Agricultural Activities. They grow crops and keep livestock. Out of the 125 respondents interviewed 64% reported to be subsistence farmers.

Agricultural Activities

Cash Crops - Coffee
 Tea
 Sugarcane

Food Crops - Maize, Beans, Bananas, Vegetables, Sweet Potatoes,
 Cassava, Millet, Fruits, Yams and Groundnuts.

Livestock - 60,703 in Location.

Additional Income come from:

- Sell of Farm Produce
- Casual/Farm Work
- Sell of Livestock
- Petty trade
- Pension
- Jua Kalis.

DEVELOPMENT PROJECTS

Within North Idakho Location the following are Development Projects the Donors, and number of people served.

<u>NAME OF PROJECT</u>	<u>DONOR</u>	<u>POPULATION</u>
1. Shiseso Health Centre	Community, Weste Germany	10,283
2. Malaika tailoring School	West Germany	145
3. Isulu - Shiseso Bridge	Community & Government	
4. Khayega - Shimanyiro Road	Community & Government	
5. Bushiangala Polytechnic	Community & Governement	750
6. Mumbetsa Polytechnic	Community	580
7. Mukoyani & Shiamusinjiri Schools	Community	785
8. Mutaho Water Project	Catholic Relief Fund and Community	1,200
9. Shitoli Water Supply	Government & Community	44,818
10. Mkongolo Water Project	Self - Help Group	500

WOMEN GROUPS AND THEIR ACTIVITIES

Within the location there are 34 registered women groups, with average membership 45 women per group, total members 1,530.

Activities

Farming	34 groups
Crafts	7 groups
Tailoring	2 groups
Pig Farming	2 groups
Entertainment	4 groups
Welfare	34 groups

Institutions

The following were identifies:-

Health Centres	3
Clinics	7
Polytechnics	2
Schools - Nursery	26
- Primary	26
- Secondary	8
Markets	5

Latrine Coverage

From the survey findings there are 2 VIP latrines at Mumbetsa and Shimanyiro, and each of the 125 surveyed homes has asemi-permanent latrine.

RELIGIOUS GROUPS

Catholic and Protestant are the only two religious groups in the location whose development role in the community is evident.

LOCALLY AVAILABLE SKILLS MATERIALS AND INDUSTRIES

FUNDIS

INDUSTRIES

74 Masons

1 Jaggery

71 Carpenters

1 Coffee Factory

1 Painter

MATERIALS AND COST

(The cost is inclusive of transport)

Bricks - 4/= per brick

Sand - 500/= per lorry

Stones - 405/= per lorry

Cement, Iron Sheets and Nails are found at Government retail price at Malinya Hardware shops.

LOCALLY AVAILABLE RESOURCES

In North Idakho most of the construction materials for construction of water points are available, sand is found in Isiukhu and Lukose rivers at 500/= per lorry. Stones are found from people's farms and are sold at 405/= per lorry. Bricks are found in the location and sold at 4/= per brick (small size) cement, pipes, iron sheets and nails are available at Malinya Market Hardware Shop at Government Controlled Price. If out of stock at Malinya the people buy from Chavakali or Kakamega Hardware Shops. (The cost is inclusive of transport)

Many skilled persons have graduated from the two Youth Polytechnics in North Idakho Location (Mumbetsa and Bushiangala). This explains the large number of Masons and carpenters as indicated in Annex II (b).

Given the locally available resources in the Location, the Project can use their materials and hire the various skills available in the area.

(ii) Women Groups Activities

- There are 34 registered Women Groups in North Idakho Location. The groups started with Welfare Activities like assisting each other during funerals, preparation of their farms, contributions for fees of the members children. Later they started other activities as follows:-

Tailoring	- 2 groups
Entertainment	- 5 groups
Crafts	- 4 groups
Farming	- 34 groups
Welfare	- 34 groups
Pig rearing	- 2 groups

The total number of members in the group are 1530 and each group has an average of 45 members.

These groups experience the following problems which make their activities not profitable to the members.

1. Marketing - Shimanyiro, Mumbetsa and Buma are all having a problem of where to sell their products. The groups are all growing Vegetables, have table-clothes and make uniforms. They do not have markets for their products.
2. Finances - These groups lack initial capital to start Income Generating Activities. Buma, Shimanyiro Mumbetsa have been able to receive loans in the form of farm inputs from Partnership for Productivity Organisation. Other groups have not got any Financial Assistance.
3. Education - Most of the members in the groups are elderly women who have little or no education at all.

4. Management Skill - Shiseso and Shikulu Women Group members have reported misappropriation of the groups funds, since a lot of the members can not read and write there is a problem of mismanagement by a few members.
- Lack of Management Skill also results in there being no proper auditing and evaluation of the activities.

(iii) Agricultural Activities.

Out of 125 people interviewed 64% are involved in subsistence farming. The crops grown and livestock kept are as follows:

1. Cash Crops - Coffee - 6.4%
tea - 3.2%
Sugarcane 3.2%
2. Food Crops - Maize - 100%
Beans - 100%
Bananas - 100%
Vegetables - 77%
Sweet Potatoes - 43.2%
Cassava - 37.6
Millet - 10%
Fruits - 8.8%
Yams - 3.2%
Groundnuts - 3.2%
3. Livestock - 60,703
- Cattle - 30,200
- Sheep - 10,003
- Goats 5,030
- Pigs 740
- Chickens 14,430

Total Livestock - 60,703.

