



**THE NATIONAL REGIONAL STATE OF OROMIA
WAGUR SMALL SCALE IRRIGATION PROJECT**

SOCIOECONOMIC FINAL REPORT

CLIENT

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Table of Contents

Lists of Tables.....	iii
Lists of Figures	iii
ACRONYMS/ABBREVAIATION	v
EXECUTIVE SUMMARY	vi
1. INTRODUCTION	1
1.1. BACKGROUND	1
1.2. OBJECTIVE OF THE STUDY	3
1.2.1. GENERAL OBJECTIVE	3
1.2.2. SPECIFIC OBJECTIVES.....	3
1.3. SCOPE OF THE STUDY	4
1.4. LIMITATION OF THE STUDY	4
2. METHODOLOGY OF THE STUDY	5
2.1. PRIMARY DATA	5
2.2. SECONDARY DATA.....	6
2.3. SAMPLING METHODOLOGY	6
2.4. ORGANIZATION OF THE STUDY	6
3. DESCRIPTION OF THE STUDY AREA.....	7
3.1. LOCATION AND BIOPHYSICAL CONDITION OF THE STUDYAREA	7
3.2. Relief, Drainage and Climate.....	8
3.3. Brief Description Wagur SSI Project.....	9
4. RESULT AND DISCUSSIONS	10
4.1. POPULATION AND DEMOGRAPHY	10
4.1.1. POPULATION PROJECTION.....	10
4.2. Socio-demographic profile of respondents	13
4.2. Socio-demographic profile of respondents	13
4.2.1. Sex, Age Structure and Family Size	13
4.2.2. Settlement Pattern.....	14
4.2.3. FARMING SYSTEM.....	15
4.3. LIVELIHOODS & MAJOR ECONOMIC BASES	17

4.3.1. CROP PRODUCTION	17
4.3.2. LIVESTOCK PRODUCTION	19
4.4. FOOD SECURITY SITUATIONS IN THE AREA	24
4.4.1. TYPES AND SOURCES OF MAJOR INCOMES	25
4.4.2. EXPENDITURE PATTERNS	27
4.4.3. LAND USE PATTERN IN THE PROJECT AREAS	28
4.5. BASIC SOCIAL SERVICES AND INFRASTRUCTURE.....	30
4.5.1. EDUCATION	30
4.5.2. HEALTH SERVICES.....	33
4.5.3. WATER SUPPLY SITUATIONS	35
4.5.4. ROAD AND TRANSPORTATION.....	36
4.5.5. OTHER SERVICES	38
5. COMMUNITY BASED SOCIAL ORGANIZATIONS	42
Cooperatives:-	42
6. NGOs OPERATING IN THE AREAS.....	43
7. GENDER	43
9. Community Sense of Ownership of the Scheme.....	59
9.1. Community Attitude towards the Irrigation Scheme	59
10. Benefits of the Project.....	61
Conclusion and Recommendations.....	63
REFERENCES	65
Annex .I. PROJECT COMMUNITY CONSULTATION MINUTE	66
Annex.II. Data Collection Questionnaire & Check Lists.....	68
Descriptions	88

Lists of Tables

Table 1. Shows population & Household size of the two Kebeles	10
Table 2: Age structure of the sample HHs	13
Table 3 : depicts family size of the HHs	13
Table 4: Type of HHs residential houses	15
Table 5: Livestock population of Jalala Kebele	21
Table 6 : Livestock population of Madda Talila Kebele.....	22
Table 7: Major sources of incomes in the area	26
Table 8 : shows Average share of Major HHs expenditure	27
Table 9 : Land Use pattern of the project kebeles in Ha for 2009 E.c	29
Table 10 : below shows School enrolment condition of Jalala kebele (2008-2010).....	30
Table 11; Shows School enrollment situation of Mada Taliala kebele.....	32
Table 12: depicts lists of ten-top diseases in the district (2009 E.C).	34
Table 13: Service Cooperatives & credit associations in the study areas	40
Table 14: Input utilization of Jalala kebele	41
Table 15: Input utilization of Mada Talila kebele.....	41
Table 16 : NGOs Operating in the district	43

Lists of Figures

Figure 1: Schematic representation of Irrigation & Food Security linkage.....	2
Figure 2. Photo shows Partial view of enumerator training & Community consultation.....	5
Figure 3:. Location Map of the study area.....	7
Figure 4: Partial biophysical view of the project area	8
Figure 5: Depicts typical type of house in the study area.....	14
Figure 6:. Some of the residential houses of HHs in project areas.....	15
Figure 7: The long flume constructed before & formerly irrigable command areas	18
Figure 8. Most farmers switched to cultivate (Sorghum, Khat & Coffee)	19
Figure 9 : Some permanent crops & Fruits in the project area.....	19
Figure 10 : Livestock Population in TLU (Mada Talila)	22
Figure 11 : Livestock Population in TLU of the Two project Kebeles.....	23
Figure 12 : Common Livestock Spps reared in the project area	23
Figure 13 : Major sources of incomes in the two project kebeles	26
Figure 14 : Shows the mean annual expenditure pattern of the project kebeles.....	27
Figure 15 : Shows land use pattern of the study areas.....	29
Figure 16 : Partial view of elementary School & Grade 1 students attending Class in action	31
Figure 17: Students enrollment Situations in the Mada Talila kebele	32
Figure 18. The major ten top ten diseases in the district.....	35
Figure 19: Human Health post(Left) & DA office(Right) at Jalala Kebele.....	35

Figure 20 : Photo shows the magnitude of water supply problem in the District town (Dobba).....	36
Figure 21 : Photo depicts Partial view of rough Road Condition to the project areas	37

