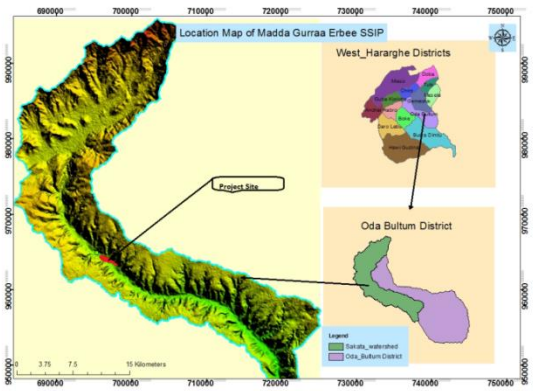
OROMIA IRRIGATION DEVELOPMENT AUTHORITY

Socioeconomic & Agri-business Feasibility study, Draft Report of ” Mada Gura Erbe” Small Scale Irrigation Project



Oromia Water Works Design & Supervision Enterprise

(OWWDSE)

March, 2019

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ACRONYMS/ABBREVAIATION

CF = Conversion factor

DA = Development Agent

EC = Ethiopia Calendar

ETB = Ethiopian Birr

FAO = Food and Agriculture Organization

FGD = Focus Group Discussion

FTC = Farmers Training Center

Kg = Kilo Gram

HH = Household

IFAD = International Fund for Agricultural Development

KM = Kilometer

Masl = Meter above sea level

NGO = Non Governmental Organization

OIDA = Oromia Irrigation Development Authority

OWWDSE = Oromia Water Works Design and Supervision Enterprise

Qtl = Quintal

SD = Standard Deviation

SPSS = Statistical Packages for Social Sciences

SSI = Small Scale Irrigation

TLU = Tropical Livestock Unit

USDA = United States Development Agency

EXECUTIVE SUMMARY

Land and water are two key Natural resources up on which poor people depend for their livelihoods more heavily than the non –poor. Various use of water for domestic, industrial and commercial, agricultural and environmental uses, are linked to each other, and water use for one purpose often conflicts with use for others. The conflicts and competitions across these uses are growing with increasing population, rapid urbanizations and expanding economic activities.

The west Hararghe zone is one of the food deficit areas in eastern Oromia region. Several reasons contribute to the food insecurity that includes; high population pressure, fragmentation of land holdings, recurrent low moisture stress due to rain fall variability and unfavorable market structure can be mentioned among others. To minimize/alleviate these problems, the Oromia Irrigation Development Authority(the client) and Oromia Water Works Design and Supervision Enterprise(the consultant) has entered in to an agreement of which the detail Socio-economic feasibility and Agribusiness detail study of Madda-Gurra Erbe of Oda Bultum District at Haq-bas kebele, small scale irrigation project was conducted with the following objectives.1) Investigate the socio-economic and demographic characteristics of the communities living in and around the project areas,2)Asses and analyze basic social services, infrastructures and facilities in terms of intended irrigation development 3)Explore the existing institutional organization set up working with the communities and/or resources and propose appropriate community based irrigation development and water management systems, so as to realize the sustainability of the irrigation development interventions. The methodology followed to collect the relevant data and based on the different approach of data collection, the result of the study, conclusion and recommendation drawn from the study result has been presented in the following section of the report.

1. INTRODUCTION

1.1. Background

Land and water are two key Natural resources up on which poor people depend for their livelihoods more heavily than the non –poor.

Various use of water for domestic, industrial and commercial , agricultural and environmental uses, are linked to each other, and water use for one purpose often conflicts with use for others. The conflicts and competitions across these uses are growing with increasing population, rapid urbanizations and expanding economic activities.(Nahusenay & Mesfin, 2015).

As a production input in agriculture, irrigation water is an important socio-economic "good" with positive role in poverty alleviation. Irrigation water can also become a socio-economic "bad" when it leads to problem such as water borne diseases (Malaria, Trypanosomiasis, Schistosomiasis) and land degradation including water logging and salinity, water pollution and associated destruction and natural ecosystems. The poor with limited resources remain unable to adopt preventive measures are most affected by consequences of water as a socio-economic "bad".

Access to reliable irrigation water can enable farmers to adopt new technologies and intensify cultivation leading to increased productivity, over all higher production and greater returns from farming. This in turn opens up new employment opportunities, both on farm and off-farm and can improve incomes, livelihoods and the quality of life in rural areas.

To lift and keep the farming communities out of poverty requires, smallholder agriculture be productive and profitable and bring agricultural transformation by which individual farms shift from highly diversified, subsistence-oriented production towards more specialized production oriented towards the market or other systems of exchange. The traditional Gurra Erbee small scale irrigation is as many of the low productivity areas, thought has untapped water resources, and irrigation development is being suggested as key strategy to enhance agricultural productivity and stimulate economic development in the area. The benefit brought up by irrigation agriculture can be illustrated as in the following figure among others.

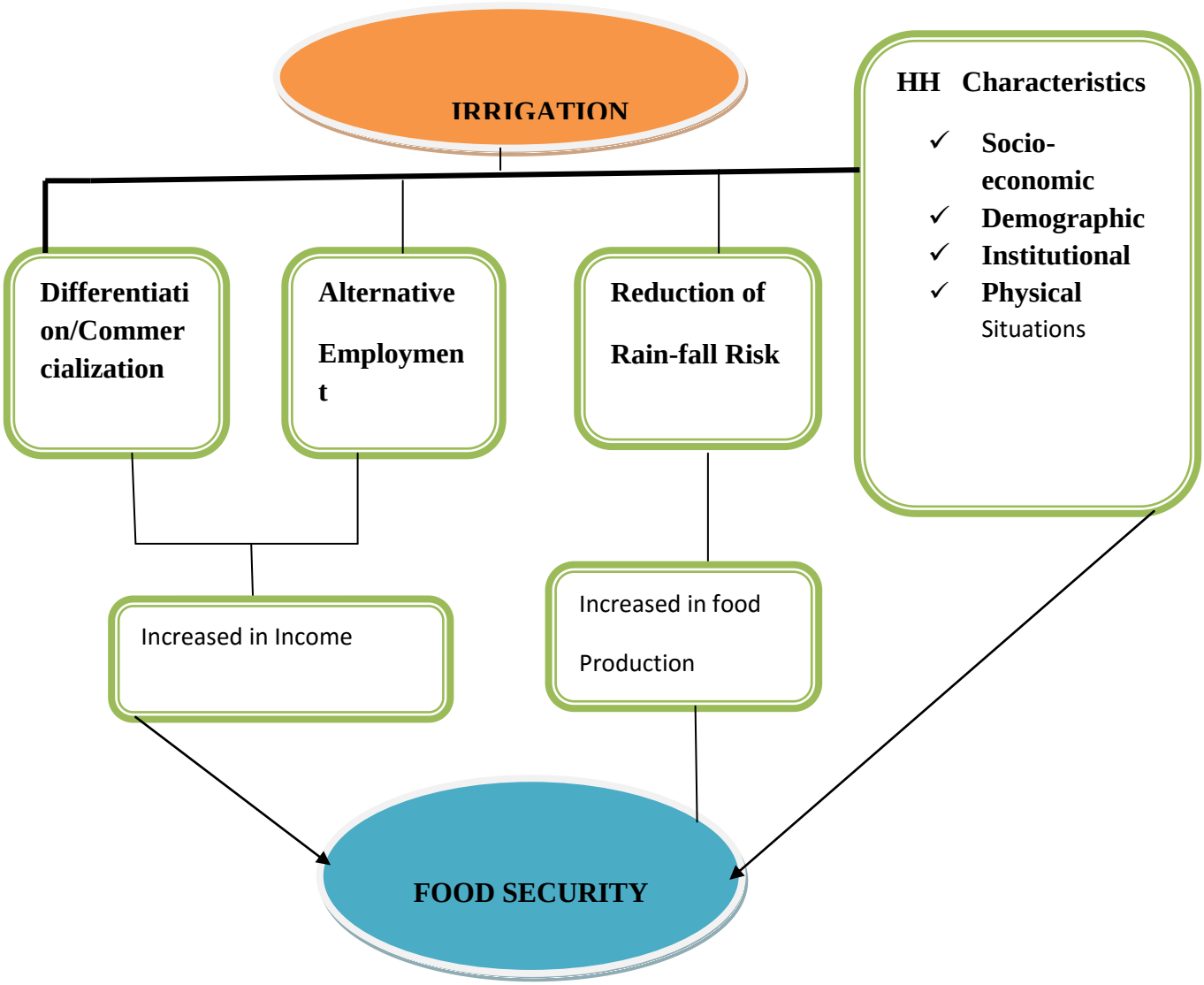

Figure 1: Schematic representation of Irrigation &Food Security linkage

Source: Adapted from Getnet,K.(2011)

Based on these, OWWDSE has entered in to an agreement with the client to conduct detail Study and Design of small scale projects in different Oromia Zones of which socio-economic feasibility study is one component of the study and Design activities.

Accordingly the detail Socio-economic &Agr-business feasibility study of Madda-Gurra Erbe small scale irrigation project was conducted and presented here under with the following objectives.

1.2. OBJECTIVE OF THE STUDY

1.2.1. GENERAL OBJECTIVE

The general Objective of the socio-economic study is to provide the user/Client with the overall socio-economic view of the project area(s) in relation to project development and come out with sound conclusion and recommendation to facilitate smooth implementation of the development interventions.

1.2.2. SPECIFIC OBJECTIVES

1. Investigate the socio-economic and demographic characteristics of the communities living in and around the project areas
2. Asses and analyze basic social services, infrastructures and facilities in terms of intended irrigation development
3. Explore the existing institutional organization set up working with the communities and/or resources and
4. propose appropriate community based irrigation development and water management systems, so as to realize the sustainability of the irrigation development interventions
5. Asses the attitudes and perception of the beneficiary and surrounding communities towards the proposed irrigation development
6. Ensure the project output and results are in favor of the desired social-Economic and cultural objectives set for the project.

1.3. SCOPE OF THE STUDY

The study has been carried out as per the terms of references specified in technical proposal. Accordingly the scope of the socio-economic feasibility study of Madda Gurra Erbe small scale irrigation project focuses on describing and verifying the underling situations of the study areas but not only restricted to the following:

- Biophysical feature of the project area
- Vegetation cover
- Economic and social aspects including economic activities, social services, infrastructures and demographic characteristics.
- The basic livelihoods of the communities
- Gender issues
- Communities social attitudes to irrigation development and likely responses
- Project social impacts and mitigation measures and others

1.4. LIMITATION OF THE STUDY

- The major difficulty faced the study team to undertake the study was the paucity/unavailability of adequate and well organized secondary data from line sectoral government offices
- In accessibility of the project site and bad road condition(The first study crew obliged to travel on foot for 12 kms to and fro) and there after some 4 kms paved by the community participation for the second crew after the Socio-economic group aware the communities.
- Poor project description (Client side problem)
- Less Reconnaissance survey activities (Consultant side)
- Less awareness of the local communities about the intended project
- Administrative re-organization, i.e. Power exchange between & among the former and the current transformational cabinet at all levels (Kebele & District) create gaps for the smooth work flow.

However, with maximum efforts made by the study team, the intended information was collected and incorporated in the study report.

2. METHODOLOGY OF THE STUDY

The main inputs used for this particular study are primary and secondary data. Secondary data was collected from different government sectoral offices based at the district and kebele level of the study areas.

2.1. PRIMARY DATA

The primary data considered using pre-designed semi structured Questionnaire for the household (HH) survey activities. Enumerators were selected from respective district and/or kebeles level which posses Diploma and above educational background having sufficient knowledge about the target project communities. These enumerators have got a one day training for how to administer the HH questionnaire and methodology of interviewing the farming communities of the project area.

In the process of primary data collection, focus group discussion ”FGD”, Key informant interviews and community consultation was also undertaken to validate the quantitative data with qualitative information from relevant groups and individuals who are more knowledgeable about the socio-cultural set up of the area and the project in question. Personal Observation was also done by the principal investigator of the study.

2.2. SECONDARY DATA

With respect the collection of secondary data relevant documents and secondary information at the district and peasant association (PA) level is collected using check list questions designed for the purpose.

2.3. SAMPLING METHODOLOGY

To obtain sample HHs, lists of the all farming communities has been taken from the kebele manager and/or DA office. Then systematic simple randomization process was used to draw the sample households from the population. Accordingly 20 % of the all population was considered to select sample households. To analyze the collected data SPSS(Statistical Packages for Social Sciences) was employed and presented in the report.

2.4. ORGANIZATION OF THE STUDY

The study is structured in to 8 chapters of two parts namely the socio-economic and the Agri-business parts. The first six chapters of the socio-economic study introduces the background information, Objectives of the study, the methodology followed to collect the study data, the scope of the study, and limitations in the course of data collection. Chapter two describes the study results and discussions which includes; population and socio-demographic situations, settlement patterns, Farming system, major economic bases, food security situations, income and expenditure. Chapter 4, discusses basic social services in the study area. The second part of the report (Chapter 8, the Agri-business) part also explores about the key market institutions which assists the smooth implementation of the Agri-business) and outlines the existing market situations in the study areas and introduces the proposed ones . The last part of the study presents the conclusion and recommendations based up the study results.

3. DESCRIPTION OF THE STUDY AREA

3.1. LOCATION AND BIOPHYSICAL CONDITION OF THE STUDYAREA

The Specific name of the project site is "Madda Gurra Erbe" which is located in Haqa-bas peasant association, of Oda Bultum district and west Hararghe zone.

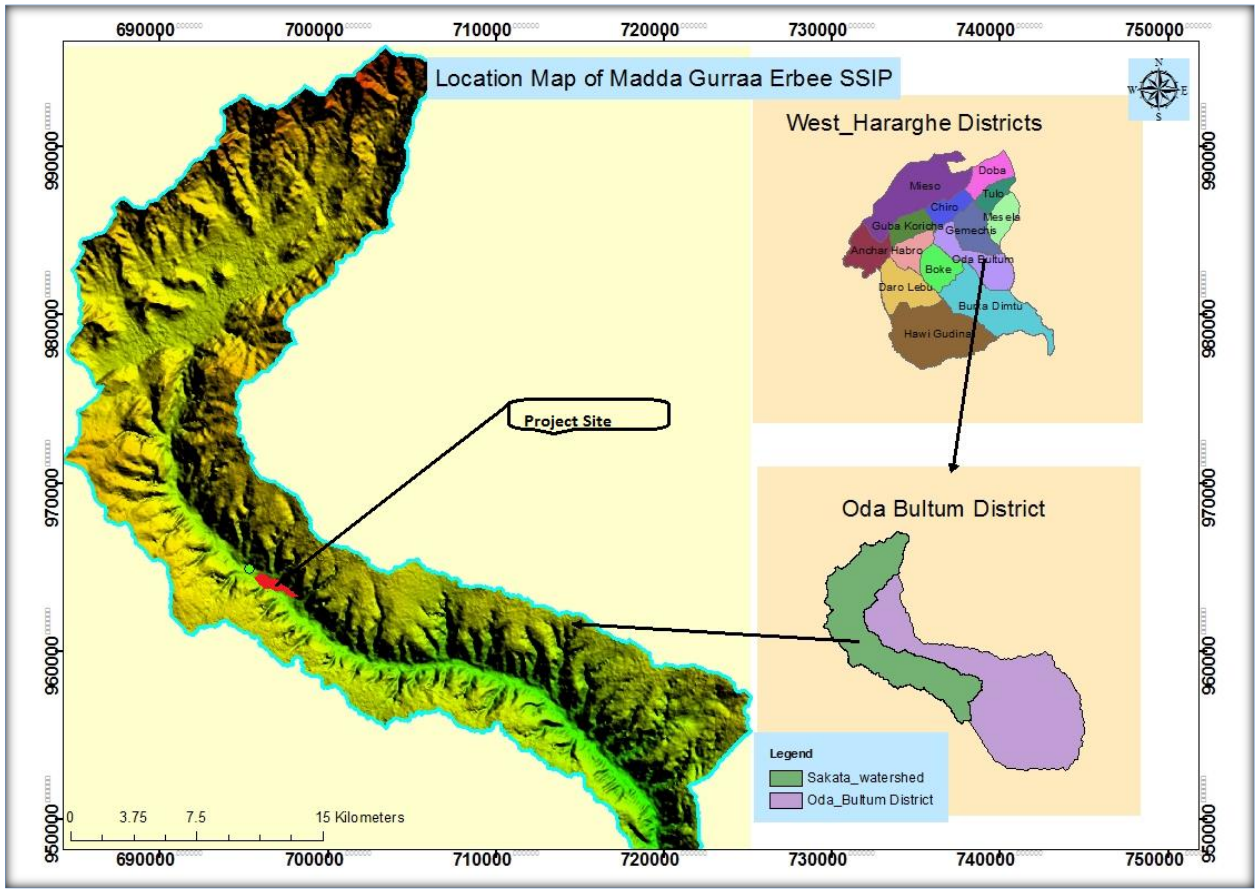

Figure 2:-Location Map of the study area

According to the socio-economic profile of the district, Oda bultum district is bordered in south by Boke district, Gemechis in the East, Ciro in the North and North –East , Gola Oda of East Harerghe Zone in the South- East and Habro in the –West and Guba Qoricha in the North-West. **T**he district is located between 8°30'0"N-9°0'0"N latitude and 40°30'E-41°20'0"E longitude. The total area of the district is estimated to **130884 hectare** or 1308.84km^2.

Physiographically, Sabale, Obii, and Saqariga mountain chains characterize the district which extends between 2500 and 1437 meter above sea level (masl). The land form of the project area

is almost with rugged topography and rolling which is highly degraded and exposed to soil erosion.

Figure:-3 Partial biophysical view of the project area

The climatic condition of the district is characterized by tropical climate dry season extending from central high land areas towards surrounding plain and plateaus.

The mean annual rain fall of the district show significant variations in both amount and seasonal distribution of rainfall. In the south eastern of the district the rainfall is low to moderate ranging from 700-1000mm and the rest are characterized by high annual rainfall ranging from 1000-1200mm. The district gets big rainfall in autumn and small rainfall in spring seasons.

The major vegetation of the study area and the district is mainly bush and shrub and there are scattered big trees in and around the lower valley areas along the river banks. Major wild animals reported in the district are bush buck, Columbus Monkey, monkey and apes. There is no wildlife reserve area is reported from the district.

Madda Gurra Erbe traditional irrigation project is a river diversion project where water from Saketa River was constructed using simple stone bund and other available materials by community participation. The headwork site is selected and constructed by farmers themselves in pooling their indigenous knowledge and locally available material (Figure -4-below). According to information obtained from key informants, this traditional irrigation practice was started in time immemorial passed from generation to generation, but Since 2008 E.C the scheme was re-constructed by informal community level association. According to the information from the community member at the start, the traditional irrigation scheme was able to irrigate about not more than 10ha. However, since 2008 E,C, the farmers put their efforts together and increased

the irrigable area and currently they are able to irrigate approximately about more than 15-20ha. Farmers have channeled the water to the intake structure constructed traditionally from stones and other local materials. In this case farmers are forced to reconstruct the structure every year and when unexpected rain comes and removes the structure and are required to repair it.