Out of these activities the people derive some income from:

1. Sell of Farm Produce - 74%
2. Casual/Farm work - 60.8%
3. Sell of Livestock - 6.4%

(iv) Off-farm Activities:

From the 125 interviewed persons 52.8% are involved in Petty trade 20.8% are on regular employment.

From the Income Generating Activities listed above, it is possible for these people to pay for the water when supplied to them after paying for school fees as average number of children per house is 7 and average acreage of land is 11.3 acres.

CONCLUSION AND RECOMMENDATIONS

1. Improvement of Shitoli Water Supply

The Supply Scheme was supposed to serve the whole Location of North Idakho where population is 44,818 people. The supply is only serving a few villages in Shikulu, Shivakala, Musoli, Shibunama sub-locations. The Scheme is not working to capacity due to the following problems:-

- 1 - 2 Pumps have been installed instead of 4 pumps.
2. No pipes for maintenance.
3. No chemicals for purification.
4. Repair of Water Storage Tanks.

The people therefore do not get regular water. To be able to serve the whole of the Location, this Water Supply could be improved by solving the above problems.

2. Repairs and Maintenance of broken Bore-holes

Bore-holes drilled by the Project are 5 and 5 Shallow Wells

<u>Village</u>	<u>Well No.</u>	<u>Condition</u>
Shimanyiro	C - 7951	Broken
Shimanyiro	C - 7952	Proper Working Condition
Shimanyiro	-	Vandalised
Imulama		Proper working condition
Mumbetsa		Lots of grass around it

The community needs more of the Bore-holes and those broken should be repaired.

3. Protection of Existing Springs

There are 74 springs in North Idakho. 18 of them have been protected by the community and 56 are unprotected. The water from the protected springs is good and acceptable by the community. The water from the unprotected springs might require an assessment of quality with a view to protecting them if possible. About 1/3 of the population draws water from these unprotected springs.

It is recommended that all unprotected springs be protected.

4. Siting for Future Water Points

There are 5 Boreholes and 5 Shallow wells. One of these Bore-holes is outside the school's compound and it was meant for the school. It poses a big problem of management as nobody takes care of it because it is in no man's land. It is recommended that siting of future water points be improved.

5. Health and Sanitation

Out of the 125 surveyed homes each home has a semi-permanent latrine. The latrines have the problem of bad odour all the time and tend to pose a danger to drinking water when they over-flow. There are two VIP latrines constructed at Mumbetsa and Shimanyiro schools. They were constructed by Kenya-Finland Primary Health Care Programme. The people want more of VIP latrines in the location. The demonstration VIP latrines should be constructed in schools, Health Centres, Clinics, Chiefs compounds and Market places.

It is recommended that more improved sanitation activities are initiated by Ministry of Health and Kenya - Finland Primary Health Care Programme.

6. Use of Skilled Labour and Available Resources

There are 74 Masons, 71 Carpenters and 1 painter reported in the Location from Survey results. These fundis are self-employed and can be utilised by the Project when undertaking the work in the Location.

Most Construction Materials are available in the Location. Prices which include the transport to the site are listed in Annex VII No.7.

It is recommended that the available construction materials are used by the Project when undertaking work in the Location.

7. Women Group Activities

All these groups lack management skills, finances, markets and have minimal education. It is recommended that the Project looks into ways and means of assisting these groups to start up viable Income Generating Activities in addition to what they have.

An improvement of the existing Women Groups could be achieved through assisting the women solve some of their problems through:-

- finding donors to fund their Projects.
- arranging for management training and
- finding markets for their products.

8. Provision of Water to Institutions

There are 26 primary schools, 8 secondary schools, 7 clinics, 3 Health Centres, 2 Polytechnics and 5 markets. Few of these institutions have water as follows:-

- Kefinco Water Boreholes - Shimanyiro Primary School
Mumbetsa Primary School
Mwikhomo Primary School
- Shitoli Water Supply - Musoli Mixed School
Musoli Girls School
Burendwa School
Bushiangala School
Shikokho School
Matundu School
Shichinji School
Shituha School
Musingu Boys School
Shivakala Mixed School
Bushiangala Polytechnic

The rest do not have any water. The 3 Health Centres are on Shitoli Water Supply. The Markets have no water supply.

It is recommended that the Institutions which have no water and those with unreliable water supplies be given priority during siting.

ANNEX I (a)GENERAL INFORMATION

District - Kakamega - Division - Ikolomani

Location - North Idakho - Population 44,818

Chief - Mr. Caleb S.J. Itemere

Sub-Location - Shibunama - Population 7,265

Asssitant Chief - Mr. Joab Shivachi

VillageVillage Elder

1. Lukanji	Mr. Andrea Machioto
2. Shihalia	Mr. Peter Shimekha
3. Ibwali	Mr. Joseph Shivonje
4. Ikabuse	Mr. Francis Ambani
5. Isulu	Mr. Joseph Masiongo
6. Shisango	Mr. Joseph Shioso
7. Ishikumu	Mr. Charles Shiluli
8. Shibunama	Mr. Joseph Shioso (Ag.)