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 and Several reasons contribute to the food insecurity that includes; high population pressure, fragmentation of land holdings, recurrent moisture stress due to rain fall variability and unfavorable market structure can be mentioned among others. To minimize/alleviate these problems, the Oromia Agriculture & Natural Resource Bureau(the client) and Oromia Water Works Design and Supervision Enterprise(the consultant) has entered in to an agreement to launch Small scale irrigation development study of which the detail Socio-economic feasibility study of Wagur SSI project which is located at some 20 kms from Dobba town and 32 kms from asphalt road(Addis to Harar) and the project is situated at the head of two adjacent peasant associations (Jalala and Mada Talila) kebeles (with, the easting of X=7395009 & Northing of Y=1030706) and launched 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 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, both primary and secondary data collection approach was employed based on the different approach of data collection, and based on this the result of the study, revealed that the project has the gross command area of 279.2 ha and the net irrigable net command area of about 60 ha and the estimated beneficiary HHs from the project is about 240 i.e (240*6.6 average family size)gives us about 1584 families can be benefitted from the project. According to data obtained from the two respective kebeles the total population of Jalala kebele was 540 (2786 Male and 2634 Female) and that of Mada Talila was 4379 (2322 Male and 2057 Female). The average family size of the project community is about 6.6 and regarding their ethnic group all of the respondents were Oromos and their religious affiliation indicate that all of the sample HHs were Muslims.*

In conclusion as the project is not a new project because the Wagur project was developed to modern scheme and was operational for long years and was serving the kebeles in the right and left wing for the past years and before some 5-6 years the head work site was demolished by erosion and the irrigation water cut off from previous irrigation crop field. But still the irrigation structures below the head work is intact and can be operational with minor maintenances. With regard to positive impact of the project, poverty reduction potential of modern irrigation has been well documented and increased output provides additional food for subsistence producers. It is practically observed in our country in general and the study areas in particular that much of rural migration would be driven by the “push” factor of the rural poverty than the “pull” factor of rising urban incomes. Thus provided that this irrigation development project is came to true, many young people will get employment opportunity both on farm and off-farm in the areas. The wagur modern irrigation scheme was once well developed & supported many smallholder irrigation users and currently the demolished irrigation structure is designed in the way it will resume its function in the near future and as the all structures below the head work will not be changed except minor maintainaces and the earthen canal will be changed to lined canal; and so there would not be possibility of resource damage or relocation of residential houses, permanent crops or farm plots due to the intended re-design of new irrigation development and during community consultation, there was no any tendency of the people to claim for compensation of property damage due to this project. Hence, the project owner will have no any 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 overall project implementation.

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 Wagur 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.