Figure 4 Head work location of Saketa River traditionally diverted to irrigate the farm land

The approximate total length of the main earthen canal supplying irrigation water from the sources is about 2-3 km of which fully constructed by the farmers, or direct beneficiaries. A number of small secondary and tertiary canals branch out from the main earthen canal to irrigate by flooding to different blocks within the command area in the left side of saketa River. Of-course the river is diverted and irrigating about more than two schemes in the right wing and in the upstream areas of the Madda Gurra –Erbe and as observed during this particular survey and the good thing is Saketa water shade has the capacity to be recharged from under-Neath the "ODA"tree at reasonable distance as the irrigable area is situated at a foot of the right & left chained mountain and the recharged new spring in-turn has the potential to irrigate another more land areas in the next downstream.

Accordingly the Galessa irrigation scheme is developed in the downstream of Madda-Gurra Erbe from the same shade of Saketa river that recharged another spring.

Therefore provided that the water shade is managed very well Saketa river may probably has the potential to be diverted in more areas and can develop more land areas which ***of-course shall be supported by sufficient hydrological and geological investigation.***

4. RESULT AND DISCUSSIONS

4.1. POPULATION AND DEMOGRAPHY

According information obtained from Haq-bas kebele administration office the total human population size of the kebele are 5170 of which (2667 Male and 2503 Female). The number of households (HH) in the kebele are estimated to be 685(522=Male headed and 163 =Female headed)

Table 1 Shows population &Household size of the Kebele & District

Data source	Population & Household Size					
	Population			*Household*		
	Male	Female	Total	Male	Female	Total
Haqbas-kebele	2667	2503	5170	522	163	685
Oda-Bultum district	106,205	110,540	216,745	37,506	4811	42,317

According to the household sample survey, from the total population of the command area, young age (0-14) accounts for 50.38%, economically active-age group (15-64) is 46.62% while old-age population (64+) accounts for 3.00%. Other things being constant, the dependency ratio (the proportion of the non-working dependent population, primarily children, to the working-age population) is 114%, i.e., 114 people are dependent on 100 economically active ones.

The pattern of settlement is somewhat sparse. Population crude density at district level is nearly 0.32 persons per hectare and the agricultural density is estimated to be 0.84 per hectare. Therefore, there would not be possible displacement of people from settlement or occupation of farm plots, grazing land, forestland or other sites of social value due to the intended project.

4.2. Socio-demographic profile of respondents

4.2.1. Age Structure and Family Size:

The proportion of the family members in different age category will be important to examine the dependency burden and in other case family labor for different farm and off-farm activities undertaken in the project areas. In the other way round the older people have relatively greater experience of farming activities and better access to land than younger heads. Accordingly the age structure of the sample household is presented in the table below.

Table 2: Age structure of the sample HHs

N=20		Frequency	Percent	Valid Percent
Age structure of the respondents	18-30	6	30.0	30.0
	31-45	7	35.0	35.0
	46-60	5	25.0	25.0
	Above 60 years	2	10.0	10.0
	Total	20	100.0	100.0

Source: Survey result, 2019

The overall average family size of the sample beneficiary households of the project was 6.9 with SD of 2.468 and with 2 and 11 minimum and maximum family members respectively**.**

Table 3 : **depicts family size of the HHs**

Table: Shows family size of the sample HHS					
N=20	N	Minimum	Maximum	Mean	Std. Deviation
Family size of the respondent	20	2.00	11.00	6.9000	2.46875

Source: Survey result,2019

Eighty five percent of the respondents were males and the other 15% were females. In terms of age composition, 30% of the respondents were between 18-30 years old followed by 35% are between 31-45 years old and 25 % of the respondents are 46-60 years and above 60 years old area about (10%).

Ninety percent of the respondents were married; and the rest were widowed (10 %); and there were singles in the respondents. In the survey the male household head and female household heads were covered and accordingly 85 % were male headed and the rest 15% were female

headed.. All of the respondents were from Oromo ethnic group and all of them follow Muslims in their religious affiliation.

With regard to the educational background of the sample households, about 85% of the respondents were illiterate and among the literate group 5% of them followed non formal education (Basic adult education) followed by 6 % followed first cycle and the rest 4 % were attended second cycle. i.e (grade 5-8).

4.2.2. Settlement Pattern

Every mode of community settlement pattern has its own link with a given economic activities and social contacts among the community members to access resources like farming plots, grazing land, family ties and access to water supply and others. The type of settlement pattern observed in the project area is sedentary settlement in which clustered houses are formed into a village form at relatively up lands and leaving the bottom land arras for agricultural purposes. This type of settlement pattern may be a good approach to make use of potential agricultural bottom lands for crop cultivation and implementation of the proposed irrigation.

Figure 5. Depicts typical type of house in the study area

The type of houses owned by inhabitants of the project areas are thatched houses made of wood and mud with grass roofing while some houses are made of mud and iron sheet roofs.

Table 4: Other type of HHs residential houses

N=20		Frequency	Percent	Valid Percent
Valid	Blocket with Corrugated . Iron	8	40.0	40.0
	Thached wall with grass roof	10	50.0	50.0
	Temprory tent	2	10.0	10.0
	Total	20	100.0	100.0

Figure 6. Some of the HHs in project area reside in such simple plastic tent

As can be observed from Figure below there are also simple tents made of plastic materials. Population density of the project areas population is nearly 3.6 persons per hectare. As the traditional irrigation scheme was well established by the communities and the canal alignment may be the extension (improvement) of the existing structure, there would be no possible displacement of people from their settlement or occupation of farm plots, grazing land or other sites of social values such as holy places, aesthetic importance etc… due to the intended irrigation project.

4.2.3. FARMING SYSTEM

The major farming system exercised by the project community is mixed crop-livestock type in which one component complement the other, where the entire land plots meant for agriculture purpose is cultivated by oxen power and animals manure help for soil fertility as important inputs. In other way round the crop output and by products may be the major livestock feed where there is little or no grazing land for livestock and exclusively different livestock are depend on pre-stored crop byproducts or Zero grazing(cut and carry system).

4.3. LIVELIHOODS & MAJOR ECONOMC BASES

According to West Hararghe Zone Finance & Economic Development Office of Oda-Bultum District Socio-economic Profile, agriculture is the foundation of the economy of the district and project areas. Based on the sample household survey, mixed-farming system, i.e., crop production and animal husbandry is practiced by almost all farmers as a prime source of livelihood. Both crop production and livestock rearing are longstanding practices in the areas. Un-like Farmers of the other areas (Zone) farmers of the project areas usually sell their Livestock and/or Khat "Jimaa" to cover the cost of financing their food items and non-home-made consumer goods and services such as clothes, medication, sugar, salt, farm inputs, gas, oil, transportation, etc. This is mainly because, there are few farmers who depend on their own food crop production to secure their annual food demand as the land plot they have for crop cultivation is very small, rain fall variability and less input utilization.

Agricultural activities are seasonal. As a result, during some seasons of the year farmers are too busy while during other seasons they remain idle and pass their time chewing stimulant plant "Khat". But unlike their male counter parts, females are working hard without any leisure time, engaging in different tasks (petty trade, house work, take care of children and livestock)

4.3.1. CROP PRODUCTION

The communities living nearby/around the envisaged irrigation development project (Mada Gurra Erbe) are sedentary agricultural people producing food crops. Major crops produced in and around project areas include: Maize, Sorghum, Sugar cane and Soybean. Some farmers also produce vegetable crops. like (Potato, Tomato, Cabbage, pepper and onion) and fruits(Banana, Papaya). The practice of Crop production in the area is like other people in the neighboring areas by large use irrigation water and during wet season-are dependent on rain fed agriculture. Farmers of the project areas produce mostly Maize and vegetables by irrigation twice or three times a year using diverted water from Saketa River. Where there is such schemes, the people have long years experience of using water for small traditional irrigations.. According to the sample household survey, about **98%** of the households use traditional irrigation by diverting Sakata River, with part of the water goes away due to seepage before it reaches the command area; but they are still eager to use modern irrigation with the intention to double or triple the

current level of production cycle and increase the area covered by irrigation water so as to increase their productivity per plot of land they own.

Figure 7. Maize is the major crop developed by traditional irrigation in the area

Though the land areas around the project area is depleted due to repeated land degradation (soil erosion in high slope areas) the irrigation command area's land is relatively fertile and productive when adequate inputs and water are available. To maintain land fertility, crop rotation, and chemical fertilizer (DAP and Urea) are applied in the project areas in general.

However, though the irrigable land is suitable for both cereal and vegetable production, the farming communities are in favor of producing permanent perennial crops like (Khat, Coffee, Sugar cane and others)in addition to cereals(Maize and Sorghum) than producing vegetables and fruits, mainly due to lack of market for the bulk production and perishabilty nature of the crop.

Figure 8. Most farmers switched to cultivate (Khat, Sugar cane & Coffee)

As can be practically visualized from the above figure, the farming communities of the area prefer to cultivate perennial crops like (Khat, Sugar cane and coffee) beside maize than producing fruits and vegetables. This is due to the fact that, though the area is highly suitable for vegetable and fruits production, as there is no infrastructure facility(road connection),the surplus and bulk production of these crops is spoiled on the field, due to their perishable nature except sun dried one like(Onion & Garlic).

Figure 9:. Common fruits & Vegetables produced in the project area

4.3.2. LIVESTOCK PRODUCTION

Livestock production has a special place in Hararghe communities in general and the project area communities in particular with respect to the due attention given to livestock management (Feeding, housing, treatment) and other care. The Hararghe communities consider livestock as the walking Bank and asset forming mechanism beside using the large animals (cattle) for traction purpose, small ruminants for immediate cash source and use Equines (Donkeys) for packing different items including water.

The Hararghe communities also have a special Knowledge (skill) of fattening animals for market. That is why the well fed and finished Beef is symbolized by “Harar Sanga” and fetch a premium price in Ethiopian beef market.

Livestock type in the district and project site mainly comprises cattle, sheep, Goats, donkey, Camel and poultry. Grazing land is inadequate in the area and Feeding is restricted to crop

residues, Zero-grazing and thetaring. Livestock type and population of the "Kebele/Ganda" are given in the following (table-5-).

Table 5: Livestock population of the area

S.N	Livestock Type	Number	C.F	TLU	Remark
1	Cattle	3457	0.7	2,419.90	
2	Sheep	1576	0.1	157.60	
3	Goats	2729	0.1	272.90	
4	Donkey	478	0.5	239.00	
5	Camel	153	1.0	153.00	
6	Poultry	3957	0.01	39.57	
	Total	12,350.00		3,281.97	

Source: Data obtained from Kebele Administration: (C.F=Conversion factor, TLU=Tropical Livestock unit)

Livestock are used for milk and traction power, meat, transport, source of cash, Soil fertility management, asset forming and, etc. Most farmers use oxen for plowing of their farm land and no one in the area uses tractor. Shortage of feeds compounded with the prevalence of some diseases in general is major impediment to livestock production in the areas.

Figure 10. Common Livestock reared in the project area

The livestock feed shortage due to confined and intensive grazing in the project area will show livestock feed development should be incorporated in the intended irrigation development and

during design for canal construction water for human consumption and livestock drinking should be considered as currently all traditional irrigation beneficiaries use Sakata river for (human consumption, Livestock drinking and irrigation purposes).

4.4. FOOD SECURITY SITUATIONS IN THE AREA

The majority of the Madda-Gurra Erbe irrigation scheme households do not cover their annual food demand from their own production.

The communities in and around the project areas are generally classified as among those that are food in-secured by their own production. Because, the surrounding land area is ragged with stepped topography and the land holding of the agricultural potential (irrigable land) areas of the individual farmer is very small and their production from that small plot is at subsistence level without any extension services. The sample household survey response result reveals that:

- Shortage of irrigable agricultural land coupled with rain fall irregularities as well as population increments on the specific cultivable land put the communities at a risk of food insecurity.
- According to the HH survey result only 2 % of the respondents produce food sufficient to cover annual household need: due to shortage of farmland (45 %) and bad weather like frost, hailstorm (20%) and due to input shortage is 25 %.
- As the project area is situated in an isolated area (in accessible) it is out of the reach of extension services and almost all traditional irrigation users seldom get agricultural inputs and over the recent 5-10 years crop production remain stagnant or decreased.
- From the sample HHs respondents no one is without landholding; and, among those having holdings: 40% has holding size of <0.5 ha, 45% has between 0.5-1.0 ha, and 10% of the respondents posses(1-1.5 ha) and farmers who have >1.5 ha are only 5% respectively
- The farmers of the project areas are obliged to plant Maize as mono cropping and vegetables and fruit as well as Sugar cane, by irrigation, but except maize, the other produce spoiled on the field as it get ripped at the same time and no market in the area to sell it in bulk.

The project area is generally known as one of those areas with high agricultural potential in the past. But recently due to population increment and deterioration of land fertility over time and as a result, fertilizer application has become mandatory, though it is not available because of accessibility problem. Basically crop Production cycle mainly (Maize) as mono cropping in addition to horticultural crop and other perennial crops like "Khat, Sugar cane) others are harvested two to three times in the year, because the communities have long years experience of traditional irrigation, but due to limited technical knowledge and financial capacity the water cannot cover large areas which can irrigate more areas and serve more number of beneficiaries. The area receives rainfall, which is highly variable in its distribution to support crop production in one season in the course of a year. Around the start-and-end of rainy season, it has begun to show an erratic pattern since recent years. Then if irrigation water is made available during the dry season of the year covering more areas and can benefit more farmers at equitable manner and, the frequency of production will increase from once to twice or three times in a year, or water seepage would reduce thereby increase supply to command area. Subsequently, household income would be increased and contribute to improved food security.

4.4.1. TYPES AND SOURCES OF INCOMES

According to the household survey results the farming communities of the project areas have diversified sources of incomes to avert some un-predictable external shocks like(Drought, Flood) and crop failure, farmers distribute the risks by switching to other alternative source of incomes.

Because of these and other reasons the farming communities of the project areas use the following as the sources of incomes, but not restricted to: These include: Sale of stimulant plant "Khat" and Sale of livestock (Cattle, small ruminants, equines, camels and poultry), are the major sources of income in the study areas. The other income sources may include, different petty trade (females), Sales of crops, vegetables, fruits, and sugar-cane and sale of animal products (Milk, Butter, hide &skins) and others participate in off-farm activities as the sources of income. The amount of income of a typical household generate depends up on the wealth and family status of the household.

Based on this the annual income that a typical household earns ranges from 2000.00 Eth. Birr to 30, 000.00 and on average of 13,400 ETB/Annum.

4.4.2. EXPENDITURE PATTERNS

According to this particular study, the farming communities of the project area expend more than their annual income to cover their personal obligations. The following graph shows the different average annual expenditures sample farmers in the study area.

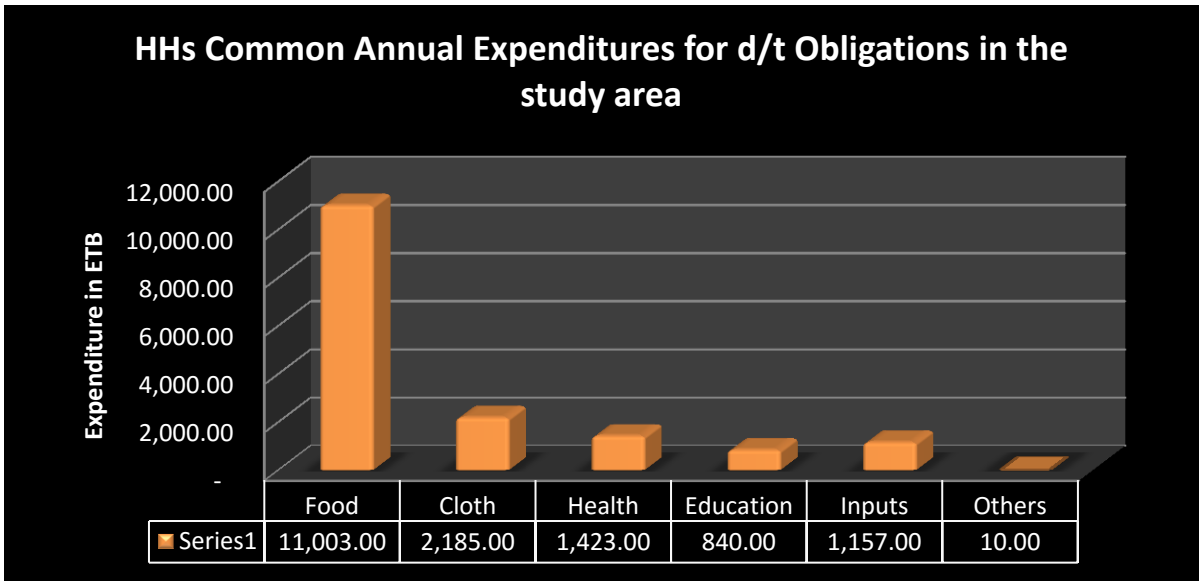

Figure 11: Households Annual expenditure

Source: Survey result

This is because it is about only 2 % of the community members are food self sufficient from their own annual production. And the respondents fill the deficit by selling their previously accumulated assets like (Selling of livestock, Khat and performing available off-farm activities and petty trade in their areas

As shown from graph above, the major expenditure of a typical HH goes for food followed by Cloth and health. The sample HHs expend less to education and this may be due to the fact that there is only one first cycle community school in the area and there is less opportunity for the students to go to other areas for classes above 4^{th} grade due to families financial capacity and age of the students also matters to go distance places (for more classes beyond 5^{th} grades).

4.4.3. LAND USE PATTERN IN THE PROJECT AREA

The term land use refers to the ways that people/communities use land and the natural resources for different computing uses.

However, Land use is not a static phenomenon, but it changes from time to time depending on socio-economic dynamics. For instance, grazing land, natural forest and fallow lands are decreasing through time as more-and-more lands are brought under cultivation, man-made forest and residence. The identification and delineation of land, on the basis of comparable natural resource characteristics (climate, elevation, landforms, soils, hydrology), into natural land units or zones helps to use the land for its best alternative uses

Accordingly as per the reports of socio-economic profile of west Hararghe zone the land use of the study district(Oda Bultum) by its use type is presented in the table below.

Table 6: **Land Use pattern of Oda Bultum District in Ha for 2009 E.c**

No	Land Use type	Unit	Year,2009 E.C
1	Cultivated Land	Hectare	50,486
2	Grazing Land	Ha	6755
3	Forest Land	"	9103
4	Natural Forest	"	11,145
5	Shrubs and bush	"	465
6	Man made	"	730
7	Bare land	"	1542
8	Others	"	172
9	Total	"	130,884

Source: Oda Bultum District Land Resources Management office

The common land tenure system in the project areas are: allocation by government inherited from families and /or rented).