ANNEX I (b)

District - Kakamega - Division - Ikoloman
 Location - North Idakho - Population - 44,818
 Chief - Mr. Caleb Itemere

Sub-Location - Shikulu Population - 8,200

Assistant Chief - Mr. Laurence Khamati

VillageVillage Elder

1. Butika (Imaka)	Mr. Arnol Kupalo
2. Ikhuyu	Mr. Abraham Mbaya
3. Mukoyani	Mr. Laban Ayuku
4. Burendwa	Mr. Peter Muhanji
5. Shanyenya	Mr. Nathan Muhanda
6. Shikomari	Mr. Noah Mutinyo
7. Shisende	Mr. Peter Mukabwa
8. Imbale	Mr. Reuben Isutsa
9. Ibwali	Mr. Alphonse Likhoto

ANNEX I(c)

District - Kakamega - Division - Ikolomani
 Location - North Idakho - Population - 44,818
 Chief - Mr. Caleb Itemere

Sub-Location - Musoli Population 7,784

Assistant Chief - Mr. Robert Ingonga

VillageVillage Elder

1. Bumaya	Mr. Jacton Lanya
2. Shikangania	Mr. Engutili Muyumba
3. Buyemi	Mr. Makoli Wina
4. Bukwanga-Shikumu	Mr. Elicha Lunalo
5. Busilwa	Mr. Shichina Joseph
6. Mahani	Mr. Mbaya Munguya
7. Shikunga	Mr. Richard Tsilimi

ANNEX I (d)

District - Kakamega - Division - Ikoloman

Location - North Idakho - Population 44,818

Chief - Mr. Caleb Itemere

Sub-Location - Shivakala - Population 11,285

Assistant Chief - Mr. Laurence Luyeku

<u>Village</u>	<u>Village Elder</u>
1. Busalwa	Mr. Imbali Imbongo
2. Shilalio	Mr. Mukeya Shilaho
3. Musiri	Mr. Shilongo Makhus
4. Masaka	Mr. Makwaka Likunda
5. Shikwado	Mr. Clement
6. Musanyi	Mr. Ikhilachi
7. Shilutsi	Mr. P. Madioli Mera
8. Ibhuli	Mr. Lumiti Shivanda
9. Imusembe	Mr. Asuman Gosi
10. Shivagala	Mr. Labani Marango
11. Ibanga	Mr. Mawingo
12. Ichina	Mr. Andrea K. Likhako

ANNEX I(e)

District - Kakamega - Division - Ikolomani

Location - North Idakho - Population - 44,818

Chief - Mr. Caleb Itemere

Sub-Location - Shiseso Population 10,283

Assistant Chief - Mr. Joab Shibachi (Ag.)

<u>Village</u>	<u>Village Elder</u>
1. Ibushitsula Mushikulu	Mr. Lawrence Shichapati
2. Ilusembe	Mr. Joseph Khalumba
3. Shimanyiro	Mr. Esau Atondola
4. Imamule	Mr. Pius Isindu
5. Mumbetsa	Mr. Cornel Achebi
6. Imulama	Mr. Alfred Mbalasi
7. Shikhombero	Mr. Gabriel Shivachi
8. Shisalachi	Mr. John Anyika
9. Ibukhubi	Mr. Sisiko Murambi
10. Ishilakaya	Mr. Alfred Indenje
11. Imasitsi	Mr. Pius Nyamu
12. Ikhumbula	Mr. Joseph Matambache
13. Ishisele	Mr. Kaitano Jalwa
14. Ibukase	Mr. Kotolo Shiakach

ANNEX II (a)ECONOMIC ACTIVITIES

The calculation are based on a sample of 125 homesteads.

1.	<u>Occupation</u>			
	(i) <u>Subsistence Farming</u>	-	80	64%
	(a) <u>Cash Crops</u>	-		
		-	Coffee - 8	6.4%
		-	Tea - 4	3.2%
		-	Sugarcane - 4	3.2%
	(b) <u>Food Crops</u>	-		
		-	Maize 125	100%
		-	Beans 125	100%
		-	Bananas 125	100%
		-	Vegetables 97	77%
		-	Sweet potatoes 54	43.2%
		-	Cassava 47	37.6%
		-	Millet 13	10.4%
		-	Fruits 11	8.8%
		-	Yams 4	3.2%
		-	Groundnuts 4	3.2%
	(c) <u>Livestock</u>	-		
		-	Cattle)	
		-	Sheep)	
		-	Goats) - 60,703	
		-	Pigs)	
		-	Chickens)	
	(ii) <u>Regular Employment</u>	-		18.4%
	(iii) <u>Jua Kalis</u>	-		24%
2.	<u>Income Generating Activities</u>			
	Sell of Farm produce	-		73.6%
	Casual/Farm Work	-		60.8%
	Sell of Livestock	-		6.4%
	Petty trade	-		52.8%
	Others (salaried)	-		20.8%

ANNEX II (b)

MARKETS AND MARKET DAYS

		<u>MARKETS AND FUNDIS</u>	I Ib (i)
Isulu	-	shikulu Sub-location	- Tuesday
Shikulu	-	Shikulu Sub-location	- Tuesday
Shimanyiro	-	Shiseso Sub-location	- Wednesday
Malimiri	-	Shiseso Sub-location	- Wednesday and Friday