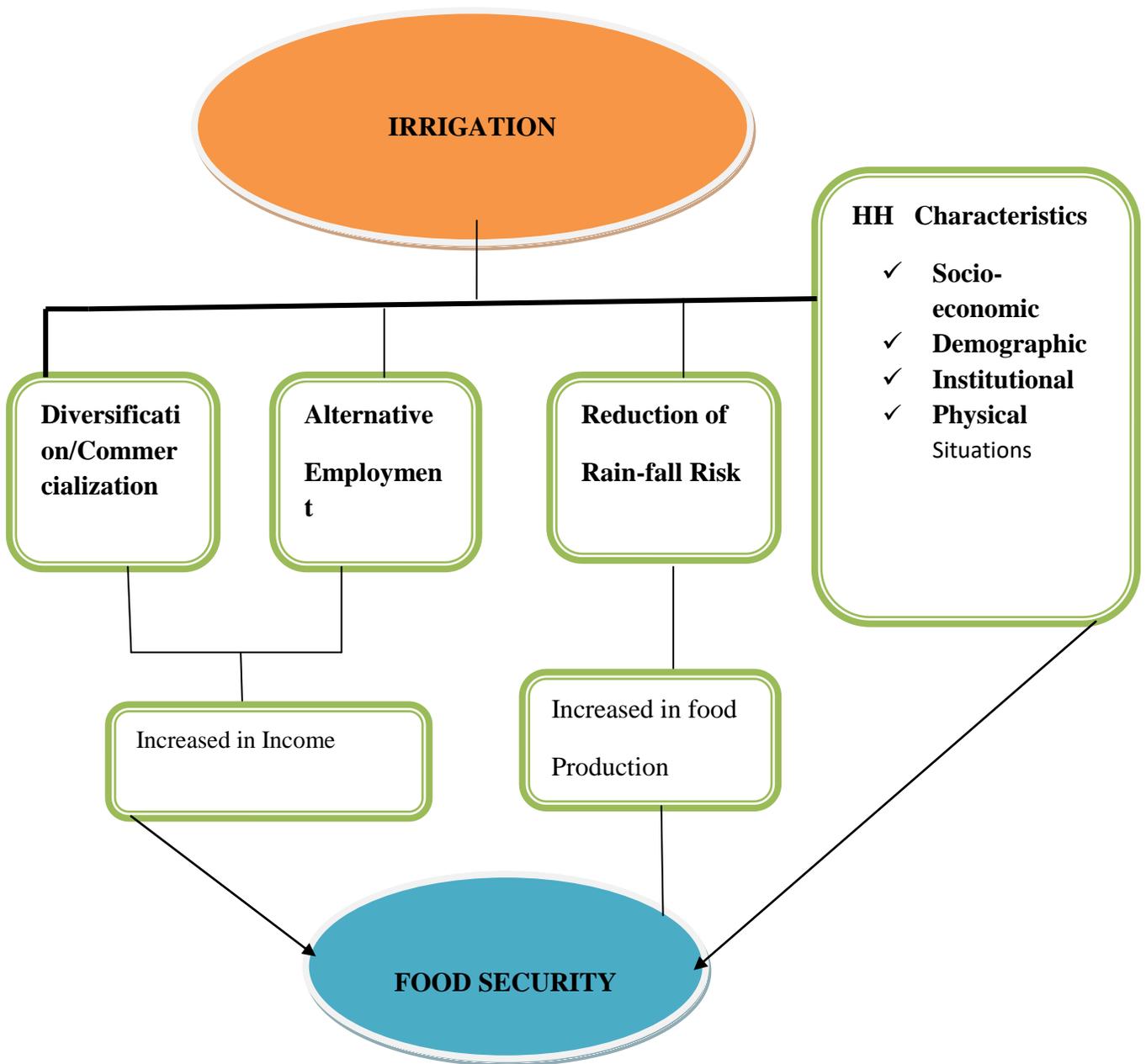


Figure 1: Schematic representation of Irrigation & Food Security linkage

Source: Adapted from Getnet,K.(2011)

With the above background information Oromia Irrigation Development Authority (OIDA), the client awarded study and Design of Seventeen Small Scale irrigation projects to Oromia Water Works Design and Supervision Enterprise (OWWDSE), the consultant.

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 & Agri-business feasibility study of Wagur 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 irrigation 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 the basic social services, and infrastructures facilities in terms of intended irrigation development
3. Explore the existing institutional organization set up working with the communities and/or resources;
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 Wagur 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 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 6 kms to and fro and some 3 kms paved by the community participation for the second crew)
- ❖ Poor project description (Client side problem)
- ❖ Less Reconnaissance survey activities (Consultant side)
- ❖ Security problem (Wagur project), due to Conflicts between the Oromo and neighboring Ethio-Somali communities.
- ❖ 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.



Figure 2. Photo shows Partial view of enumerator training & Community consultation

2.2. SECONDARY DATA

Regarding the collection of secondary data relevant documents and secondary information at the district and peasant association (PA) level was 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 offices. 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. The collected data was analyzed using SPSS (Statistical Packages for Social Sciences)

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 seven chapters of the socio-economic study starts with the introductory part which 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 outlines the methodology part of the study which includes: method of data collection and sampling methodology. Chapter three, 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. Chapter five, six and seven outlines community based social organizations, Non-governmental organizations operating in the study areas and Gender aspects. 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 STUDY AREA

The Specific name of the project site is “Wagur” which is located at the head of the two adjacent peasant associations (Jalala, and Madda Talila) of Doba district in west Hararghe zone.

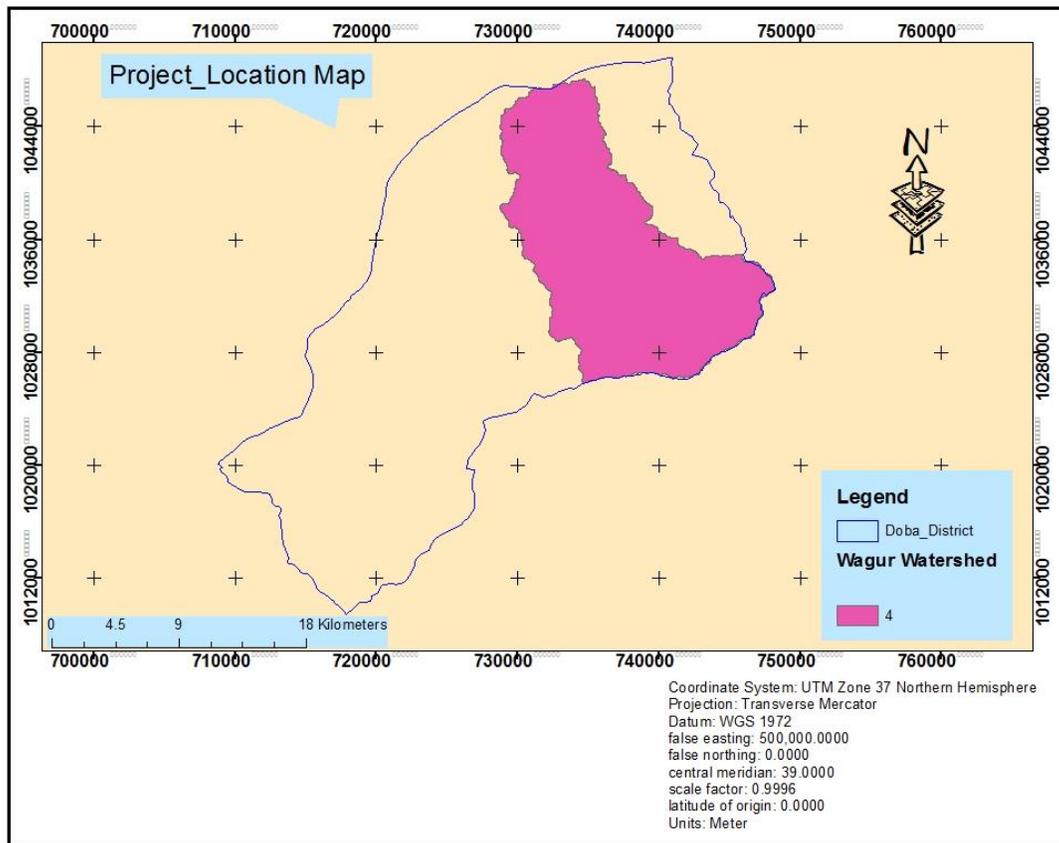


Figure 3: Location Map of the study area

Doba is one of the 15 districts of West Hararge Zone of Oromia Regional State. The district is composed of 42 kebeles, where the rural parts have 40 farmers associations and the urban parts possess two towns having 1 kebele each. The main town of district is Doba, located at 57km from the zonal capital of Chiro and 382km from Finfinne. The Woreda is bordered in East by East Hararge Zone(Goro-Gutu Woreda, Tulo district in North East, Somali National Regional State and Mieso district in the South West and chiro Woreda in the West. The astronomical location of the District is approximately $9^{\circ}10' - 9^{\circ}25' N$ and $40^{\circ}10' - 41^{\circ}10' E$ latitude and longitude respectively.