4.5. BASIC SOCIAL SERVICES AND INFRASTRUCTURE

4.5.1. EDUCATION

Education is an important instrument for any development endeavor in any societies of human kind with no exception for communities of the project areas in creating more productive generation to come. In order to produce such type of society and educated work force, the existence of capable Educational Institutions are the prerequisite issue. To this end the farming communities living in and around the project areas are among the extremely neglected societies from the reach of any educational opportunities and facilities when compared to the other communities in the district and kebele. This is mainly due to the fact that the area has no any road connection and at remote distance from Haq-bas kebele center and from any Government infrastructure facilities. As the information obtained from kebele administration office, all school-age children have access to regular education service in the kebele, but this doesnot hold true for the project area communities.

Table 7 : below shows School enrolment condition of Haq-bas kebele(2008-2010)

Grade	2008 E.C		2009		2010		Total		G.Total
	Male	Female	Male	Female	Male	Female	Male	Female	
1	119	107	84	83	104	27	307	217	524
2	87	57	71	43	88	8	246	108	354
3	83	52	57	33	45	46	185	131	316
4	45	23	75	43	30	13	150	79	229
5	52	27	38	16	25	17	115	60	175
6	73	5	40	11	15	8	128	24	152
7	20	7	12	5	18	10	50	22	72
8	32	6	19	20	9	5	60	31	91
G.Total	**511**	**284**	**396**	**254**	**334**	**134**	**1241**	**672**	**1913**

Source: District education office

According to the information obtained from the key informants, up until 2007 E.C. there was no any school for the children in the project areas. But by the year 2007 E.C with the communities relentless effort and participation, MELKA LAKU first cycle school (1-4) was constructed and request was presented to the district administration to deploy teachers and fulfill basic educational materials. Accordingly, their appeal got acceptance to open elementary school and to

deploy teachers was also implemented and now the teaching learning process is underway with all its problems and constraints. The major problems observed during the survey were: The school has no Guard and Fence, and No (teacher's residential house, student's text Books, seat for the students and students seat on the stone and wooden materials,).The Black-board was broken with no maintenance and/replacement and teachers also told us that they borrow Writing Chalk from the neighboring school and others. The class rooms have no doors and windows.

Figure 12. Photo shows the condition of Melka Laku elementary school at the project site.

With this problems and shortages, the probability of opening 5th grade in the coming year will be next to impossible and students promoted to 5th grade will have no chance to go to the next class at other school due to non-existent infrastructure facilities and in affordability of the expenses by their parents.

4.5.2. HEALTH SERVICES

According to data obtained from Oda-Bultum District health Office, there is a health post in Haq-bas kebele with two health extension workers working on some of the 17 health packages. A health center is also available at district center, Badessa town. Health service coverage of the district is reported nominally as 85% and 83% as per standard for health post and health center respectively. However, due to the remoteness of the area and inaccessibility of the project area, there is no any kind of health services given to the project area communities at all including pregnant women and children. Women in the project areas give birth at their home and there is no pre-natal and/or post natal vaccination in the areas. If anybody fall sick, capable family member sent to Boke town or Badessa to buy medicine by telling the symptom of the diseases to the pharmacist or Health technician at the nearest town as the area is hardly passable to any motorized vehicle except Motor cycle.

Table 8: depicts lists of ten-top diseases in the district (2009 E.C).

No	**Ten top diseases prevailing in the Oda-Bultum district2009 in descending order**		**Percentage share of each disease type**
	Type of diseases	Number of people affected by diseases	
1	Diarrhea	3892	22.32
2	pneumonia	3088	17.71
3	Trauma (injury, fracture	2729	15.65
4	single spontaneous delivery	2459	14.10
5	acute upper respiratory infection	1188	6.81
6	acute febrile illness(AFI)	1019	5.84
7	urinary tract infection	965	5.53
8	diarrhea with dehydration	893	5.12
9	diseases of the musculoskeletal system and connective tissue	610	3.50
10	infection of skin	595	3.41
	Total	17438	100.00

Source: Oda-bultum district health office

Diarrhea, Pneumonia followed by Traumatic injury stands first to third in the **ten-top-diseases** in the table above. This is an indicative that water-borne and related diseases usually occur in the

district and the project areas where typhoid is the most common one. Trauma and injury stands third in the list of common health problems in the district. This is because of the fact that as there is no sufficient transportation facility and most of the road condition is impassable for car the main transportation means in the area is Motor cycle which can load up to 5 passengers at a time including the driver. ***Most of the Drivers are too young and have no driving license and the Motor cycles have no legal Plate number and the number of passengers fall from Motor cycle per day is so significant in the area.*** This condition may seems out of the control of the traffic polices operating in every corner of the zone.

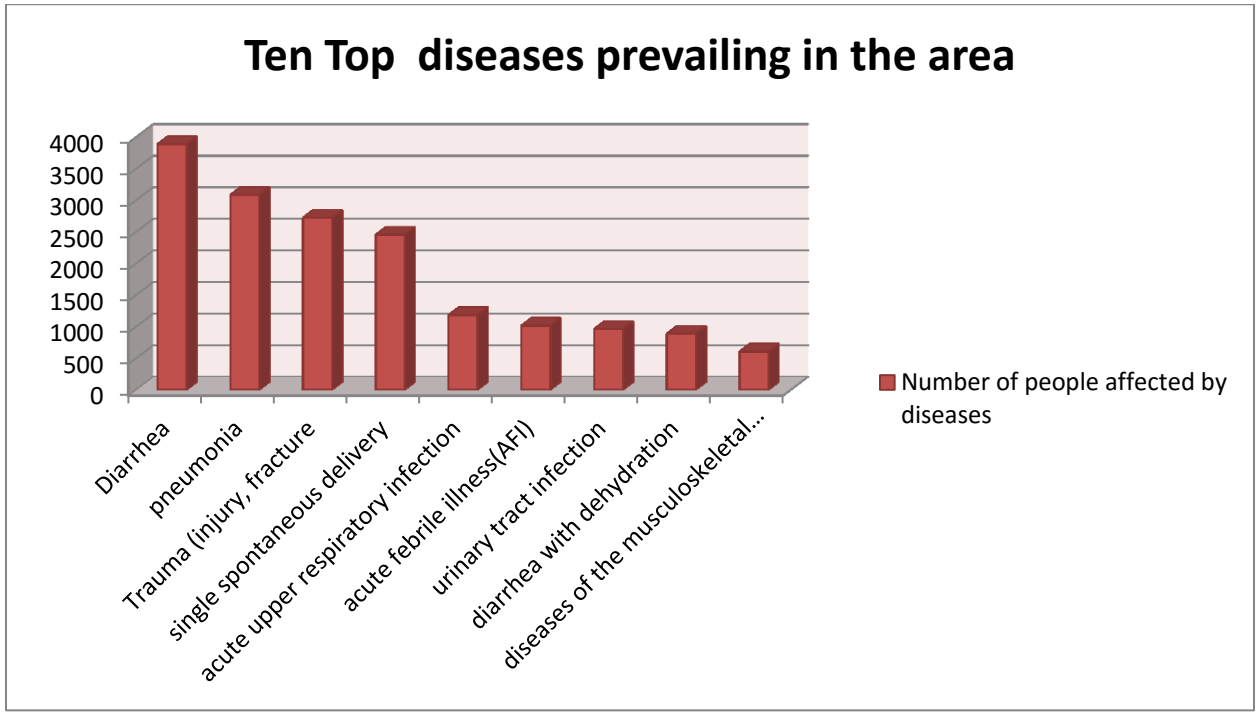

Figure 13. The major ten top ten diseases in the district

Source: Oda Bultum District Health Office

The other Phenomenon observed during this particular survey was as there is no any Government or Non Government supported health institutions in the project area, and district and kebele health institutions are at far distance, the chance of sick men are to go to the traditional healers in their respective villages and take any type of medication prescribed to them.

Figure 14. Traditional healer is treating the patient in the study village ”Kobaa”

4.5.3. WATER SUPPLY SITUATIONS

The provision of safe and adequate water supply for the needy population & Livestock has far reaching effects on health, productivity, quality of life and at large to reduce poverty and ensure sustainable socio-economic development.

However the water supply condition of Haq-bas kebele and its surrounding areas are next to none. According visual observation made to the water point at Burqa town adjacent to Haq-bas kebele was really touching when women and Girls came to the area from more than 5 kms to fetch the water with poor sanitary condition after waiting for more than 6 hours. Animals and human beings share from the same water point as there is no other alternative water point in the areas. Women & Girls are the most suffered in the HH due to water scarcity.

Figure 15. Photo shows the magnitude of water supply problem in the area

With regard to the project site, the main source of water supply in the envisaged project area is **Saketa** River and few households use unprotected spring, but found at far distances from home of project households. No alternative sources of water supply for all purposes except this river. The water is used for all domestic purposes (drinking, cooking and washing) and irrigating the farm land in the irrigation scheme. The river is also used for livestock. The water supply is sufficient all-round the year as reported by all residents. However, the water is not properly protected and its safety is so doubtful. Women and children have the highest share in fetching water from these sources.

Generally Saketa river is the only and the most crucial resources up on which the life of human, livestock and wild life is dependent and during the project Scheme development (Canal construction) water for Livestock and irrigation as well as potable water for human consumption has to be designed independently and /or with mutual win-win integration and with due precautions.

4.5.4. ROAD AND TRANSPORTATION

The project area is located at about 38km from Baddessa town in the direction of Boke district, but From Badessa town to Haq-bas kebele is some 23 km south wards, but though the project village is in the Haq-bas kebele, there is no road connection for vehicle except on foot through the kebele to the project area due to deep valley and ragged topography between the project site and kebele and to go to the project site one has to take a vehicle from Badessa town in the direction of Boke district up to some 32 kms and because of the area beyond 32 is hardly passable by car, it demands walking on foot which may take some 6 kms to the irrigation Scheme site i.e.(12kms to and fro).

Figure 16. Photo While the study team heading to the project site in action

However after the arrival of Socio-economic team, to the project area as the communities are too eager for the project implementation, some 3kms was paved by community participation for the other study crew, who came to the area after community consultation and mobilization, was made.

There is neither public transportation nor other type of Transportation to the kebele and the project area except some small Government vehicles for official assignments and vehicles like "ISUZU" went to the area for loading some produce to the nearest town

Generally the project site is hardily passable for motorized vehicle (Car) except Motor-cycle and the communities are remain marginalized from every social and infrastructural facilities as well as to sell their produce and buy non-home made items and other sanitary materials for the past long period of time.

Due to road problem the local agricultural produce (Crop and Livestock) cannot accessed to market centers in time and in turn different agricultural inputs and extension services as well as social services(health, education) and others also cannot reach the needy farming communities of the project area. Thus before implementing any development endeavor in the area, alleviating road infrastructure should take the first priority.

Figure 17. The area has no any public transportation facility

As can be seen from the above figure, majority of the people in the area obliged to walk on foot whenever they have any issue from district town or to the nearest market center. In this case the Motor cycle owners exploiting the community in forcing them to may un reasonable price for single or round trip(100.00 to 300.00 ETB/person/single trip for 32 kms).

4.5.5. OTHER SERVICES

4.5.5.1. ENERGY SERVICES

Currently, electricity service is not available in and around the rural project site. Traditional sources of energy are the dominant forms of energy being used by households. The major source of household energy is animal dung and firewood for cooking; and gas “Kuraz” is used for light at night time and solar energy which is collected from direct sun light during the day and give light during the night time, as well as used to charge their cell phone and other electronics like, (Radio).

4.5.5.2. TELECOMUNICATION SERVICES

Throughout the project areas, telecommunication service (cell phone) is available. But Ground line telephone services and Postal services are available only in urban areas i.e Badessa town.

4.5.5.3. FINANCIAL SERVICES

The major financial institutions providing services in the district are different Banks includes (Commercial Bank of Ethiopia, Awash, Oromia International Bank and Cooperative Bank of Oromia). Though these all Banks are available at near distance (Badessa) town the saving culture of the farming communities in and around the project areas is at its infant stage.

4.5.5.4. INSTITUTIONAL SERVICES

The major institutional services available in the study area include: agriculture and health extension, credit services and input supply at a lesser extent.

4.5.5.4.1. Extension services

The major purpose of extension service is aimed at disseminating modern agricultural technologies which are adaptable to the prevailing agro-ecology and familiar with the farming system of the communities in question.

To facilitate these activities at least three Development Agents (DAs) having educational background of at least Diploma holders in three discipline (Animal Sciences, Plant Science and Natural Resource) to be deployed at each kebele at respective Farmers Training Center ”FTC”. In addition Cooperative and Animal health technicians’ are also to be deployed one for every kebele or (one for three kebeles). In principle these professionals need to be based at Farmers training center and supporting the communities with their knowledge and skill of their respective discipline by demonstrating every adaptable technologies at FTC..

But these condition are not functional at the haq-bas kebele level and project area because during this particular survey period none of the above professionals exist in the kebele except two human health and one Animal health technician. Due to accessibility problem and remoteness of the project area from kebele center, the existing professionals cannot reach the project area communities to deliver their professional skill and knowledge.

Therefore as the project area is situated in isolated part of the kebele, the farming communities are not in a passion to get any agricultural and human health services. Thus except by the individual community member, there is no modern agricultural inputs reach to the area.

4.5.5.4.2. Credit Services

Access to the provision finance and credit, facilities farmers will increase their financial status in utilizing agricultural inputs and adopt modern technologies that fit to the prevailing agro-ecology

As known commercial Bank of Ethiopia doesn't accept provision of credit to the small holder farmers as it demands collateral for which the asset of the farmer couldn't qualify due to the risk associated with agricultural produce is more dependent on prevailing climate. Therefore, so far there was no any credit facilities arranged for the project influence areas. But for the future they planned to organize themselves and request the concerned body for technical support and get available services (like access to credit facilities).

4.5.5.4.3. Input Supply and Use

Farmers of the Woreda as well as the project area are well aware of the importance of agricultural inputs including fertilizers, improved seeds and agro-chemicals like(herbicide and pesticide). However, due to less financial capacity and accessibility problem, and no well organized institutions in the area, farmers reported that they do not have access to any input supply and those who have the capacity to use by their individual effort are also don't use the recommended full packages.

5. COMMUNITY BASED SOCIAL ORGANIZATIONS

As information obtained from community elders as it is commonly exercised in the other parts of both Hararghe zones, the study area communities have their own self help organizations established to meet different day to day social and cultural obligations which is based on formal and/or non-formal settings.

Cooperatives:-Community based organizations such as cooperatives have socio-economic significance in the way that the members formally or informally get organized and pool their financial resources and supply different consumer goods in reasonable prices and distribute to their members in fair prices. But the project area, communities are not yet well organized to be benefitted from such institutional arrangements as they lack organizing body or less aware of about the significance of the issue. But there is informal traditional irrigation user groups which is strong and enforced by local laws sated out by the group members for how to use or when to use the irrigation water. This may be a one step forward for the smooth establishment and implementation of the envisaged irrigation project in the area.

"**Iddir"**:- is the most frequent type of community-based organizations in the study community is primarily aimed to give support both financially and/or labour following the incidences of sickness or death of any family member or friends in the community/village and give labour support during the busy crop production, harvesting or trashing time. Eligibility to member ship depends upon bylaw settings that agreed by all members. Volunteers elected by the majority vote from members commonly manage these social settings. For "iddir" leaders there is no defined term of service period as far as there is no discontent from members.

***"Dabo"*:-** is also a very common social setting to contribute labor between individuals or among groups for the needy individuals or groups which may be lasts for one day or more days based on the type and intensity of the problem faced by the helped individual/groups. This organization can be in neighborhood (village based proximity to each other) religious, kin-ship or age group affiliated. The helped individual/group require to prepare food and drinks, based up on his/her resource (wealth status) willingly which the working team served as a reward of their contribution.

6. NGOs OPERATING IN THE AREAS

The major NGOs operating in district and the areas include the following:

Table 9 : NGOs Operating in the district

Name of NGOs	Areas of Operation	Remark
Pass finder	All Livelihood	
Care Ethiopia	All Livelihood	
World Food Program	Nutrition	
IFAD	SSI, Livelihood, Nutrition	

But there is no any NGOs reported to operate partially or fully in any development endeavor of this particular project area.

Of course among the above mentioned lists of NGOs, operating in the district IFAD contributed remarkable development activities around the project areas. In this regard, IFAD has been an important supporter of small-scale irrigation in Ethiopia as general and around the project areas in particular over a years and the most recent one is the Participatory Small – scale irrigation program.

7. GENDER

Gender is the socially constructed roles and responsibilities assigned to women and men but not a biological factor in a given culture or location. The roles played by and responsibilities given for men and women in the society may vary like in the other areas of the country.

It is a deep rooted cultural norm especially in most rural parts of the country that Women have faced multitude of challenges such as, poverty and unemployment, illiteracy and inequality in education, heavy workload, unequal division of labor and decision making.

Assessments of gender-based social roles and responsibilities in and around the project areas reveal that there is no purposive domination of men over women counter parts, but as indicated above there are deep rooted previous social setups, for instance some jobs like collecting fire woods, fetching water from any water sources, taking care of children, cooking, baking and the likes are seems God given sole responsibility of women. Whereas jobs like Farm land preparation, plowing, harvesting, threshing, large animal marketing the duties of male.

According to the project areas key informant interview estimated length of daily working hours of women compared with their men counter parts show women stay more time on work than men (on average 12 hours for Women and less than 8 hours for men). The other is selection of their marriage partner is mostly arranged by their families than by Girls own choice, though this condition is in decreasing trend as both Girls and the Male counterparts have the opportunity to meet at different places like(School, Market places) and can discuss and decide their future affairs.

8. AGRICULTURAL MARKETING (Agri-Business)

8.1. INTRODUCTION

With the increasing commercialization of agriculture and food systems worldwide, the food industry is increasingly dominated by large agribusiness firms whilst the influence of farmers is declining (Reardon & Berdegué, 2002). International experience has shown that smallholder farmers produce low-value commodities, which face declining real prices and increasing competition from medium- to large-scale producers, and they are excluded from high-value markets.

As mentioned above, small-scale farmers find it difficult to make the transition to a more commercial food system because they struggle to meet the private standards set by food processors, etc. and are also constrained by limited government support (Bienabe *et al*., 2004).

Private traders and other consumers are used to choose from whom to purchase agricultural produce. Though the smallholder farmers in the country as general and the study area in particular had a small marketed surplus and due to the fact that their locations are often far away from production centers, different traders preferred to buy agricultural produce from commercial farmers because of thin market coverage from smallholder farmers of which some SH farmers especially those located in the most remote rural areas like that of Madda Gurra Erbe could not sufficiently trade their produce.