FUNDIS I Ib (ii)

1. Shibunname Sub-location

<u>Name of Fundi</u>	<u>Trade</u>
Jarmin Iगतwa	Mason
Butichi Muyeka	"
Machoni	Carpenter
Charles Musila	Mason
Joshua	Mason
Amayi	Mason
Joseph Madioli	Mason
Beneticto Khariya	Mason
Shikongolo	Mason
Ominde Lubutse	Carpenter/Mason
John Litonde	Mason
Peter Litoro	"
Edward Khasiya	"
Aswani	Carpenter/Mason
Antony Aseta	"
Maurice Machero	"
Richard Lichinga	Mason
Clide Akala	Mason/Carpenter
Kisto Khakasa	Carpenter
Alfred Isiaho	"
Herms Kibisu	"
Slyvanus Milimu	"

<u>Name of Fundi</u>	<u>Trade</u>
Lulu Aggrey	Masonry
Shikoli Masheti	Carpentry
Stomus Khabi	"
Perit Luyuku	"
Mithiso Ikhabi	"
David Kanda	Masonry
Alexander Imbisi	Carpentry
Cyprian Amuhaya	Masonry
Jackson Khayumbi	"
Austin Miheso	"
Alexander Shilachi	"

MUSOLI SUB-LOCATION

Luka Alwanyl	Masonry
Luke Andabwa	"
Richard Maleche	"
Musa Mambo	Carpentry
Stephen Maleche	Masonry
Moses Miheso	"
Juston Micheso	"
Saul Skikanga	"
James Ambutsi	"
Daniel Akweye	Carpenter
Lutha Makoli	"
Antony Makotsi	"
Jomo Makoli	"
Musa Liposhe	Mason
Muse Khasiani	"
Musiapa Mayuku	"
Lumula Mategwa	Carpenter
Elijah Alavi	Mason
Harrison Kulabi	"

Joseph Mulindi	Mason/Carpenter
Rutes Malichi	Mason
Adriano Shiakanili	Mason/Carpenter
Obardia Anzilimi	Mason
Solomon Isecheli	"
Reuben Mutasia	"
Isaac Temba	Carpenter
Osete Makatse	Mason
Zablon Manji	"
Elisha Chibolo	"
Maurice Machero	"
Ominde Lubutse	"
Edward Libehe	"

SHIKULU SUB-LOCATION

Clide Akala	Mason
Juston Mareti	Carpenter/Mason
Alphonse Mumiaho	"
Ateya Liyayi	Carpenter
Mutabe Ambutsi	"
Martin Shilulu	Mason
Alphonse Sivonje	"
Rasto Peti	Carpentry
Luseneka	"
Alphonse Tsimango	"
David Mwani	Mason
Charles Makale	"
Joseph Alulu	Carpenter
Charles Lesengo	"
Elijah Shitochi	Mason
Joseph Shichela	"
Mzee Khasieni	Carpenter
Henry Akure	"
John Mwikhali	"
John Matekwa	"
Shibachi Anjila	"
Alfred Mukavana	"
Philip Akonya	"
Evans Anjila	"

SHISESO SUB-LOCATION

NAMES OF FUNDIS	TRADE
1. John Makani	Masonry
2. Robert Kwengu	Carpentry
3. Josphat Imbenzi	Masonry
4. Joseph Ojindo	Carpentry
5. Mathias Lime	Masonry
6. Mourice Shikhungu	Carpentry
7. Charles Imonje	"
8. Christopher Makokha	"
9. Nicholas Mboya	"
10. Jerald Mutuka	"
11. Kenneth Shipulu	Masonry
12. Alex Mtendia Weri	Carpentry
13. Athanas Amusi	"
14. Azekiel Matekwa	"
15. Joseph Otuaya	Masonry
16. Joshua Shikuku	"
17. Edward Mabiya	"
18. Aggrey Musabi	"
19. Charles Mbwabi	"
20. Shianzila Ayekha	Carpentry
21. Alfred Isabari	Masonry
22. Seith Anyanda	"
23. Samwel Masakha	Carpentry
24. Athanus Ligare	"
25. Kefa Kubai	Masonry
26. Patrick Mukhwana	Masonry/Carpentry
27. Sylvester Lumiti	Carpentry
28. Joseph Murunga	"
29. Musa Mutakha	"
30. Renny Mwelesa	Masonry
31. Julius Makanga	
32. Naftali Ingosi	Carpentry
33. Joseph Muhanji	"
34. Josphat Mashuma	Masonry

SHIVAKALA SUB-LOCATION

NAMES OF FUNDIS	TRADE
1. John Akhura	Carpentry
2. Clide Akala	Masonry
3. Peter Litwachi	Carpentry
4. Likhako Lisili	"
5. Benard Shihafu	Masonry
6. Lumumba Shikalayi	Carpentry
7. Liatema Mateh	Masonry
8. John Masheti	Carpentry
9. Alfred Mushila	"
10. Maliachi Sesera	"
11. Andrea Muhanji	Masonry
12. Gaitano Katima	Painter
13. John Makani	Masonry
14. Michael Sesera	Carpentry
15. Makokha Lioshi	"
16. Francis Mbeywa	"
17. John Patrick Likhako	"
18. Ernest Likhako	Masonry
19. Protos Likhako	"
20. Reuben Mmayi	Masonry/Carpentry
21. Charles Odinga	"
22. Pius Muteshi	"
23. Solomon Khamonyi	Carpentry
24. Julius Kitale	"
25. Rasto Achesa	Masonry
26. Raphael Luhombo	"
27. Bukhuya Likalamu	"
28. Francis Lilova	"
29. Peter Bakhuya	Carpentry
30. Nyerere Ihachi	"
31. Asman Mulukurwa	Masonry
32. Amboye Akala	"