The total area of Doba district is 708.78km², which is the first When compared with Peasant association kebeles of the West Hararge zone's district.



Figure 4: Partial biophysical view of the project area

3.2. Relief, Drainage and Climate

The major mountains in Doba District are Mount Hadas (2733m), Tulu Seyli (2633m), Kadana (2120m), Babile (2150m), Chucho (2115m), Silo (2345m) and Bofa (1900m). The Known Valleys are Mata Haroo, Soolee, Ali Arabaa, Buttuu, Aynagiyo and Warabessa. There are also plateaus, hills and plains of varied heights in the District.

Drainage : Major rivers, natural and artificial lakes and ponds. Major uses of rivers and lakes The district is drained by Doba river, karaaba river and Goro rivers as well as intermittent streams, The main perennial streams of the district are karaba and doba which drain the east part of the district forming tributary to Awash.

.Climate: The agro-climatic zones of the District by their altitudinal ranges are Beda (temperate) which ranges from 2500-3500m accounts for about 3.8% (26.93Km²), Beda Dare (sub-Tropical) ranging from 1500-2500m and sharing 41.6% (294.85Km²), “Gammojji” (Tropical) that ranges from 500-1500m shares 54.6% (387Km²) of zonal area. The mean annual temperature of the District is ranging from 19 to 30 °C and the mean annual rain falls were 500mm to 1200mm.

Soils: -The major soil type verity soil, loom and clay soil is one of the most complex organic and inorganic composition. In Agricultural production the amount of production depends on soil nature and its fertilities, verity soil is one of the most dominant type of soil in the district. In

addition to these, there are also other soil types like litho sols, cambia soil, sand soil and others covers different parts of the district.

Vegetation and Wild life:

The type of vegetation found in the district includes shrub and bush dominates the lowland areas and scattered forests in the mid & highland of the areas. The known wild animals reported in the district includes a pay, monkey, jackal, hyena, Tiger, pig, and others. There are no reserved area (Natural Park, Game Reserves and sanctuaries) in Dobba District. Due to the increasing deforestation of the district the vegetation coverage is in decreasing order from time to time and this brings the decrease of the number of wild life and/or move to the other areas.

3.3. Brief Description Wagur SSI Project

The Wagur Small Scale Irrigation project is located at 20kms from the District capital “Dobba” and 32kms away from the asphalt (high way) from Addis to Harar, and the project’s estimated Gross command area of the project is about 279.2 ha and the net irrigable command area is about 60 ha and basically the project is not a new project, but it was constructed approximately before 10 years back .to serve two peasant association namely (Jalala and Mada Talila) kebeles in two right and left wings, but due to the complete demolish of the head work by erosion it already stopped to give the intended service for the project beneficiary communities..

Therefore, due to the complete demolish of the head work of the wagur project, the weir site irrigation structures is completely not functional since five years and the down lined canal do not get any water in the system and cannot give any services at either side of the two kebeles(Jalala &Mada Talila).

The wagur river has two temporary tributaries namely (Guben and Ballami) at a near distance below the head work and after irrigating the two peasant association crop land, it reaches Mada –Bilisumma Kebele, where it forms Karaba river which in turn irrigates the downstream areas and it is one of the largest and longest perennial river in the district and lastly destined to Awash water shed.

4. RESULT AND DISCUSSIONS

4.1. POPULATION AND DEMOGRAPHY

According to the information obtained from the two kebele administration offices the total human population size of the kebeles are presented in the table -1-below.

Table 1. Shows population & Household size of the two Kebeles

Data source	Population & Household Size					
	Population			<i>Household</i>		
	Male	Female	Total	Male	Female	Total
Jalala	2786	2634	5420	433	154	587
Madda Talila	2322	2057	4379	413	135	548

The settlement pattern of the project area population is somewhat sparse. Population crude density at district level is nearly 3.53 persons per hectare and the agricultural density is estimated to be 9.26 per hectare. This indicates high population densities depend on available agricultural land. However, as the project is not new and almost all users know their plot of irrigable land, 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 this project.

4.1.1. POPULATION PROJECTION

The number of people in a given area can grow or decline as a result of the number of births that take place, the number of deaths that occur and/or by the number of people moving in or out of a local area . Migration can drastically change the size and composition of a population in a brief period of time, especially in small geographic locations.

Planners need to study changes in the composition of the population to plan for education, health care services, and economic development projects like that of ours (Wagur Irrigation project). the age of residents, gender, and occupation, level of education, marital status, and living arrangements provide planners with the type of information needed to plan for the residents' diverse needs. A population composition that has a large percentage of residents under age 15 implies the need for schools, primary health services, and recreational needs. Gender is another key factor. For example, women, especially in their early reproductive years, 18–40, may need specialized health services for childbearing. Based on these and other issues the population

projection of wagur small scale irrigation for the coming 20 years is presented in the following table.