This is why most smallholder farmers especially those located in remote rural areas sale their produce at the farm gates, while commercial farmers sale a larger share through other intermediaries (retailers, whole sellers and processors (Makhura, 2001).

Crop producers usually sell their crops through two main channels of informal and formal channels. Though each marketing channel has its own advantages and with its own problems and constraints.

However, the informal channel is by far the most preferred channel for smallholder farmers like in other parts of the country as general and in the study areas in particular. This is mainly due to quality requirements and product specifications for crops in these channels are far more stringent and specific. Thus, they find it difficult to smallholders to meet this standard.

Hence, there is a need for better understanding of the market functioning of smallholder farmers in the "Madda Gurra Erbe" SSI project, which could contribute to improvements in their performance. This study therefore, try to investigate the marketing (Agri business) situation of the study area with the following brief objectives.

8.1.1. General Objectives

The General objective of this study is to investigate the marketing situations and channels of smallholder mixed farmers in "Madda Gurra Erbe" SSI project areas of Oda Bultum district.

8.1.2. Specific Objectives

- Examine the availability of commodity specific institutional support in the study areas
- To identify the marketing choices as well as the marketing aspects among smallholder farmers of the study area
- Assessing the major market actors in the area
- To investigate the challenges faced by smallholder mixed farmers in market channel selection of the area
- Know to what extent these smallholder crop and livestock farmers fully market their produce in the area and along the way to national and international markets

8.2. EXTENSION SERVICES

For the smallholder agricultural community to take better advantage of their market opportunities, extension services will require fundamental changes. Modern services must be more flexible regarding the needs of farmers, and new types of institutional arrangements are needed such that different types of service providers can meet the needs of particular farming communities.

Inefficiency in agricultural extension services is a result of many challenges; key amongst them is lack of investment in government services, which leads to staff with limited operational budgets and workable knowledge/ skill sets. Another challenge is the diverse, yet less coordinated mix of development contractors and NGOs. Whilst many contractors and NGO's are better resourced than Government counterparts, they are a mixed set of actors, with ranging

levels of capacity, generally working on short-term projects. As a result farmers may experience weak long term support from Government, and only bursts of stronger support from civil society actors.

8.2.1. Extension's role in the marketing approach

In order to help farmers improve their competitiveness within a market chain or business model process, extension must simultaneously focus on farmer organization and on improving the management skills of existing structures.

Some examples of methods for farmer organization in market linkage include:

• Farmer groups in collective marketing

• Cooperative support

• Value chain support within the chain

• Agri-dealer networks

• Fee-based community service providers

8.3. COOPERATIVE SERVICES

Agricultural Cooperative service is one of the necessary conditions to deal with agribusiness activities and no exception for the farming communities of the project areas. In the project areas, farmers have become concerned that they are receiving lower and lower prices for their produce from the traders who seldom come to their villages due inaccessibility problem to buy their produce(crop and livestock). They are considering forming a marketing cooperative to sell their produce directly to come together formally and discuss some of the felt needs of members.

In (USDA, 2011) Cooperatives is defined as "a user owned and democratically controlled business in which benefits are received in proportion to use."

In our case (the study areas) there is not yet a formally organized cooperative service and the smallholder farmers of the areas accomplish their day to day activities individually. But to undertake agribusiness activities in the area organizing the farming communities is a pre-requisite because of the following facts:

- .to improve bargaining power of the farmers when dealing with other businesses;
- to reduce costs;
- to obtain products or services not otherwise attainable as an individual efforts;

- to gain market access or enhance marketing opportunities;
- to improve product or service quality; and
- to increase their collective incomes and others

A cooperative's sole purpose is to serve members' needs. Whether those needs reflect some or all of the above indicated reasons, cooperative member owners have the freedom to tailor their business to fit those needs.

The people who use the cooperatives own it, and are responsible for providing the necessary financial backing to keep it operating.

8.3.1. Conditions Needed to Create a Cooperatives

As indicated in (FAO, 1998) Cooperative organizations are based on several fundamental conditions among which the following worth notified:

- Existing problems and constraints cannot be solved individually. A **group** of motivated persons who share common problems is needed.
- there is no alternative to cooperative self-help - e.g. help cannot easily be provided from family, a social institution, or the state.
- the advantages of membership access to (goods, inputs, loans, services, markets, etc.) outweigh the duties of membership (e.g. contribution of resources such as money, time, land, equipment etc.).
- at **least one person** amongst the group has leadership ability and **takes the initiative** to represent the group.

8.3.2. Possible Users benefit from Cooperatives:

Members unite in a cooperative to get services otherwise not available, to get quality supplies on a timely basis, to have access to markets, or for other mutually beneficial reasons. Acting together for instance in marketing of their local produce gives members the advantages of economies of size and bargaining power, and allows them to share the cooperative's earnings on a basis proportionate to their use.

It is logical, therefore, that members are obligated to provide financing in proportion to the use of the cooperative that produced those benefits. As a business, the cooperative has ordinary costs that member owners are obligated to pay.

8.4. The Role of Government To Promote Cooperatives

Federal or regional governments have provided too many regulations and controls on the activities of cooperatives for them to be able to function effectively. This means ensuring that legally, support them, and groups are allowed to elect their own leaders; to market their own goods; to earn profits and to make their own decisions about distributing surplus and to carry out numerous other business activities in the members' interests.

8.5. Access to finance for production inputs

The majority of smallholder producers experience difficulty in obtaining credit for production inputs. Almost more than 90 percent of the interviewed farmers indicated that they lacked access to sufficient production inputs. The concerned Government institutions like (agricultural research and Cooperatives) should be used assist poor smallholder farmers to purchase production inputs. There is also a need that the line administration offices ensure that smallholder farmers have access to production loans to expand their production base.

International experience has shown that private institutions become more involved in rural development when government becomes committed (Joshua K., 2010). There are many ways in which government can intervene indirectly to ensure that smallholder farmers have access to credit. Some alternatives may include:

Recommending viable enterprise for lending

Government-created institutions may help poor smallholder farmers to access credit by providing information to lending institutions. For example, zonal or district extension and market development officers may recommend viable agricultural projects to lending institutions such as Bank in collateral arrangements whenever such motivations are needed, because agricultural extension officers know the farmers and the products they produce.

Helping smallholder farmers to secure market contracts.

Government officials (extension officers, marketing development officers) and other concerned parties, based at zonal and district can negotiate market contracts with markets and agribusiness firms, and these contracts can serve as collateral for poor small-scale farmers to access credit. Despite the existence of tangible collateral, some institutions are motivated to provide loans to farmers if they have secured official written contracts from markets or agro-processing industries.

Government officials may assist by linking farmers and negotiating such contracts on behalf of smallholder farmers. Contract farming, as an institutional innovation, may also help to reduce transaction costs.

8.6. MARKET SITUATION ANALYSIS IN THE AREA

Producers in the project areas are demanding (expending) for food crops more than their annual production and according to the household survey result not more than 2 % of the sample households depend on their own cereal crops production like (Maize and Sorghum) . For the self sufficient farmers the rest of the products are sold to the nearest local markets (BOKE and BURKA) by using pack animals (Donkeys) to some accessible areas and then loaded to "ISUZU" to take to the nearest market centers.

However as can be seen from the above statement, with the present production status of the project communities on the existing small plot of irrigable land the number of farmers who are self sufficient with cereal production in the area are very few and they full fill their annual requirement of food crops is by purchasing from the nearest market in selling their overtime accumulated asset like livestock (Cattle, Sheep and Goats) and Khat. But most of the surplus produce in the areas are vegetables, fruits and Sugar cane are produced more than their family demand but, as vegetables and fruits are easily perishable products unless they get potential buyers which can take in bulk, it is simply spoiled on the field and as ***the availability of storage facility is not thinkable at such remote and isolated areas the loss is more than the benefit they get from their vegetables& fruit production***.

Furthermore, they have some chance to access/find the whole buyers in relatively larger towns (BADESSA or beyond) so long as they will be able to boost production in excess of domestic consumption or greater than the current level of production provided that the accessibility road infrastructure problem is solved.

In other cases though the project area is highly conducive for irrigable sugar cane production, the surplus produce (the bulk amount) is currently fed to livestock and other is left at the field. This need concerned government institutional intervention so that the producers get premium market price for their bulk cane production and contract farming can also be arranged with the nearby

industries which demand cane plant for sugar production or inviting Livestock related investment to use the whole or cane top for fattening of different livestock in the areas.

In addition to crops, the market and the price of livestock at project areas and the nearest district market is also vary significantly as the bargaining power of the farming communities is very low and the brokers benefit by making artificial price between the seller and buyers.

However, in the future provided that the road problem is solved, there is a possibility to organize the farmers into unions and lead them along what time demands to strengthen their bargaining position in the market and to facilitate the marketing processes. In this way, it is deemed that they could also obtain agricultural inputs and non-agricultural commodities at fair prices.

Therefore, access road to market centers and transport facilities in this particular project area is lacking or non-existent at present. Thus, to improve this condition as an entry point and a leading role to initiate and coordinate the efforts of concerned stakeholders is highly needed.

8.6.1. Market Channels

Marketing channels are routes through which agricultural products move from producers to consumers. The length of the channel varies from commodity to commodity, depending on the quantity to be moved, the form of consumer demand and degree of regional, zonal and local specialization in the production of that specific commodity.

A very small proportion of farm produce moves directly from farmers to consumers. Most of the farm products move to consumers through several institutions and channels. There are two main routes through which agricultural commodities reach the consumers:

(i) Direct Route: Sometimes, agricultural commodities directly pass from producers to consumers. In this case there is a complete absence or less middlemen or intermediaries. But it is only a very small proportion of the agricultural commodities which moves directly from producers to consumers.

(ii) Indirect Route: Agricultural commodities generally move from producers to consumers through intermediaries or middlemen. The number of intermediaries may vary from one to many at each market tier.

As already indicated in the introductory part of the socio economy report, the cereal-based mixed faming system of the Hararghe zones as general shifted gradually towards cereal-khat-vegetable based mixed system and in the study area in particular farmers again switched to produce permanent crops like (Coffee, Khat, Sugar cane) in addition to cereals (Maize and Sorghum) basically due to land shortage and perishable nature of the vegetables and fruits as the project site is impassable to any motorized vehicle except Motor cycle.

8.6.2. Smallholder marketing channels in the areas

For farmers involved in agribusiness, growing and harvesting a crop and rearing animals form only half of the way from long journey because they still have to market the produce.

Different types of smallholder farmers are differently integrated with outside markets, whether regional or national (Shiferaw *et al.,* 2006). Before choosing a marketing channel, smallholder farmers consider the **costs associated with transportation, profits, level of trust** among the available brokers and familiarity of the markets, among other factors (Makhura, 2001). Unfortunately some marketing choices pose problems for farmers, and can result in lower farmer earnings.

In general terms, smallholder farmers market their produce individually in local markets but make use of middlemen in regional, national and international markets. For local markets, smallholder farmers either sell to local traders or directly to consumers at the farm gate. Therefore to alleviate such market irregularities the proposed marketing channels for the study areas and the district can be illustrated in the figure -18-below.

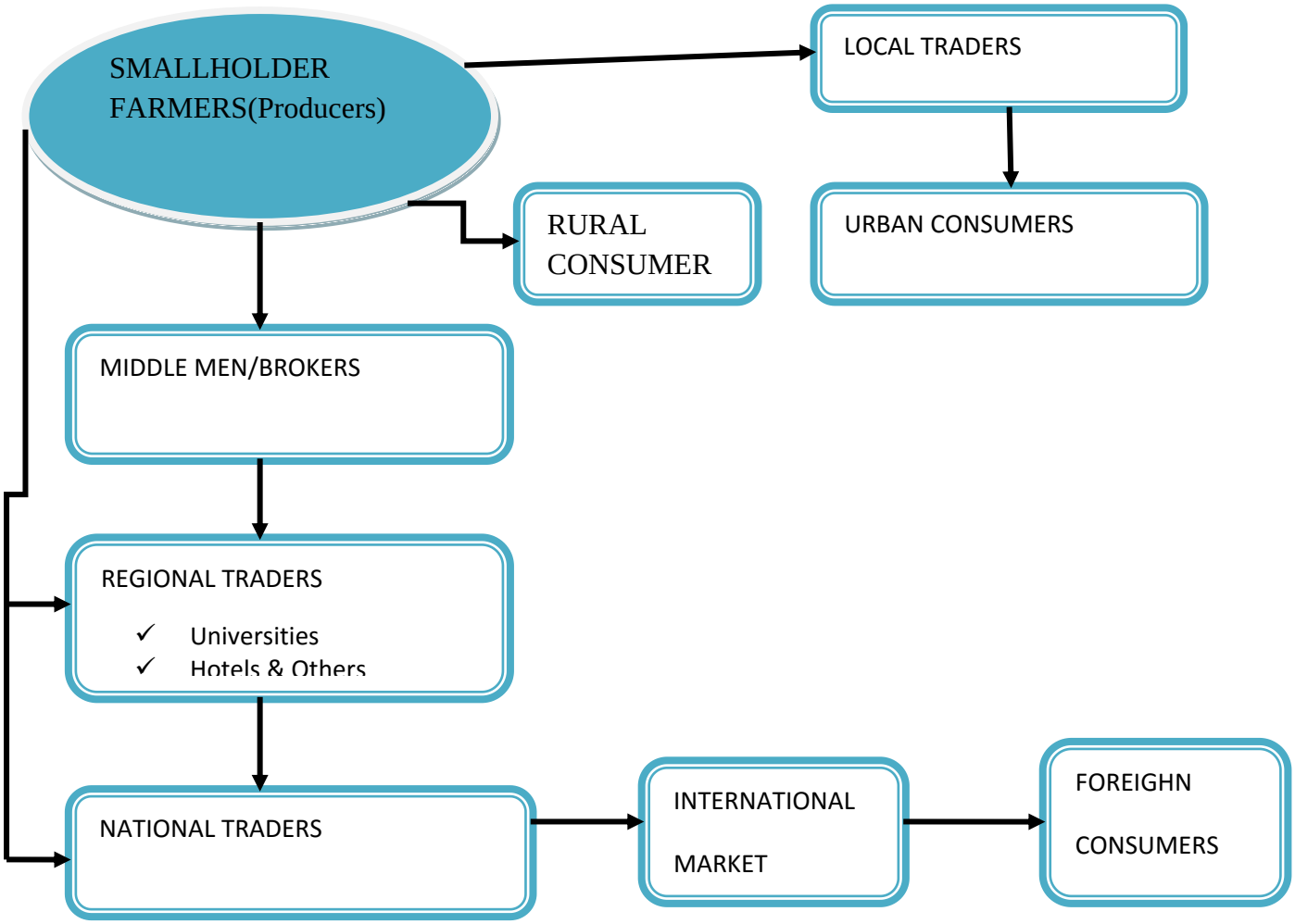

Figure 18. Depicts the proposed marketing channels of the study area

The above figure shows the channels through which most smallholder farmers need to market their produce. The arrows illustrate the different paths that are followed by the produce, from smallholder farmers to the final consumers.

Most produce from smallholder crop /Livestock producers are sell their produce locally, with only a small amount supplied to local, regional market or exported. When they sell in the local markets, they mostly sell at the farm gate through informal transactions. Unfortunately, farm gate sales result in lower farmer revenue since the prices offered are normally low and variable (Montshwe, 2006). Variable prices result from the unavailability of scales for weighing the produce and lack of market price knowledge. At the farm gate also, farmers are often obliged to sell to their neighbors even when the latter cannot pay immediately for the produce.

However, smallholder farmers prefer farm gate sales because they receive direct immediate payments and do not incur marketing costs such as transportation costs and tax payments.

Smallholder crop farmers are said to make use of middlemen in marketing, thereby exposing themselves to price manipulation and exploitation.

8.6.3. Factors Affecting Length of Marketing Channels

Marketing channels for agricultural products vary from product to product, region to region.

For instance, the marketing channels for vegetables and fruits are different from those for food grains. Packagers play a crucial role in the marketing of vegetables and fruits. The level of the development of a given society can also determine the final form in which consumers demand the product. For example, consumers in more developed countries demand more processed foods in a packed form. For instance Wheat has to be supplied in the form of bread. Processors play a dominant role in such societies. In the developing countries like that of ours, however, most food grains are purchased by consumers in the raw form and processing is done at the consumer's or processors level. Again, the food grains or vegetables originating at small farms follow different route or channels from the one originating in large farms. For example, small farms usually sell their produce to village traders; which may or may not enter the regional/national market. But large farms usually sell their produce in the main or large market, where it goes into the hands of wholesalers..

With the expansion in transportation facilities and communication network, changes in the structure of demand and the development of markets, marketing channels for farm products in our country have undergone a considerable change, both in terms of length and quality.

8.6.3.2. Proposed Marketing Channels for Cereals in the study areas

Marketing channels for various cereals in the project areas are more or less similar, except the channel for vegetable or fruits. The flow chart in Fig.-19-below may helps us to know the marketing channels for general food grains in the study areas.

Some common marketing channels for Sorghum and Maize have been identified as follows: but may not be only restricted to it.

(i)Farmer → consumers;

(ii) Farmer → retailer or village trader → consumer;

(iii) Farmer → village trader → wholesaler → retailer → consumer;

(iv) Farmer → co-operative → marketing society → retailer → consumer;

(v); Farmer → wholesaler → flour miller → retailer → consumer

Therefore, provided that the road and other infrastructural facilities are improved, the smallholder farming communities of the project areas will have the opportunities to supply their produce through the above market channels to different direction of the country. The possible market routes from the project areas to different parts of the region and country can be as follows:

1. Agricultural produce from project areas → Badessa town → Chiro → Adama → Finfinnee (National Market)
2. Agricultural produce from around the project areas → Badessa → Chiro → Harar(Diredawa) → Djibouti / Somali land

It is obvious that through all these market routes there are different market actors and intermediaries to facilitate the flow of the produce from its production area to its final destination(Final consumer) and different transaction costs also occur in the market chain.

8.6.3.3. Transaction costs in smallholder farming

In order to participate in the market, Hobbs (1997) explained that farmers must determine trading partners, terms of exchange, conduct negotiations leading to a bargain, draw up a contract, and undertake the inspection needed to make sure that the terms of the contract are being observed. These operations are often costly and the costs associated are termed transaction costs. Transaction costs, as defined by Eggertson (1990), are observable and non-observable costs associated with enforcement and the exchange of property rights. Specifically, these include the costs of searching for a trading partner with whom to exchange with, the costs of screening partners, of bargaining, monitoring, enforcement and, eventually, transferring the product to its intended destination.

In view of this the smallholder producers in and around the project areas face different transaction costs with varying magnitude in selling their produce and buy necessary inputs for their production process.