ANNEX IIIWATER SOURCES

1. Shitoli Water Supply - Ministry of Water Development
2. Mutaho Water Project - Catholic Relief Services
3. Mkongolo Water Project - Community
4. Protected Springs 18 KEFINCO
5. Unprotected Springs 56
6. Boreholes 5 KEFINCO
7. Shallow Wells 5 KEFINCO
8. Rivers - 3
 - Lukose
 - Yala
 - Isiukhu

ANNEX IV - HEALTH AND SOCIAL ASPECTSINSTITUTIONSPATIENTS PER DAY

1. Shibwe Health Centre - Shivakala Sub-location	200
2. Bushiangala Health Centre - Shibunama Sub-location	30
3. Shiseso Health Centre - Shiseso Sub-location	Not opened
4. Shimanyiro Clinic - Shiseso Sub-location	17
5. Musoli Mission Dispensary - Musoli Sub-location	21
6. Musoli Clinics (2) - Musoli Sub-location	20
7. Isulu Clinic - Shikulu Sub-location	10
8. Malinya Clinic - Shivakala Sub-location	15
9. Shiseso Clinic - Shiseso Sub-location	20

SCHOOLS - SHISESO SUB-LOCATION

<u>NURSERY</u>	<u>POPULATION</u>	<u>PRIMARY</u>	<u>POPULATION</u>	<u>SECONDARY</u>	<u>POPULATION</u>
1. Shiamusinjiri	55	Shiamusinjiri	739	Shiamusinjiri	450
2. Shimanyiro	57	Shimanyiro	429		
3. Mumbetsa	42	Mumbetsa	339		
4. Mwikhomo	47	Mwikhomo	419		
5. Shituha	105	Shituha	635		

SHIKULU SUB-LOCATION

<u>NURSERY</u>	<u>POPULATION</u>	<u>PRIMARY</u>	<u>POPULATION</u>	<u>SECONDARY</u>	<u>POPULATION</u>
1. Imbale	127	Imbale	789	Imbale Mixed	300
2. Mukoyani	35	Mukoyani	49		
3. Bushiangala	42	Bushiangala	546		
4. Shichinji	40	Shichinji	635		
5. Burendwa	108	Burendwa	420	Musoli	275
6. Mutaho	56	Mutaho	365		
7. Ibwali	-				
8. Muchenje	-				

SHIVAKALA SUB-LOCATION

<u>NURSERY</u>	<u>POPULATION</u>	<u>PRIMARY</u>	<u>POPULATION</u>	<u>SECONDARY</u>	<u>POPULATION</u>
1. Shivakala	86	Shivakala	584	Shivakala	420
2. Ichina	39	Ichina	299	Musingu Boys	800
3. Malinya	67	Malinya	468	Shikokho Mixed	400
4. Matundu	75	Matundu	578		
5. Musingu	63	Musingu	490		
6. Musali	74	Musali	364		
7. Shirumba	74	Shirumba	300		

SHIBUNAME SUB-LOCATION

1. Shibuname	-	Shibuname	408	Musali Mixed	320
2. Shikumu	52	Shikumu	310		
3. Isulu	63	Isulu	450		
4. Shihalia	30	Shihalia	230		
5. Shichinji	40	Shichinji	635		

MUSOLI SUB-LOCATION

1. Busilwa	30	Busilwa	317		
2. Shikunga	-	Shikunga	415	Shikunga	285
3. Shikumu	52	Shikumu	310		
4. Musoli	98	Musoli Girls'	560	Musoli Girls'	350
		Musoli Mixed	377		
5. Burendwa	108	Burendwa	420		
6. Mutaho	56	Mutaho	365		

ANNEX V

WOMEN GROUPS AND ACTIVITIES

<u>NAME</u>	<u>MEMBERSHIP</u>	<u>ACTIVITY</u>
1. Kusaidia Mama	44	Welfare, Farming
2. Shiunga	35	Farming/Welfare
3. Ashikhong W.G.	31	Farming
4. Mukoyani	33	Farming, Sewing
5. Shikangania	30	Farming/Crafts
6. Shikulu	50	Entertainment/Crafts/Farmers
7. Imbale	40	Farming/Welfare
8. Shikokho	25	Farming/Craft
9. Shimanyiro	29	Tailoring/Farming
10. Mumbetsa	60	Farming
11. Shivagala	25	"
12. Shikwado	55	Farming/Welfare
13. Bushiangala	50	- " -
14. Musingu	45	Farming
15. Mutaho	47	Farming/Crafts
16. Mutondo	24	- " -
17. Shibunama	27	- " -
18. Bukabili	21	Welfare/Farming
19. Buma	39	Entertainment/Farming
20. Mungusi	39	Farming/Welfare
21. Mukoyani	40	Welfare/Crafts
22. Manani	50	Farming
23. Shiseno	20	Welfare/Farming
24. Shiamusinjiri	42	Farming
25. Ichina	32	Pig Farming
26. Malinya	50	Dancers, Farming Pigs
27. Shivinga	27	-
28. Shibuli	-	-
29. Buyemi	-	Dancers, Farming
30. Shilalyo	-	Farming
31. Imuliru	-	"
32. Ujirani Wema	-	Farming/Welfare
33. Imabwa P.A.G.		P.A.G.
34. Busilwa		Farming