The formula used to calculate the project population is presented as follows:

$$P = p (1+r)^n$$

Where Capital P=Population

P = base year population

R= rate of population growth and

n= Number of years

Table. Population projection of Jalala Kebele

Jalala Kebele (Population Projection)				
Year E.C	Male	Female	Total	Remark
Base y'r	2786	2634	5420	base year
2011	2867	2710	5577	
2012	2950	2789	5739	
2013	3005	2870	5905	
2014	3124	2953	6077	
2015	3214	3039	6253	
2016	3307	3127	6434	
2017	3403	3218	6621	
2018	3502	3311	6813	
2019	3603	3407	7010	
2020	3708	3506	7214	
2021	3815	3607	7423	
2022	3926	3712	7638	
2023	4040	3820	7860	
2024	4157	3930	8088	
2025	4278	4044	8322	
2026	4402	4162	8563	
2027	4529	4282	8812	
2028	4661	4406	9067	
2029	4796	4534	9330	
2030	4935	4666	9601	

Table . Population projection of Mada Talila Kebele

Mada Talila Kebele (Population Projection)				
Year E.C	Male	Female	Total	Remark
2010	2322	2057	4379	base year
2011	2389	2117	4506	
2012	2459	2178	4637	
2013	2530	2241	4771	
2014	2603	2306	4909	
2015	2679	2373	5052	
2016	2756	2442	5198	
2017	2836	2513	5349	
2018	2919	2586	5504	
2019	3003	2661	5664	
2020	3090	2738	5828	
2021	3180	2817	5997	
2022	3272	2899	6171	
2023	3367	2983	6350	
2024	3465	3069	6534	
2025	3565	3158	6724	
2026	3669	3250	6981	
2027	3775	3344	7119	
2028	3885	3441	7326	
2029	3997	3541	7538	
2030	4113	3644	7757	

According to the above tables the population projection results has shown us the population size of Jalala kebele is estimated to be 9,601(4935 male and 4666 female) and that of Mada Talila kebele will be 7757(4113 male and 3644 female) in the coming 20 years of project life.

As we all know land is a static resource and human needs and population will keep on increasing and thus ,Government and the concerned stakeholders should think(plan) on how to satisfy this continuing human need and population in creating other job opportunities like(smallholder farmers commercialization, linking to market and diversifying the livelihood base of the project communities for instance harnessing smooth transfer of Agriculture to industry..

4.2. Socio-demographic profile of respondents

4.2.1. Sex, Age Structure and Family Size:

The proportion of the family members in different age category will be important to examine the dependency loads and in other cases family labor for different farm and off-farm activities to be 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 HH heads. Accordingly the age structures of the sample households of the two kebeles are presented in the table below.

Table 2: Age structure of the sample HHs

HHs Age structure (years)	Jalala Kebele N=24		Madda Talila N=20		Remarks
	Frequency	Percent	Frequency	Percent	
18-30	4	16.7	0	0	
31-45	12	50.0	7	35.0	
46-60	8	33.3	12	60.0	
>61 years	0	0	1	5.0	

Source: Survey result, 2019

The overall average family size of the sample beneficiary households of the project was 6.58 for Jalala and 6.60 for Mada Talila with SD of 2.339 and 2.962 respectively. The minimum and maximum family sizes of the two kebeles are with 4 and 11 for Jalala and 2 and 11 for Madda Talila respectively.

Table 3 : depicts family size of the HHs

Table: Shows family size of the sample HHS in the two kebeles					
Kebele Name	N	Minimum	Maximum	Mean	Std. Deviation
Jalala	24	4.00	11.00	6.58	2.339
Madda Talila	20	2.00	11.00	6.60	2.962

Source: Survey result,2019

Eighty three percent (83.3%) of the respondents were males and the rest 16.7 % were females for Jalala and 80 % and 20% for the Madda Talila peasant association.

Ninety percent of the respondents were married; and the rest were widowed (10 %); and there were no 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 both kebeles of project areas are sedentary settlement in which clustered houses are formed into a village form at relatively up lands and leaving the bottom land areas for agricultural purposes. This type of settlement pattern may be a good approach to make use of potential agricultural bottom lands for irrigated agriculture.



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: Type of HHs residential houses

Type of Houses	Jalala kebele N= 24		Madda Talila Kebele N=20	
	Frequency	Percentage	Frequency	Percentage
Wood & Mud wall with Corrugated. Iron roof	17	70.8	18	90.0
Thatched wall with grass roof	7	29.2	2	10.0
Temporary tent	0	0	0	0
	24	100	20	100

**Figure 6.: Some of the residential houses of HHs in project areas**

As can be observed from Figure above there are also Houses made of grass roofs and the wall made of wood and mud.

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 for soil fertility management. In other way round the crop output and by products also 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 ECONOMIC BASES

According to Dobba District's 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. Unlike Farmers of the other areas (Zone) farmers of the project areas usually sell their Livestock and/or Khat "Chata edulis" 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, and due to rain fall variability and less input utilization.

Agricultural activities are seasonal with the onset of rainy season and 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"(Chata edulis) 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 feeding of different livestock species).

4.3.1. CROP PRODUCTION

The communities living in and around the irrigation development project 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 using irrigation water twice or three times a year using water coming to their crop field by Conveyance canal. Since the construction of the irrigation canal in 2001 E.C the users were using the water to grow different crops without any problem. But starting from the year 2005 E.C. the head work fail to accumulate enough volume of water to

be channeled to the distribution canal and became decreased year after year and completely demolished due to high erosion coming from the upstream with higher gravity.

Though the previous constructed head work completely demolished, the user communities were tried their best to reconstruct another weir site with locally available materials to channel the water in to the conveyance canal, but fail to irrigate their plot of land. Except the head work, the downstream conveyance canals and the long flumes in the command areas are all functional or become functional with minor maintenance across all its line.



Figure 7: The long flume constructed before& formerly irrigable command areas

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 because of high deposit of fertile soil from up lands and can be more productive provided that adequate inputs and water is available.



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

During the time when irrigation water was abundantly available, the farming communities of the area used to crop maize and horticultural crops(vegetables and fruits) but now they forced to cultivate perennial crops like (Khat, Sugar cane, coffee and Sorghum) as these crop can survive and give yield with minimum rainfall or with available residual moisture.