8.6.4. PRICE SETTING IN THE AREA

Farmers use various mechanisms when setting prices for their produce. According to the key informant interviews made at project site, smallholder farmers in crop and livestock production come up with prices for their produce in different possible methods.

The possible methods that a farmer can use are: 1) he or she can set the price him/herself; 2) He/she can make a price of the produce based on the price in the market (market driven) or; 3) the buyer can dictate the price at which he is willing to buy the produce. Accordingly the market prices of different commodities are presented in the table below.

Table 10: Price of some common Agri. commodities in the area

Name of Items	Unit	Farm gate price (ET. Birr)	District Market price (ET.Birr)	Remark
Food Grains	**Kg**			
Barely	Kg	9.00	10.00	
Wheat	Kg	10.00	10.00	
Teff	Kg	22.50	24.00	
Sorghum	Kg	7.00	10.00	
Maize	Kg	6.00	7.00	
PULSES				
Haricot Bean	Kg	15.00	16.00	
Field pea	Kg	25.00	25.00	
Lentils	"	27.00	27.00	
Chick pea	"	20.00	22.50	
Cow pea	"	20.00	22.50	
Vegetables				
Potato	"	5.00	6.00	
Tomato	"	10.00	12.00	
Onion	"	7.00	12.00	
Garlic	"	40.00	50.00	
Pepper	Kg	50.00	50.00	
Cabbage	"	10.00	12.00	
Carrot	"	20.00	22.00	
Livestock products				
Butter	Kg	-	-	
Honey	Kg	180.00	200.00	
Egg	No(1)	4.00	5.00	
Milk	Lit	15.00	21.00	

Source: Oda Bultum District Trade and Market Development Office

Table 11: Different Livestock price at Farm gate and district market

Livestock Type	Measurement ment(No)	Farm gate price (ET.Birr)	District Market price (ET.Birr)	Remark
Cattle Price				
Ox	1	15,000.00	25,000.00	
Young Bull	1	10,000.00	15,000.00	
Cow	1	5,000.00	7,000.00	
Heifer	1	7,000.00	9000.00	
Weaned Calf	1	3,000.00	4,000.00	
Shoats				
Ewe	1	1000.00	1500.00	
Ram	1	1500.00	2000.00	
Ram lamb	1	600.00	800.00	
Castrate	1	2000.00	4,000.00	
She goat	1	1200.00	1800.00	
Buck	1	4000.00	7,000.00	
Young buck	1	1500.00	4000.00	
Pack Animals				
Donkey	1	3000.00	4000.00	
Mule	1	7,000.00	7500.00	
Horse	1	5000.00	7,000.00	
Camel	1	20,000.00	30,000.00	

Source: District Trade and Market Development Office

The selected agricultural produce interns of their anticipated productivity in the areas are(Maize, Tomato, Pepper and Onion) for crops while Cattle and Goats are selected livestock species suitable for the study areas

8.7. Market Opportunities and Challenges in the area

8.7.1. Market Opportunities

8.7.1.1. Proximity to National and International Markets

The west Hararghe zone in general and the project area in particular is located at the heart of high way road from Addis Ababa to Harar city and close proximity to the National Market through the route of Adama and international Market via Harar and/Dire dawa to Somali land and Djibouti(for both crop and Livestock markets).

8.7.1.2. Diversity of Agricultural produces in the area

- **Crop Production**

There is a wealth of accumulated experience of the farming communities of Hararghe farmers in utilizing and best use of irrigable land to develop a diverse crop type, like(vegetables and fruits), Khat, Root crops, Cereals, Sugar cane others, provided that this irrigation project come to true.

- **Livestock Production**

Unlike the farming communities in the central part of Ethiopia and the regional states, the Hararghe communities are highly acquainted with market oriented livestock husbandry and this condition hold true for project area communities. As indicated in the Livestock production sub-section of this report, “the Harar Sanga” is symbolized from the due attention that the farming communities offer to the special husbandry conditions they give to different livestock species(in housing, feeding and marketing).

Accordingly the relatively old age, well fed “Harar Sanga” is highly demanded for Addis Ababa, National market considering the major Christian festivals like(Easter, Christ-mass, Ethiopian new year and Mauled of Muslims’) as this type meat from such type of animals is highly demanded for Cut meat ”Kurti/Qurx”. The relatively well fed with good body condition and younger age group animals (Cattle) and small ruminants are demanded at Somali land and Djibouti international market.

- **Business policy environment**

The National Agricultural marketing environments as well as the regional business enabling directions are promising to undertake both crop and livestock businesses. These includes the favorable National and regional government policy, the good infrastructure facilities in the region (especially) in the direction of project areas,(East &West Hararghe).

8.7.2. Marketing Challenges

8.7.2.1. Business enabling environment for SH producers

- **Lack of access Road**

Accessibility of rural feeder road is one of the critical factors in hindering efficient agricultural marketing systems. The farming communities in the project areas lack access to efficient transpiration services, both in rainy and dry seasons for transporting their surplus produce to the nearest market and in turn to transport agricultural inputs and other non homemade food items from the nearest town to their village. Currently the only alternative mechanisms Farmers use to transport their produce is pack animals either by their own or renting from their neighboring fellow farmers, to transport goods and services where as for transporting people from place to place mostly they use Moto-Cycle though the price is not affordable in relation to the price they pay for the single trip.

- **Asymmetric information Services**

The major market information sources for small holder farmers in the areas are the middle men and the small traders either by physical contact or using Mobile phone. However, majority of producers get market information after they reach the nearest market place. In this case the less aware producer may not have a good bargaining power as the middle men are more knowledgeable about the prevailing market price and can make artificial price arrangements to get commission between the buyer and the seller.

Thus the smallholder producers believed to not receive the right market price for their produce and need special market information access arrangements, by the concerned government institution based at the woreda level or beyond before or during the busy market months/seasons.

- **Lack of Standardized measurements for their produce**

The establishment of transparent weighing scale for every agricultural produce is very important between and among the market actors is very important for a well functioning agricultural marketing system and for a win-win transactions. However, in practical market condition, especially in the rural areas including the study areas, there is a complaint on the weighing scales

of crops particularly in primary markets. This brings the mistrust between producers and different traders.

In case of livestock markets the buying and selling process is undertaken by eye guess at the market place as there are no weighing scales, especially in primary and secondary markets. As observed during this particular survey, the livestock market has tremendous problems as the selling and buying is mainly dependent on the good will of the brokers in the particular markets. In doing so the middle men involved in various channels of livestock markets has a very strong effect in setting marketing margins.

9. Community Sense of Ownership of the Scheme

Community Participation is the active involvement of development beneficiaries in their choice, to bring the win-win situation for their future food security situations. The pre-conditions for effective community participation is that the community members must understand the problems they experience due to rain fall interruption and/or drought and internalize the desirable actions to address the problem. Accordingly the Mada-Gurra Erbe communities are well aware of these conditions to sustain their family life as there is little or no alternative livelihood opportunity other than managing the Sakata river to irrigate their farm land. The level of participation is emanated from the farmer's willingness to contribute to the project activities in terms of commitment of contributing their time, labor and material resources, joint scheme management and canal construction and more. In this regard (according to personal observation of the socio-economist) the Madda-Gurra Erbe traditional irrigation participation of beneficiary farmers is estimated to be 100%.

9.1. Community Attitude towards the Irrigation Scheme

Using traditional irrigation method is a common phenomenon in the zone and the district in general and no exception for the project areas community in particular. And, the people in the command area have a long year's traditional irrigation experience in this regard. They have been longing for using modern small scale irrigation in diverting Saketa River and they used to sustaining their family life. They know how other neighboring farming communities use irrigation water to produce different food crops and are clearly aware of its benefit. They also make use of the practices and currently exercising in the way others neighboring farmers have managed to use water in their scheduled shift and there would not be any problem when they become beneficiary of the modern irrigation scheme. What they intend is to use the land under their disposal intensively and properly for both crop and forage production to raise the quality of their products and find to boost their production for market-oriented products such as vegetables in addition to the existing different variety of crops.

All the people in project sites are eager to become beneficiaries of the irrigation scheme; they have positive attitude towards or high expectations about the project. Despite they are with limited technical knowledge of using modern irrigation, they have or tend to exhibit a high level

of enthusiasm and eagerness for the scheme; and this will impart a base for future sustainability of the project, where no external support is available.

By the time of this study, it was not clearly known how much plots of land will be taken or what property will be damaged due to this project. However, there would be no possible displacement of people from settlement or occupation of farm plots, grazing land, forestland or other sites of social value such as recreational, holy places, aesthetic importance, etc., due to the intended project. Thus, it is not difficult to understand that the project would not bring about much destruction as it is the extension of the already existing traditional irrigation to modern one. In case any such event will happen, the intention of the people is that there would be no claim by landholders for compensation against damage to their plots and properties. Thus, it is possible to conclude that they would not claim compensation for any effects that the project would bring.

Hence, the project owner will have no difficulty in settlement of likely claim that would arise in the future. This will ensure smooth relationship with the community, and maximize the degree of normal operation and sustainability of the project.

The upstream communities are currently using Saketa River for modern irrigation on their farm land which is already operational at present. This may reduce the quantity of water when this project will become fully operational with adding more irrigable areas. This is likely to bring about conflicting interests in the future. However, as indicated above, the Saketa river is recharged with additional spring at Madda Gurra Erbe and it is less likely that the conflict will occur due to water scarcity between the up and down stream communities. As information gathered from various organs, the occurrence of conflict among individuals on the use of resources is not frequent or serious in the areas as the communities know each other very well since long period of time. In case when any conflict happens, it is resolved through administrative and legal bodies and local elders as well.

Consideration of and working towards all these issues would induce responsibility on the part of the community in protecting and ensuring the security of this scheme using their accumulated old tradition and existing administrative structures in the future. The willingness of the community to support every aspect of the project has been observed during consultation with them and representatives of administrative officials.

10. Benefits of the Project

Though the productivity level of the current traditionally developed irrigation land is so less, because of low input and low output, irrigation remain the only livelihood base of the user communities on the existing plot of land they posses , and if the modern irrigation scheme come true, the weir site level will be raised, to catch more volume of water and a greater area of land will be developed so it allows more farmers will be benefitted from the new project. The project is, therefore, very important to exploit opportunity to augment output per unit of land and the amount of annual production from the existing fixed plot of land by enabling production at least twice and/or three times per year from the same plot of crop land. The irrigation project would possibly induce intensive use of small land for both crop and livestock pasture production.

Provided that road infrastructure will be constructed during the scheme development, the project may have multiple or triple benefits in terms of providing sufficient or surplus food to previously food insecure direct consumers and attract different traders who may buy in bulk and re-sell the products on retail at the local and distant markets. Farm inputs suppliers are also likely to be benefited due to increased cycle of production under this project.

During and following the project implementation, necessary infrastructures and government institutions will be established and necessary employees will be deployed to the area to deliver their respective professional knowledge/skill to the needy communities, like (Human and Animal health technicians, Development agents).

Currently farmers of the areas are switched their production from vegetables and fruits production like (Tomato, Onion, Cabbage, Potato, Papaya, Banana) to more permanent crops like(Sugar cane, Chat, Coffee)and others because of lack of market & their bulk production and their perishable nature with in short period of time in such remote and isolated areas and now due to this project, it is hoped that infrastructure facility will be improved and producers get more traders will come to the area and take their produce at right time and with reasonable price.

The beneficiaries will have shifted from once a year (rainy season) to two and three harvests and labor use efficiency will be improved due to irrigation and so per capita income of the typical household will be increased.

Crop residues, vegetable and fruits by products as well as sugarcane tops will be fed to different livestock which is helpful in finishing livestock for market in a shorter period of time possible, which fuel HH income.

The existing traditional water users associations will be organized formally and empowered in order to improve the performance of SSI schemes; simultaneously, cooperatives establishment will be encouraged and empowered in order to solve the current marketing constraints of members. In this regard, the currently non-existent agricultural extension service should be improved and include market information and organize agri-business trainings.

Generally as stipulated in proclamation No 56/2012 of Oromia Regional Government, Rural land Administration and use(Article-8) minimum farm land plot size per farm HH, excluding existing holding is fixed to 0.5 ha for cereals and 0.25 for perennial crops. Accordingly the Mada Gura Erbe small scale irrigation surveyed net command area is estimated to be 27.3 ha and this can benefit about only 54.6 HHs when estimated to allocate 0.5 ha for each family head and about 110 HHs at 0.25 ha estimate for each HH head. Therefore, in general the project can feed/benefit (110*6.9 average family size) about 759 families.

Conclusion and Recommendations

- The community has a high-level of concern for the modern irrigation project implementation as they have sufficient over year's accumulated traditional irrigation experience in managing the scheme in their vicinity, and have a full hope that the project would affect their life positively. As the "Madda Gurra Erbe" traditional irrigation is currently in progress without any interruption, there would not be much resource affected (damaged) due to the intended new irrigation project and during community consultation, there is no tendency of the people to claim compensation for property damage due to this project. Hence, the project owner will have no difficulty in settlement of likely claim that would arise in the future. This will ensure smooth relationship with the community, and maximize the degree of normal operation and sustainability of the project.
- As the project area is located in extremely isolated area even from the rest of kebele community, ***paving access road*** to the site is a necessary condition for transportation and undertaking activities like construction and to improve market links and communication. The community desperately needs support of various actors in alleviating these problems that are beyond its capacity. Therefore, stakeholders (including the project owner or client) are expected to monitor the case of incompatible interests and take appropriate actions. Various bodies need to cooperate and play their role in making access road to the envisaged project site. Above all, the role of the project owner is a decisive factor in initiating and coordinating the efforts of other stakeholders including the user communities.
- Saketa River water shade is serving the surrounding communities in the right and left wing both for Boke and Oda Bultum district communities and during access road construction bridge is mandatory to access the either side communities and/or livestock.
- Down-stream users of irrigation scheme may be affected by reduced quantity of Saketa River supply when this particular project becomes operational in its full capacity. This is likely to bring about conflicting interests between the up and down stream communities in the future. But, as the study team observed during this particular socio-economic survey, ***Saketa River has shown the high recharging*** capacity after every distances as it flows between the foot of mountain chains in the right and left and with respect to this

particular project, the occurrence of water scarcity is less likely, though the detail conclusion may be left to the Hydrology team.

- To bring sustainable agricultural development and ensure food self sufficiency of the smallholder farmers in the study area in particular and, the zone as general actors involved in the agriculture sector should act in an integrated manner.
- Services like extension, input supply, credit provision, research and development in the region are amongst all delivered in the project area for the realization of bringing about the intended change at the study area and the surrounding.
- Agricultural inputs like seed, fertilizer, pesticides, improved farm tools, etc supply in line with efficient extension service would lead to ensure enhanced production and productivity. However, the supply of these production enhancing inputs/services were constrained with various factors like (absence of road connection and other socio-economic constraints) and these condition should be solved to bring the users to intended development track increase farmers productivity.