ANNEX VI

SUB. LOCATION: SHIKULU

ASS. CHIEF: LAWRENCE KHAMATI

VILLAGE	HOMESTEADS	NO. OF PEOPLE PER HOUSE	AREA OF LAND	DIS. TO PRESENT WATER SOURCE	VILLAGE ELDER
MUKOYANI	1. JONH IMBOBA	9	2	1.5	LABAN AYUKU
	2. VICTOR MUHATIA	11	22	-	
	3. FRANCIS MUSUNLU	15	10	1.5	
	4. ALPHONSE MUNIALO	6	2	1.5	
	5. ALPHONSE MILIMO	8	2.5	1.5	
IKHUYU	6. STEPHEN AMULABU	9	15	2	IBRAHIM MBAYA
	7. LATE. CHARLES IKUTWA	11	35	1.0	
	8. CLEMENT ITAMBO	7	2.5	0.5	
	9. WILLIAM ABOKA	10	22	0.5	
	10. RASTO PETI	8	3	1.0	
SHIKONARI	11. ATHANUS SHISANYA	10	5	-	NOAH MUTINYU
	12. LATE. LAWRENCE LUMWANU	11	3	2km	
	13. STEPHEN IKEITA	7	0.5	1.5	
	14. CHARLES BUKHALA	11	0.5	2	
	15. TEREZINA ANYANGU	16	2	2	
SHISENDE	16. NELSON SHIRAMBA	11	6	-	PETER MUKABWA
	17. JOSEPH MUYEKA	11	15	-	
	18. NATHAN ALIELO	10	7.5	-	
	19. LATE. FRANCIS ANDAMBWA	13	20	-	
	20. PETER MAKOMERE	11	8	0.5	
IMBALE	21. BERETCH LITIKU	11	12	1.5	REUBEN ISUTSA
	22. EZEKIEL SHIKANGA	11	1.5	0.5	
	23. JACKSON SHIVACHI	8	2.0	0.5	
	24. REUBEN ISUTSA	11	15	2	
	25. JAVAN NAMASA	14	4	0.5	

SUB. LOCATION: SHIVAKALA

ASS. CHEIF: LAWRENCE LUYEKU

VILLAGE	QUE NO	HOMESTEAD	NO OF PEOPLE/ HOUSE	AREA OF LAND	DIS. TO PRESENT WATER SOURCE KM:	VILLAGE ELDER
ICHINA	26	MARTIN KUBAI	6	2ACRES	0.5	ANDREA LIKHAKO
	27	JOHN LIKHAKO	11	6.0	0.5	
	28	ANDREW LIYAI	9	3.0	-	
	29	PEUS MUHANDA	8	2.5	0.5	
	30	ANDREA LIKHAKO	20	2.0	0.5	
SHILUTSI	31	P. MADIOL MERA	14	2.0	0.5	P.NADIOLI MERA
	32	MUSA KAKAI	6	2.0	1.0	
	33	JOSEPH BUSOLO	8	2.0	-	
	34	ENOCK SHISIETSANGA	8	8.0	-	
	35	FRANCIS MBEYWA	12	2.5	0.5	
SHIVAKALA	36	PHILIP AKHURA	9	0.5	3.0	LABAN MARANGO
	37	CHARLES MUTANDA	3	3.0	1.0	
	38	LABAN MARANGO	8	2.0	0.5	
	39	FESTO MASHETI	11	1	0.5	
	40	EBRAHIM SHIKOLI	14	1.5	1.0	
BUSALWA	41	FRANCIS MAKACHA	14	3.0	0.5	JOSEPH IMBALI
	42	GARDY MADIOLI	17	2.0	1.0	
	43	JACOB ASHIONO	7	2.0	0.5	
	44	PAUL MUTESHI	9	2.0	1.0	
	45	JOHN BUKHALA	12	3.0	1.0	
MASAKA	46	ERENEST MATE	6	1.5	2.5	JAMES MAKWAGA
	47	JACKSON MUSAMIA	7	0.5	1.0	
	48	WALTER IMBALI	7	1.5	2.0	
	49	MATHIEAS INGOSI	11	1.0	0.5	
	50	JOSEPH LISIOLO	9	0.5	0.5	