Figure 9 : Some permanent crops &Fruits 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 husbandry (Feeding, housing, treatment) and other management practices. The Hararghe communities consider livestock as the walking Bank and asset forming mechanism beside using the large animals (cattle) for traction purpose and milk production and small ruminants for immediate cash source and use Equines (Donkeys) for packing different items including water.

The project area 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 generate 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 tethering. Livestock type and population of the two “Kebeles Gandas” are given in the following (table-5-).

Table 5: Livestock population of Jalala Kebele

S.N	Livestock Type	Number	C.F	TLU	Remark
1	Cattle	3332	0.7	2332.4	
2	Sheep	789	0.1	78.9	
3	Goats	1656	0.1	165.6	
4	Donkey	527	0.5	263.5	
5	Camel	200	1.0	200	
6	Poultry	1278	0.01	12.78	
	Total	7,782.00		3,053.18	

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

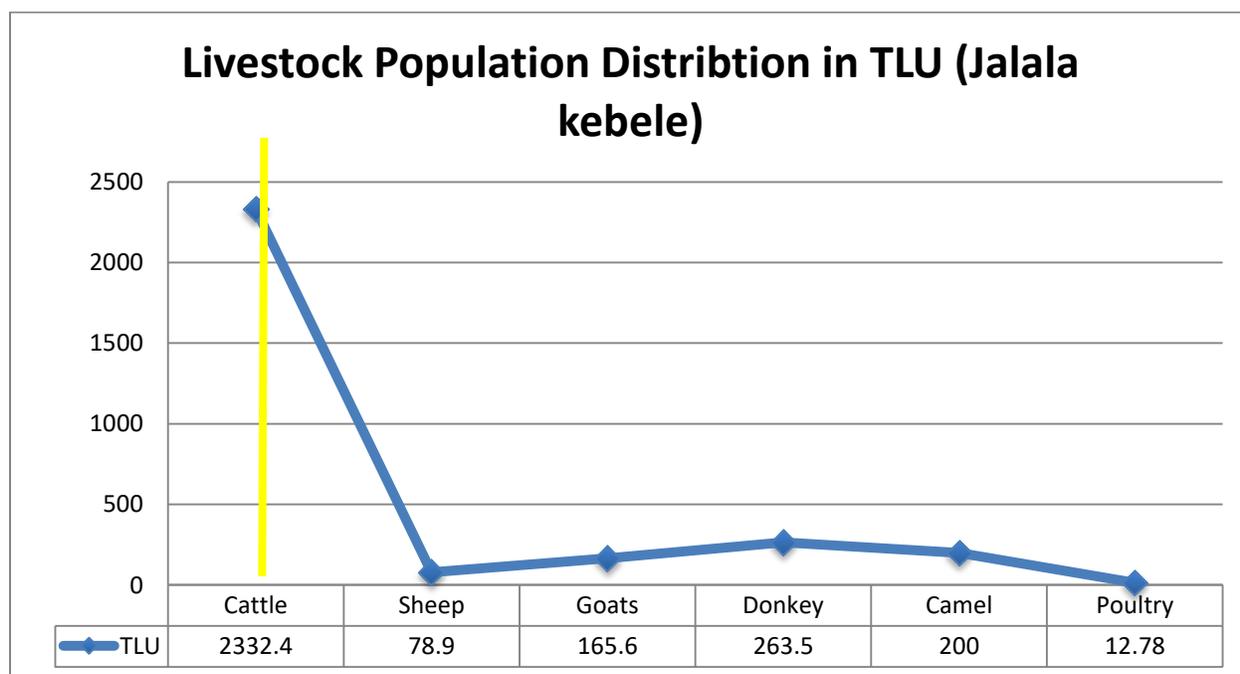
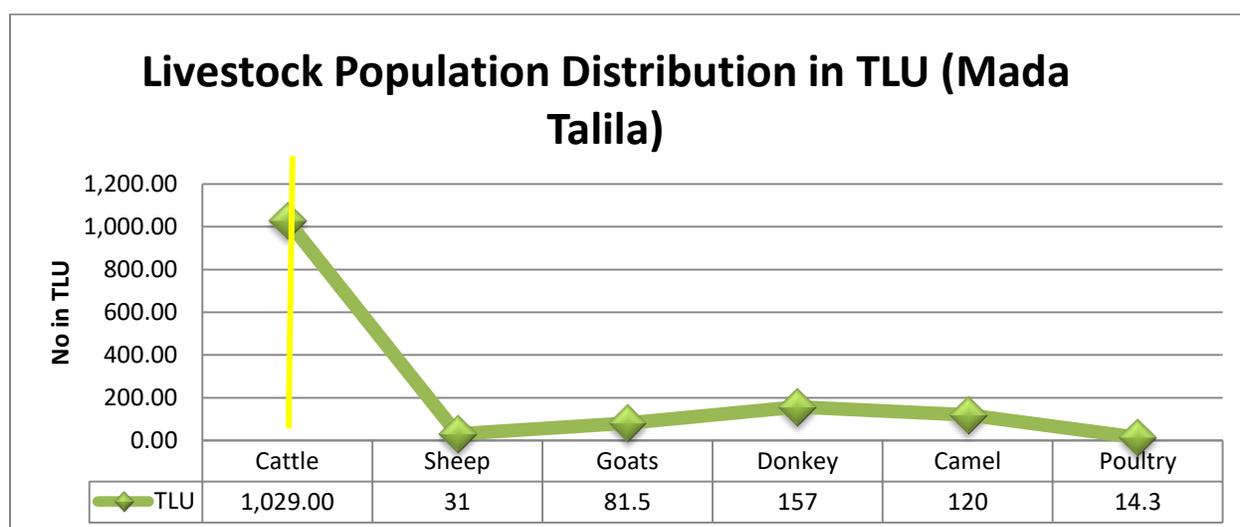