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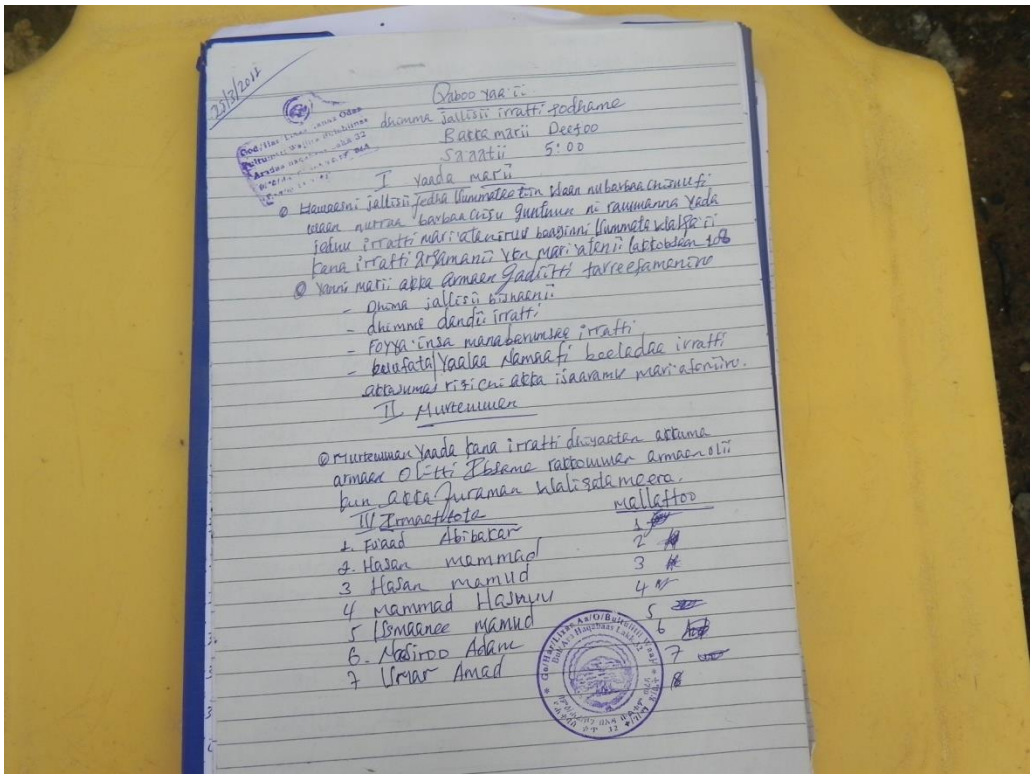
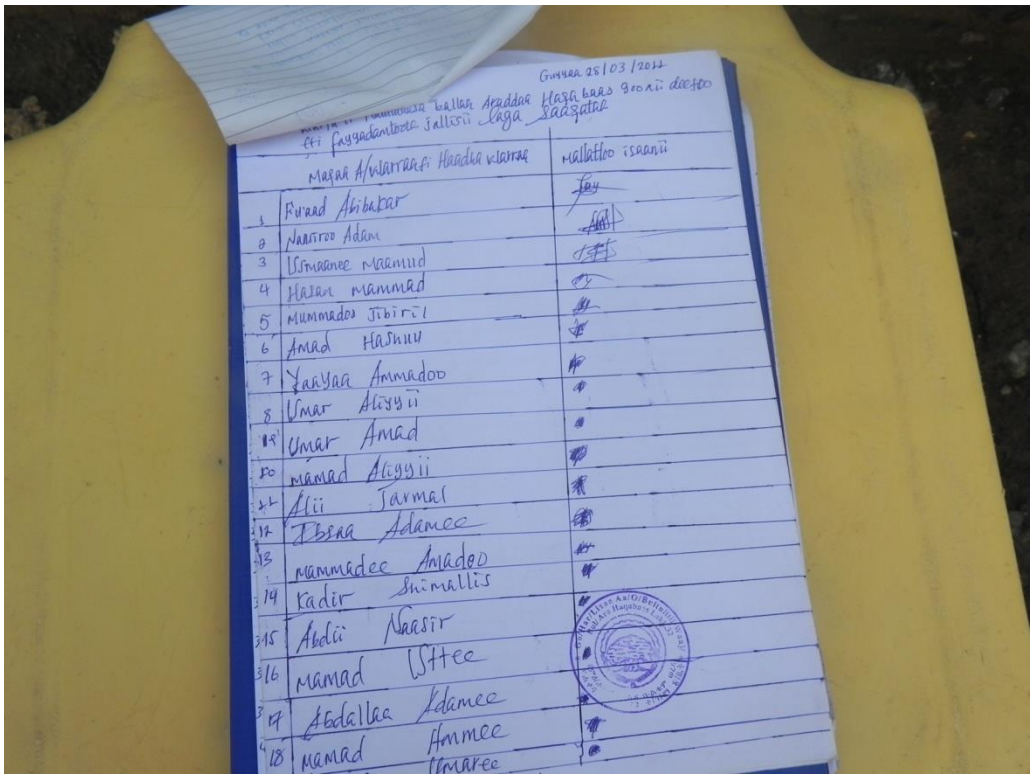
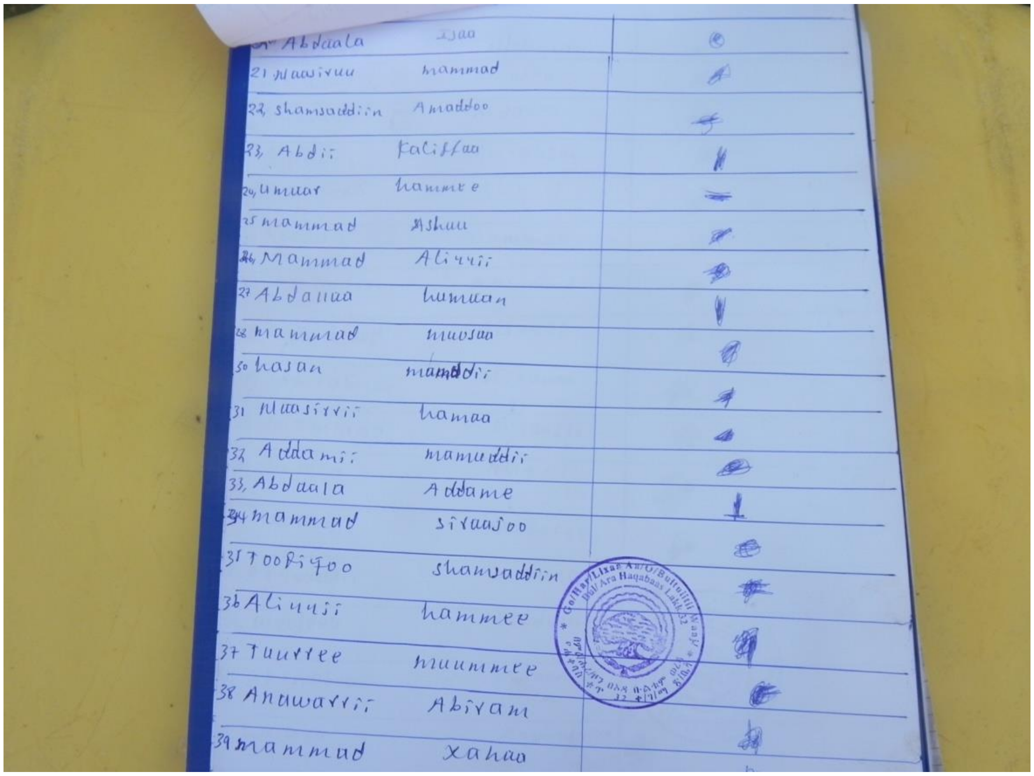
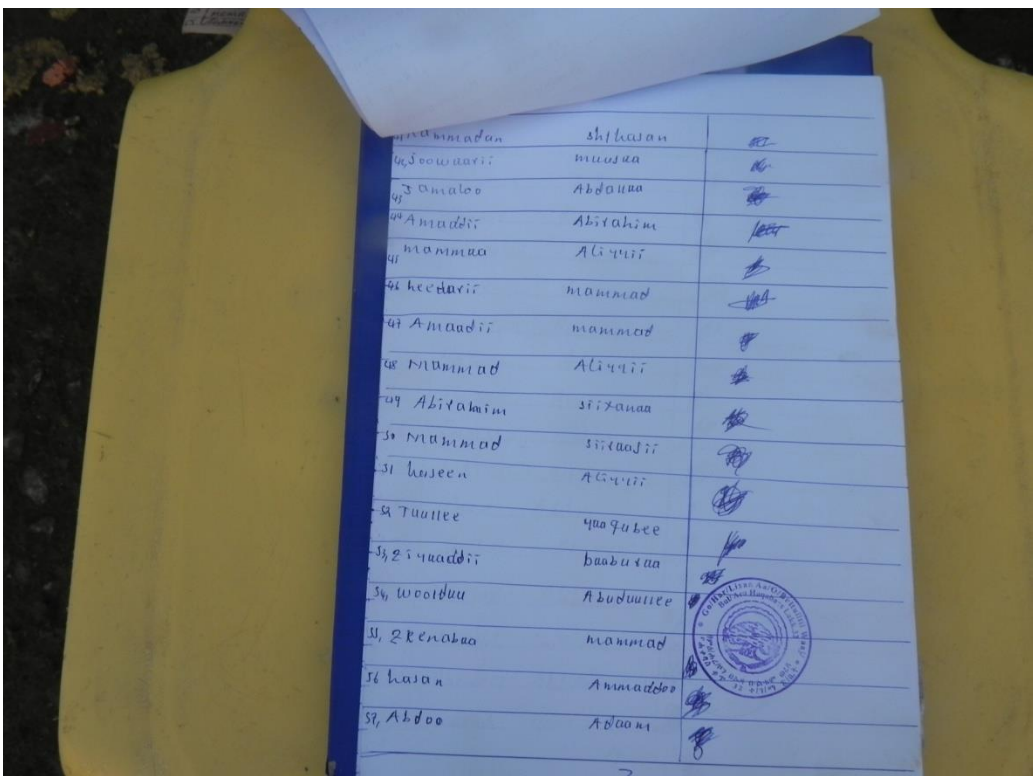
ANNEX.I. COMMUNITY CONSULTATION MINUTES



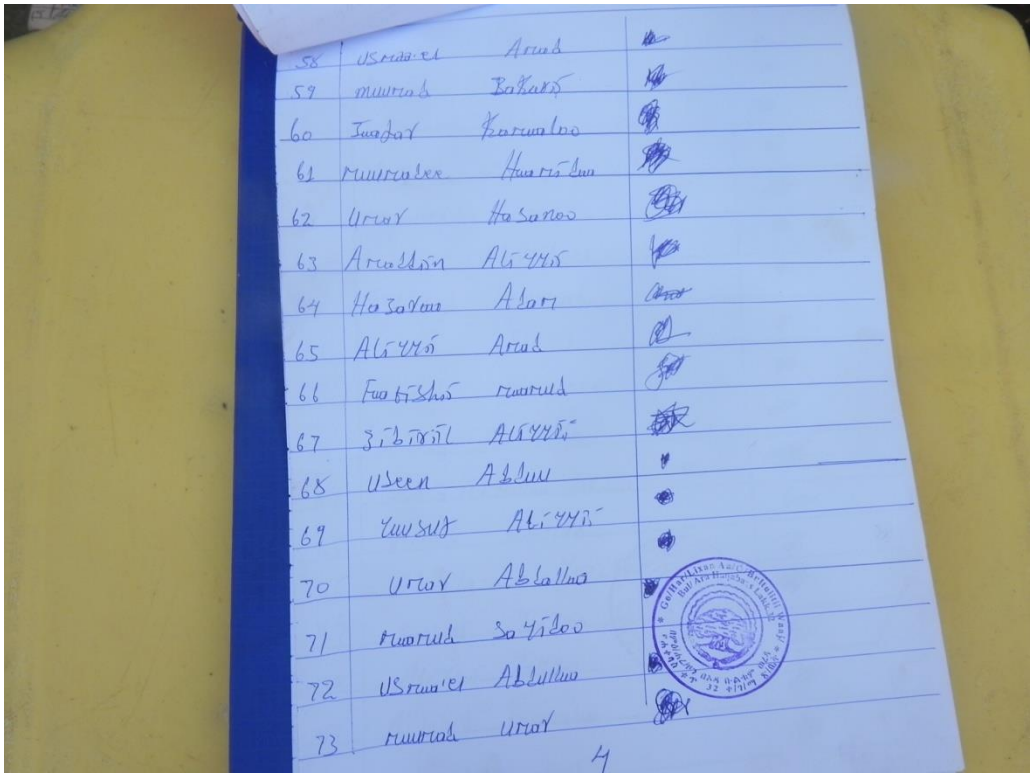




Abdaala		
21 Naasiruu	mammad	
22 shamsaddiin	Amaddoo	
23 Abdii	Faliffaa	
24 Umuar	hammee	
25 mammad	Ashuu	
26 Mammad	Aliyyii	
27 Abdallaa	humuan	
28 mammad	muusaa	
30 hasan	mammadii	
31 Naasirrii	hamaa	
32 Addamii	mamuddii	
33 Abdaala	Addame	
34 mammad	siraajoo	
35 Toofiqoo	shamsaddiin	
36 Aliyyii	hammee	
37 Tuurree	muummee	
38 Anuwarrii	Abiram	
39 mammad	xahaa	

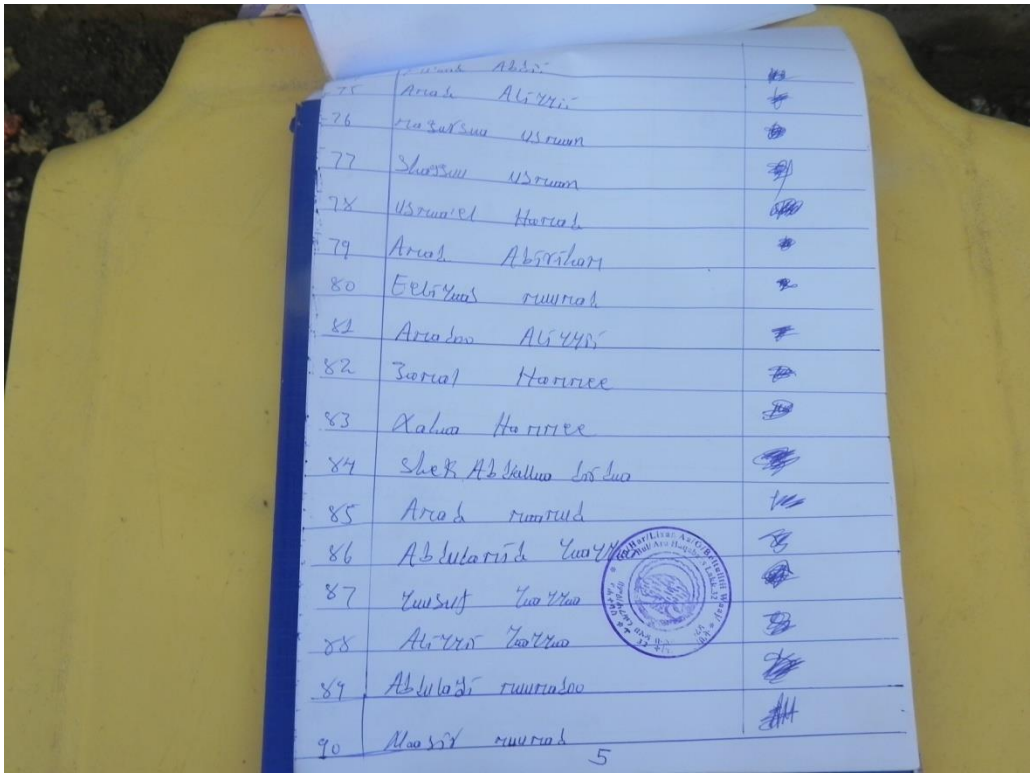


mmadan	shihasan	
Soowaarii	muusaa	
43 Jamaloo	Abdallaa	
44 Amaddii	Abirahim	
45 mammaa	Aliyyii	
46 heedarii	mammad	
47 Amaadii	mammad	
48 Mammad	Aliyyii	
49 Abirahim	siiraaj	
50 Mammad	siiraajii	
51 huseen	Aliyyii	
52 Tuullee	yaaqubee	
53 Ziyaaddii	baaburaa	
54 Wooddaa	Abduulee	
55 Zeenabaa	mammad	
56 hasan	Ammaddoo	
57 Abdoo	Adaam	



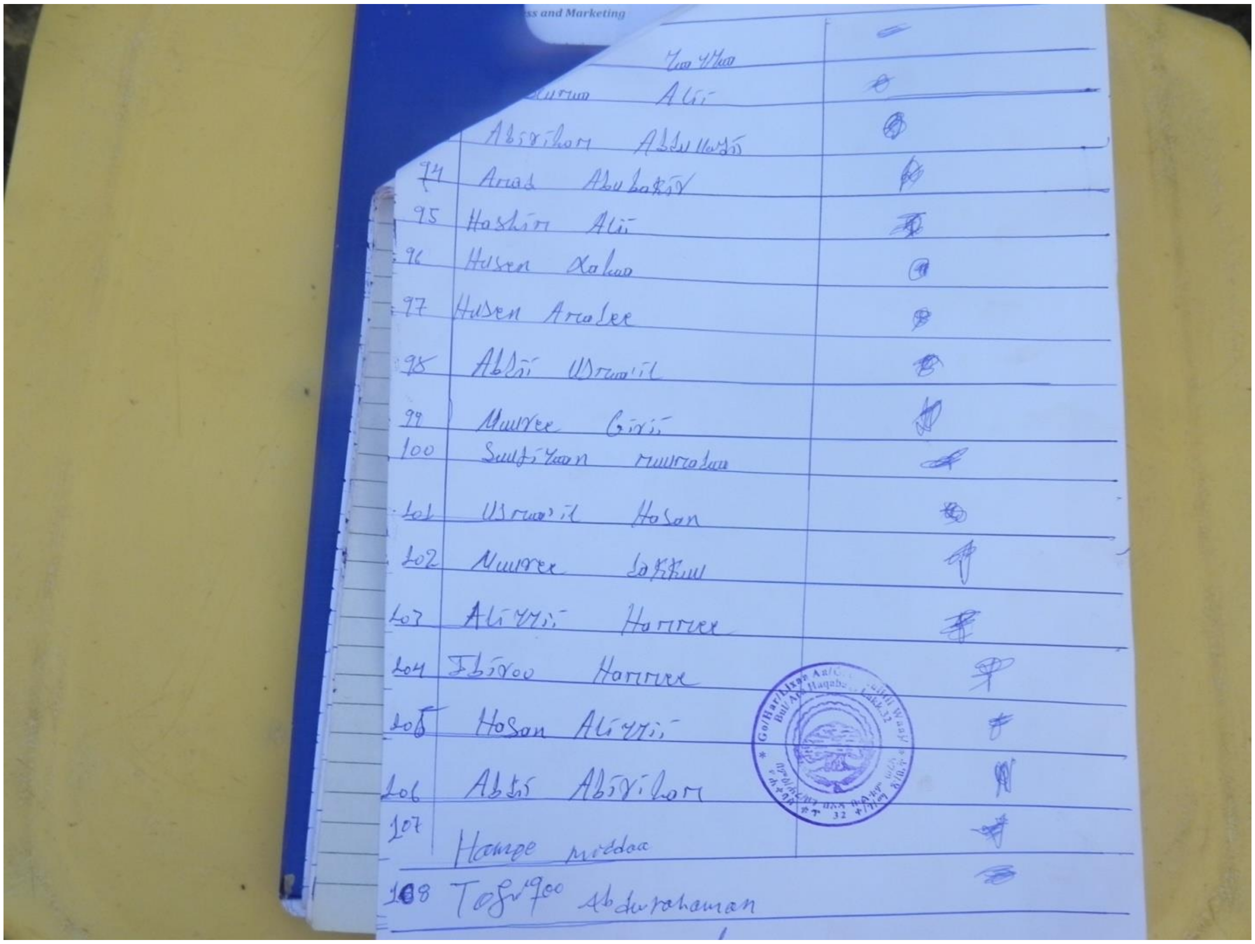
58	USmaEl	Arad	
59	muHmad	BaKarY	
60	Jamal	Kamalee	
61	muHmadee	HamiSa	
62	Umar	Hasanee	
63	Amaddin	AliYYi	
64	HaSaYna	Adam	
65	AliYYi	Arad	
66	FaTiSha	muHmad	
67	GaBaYiL	AliYYi	
68	USeen	Abdu	
69	YuSuf	AliYYi	
70	Umar	Abdalla	
71	muHmad	SaYida	
72	USmaEl	Abdulla	
73	muHmad	Umar	

4



75	Arad	AliYYi	
76	HaSaYna	USman	
77	Shassu	USman	
78	USmaEl	Hamid	
79	Arad	Abdiman	
80	EliYas	muHmad	
81	Amadee	AliYYi	
82	Jamal	Hamee	
83	Kalla	Hamee	
84	SheK	Abdulla Isdu	
85	Arad	muHmad	
86	Abdulaziz	YuYYa	
87	YuSuf	YuYYa	
88	AliYYi	YaYYa	
89	Abdulaji	muHmadee	
90	Mass	muHmad	

5



94 Anas Abubakar
95 Hashim Alii
96 Husen Xaloo
97 Husen Araalee
98 Abdii Ismaa'il
99 Muuree Girii
100 Sufiyaan Muuradaa
101 Ismaa'il Hasan
102 Nuuree Sakkuu
103 Aliyyii Harmee
104 Ibiroo Harmee
105 Hasan Aliyyii
106 Abdii Abiriham
107 Hampe Moddaa
108 Tofiiqoo Abdurahaman

Annex. II. Data Collection Questionnaire & Check Lists

Socio-Economy Household Survey Questionnaire for Small Scale Irrigation Projects

Location: District_____ Kebele _____

Name of the Interviewer: _____

Date of interview: _____

1. Respondent's Profile

1.1 Respondent's sex: 1) Male; 2) Female;

1.2 Age group of the Respondent; 1) 18 to 30 years; 2) 31 to 45 years; 3) 46 to 60 years; 4) above 60 years;

1.3 Marital status of the respondent: 1) single; 2) married; 3) divorced; 4) widowed; 5) Other (specify);_____

1.4 Family size of the respondent; 1) one, 2) two, 3) three, 4) four, 5) five, 6) six; 7) greater than six;

1.5 **N**umber of wives of the respondent (if Male headed) ? 1) One 2) Two 3)Three 4) >Three