SUB. LOCATION: MUSOLI

ASS. CHIEF: ROBERT T. INGONGA

VILLAGE	NO	HOMESTEADS	NO OF PEOPLE PER HOUSE	AREA OF LAND	DIS. TO PRESENT WATER SOURCE	VILLAGE ELDER
				ACRES	KM.	
BUNAYWA						JACKTON LANYA
	51	PETER SHILAHO	14	2	1	
	52	ELIJAH MANGALA	8	2	0.5	
	53	JACKSON MAMBO	10	3.5	2	
	54	JOSEPH MALECHE	12	5	0.5	
	55	JORAM SHIVONJE	10	5	-	
SHIRANDALA						MAKOLI BWINA
	56	ALLAN LUSESO	13	2	0.5	
	57	ANDREA MUYEKA MUHAMBI	12	2.5	-	
	58	MUSA ACHEBI	14	3	0.5	
	59	RAPHAEL SAYANO	5	4	0.5	
	60	SISCO SHIHEMI	4	1.5	0.5	
BUSILWA						JOSEPH SHICHINA
	61	PANDI LIADONGA	5	3.5	0.5	
	62	THOMAS A. MICHAEL	11	2.5	2.0	
	63	JOSIAH LUHAYI	10	10	2	
	64	MULELWA TUNYA	8	1.5	0.5	
	65	ILEA MORI	8	3	0.5	
SHIKUNLA						RICHARD TSILIMI
	66	JOSEPH OKAN'A	10	2.5	0.5	
	67	FRANCIS SHIAMELA	7	1.5	0.5	
	68	SIMON MATAFALI	11	1.0	0.5	
	69	ANDREW MMBANO	8	2.5	0.5	
SHIKUMU						ELIJA LUNALE
	70	CYLUS MUSILA	10	7	0.5	
	71	ENOS EMONJE	8	1.0	0.5	
	72	JOSHUA INDECHE	12	2.5	0.5	
	73	BENJAMIN MUKHOBI	7	2.0	0.5	
	74	PETER A. AHINDA	6	4.0	0.5	
	75	LUNALO MATETEKHANA	14	14	1.0	

SUB-LOCATION - SHIBUMAME
ASST. CHIEF: JOAB SHIVACHI

VILLAGE	HOMESTEADS NO.		NO. OF PEOPLE /HOUSE	AREA OF LAND	DIST. TO WATER SOURCE	VILLAGE ELDER
SHIKUMU	76	RAMADHAN MAGWAGA	9	27 Acres	3 Kms.	CHARLES SHILULI
	77	JOSEPH MADIOLI	15	14	2.5	
	78	WILBER LIBECHE	4	8	2.0	
	79	CHARLES SHILULI	10	2.5	1.5	
	80	REUBEN LIMISI	11	2.5	2.5	
SHIBUNAME						
SHISANGO	81	JOTHAM IKOA	13	4.5	2.0	JOSEPH SHIOSO
	82	RITAH SHIKOKOTI	8	5.0	3.5	
	83	ATENUS MILIMU	6	1.5	3.0	
	84	ALPHONSE AMBOSO	10	2.5	0.5	
	85	LATE RAYMOND SHILAHO	9	5.0	2.5	
LUGANJI	86	ADRIANO MIHESO	8	2.5	1.5	ANDREA MACHOTO
	87	JACKTON SHILECHE	11	2.5	2.5	
	88	ABRAHIM LUKASI	11	2.5	1.0	
	89	KASWENTE MUTUBA	6	3.0	3.0	
	90	SHELDON ATAMBA	14	10	1.5	
ISULU	91	JOSEPH MASIONGO	12	2	1.5	JOSEPH MASIONGO
	92	LATE CYPRIAN IMBISI	4	1.5	2.0	
	93	PAUL LIKULU	9	5.0	2.0	
	94	ADRIANO KWAYOMBA	7	2.0	2.5	
	95	ALIJAH MAKO	9	9.0	2.5	
SHIHALIA	96	JOSEPH MAKATIANI	6	6.0	1.0	PETER SHIMEKHA
	97	KHAYEKA KHAYIYA	6	1.0	2.0	
	98	WILDON SHIKONGOLO	9	2.0	1.0	
	99	ERNEST KHAYEKA	11	3.0	1.0	
	100	CHARLES KHALEFWA	14	2.0	2.0	

SUB-LOCATION: SHISESO

ASS. CHIEF: JOA, SHIVACHI

CHIEF: CALEB S. ITEMERE

VILLAGE	NO. OF QUES:	HOMESTEADS	NO OF PEOPLE HOUSE	AREA OF LAND	DIS. TO PRESENT WATER SOURCE	VILLAGE ELDER
IMULAMA	101	ALEXANDER TSEYI	10	acres 18	Km 0.5	AFRED MBALASI
	102	SILVESTER MWELESE	11	1.0	0.5	
	103	REUBEN MAKONJIO	7	8.0	1.0	
	104	LIVINGSTON ANEKHA	12	8	1.5	
	105	GAITANO MAGUTU	5	1	1.5	
SHIMANYIRO	106	JOSEPH CHESERO	8	10	0.5	ESAU ATONDOLA
	107	ESAU ATONDOLA				
		MIHESO	8	3	3	
	108	ALFRED SHIKANGA	3	2.5	2	
	109	JOSEPH LUMIT	6	4	3	
MUMBETSA	110	PAUL ASHIONO	9	13	2	CORNEL ACHEBI
	111	JOSEPH KHUMWA	10	1	0.5	
	112	CHARLES IMBWABI	3	4	2.5	
	113	PIUS ISINDU	5	3	2.5	
	114	ALPHONSE LIKHAKO	11	6.5	1.5	
SHISELE	115	ANDREA ISUTSA	12	10	0.5	GAITANO JALWA
	116	SEPHANIA YABATSA	7	6	0.5	
	117	RAMCHUS MUSALAKANI	10	1.0	1.0	
	118	JOHN MWIKHALI	5	0.5	1.0	
	119	SAVARI MWANZI	5	1.0	0.5	
SHISALACHI	120	GAITANO JALWA	8	2.0	0.5	JOHN ANYIKA
	121	FRANCIS MMBOYI	1	1.5	1.5	
	122	PETER BUSALEKO	10	1.0	2.5	
	123	CHARLES LISAMULA	9	0.5	2.5	
	124	JULIAS WAKUKHA	9	2.0	2.5	
	125	JOSEPH INDECHE	10	3	2.5	
		TOTAL	1151	Ave. 4.4	Ave. 1.6	
		AVE.	7.7	Acres	2Km	
		App.	8/House	1408	162.5	
			9.288	11.26	1.3	