Table 6 : Livestock population of Madda Talila Kebele

S.N	Livestock Type	Number	C.F	TLU	Remark
1	Cattle	1470	0.7	1,029.00	
2	Sheep	310	0.1	31.00	
3	Goats	815	0.1	81.50	
4	Donkey	314	0.5	157.00	
5	Camel	120	1.0	120.00	
6	Poultry	1430	0.01	14.30	
	Total	4,459.00		1,432.80	

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

**Figure 10 : Livestock Population in TLU (Mada Talila)**

As can be noticed from the above Table(--5&-6-) and Figure(-9&-10-) the most preferred livestock species in the project areas are Cattle followed by Donkeys and Goats. This is due to the fact that Cattle are used mostly for Traction, Milk production and cash income among others and Donkeys are also named as the rural "ISUZU" in transporting different goods and services where there is no(less) transportation facilities in the area. Small ruminants especially Goats are well adapted to the prevailing environmental condition of the areas and fill gaps of financial shortages of the households when immediate cash is needed in the family.

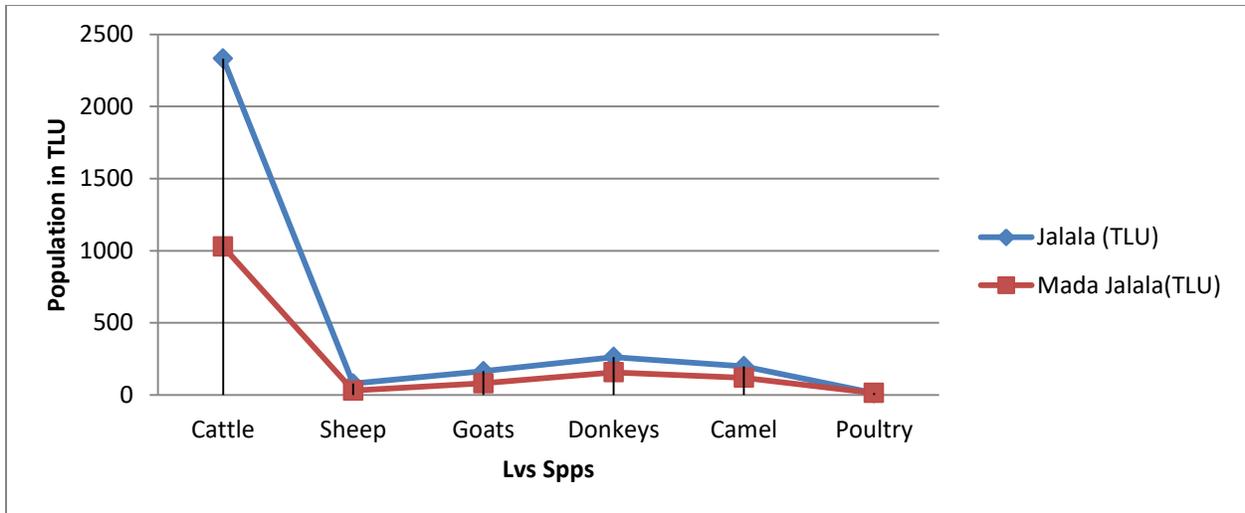


Figure 11 : Livestock Population in TLU of the Two project Kebeles

However, the general purpose of keeping livestock in the area include, milk production, traction power, meat, transport, source of cash, Soil fertility management, asset forming and, others. Almost all farmers use oxen for plowing of their farm land as there is no tractor or its rental price/hour is not affordable by the rural households. Shortage of livestock feed due to absence of grazing land compounded with the prevalence of some livestock diseases are the major impediment to livestock production in the areas. However, the farming communities of the area are well acquainted with conserving livestock feed from crop residues and using zero grazing to fill the livestock feed deficit in the area.



Figure 12 : Common Livestock Spps reared in the project area

The livestock feed shortage due to confined and intensive grazing in the project area will indicate us, livestock feed development should be incorporated in the future irrigation development and during design revision for canal construction and/or maintenances water for both human consumption and livestock drinking should be considered as currently all irrigation beneficiaries use Wagur/Karaba river for (human consumption, Sanitation, Livestock drinking and irrigation purposes). Beside irrigation development pure potable water supply is also equally important for the communities of the area.

4.4. FOOD SECURITY SITUATIONS IN THE AREA

The majority of the Wagur 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 per individual farmer is very small and their production from that small plot is at subsistence level with the current less extension services. The sample household survey response result reveals that:

- Insufficient irrigable agricultural land per household 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 20.8 % of Jalala and 25% of Mada Talila respondents produce food sufficient to cover their annual household need. According to sample respondents, this is mainly due to shortage of farmland (62.5 and 55 %) and bad weather like frost, hailstorm (8.3 and 30%) and due to input shortage is (8.3 and 15 %) respectively for the two peasant associations(Jalala and Mada Talilia).
- As the project areas are situated in remote area (in accessible) and with less extension service coverage and since after the Wagur irrigation project became demolished crop production in the area significantly decreased year after year.
- From the sample HHs most of respondents (>95%) posses cultivable land of their own in both kebeles; but , among those having holdings: 47 and 55 % withholdings of <0.5 ha, (37.5 and 50 %) posses holdings between 0.5-1.0 ha, (16.7 and 5%) of the respondents

posses 1-1.5 ha and farmers who have >2 ha are only (4.2 and 5%) respectively for the two kebeles sample households.