1.6 Relation of the respondent in the family: 1)Husband: 2) Wife 3) Daughter 4) Son 5) other/specify/_____

1.7 Religion of the respondent 1) Protestant 2) Orthodox 3) Catholic 4) Muslim 5) Other_____

1.8 Ethnicity of respondent: 1)Oromo 2) Amhara 3) Others(specify)_____

1.9 Type of residential house:1) Blocket wall with Corrugated iron 2) Thatched wall with grass roof; 3) Hut; 4)Temporary tent; 5) Other (specify);_____

1.10 Do the respondent can read and write? 1) Yes; 2) No;

1.10.1 If yes, what is your highest education level? 1) Basic/Adult Education; 2) Religious school; 3) first cycle (1 – 4); 4) Second cycle (5 – 8); 5) 9 –10^{th}; 6) 11 – 12^{th}; 7) Certificate; 8) Diploma and above

1.10.2 Major occupation of the respondent 1) Crop production; 3) Livestock production 3) Mixed farming 4) Petty trading; 5) Daily laborer; 6) Employee (Gov./NGOs); 7) Other (specify); _____

2. Socio-economic Data and /information of the Respondent

2.1 Major source of livelihoods of the respondent: 1) Crop production; 2) Livestock rearing; 3) Both crop and livestock 4) Other (specify)_____

2.1.1 If the respondent exercising mixed agriculture :

2.1.2 Major Crops produced? 1) Teff 2) Wheat, 3) Barely 4) Maize 5) Sorguhm 6) Others(specify)_____

2.1.3 Do your last year production is sufficient for your household? 1. yes 2. No

2.1.1. If no what is the reason? 1. Shortage of farm land 2).Shortage of inputs (Seed, fertilizer, Draft power) 3) Bad weather 4) Other Specify

2.1.4 For how many months of the year you rely on your own production? 1). < 3months 2). 3-6 months 3). 6-9 months 4). 9-12 months

2.1.5. How many quintals of crop (all types) your household requires for a year? _____Quintal

2.6.1. What are the major Livestock types you rear? 1) Cattle 2) Sheep, 3) Goats 4) Equine 5) Others (Specify)_____

2.1.6. The major purpose of keeping Livestock in the areas in order of importance:

1) Cattle : _____
2) Sheep and Goats: _____
3) Equines(Donkey, Horse & Mule): _____
4) Camel (if reared in the area) _____

2.2 Do you get sufficient and quality feeds for your animals all over the year? 1) Yes; 2) No;

2.2.1 If No, how do you fill the gap of feed shortage ? 1) through moving the animals to other areas; 2) through utilizing pre-stored feeds and pastures; 3) through purchasing grasses and pastures from other areas; 4) through government and NGOs supports; 5) others (specify) --------
---

2.3 If you are agro-pastoralist, what are the major types of crops you grow? 1) Maize and sorghum 2) maize, sorghum and haricot bean 3) maize, sorghum, haricot bean, vegetables, chat and others 4) Others (specify)_____

3. Income and Income Sources of the Household

3.1 What are the major income sources of the household? 1) sale of cattle; 2) sale of goats and sheep; 3) sale of poultry; 4) Sale of equines; 5) sale of camels; 6) Other off-farm activities 7) remittances; 8)sale of animal products such as milk, butter, eggs, skins and hides; 9) sale of grain crops such as maize, and vegetables and fruits; 10) Aids from (NGOs or GOs), 11) Other (specify) ----------

3.2 What is your average annual income from different sources during last year (2010 E.C.) in ETB? ----------

3.2. What is the percentage share of crop production contributed to your annual income? _____%

3.3 Estimate of annual expenditure of the household for different purposes? In Ethiopan Birr

1). Food_____ 2). Clothing _____ 3).Education_____
4) Farm inputs(Seed, fertilizer, herbicide etc). _____5).Health _____
6) Non homemade items (Sugar, Salt, Oil, 7).Sanitary materials (Soap, Omo & others)_____
8). Others (if any) _____ 9) Total_____

3.4 Do you get agricultural extension services on how to rear and manage your livestock and/or crops? 1) Yes; 2) No

3.4.1 If yes, what are the main extension services and technical supports you have been accessed and? 1) Using improved feeds, pastures and/or seeds; 2) using improved breeds and other agro-inputs; 3) others (specify)

3.5 What are the major challenges facing you on your production activities? 1) Shortage of improved feeds and water; 2) lack of veterinary services; 3) Lack or shortage of improved seeds and other agro-chemicals 4) lack market facilities and marketing information; 4) lack of accessible road, school, pure water supply and transportation services; 5) others (specify) ----------;

4. Irrigation Practices and Experiences of the Respondent

4.1.1 Do you have your own land ? 1) Yes; 2) No;

4.1.1 If yes, what is the size of the land plot you possess? 1) < 0.5 ha; 2) 0.5- 1.00 ha;

3) 1.00- 1.5ha; 4) 1.5 – 2.00 ha; 5) 2.00 - 3.00 ha; 6) 3.00 – 4.00 ha; 7) 4.00 – 5.00 ha;

8) > 5.00 ha

4.2 Do you practice irrigation agriculture? 1) Yes; 2) No;

4.2.1 If yes, is it modern or cultural? 1) Cultural; 2) modern; 3) both

4.2.2 Do you use inputs for irrigation agriculture? 1). Yes 2). No

4.2.3 What type of inputs do you use 1). Fertilizer 2). Improved seed 3). Herbicide 4). Other

4.2.4 If yes, what is the source of water for your irrigation activities? 1) River 2) Spring 3) traditional pond 4) harvested rain water 5) Other (specify)

4.2.5 If yes, what is the size of land plot used irrigation agriculture? 1) < 0.5 ha; 2) 0.5 ha 3) .5 - 1 ha; 4) 1 - 1.5 ha; 5) 1.5 – 2 ha; 6) 2 – 2.5 ha; 7) 2.5 - 3.0 ha; 8) >3.0 ha

4.2.6 If yes, for which type of crops do you use irrigation? 1) Maize, Sorghum, Vegetables and others like chat, coffee, etc. 2) Teff, wheat Barely, Vegetables and some permanent crops such as coffee, banana, papaya, etc. 3) Others (specify)

5. What is the average yield per hectare of irrigation land used for the major crops grown using irrigation agriculture (describe by crop type in Quintal)

1) Maize_____2). Sorghum_____3) Teff_____

4).Wheat_____ 5). Barely _____ 6). Vegetables_____

7) Others (Specify)_____

6. What is your perception towards the proposed irrigation project? Do you support it? 1. Yes; 2. No;

7.1 If yes, how do you support the proposed project? 1) Through labor provision 2) Money support 3) Material support 4) Idea sharing 5) Others (specify);_____

Enumerator's:

Full Name & Signature: _____;

Date: _____

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

SS_Irrigation project Socio-Economic Study

Checklist questionnaire for District/Kebele Agricultural development office

Dear officer of the **Agricultural office** as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Agricultural activity** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. Physical features of the District

1.1. What are the main land ownership types in the district?

A. Communal land ownership : _____

B. Private land ownership : _____

C. Governmental land ownership : _____

D. If other, specify_____

1.2. What are the major farming systems in the district?

A. Pastoral

B. Agro-pastoral

C. Mixed Farming

D. Other _____

1.3. Please indicate the average land holding size in the district: _____ in (ha.)

1.4. Is proper land use planning practice realized in the area? 1.yes 2.no

1.5. If yes, what are its weakness and strength? _____

1.6. If no, what is the root cause? _____

2. Land use Pattern of the District in the project area in 2010 E.C.

No.	Land use type	Area in Ha.	Remark
1	Cultivated land		
	❖ Annual crop		
	❖ Perennial crop		
2	Cultivable land		
3	Grazing land		
4	Forest land		

5	Bush and shrubs land		
6	Water body		
7	Infrastructure and Settlement		
8	Bare land		
Total			

Economic Activities

Crop production

Please list down the major crops grown in the district:

No.	pe of Crop	Areas cultivated in ha and average yield Quintal/year									
		06		2007		2008		2009		2010	
			ld	ct	ld	ct	ld	cta	ld	ct	ld
	ize										
	ners										
tal											

Would you Please indicate inputs utilization of the last five years?

No.	pes of inputs	it	Inputs used				
			06	2007	2008	2009	2010
	tilizer	in					
	Dap						
	Urea						
	Other						
	rbicide						
	ecticide						

	sticide						
	proved seed	in.					
	hers						

4. Describe the rate of input utilization per hectare in each year?_____
5. What are the major problems that hinder crop production in the district?

1. Crop disease
2. Shortage of rainfall
3. Land degradation
4. Land fragmentation
5. Lack of oxen for plowing
6. Lack of agricultural inputs (fertilizer, herbicides and pesticides, improved seeds etc.)
7. Erratic rainfall distribution
8. If other, specify_____

6. What are the possible solutions to overcome the problems that encountered crop production? _____

7. Agricultural Extension Service

1. Please describe the situation of extension service in the district(i.e., its availability, extent of implementation and problems encountered):_____

_____

_____

2. Are there -trained Development Agents (DAs) in the district? 1. Yes____2.No____;
3. Have you encountered any problems regarding DAs' assignments in the district? 1. Yes_____2.No_____;if yes; please describe the problems:_____

_____

4. What are the total numbers of extension workers in the district?_____

_____

5. What are the major types of extension services in the district? _____

_____

_____

8. Please describe possible development potentials related to crop production in the district?

_____

_____

9. Average estimated Price of different crops at district level from 2006 to 2010 E.C in Birr

No.	Types of Crops	Unit	Years from 2006-2010 EC				
			2006/07	2007/08	2008/09	2009/10	2010/11
1	Teff	Quintal					
2	Maize						
3	Barley						
4	Wheat						
5	Sorghum						
7	Oats/Aja						
8	Rice						
9	Faba bean						
10	Field peas						
11	Haricot bean						
12	Chick peas						
13	Lentils						
14	Neug						
15	Linseed						
16	Groundnuts						
17	Sesame						
18	Rapeseed						
19	Coffee						
20	Chat						
21	Pepper						
22	Banana						
23	Papaya						
24	Mango						
25	Potato						

10. If you have any other idea(s) not covered in the checklist question, please forward your idea(s)

_____

Oromia Water Works Design and Supervision Enterprise

Socio-Economic Study

Checklist questionnaire for District/Kebele livestock development Agency

Dear officer of the **Livestock Agency office** as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Livestock** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

I. Livestock production

1. Please list down the major types of livestock and the current livestock population in the district?

No.	pe of Livestock	N Number of Livestock	mark
	Cattles		
	Sheep		
	Goats		
	Camels		
	Horse		
	Donkey		
	Mule		
	Poultry		
	Beehive		
	Others		
	Total		

2. What are the major problems of livestock production in the area?_____

_____

_____

3. What are the traditional livestock management systems (Livestock feeding, watering, Herding, Housing, Traditional Fattening) in the district?

Herding : _____

Housing :_____

Watering : _____

4. Please list down the types of veterinary services available in the district?

ɔe of Veterinary Clinic mber ıce(Kebele Name)

5. Do the veterinary institutions effectively provide the required services? 1. Yes_____2.No_____; if No, why? _____

II. What are the major livestock diseases?_____

Livestock Products price in the areas in Eth. Birr

Livestock Products	Average product/animal	Unit of measurement in lt,kg or No	Price / (Liter or kg/No.)	% Share for sale	Share for consumption	Annual income (in birr)
Milk		Lit				
Butter		Kg				
Meat		Kg				
Egg		No				
Honey		Kg				
Hide		No				
Skin		No				
Sale of Live animals						
Ox		Number(1)				
Bull						
Young Bull						
Heifer						
Sheep(Ewe)						
Sheep(Ram)						
Ram-lamb						
Ewe -lamb						
Goat (Doe)						
Male(Goat)						
Young						
Poultry						
Donkey						
Mule						
Horse						
Camel						
Others						

III. Livestock Marketing

- Please indicate livestock marketing places in the district and its surrounding areas:

No.	Name of market place in the areas	Distance from district town (in kms)	Type of market Livestock/Crop/General market

1. Are the existing markets enough to provide the required services? 1. Yes_____2.No_____; if No, what are the alternative markets for livestock in the area? (Indicate name, place and distance in km): _____

   _____

2. What are the main problems of livestock production and livestock marketing in the district?
   1. _____
   2. _____
   3. _____

3. Please describe possible development potentials related to livestock production in the district?

   _____

4. If you have any additional suggestions and comments not covered in the checklist question, please forward your opinion ----------

Name of the district livestock development office head_____

Signature_____

Date_____

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Oromia Water Works Design and Supervision Enterprise

_____Irrigation Project Socio-Economic Study

Checklist questionnaire for district land administration and environmental protection office

Dear officer of the **Land administration and environmental protection office** as the title of the project above describes this study is a detail **socio-economic study** phase aiming at gathering an overall Land use and Environmental issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

I. Land Use

1. Are there any problems in rangeland management (problems such as, overgrazing, bush encroachment, agricultural land expansion, pastureland use conflict, etc.)? 1. Yes 2. No , If yes describe the problems ?
   :_____
2. Is there any traditional rangeland management system in the area?(describe if there is any):
   _____
3. Are there any land use conflicts (such as, conflicting interests between pastoralists and farmers, between pastoralists themselves over water sources and pastureland, etc.)? 1. Yes, 2. No
   _____
4. If yes,What are the mechanisms of solving land use conflicts mentioned above?_____
   _____
   _____
5. What is the land use types existing in the district?
   A. Cultivated Land _____ ha
   B. Forest Land _____ ha
   C. Shrub Land _____ ha
   D. Wood Land _____ ha
   E. Grass Land _____ ha
   F. Wet Land _____ ha

G. Water Body _____ ha

H. Bare Land _____ ha Others_____

II. Do the land certification issue realized in the area? 1. Yes 2.no

III. If yes, which level of land certificate? 1. 1st level_____% 2. 2nd level _____%

IV. Environmental protection

1. Are there deforestation problem in the area? If yes, describe the main cause of deforestation precisely.----------
2. What should be expected after the realization of land use planning practice? Describe both positive and negatives outcomes.----------
3. What are the possible solutions to overcome the problems ----------
4. If you have any additional suggestions and comments not covered in the checklist question, please forward your opinion ----------

Name of the district land administration and environmental protection office head_____

Signature :_____

Date_____

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____Irrigation Project Socio-Economic Study

Checklist questionnaire for district water and sanitation office

Dear officer of the **Water and Sanitation office** as the title of the project above describes this study is a detail **socio-economic study** phase aiming at gathering an overall Water and sanitationissues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. Since when the district started to get pure drinking water supply?----------EC
2. What was the water supply coverage at the year of establishment? ----------%
3. Fill out the Table for Pure potable water coverage in the past five years

years	**Pure drinking water supply coverage in %**
2007	
2008	
2009	
2010	

How many water holes and/or sources are there in the area in different years?

No.	Type/sources	Locality	Number of water holes in different years							
			2006	2007	2008	2009	2010	No. of beneficiaries		
								Male	Female	Total
1	Potable water									
2	Bore-hole									
3	Hand-pump									
4										

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____Irrigation Project Socio-Economic Study

Checklist questions for District Irrigation Development Agency

Dear officer of the **Irrigation Development Authority office** as the title of the project above describes this study is a detail socio-**economic study** phase aiming at gathering an overall Irrigation practice and relatedissues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. Is there any irrigation scheme in the district? 1. Yes ___2.No____; if yes, 1. Traditional ___ _____ha.2.improved _____ha.3. Total_____ha.
2. Are there any potential irrigable water sources in the district?1.Yes____2.No____;if yes please indicate them _____
3. List down the major vegetables grown in the district?

No.	pe of vegetables	Area cultivated and Yield quintal per hectare									
		2006		2007		2008		2009		2010	
		hectar	yied	nectar	yied	nectar	yiel	nectar	yied	nectar	Yied
	Tomato										
	Potato										
	Onion										
	Garlic										
	Cabbage										
	Total										

4. List down the major fruit grown in the district:

No.	pes of fruit	Area cultivated and Yield quintal per hectare									
		2006		2007		2008		2009		2010	
		nectar	yield	nectar	yield	nectar	yield	nectar	yield	nectar	Yield
	Orange										
	Lemon										
	Papaya										
	Mango										
	Banana										
	Others										
	Total										

5. What are the major problems that hinder vegetables and fruit production in the district?

   A. Disease out break
   B. Lack of potential area
   C. Shortage of rainfall
   D. Land degradation
   E. Land fragmentation
   F. Lack skilled man power
   G. Lack of agricultural inputs (fertilizer, herbicides and pesticides, improved seeds etc.)
   H. If other, specify_____

Name of the district Irrigation Development Agency office head_____

Signature_____

Date_____ _____

Official stamp

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Oromia Water Works Design and Supervision Enterprise

_____Irrigation Project Socio-Economic Study

Checklist questions for district Health Office

Dear officer of the **Health Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Health** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

A/ List the number of health institutions in the District of the irrigation development project in 2010 E.C.

Number	Type of institutions	Number	Specific Site	Distance from district capital
1	Hospital			
2	Health center			
3	Clinic			
4	Health post			
5	Private clinic			
6	Rural drug vender			
7	NGO clinic			
8	Health post			
Total				

B/ How many health professionals are serving in the above institutions in 2010 E.C?

Number	Type of profession	Number		
		Male	Female	Total
1	Physician			
2	Health officer			
3	Nurse			
4	Health assistant			
5	Pharmacist			
6	Lab.Techinician			
7	Sanitary			
8	X-ray tech.			
9	Health extension workers			
10	Others(specify)			

C/ The trend of health service coverage in percentage (%) in the kebeles of the project areas (from 2007-2010 E.C);

S.No.	Periods	Urban (%)	Rural (%)	Total (%)
1	2010			
2	2009			
3	2008			
4	2007			

D/ The trend of family planning service coverage in percentage (%) in the kebeles of the project areas: (2007-2010E.C);

S.No.	Periods	Urban (%)	Rural (%)	Total (%)
1	2010			
2	2009			
3	2008			
4	2007			

E/ What are the top ten diseases that are responsible for morbidity and mortality in the kebeles of the project areas? (2007-20010 E.C);

S/N	Type of disease	Cases Treated (Year)			
		2007	2008	2009	2010
1					
2					
3					
4					
10					
Total					

F/ what are the major health problems in the district?

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____ irrigation Project Socio-Economic Study

Checklist questions for District Education Office

Dear officer of the **Education Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Education** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. How many schools are there in the kebeles that fall in the command/or irrigation areas?

1-4_____
5-8_____
9-10_____
Preparatory school_____
TVT_____
Colleges_____

2. How many students are attending in the above schools in 2009 E.C.?

Table 1:Number of student and coverage

Descriptions	Number of students and coverage				Share of female students (%)
	Male	Female	Total	Coverage(%)	
1-4					
5-8					
9-10					
Preparatory school					
TVT					
Colleges					
Total					

3. What is the total number of students' drop out in2009 E.C.?

Male_____ Female_____Total_____

What are the main reasons for the students drop out in the areas?