ANNEX VI IPEOPLE INTERVIEWED AND ORGANISATIONS

- MR. ARTO SUOMINEN - THE PROJECT MANAGER,
KENYA - FINLAND WESTERN WATER SUPPLY
PROGRAMME.
- MR. MOMANYI - ASSISTANT PROJECT MANAGER,
KENYA - FINLAND PRIMARY HEALTH CARE
PROGRAMME.
- MRS. JULIA KUNGURU - HEAD OF TRAINING AND COMMUNITY DEVELOPMENT.
- MISS EMMA SISIA - Ag. HEAD OF SOCIO-ECONOMIC SECTION.
- MR. LOGAN BUSOLO - Ag. HEAD OF COMMUNITY DEVELOPMENT SECTION.
- MR. BARNO - ASSISTANT PROVINCIAL GEOLOGIST,
MINISTRY OF WATER DEVELOPMENT.
- MR. AKHONYA - ASSISTANT PROVINCIAL STATISTICAL OFFICER
- MR. SHISOKO - COMMUNITY DEVELOPMENT SOCIAL OFFICER.
- MR. CALEB ITEMERE - CHIEF NORTH IDAKHO LOCATION.
- MR. SISCO SHIHEMI - SECRETARY OF CHIEF NORTH IDAKHO LOCATION.
- MR. JOAB SHIBACHI - ASSISTANT CHIEF SHIBUNAME SUB-LOCATION.
- MR. LAURENCE LUYEKU - ASSISTANT CHIEF SHIVAKALA SUB-LOCATION.
- MR. ROBERT INGONGA - ASSISTANT CHIEF MUSOLI SUB-LOCATION.
- MR. LAWRENCE KHAMATI - ASSISTANT CHIEF SHIKULU SUB-LOCATION.
- MR. ESSAU ATONDOLOA - SHIMANYIRO VILLAGE ELDER
- MR. MUSA OKUMU - COMMUNITY DEVELOPMENT ASSISTANT (NORTH IDAKHO)

MRS. LEONIDA SHERI - WOMEN REPRESENTATIVE MUMBETSA

MRS. LOICA ALWANYI - MEMBER OF SHIKULU WOMEN GROUP.

MRS. MARY LITUNDA - BUMA WOMEN GROUP

MRS. MARY AMBOSO - BUMA WOMEN GROUP
CHAIR-LADY.

MISS BRENDA - LOCATIONAL REPRESENTATIVE (KEFINCO)

ANNEX VIIITERMS OF REFERENCE FOR SOCIO-ECONOMIC STUDIES

The Socio-economic studies carried out will be required to provide the following information in details:-

- List of Location, Sub-locations, Villages and their respective local leaders.
- Population of the area.
- A general description of the area including its Agricultural and Livestock Production.
- The existing water systems and their working conditions.
- Other Development Organizations in the area and their activities.
- Income generating activities the local people engage in.
- The people's level of income.
- Existing Women Groups and their specific activities.
- The people's attitudes towards Participation in Development Projects.
- Religious Groups in the area.
- Locally Available Resources (Materials and Skills) and their prices.
- Constructed Water Points and distance to these Water Points.
- Latrine Coverage in the area.
- Institutions in the area.

KENYA-FINLAND WESTERN WATER SUPPLY PROGRAMME

PART A

General Information

District.....Division.....
 Location.....Chief.....
 Sub-Location.....Assistant Chief.....
 Village..... Village Elder

Name of Interviewer.....Sheet No..... Date.....
 Name of Head of Household.....Occupation.....
 Respondent's name.....Relationship to above.....

What are your sources of income ?

- | | | | |
|--------------------------|----------------------|----------------------|----------------------|
| (a) Sell of Farm produce | <input type="text"/> | (b) Casual/Farm work | <input type="text"/> |
| (c) Sell of Livestock | <input type="text"/> | (d) Petty Trade | <input type="text"/> |
| (e) Pension | <input type="text"/> | (f) Other specify | <input type="text"/> |

Total No. of children	Pre-school	Primary	Secondary	College	Working
.....
Amount of money spent/received in

1. (i) What is the total area of your land.....

2.

CROPS		LIVESTOCK	
Cash crops	Food crops		Numbers
1.....	1.....	1. Cattle
2.....	2.....	2. Sheep
3.....	3.....	3. Goats
4.....	4.....	4. Pigs
5.....	5.....	5. Chickens