No.	Reason for school dropout	Rank
1		
2		

5. Is there any non-formal education structure in the areas?

1. Yes_____2.No_____

If *yes,* how many people are attending?

Adult: Male_____Female_____Total_____

Children: Male_____Female_____Total_____

6. Who established the non-formal schools?

A/ Government_____ B/ NGOs_____C/ Government and NGOs_____

7/ What is the Educational coverage of the kebeles_____ (in %)

8. Describe the ratio of class to student and teacher to student in the district average by the year 2009 E.C (for formal education system).

Class and teacher to student ratio

Description	Class to student ratio	Teacher to student ratio
1-4		
5-8		
9-10		
11-12		

9. What are the major problems regarding?

A/ Formal education

_____

_____

B/ Non-formal education in the areas;

_____

_____

10. Specify the number of teachers by level of qualification;

Table: 3Qualification of teachers in the District in 2009 E.C.

Level of qualification	Male	Female	Total
2nd Degree			
1st Degree			
Diploma			
TTI			
Others			
Total			

Name of District Education Office head_____

Signature_____

Date_____

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____ irrigation project

Socio-Economic Study

Checklist questions for Cooperative Promotion office of the District

Dear officer of the Cooperative Promotion Office, as the title of the project above describes this study is a detailed socio-economic study phase aiming at gathering an overall Cooperative Promotion issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. Total number of cooperatives in the kebeles of the irrigation project areas (command/or reservoir),

_____

2. Types of available cooperatives in the kebeles of command/reservoir areas:

   A. _____
   B. _____
   C. _____
   D. _____
   E. _____

3. Total number of members of cooperatives:

   Male_____ Female_____ Total_____

4. Please, indicate the achievements of each of the cooperatives so far: _____

_____

4. How and Terms of repayment capacity of the beneficiaries?_____

   _____

5. What are the major problems you encountered regarding cooperative promotion in the district?

_____

5. Cost of inputs in 2009 E.C.

No.	Type of inputs	Cost(quintal /lit	Remark
1	DAP		
2	Urea		
3	Insecticide ❖ _____ ❖ _____ ❖ _____		
4	Improved Maize seed		
5	Improved Wheat Seed		
6	Improved Barley seed		

Name of District Cooperative Promotion Office Head _____

Signature _____

Date _____

_____

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Checklist questions for District Administration Office

Dear officer of the **Administration Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Administration** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

A. Human Resources

1. Population
   - ❖ Total population_____
     Male_____
     Female_____
   - ❖ Total Households_____
     Male_____
     Female_____
   - ❖ Average household size in the district_____
     Rural_____
     Urban_____
2. Rural work force by age
   I. 0-14_____
   II. 15-64_____
   III. 65 and above_____
3. Ethnic Composition in percentage/%/
   Oromo_____
   Amhara_____
   Gurage_____
   Tigre_____
   Others_____
4. Religion Composition (%)
   Orthodox_____
   Protestant_____
   Muslim_____
   Waqefata_____
   Others_____

B. Infrastructures

1. Describe the type and length of road in the kebeles of the command /or reservoir areas;
   1.1. All weather road in km_____

- Asphalt in km_____
- Gravel in km _____

1.2. Dry weather road in km_____

1.3. Total in km_____

2. Indicate number of kebeles that have access to telecommunication services in project command/or reservoir areas;

S/No	Name of the village/town	Distance from the district	Status of the Services

3. List down towns and villages/kebeles that have access to electricity in the irrigation command/or reservoir areas;_____

_____

_

4. Describe(Name) the number and type the financial institutions available in the district including rural credit and saving institutions?

Bank_____

Insurance_____

Micro finance _____

Credit and saving institutions_____

Others_____

If there are rural credit and saving institutions, does the community of the areas have access to credit?

1.yes, 2.No , If yes On what basis?_____

Name of the District Administrator_____

Signature_____

Date_____

_____

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Checklist Question for Culture and Tourism Office

Dear officer of the **Culture and Tourism Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Culture and Tourism** issues data in your district. Therefore, we require genuine information that can help the regional government to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

Tourist Attraction Areas/Sites

S.No.	List of sites	Name of Kebele it exists	Distance from District town	Accessibility	Status	
					Visited by tourists	Not known
1						
2						
3						
4						
5						
6						
7						

Name of the District Culture and Tourism Office Head _____

Signature_____ _____

Date_____

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Checklist questions for District Women Affairs Office

Dear officer **of Women Affairs Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Women Affairs** issues data in your districts. Therefore, we require genuine information that can help the federal and regional governments to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

1. Year of establishment of the women affairs office _____ E.C.

2. What is the total budget allocated for the office and total expenditure of the office at different fiscal years?

Years	Total Budget Allocated and Total expenditure in Different Years (In Birr)	
	Total budget	Total expenditure
2006		
2007		
2008		
2009		
2010		
Total		

3. What are the major facilities available in the office?

Types of office facilities	Available (put a √ Mark)	Not available (put a √ mark)	Not functional (put a √ mark)
Standard office			
Cars			
Motors			
Computers			
Printers			
Stationery materials			

4. Number of employees in the office

Number of Employees	Total Number	Educational Qualification (Number)									
		MA/Msc	BA/BSc	Diploma	12	10+2	10+1	9-12	1-8	Read and Write	Illiterate
Management Level											
Technical Level											

Number of Employees	**Total Number**	**Educational Qualification (Number)**									
		MA/Msc	**BA/BSc**	**Diploma**	**12**	**10+2**	**10+1**	**9-12**	**1-8**	**Read and Write**	**Illiterate**
Supporting Staffs											
Other											
Total											

5. What are the major activities the women affairs office renders to the district communities?

i. _____
ii. _____
iii. _____
iv. _____
v. _____

6. What are the major economic activities of women engaged in the district for their household economies please indicate the agricultural and non agricultural activities?

Sr.No	Type of activities	Estimated number of women	Percent from total
1			
2			
3			
4			
5			
6			
7			

7. Who are actively participating in trade and trade related activities in the house holds?

a. Man(father)

b. Woman(mother)

c. Both

d. All men in the house hold E. Others _____

Who are actively participating in decision making in the house holds?

A. Man (father) B. Woman(mother)

C. Both

D. All men in the house hold E. Others _____

8. What are the most common traditional practices that benefit or affect women?

Local name of practices	**Type of benefit**	**Type of harmful traditional practices that affect women**

9. In general, what are the major problems that are related to women in the district? Write them based on their severity.

1st _____

2nd _____

3rd _____

Name of District women affairs Office

Head_____

_____

Signature_____ _____

Date_____ ***Official stamp***

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____ Irrigation Project Socio-Economic Study

Checklist questions for District Trade and Industry Office

Dear officer of**Trade and IndustryOffice**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall G**rain and Livestock Marketing**issues data in your districts. Therefore, we require genuine information that can help the federal and regional governments to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

Data Collection Sheet for Market Prices of Agricultural Commodities

Grain prices in Birr (Reference year _____2009 E.C)

Items	Unit	Qty	Lowest price		Highest price	
			Period	Birr	Period	Birr
Food Grains						
- Barley						
- Wheat						
- Barley plus wheat						
- *Teff*						
- Sorghum						
- Maize						
Pulses and beans						
- Horse bean						
- Field pea						
- Lentils						
- Chick pea						
- Cowpea						
Vegetables						
- Potato						
- Tomato						
- Pepper						
- Onion						
- Garlic						
- Cabbage						
- Carrot						
- Beetroot						
Other crops						

Items	Unit	Qty	Lowest price		Highest price	
			Period	Birr	Period	Birr
- Safflower						
- Flax						
- Vetch						
Improved seeds (specify):						
1.						
2.						
3.						
4.						
5.						
Fertilizer:						
- DAP						
- Urea						
Pesticides						
- Liquid						
- Powder						

A. Livestock and related input prices in Birr

Items	Unit	Qty.	Lowest price		Highest price	
			Period	Birr	Period	Birr
Livestock feed						
- Straw						
- Hay						
Livestock products						
- Butter						
- Honey						
- Egg						
- Milk						
Labour and drought power						
- Oxen rent						
- Pack animal rent						
- Hired labour male						
- Hired labour female						

Items	Unit	Qty.	Lowest price		Highest price	
			Period	Birr	Period	Birr
Cattle prices	**No**					
- Ox		1				
- Cow		1				
- Heifer		1				
- Bull		1				
- Calf		1				
Sheep and goats						
- Ewe		1				
- Ram		1				
- Lamb		1				
- Castrate		1				
Transport animals						
- Ass/donkey		1				
- Mule		1				
- Horse		1				
Poultry						
- Pullet		1				
- Layer		1				
-		1				
Other						
- Beehives		1				

* Period refers to the specific season

Name of District Trade and IndustryOffice Head_____

Signature_____ _____

Date_____

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The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

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Checklist questions for Investment Office

Dear officer of investment bureau, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall ***investment*** *related* issues data in your districts. Therefore, we require genuine information that can help the federal and regional governments to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

Zone name: _____**District Name**: _____

1. What are the total numbers of investment projects?

Type of Project	**Number of Projects in Different Years**				
	2006	**2007**	**2008**	**2009**	**2010**
Agriculture					
Small-Scale Industry					
Medium Scale Industry					
Large Scale Industry					
Service Sector (Clinic, Schools, Supermarkets, …)					
Recreation (including Hotels, Restaurants, Lodges…)					
Mining and Quarrying					
Bee keeping					

2. What is the total capital?

Type of Project	**Total Capital in Different Years (in Birr)**					
	2006	**2007**	**2008**	**2009**	**2010**	**Total**
Agriculture						
Small-Scale Industry						
Medium Scale Industry						

Type of Project	Total Capital in Different Years (in Birr)					
	2006	2007	2008	2009	2010	Total
Large Scale Industry						
Service Sector (Clinic, Schools, Supermarkets						
Recreation (including Hotels, Restaurants, Lodges…)						
Mining and Quarrying						
Bee keeping						

3. What is the total number of job opportunities created and expected job opportunities to be created?

Type of Project	Total Job Opportunities create in Different Years					
	2006	2007	2008	2009	2010	Total
Agriculture						
Small-Scale Industry						
Medium Scale Industry						
Large Scale Industry						
Service Sector (Clinic, Schools, Supermarkets, …)						
Recreation (including Hotels, Restaurants, Lodges…)						
Mining and Quarrying						
Bee keeping						

4. What is the total land requested and provided for different sectors?

Type of Project	**Total Land provided in Different Years**					
	2006	**2007**	**2008**	**2009**	**2010**	**Total**
Agriculture						
Small-Scale Industry						
Medium Scale Industry						
Large Scale Industry						
Service Sector (Clinic, Schools, Supermarkets, …)						
Recreation (including Hotels, Restaurants, Lodges…)						
Mining and Quarrying						
Bee keeping						

5. What is the current status of projects?_____
_____
_____

6. Which sector takes the largest in terms of capital, number of job opportunities it provides, and total land provided?

Type of Project	**Largest Sector In terms of**		
	Total Capital Allotted	**Total Job Created**	**Total Land Provided**
Agriculture			
Small-Scale Industry			
Medium Scale Industry			
Large Scale Industry			
Service Sector (Clinic, Schools, Supermarkets, …)			
Recreation (including Hotels, Restaurants,Lodges…)			

7. In which areas of investment rules and regulations that the government must take corrective measures:

i. _____ _____ _____ _____ _____ _____ _____
ii. _____ _____ _____ _____ _____ _____ _____
iii. _____ _____ _____ _____ _____ _____ _____
iv. _____ _____ _____ _____ _____ _____ _____

8. What are the major problems that investors face?

i. _____ _____ _____ _____ _____ _____ _____
ii. _____ _____ _____ _____ _____ _____ _____
iii. _____ _____ _____ _____ _____ _____ _____

9. What are the major opportunities for investment?

i. _____ _____ _____ _____ _____ _____ _____
ii. _____ _____ _____ _____ _____ _____ _____
iii. _____ _____ _____ _____ _____ _____ _____
iv. _____ _____ _____ _____ _____ _____ _____
v. _____ _____ _____ _____ _____ _____ _____

10. What are the most important benefits investments and/or investors generates for the surrounding community in your districts?

i. _____ _____ _____ _____ _____ _____ _____
ii. _____ _____ _____ _____ _____ _____ _____
iii. _____ _____ _____ _____ _____ _____ _____
iv. _____ _____ _____ _____ _____ _____ _____
v. _____ _____ _____ _____ _____ _____ _____

11. What are the major challenges for investment?

i. _____ _____ _____ _____ _____ _____ _____
ii. _____ _____ _____ _____ _____ _____ _____
iii. _____ _____ _____ _____ _____ _____ _____
iv. _____ _____ _____ _____ _____ _____ _____
v. _____ _____ _____ _____ _____ _____ _____

*Name of Urban/District Investment Office Head*_____

*Signature*_____ *Date*_____

_____

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The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

SS_Irrigation project Socio-Economic Study

Checklist questions for Ganda (Kebele) Administration (project area) office

Dear officer of investment bureau, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall ***Ganda****related* issues data in your districts. Therefore, we require genuine information that can help the federal and regional governments to design appropriate developmental plans accordingly for the sustainable development of the district and the region. So, we kindly ask you to read carefully and give suitable answers for each question below.

I. Livelihood

1.7. What are the main land ownership types in the kebele?

A. Private land ownership

B. Communal land ownership

C. Governmental land ownership

1.8. Please indicate the average land holding size in the kebele: _____ ha.

1.9. What are the major farming systems in the kebele?

E. Pastoral

F. Agro-pastoral

G. Mixed Farming

H. Other _____

List down the major crops grown in the kebele?

S/No.	Type of crop	Area cultivated hectare(2009)	Average yield in quintal/hectare					Remark
			2006	2007	2008	2009	2010	
1								
2								
3								
4								
	Total							

1. What are the major problems that hinder crop production?----------
---
2. What are the possible solutions?----------

Livestock production

1. List down the major types of livestock and the current livestock population?

S/No.	Type of livestock	Number of livestock	Remark
1	Cattle		
2	Sheep		
3	Goats		
4	Donkeys		
5	Poultry		
6	Beehives		
7	Horse		
8	Mule		
9	Camel		
	Total		

2. What are the major problems of livestock production?

i. ----------
ii. ----------
iii. ----------

3. Do the veterinary institutions effectively provide the required services?

   1=Yes 2=No

4. What are the major livestock diseases?
   i. ----------
   ii. ----------
5. Indicate livestock marketing places in the kebele?

   ----
6. Are the existing markets enough to provide the required services?

   1=Yes 2=No

7. Describe possible development potentials related to livestock production?----------
   ----

II. Social services

A. Health

i. What are ten **top** diseases responsible for morbidity and mortality in the kebele?

1._____
2._____
3._____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

ii. How many households are there in the area? Male---------- Female---------- Total----------

iii. Average number of HH family member?Male----------Female----------Total----------

iv. What are the major health problems in the kebele?

- ✓ ----------
- ✓ ----------

v. Is the problem related with STD's increasing/decreasing?

- ✓ Increasing at high rate
- ✓ Increasing at constant rate
- ✓ Decreasing
- ✓ Decreasing at high rate
- ✓ Constant overtime
- ✓ Other(if any)----------

vi. Indicates facilities in the health institution

- ✓ Well facilitated
- ✓ Problem of medical equipment
- ✓ Problem of man power
- ✓ Problem of medicine
- ✓ Problem of office

vii. What are the major reasons of patients to move for treatment to other places/Finfinnee?

i. ----------
ii. ----------
iii. ----------

viii. Is there any action taken related to HIV/AIDS

- ✓ Yes
- ✓ No

ix. Describe the health coverage of the kebele?

In 2006--------- 2007---------- 2008---------- 2009---------- 2010----------

B. Education

x. How many students are attending school?

ade level	School enrollment				
	06	07	08	09	10
ade 1					
Grade 2					
Grade 3					
Grade 4					
Grade 5					

xi. School enrollment by sex composition

Grade	School enrollment																	
	Male						Female						Total					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
1																		

xiii. Numbers of students who took national examination

Grade	2005		2006		2007		2008		2009		Total	
	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Male	Fem
8												
10												
12												

xiv. Distribution of teachers with qualification in past five consecutive years

Education level	Male					Female					Total				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Degree															
Diploma															
TTI															
Others															
Total															

xv. Indicate the number of school drop out

Grade	2005			2006			2007			2008			2009		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1															
2															
3															
4															

xvi. What are the major reasons for school drop out?

i. ----------

ii. ----------

iii. ----------

xvii. What are the major over all problems related to education in your area?

C. Water and sanitation

1. Since when the kebele started to get pure drinking water supply?----------EC
2. What was the water supply coverage at the year of establishment? ----------%
3. How many water sources (holes) are there in the area?_____
4. By whom that the existing water sources for pure drinking water are constructed?
5. How many customers are there currently? Male---------- Female---------- Total---------
6. What are the major problem pertaining to pure water supply in the kebele?

III. Irrigation development

1. Is there any irrigation scheme in the kebele? 1. Yes 2. No
2. If yes 1. Traditional 2. Improved
3. Are there irrigable water sources in the kebele? 1. Yes 2. No if yes indicate them----------
   ----
4. List types of vegetables and fruits produced in the kebele?

No.	pes of vegetables and fruits	ld /hectare	mark
	ssava		
	mato		
	ion		
	bber		
	nana		
	ange		
	ngo		
	tal		

5. Describe the main constraints of irrigation development in the area?
   i. ----------
   ii. ----------
   iii. ----------
6. Number of market points?_____

IV. Gender

1) Are there low enrollments of girls? 1. Yes 2. No

If yes what are the major reasons?

a) Early marriage
b) Work load
c) Long distance

2) Average age of marriage for girls is----------

3) What are traditional practices that affect the lives of women's and girls' in the area?

A. Female genital mutilation
B. Low attitude of parents towards girls education
C. Abduction
D. Rape
E. Early marriage

4.What is the community perception about women? (Say true or false)

A. Women are dependent on men and inferior
B. Women should work only in the house
C. Education of women has less important
D. Men are the decision maker
E. It is forbidden for women to participate in meeting
F. Women are not allowed to own resources

5) Is there any women association in kebele? 1. Yes 2. No

If yes what are the names of women association?

6) What are the total numbers of investment project?

i. Agriculture
ii. Small scale industry
iii. Service sector
iv. Others(specify)

7) List down the months of food insecurity problems are occurred?----------

---

---

8) Describe community's participation in different developmental activities?

.	tivities	ıle	male	tal	rticipation in monetary terms
	gation cannel				
	ad				
	l and water conservation structures				
	nool maintenance				
	alth post maintenance				
	ncing				
	ners(specify)				

*Name of Ganda/Kebele/ Office Head*_____

*Signature*_____

*Date*_____

*Official stamp*_____