- During the time, when Wagur irrigation was functional, the farmers of the project areas were using Maize and horticultural crops as the major irrigable crop, but after wards when irrigation water stopped due to head work destruction, farmers switched to produce Sorghum and other permanent crops like (Coffee, Sugar cane and Chat) and other fruit bearing trees (Avocado, Papaya, Zeytun) by rain fed agriculture.

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 commercial fertilizer is also do not arrived to the area at its normal production. The areas also receives rainfall, which is highly variable in its distribution to support crop production in one season in the course of the year. According to the key informant interviewee respondents, 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, and the current water seepage would reduce by **constructing lined canal** thereby increase supply volume of irrigation water to command areas. Subsequently, household income would be increased and contribute to improved food security.

4.4.1. TYPES AND SOURCES OF MAJOR 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, though may not only restricted to: These include: Sale of stimulant plant leaf “Khat”(Chata edulis) 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 mostly (females), Sales of crops, vegetables, fruits, and

sugar-cane and sale of animal products (Milk, hide & skins) and others participate in off-farm activities and remittances in lesser extent as alternative sources of incomes. The amount of income of a typical household generated depends up on the wealth and family status of the household.

Based on this the annual income that a typical households earn ranges from 2200.00 and 3000.00 Eth. Birr and to 30,000.00 and 50,000.00 respectively for the two kebeles and average earnings of 10970 and 14125 ETB/Annum respectively for Jalala and Mada Talila sample peasant associations.

Table 7: Major sources of incomes in the area

Major income sources	Percent share of incomes Jalala Kebele N=24	Percent share of incomes Mada Talila, N=20	Remark
Sale of Cattle	70.80	35.00	
Sale of Shoats	16.70	15.00	
Off-farm activities	12.50	30.00	
Sale of grain	0	15.00	
Remittances	0	5.00	
Total	100.00	100.00	

Source: Survey Result



Figure 13 : Major sources of incomes in the two project kebeles

4.4.2. EXPENDITURE PATTERNS

According to the socio-economic survey result of the study, the farming communities of the project area expend more than their annual income to cover their personal and household obligations by selling their previously accumulated assets to fill the gaps. The following graph shows the different average annual expenditures of sample farmers in the study area. The main areas of expenditure for the farming communities are (food, Cloth, Education, Health, Non food items and inputs among others. The following table depicts the average share of different expenditure type in the sample house holds of the two kebeles(Jalala and Mada Talila) of the project area.

Table 8 : shows Average share of Major HHs expenditure

Expenditure types	Mean annual expenditure (ET.Birr)Jalala kebele	Mean annual expenditure (ET.Birr)Mada Talila kebele
Food	3658.33	8895.00
Clothing	2995.83	2325.00
Education	916.66	775.00
Health	941.66	1025.00
Non-food items(Sanitary)	1465.00	1740.00
Others	100.00	150.00

Source: Survey result, 2019

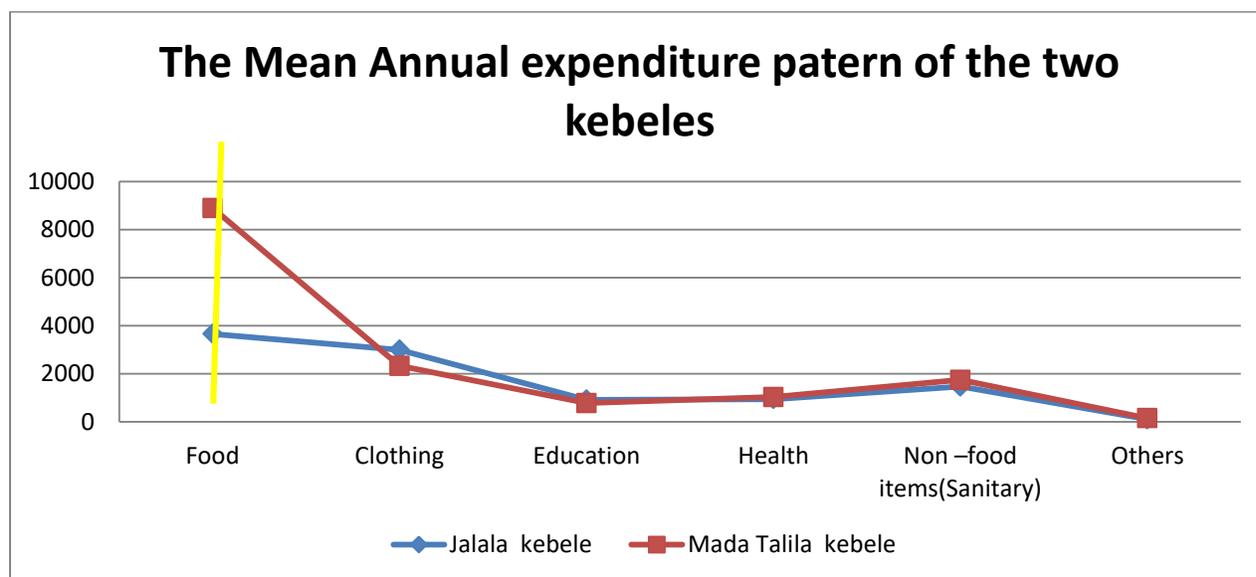


Figure 14 :Shows the mean annual expenditure patern of the project kebeles

As can be observed from the above table and Figure more of the households income expended for food, followed by clothing and the mode of expenditure pattern in the two adjacent kebeles are similar with slight difference.

This is because it is about only 20.80 % and 25 % of the sample communities of the two kebeles are food self sufficient from their own annual production. And the respondents fill the gaps by selling their previously accumulated assets in good time and sell them in time of need (Selling of livestock, Khat) and doing available off-farm activities and petty trade in their areas

4.4.3. LAND USE PATTERN IN THE PROJECT AREAS

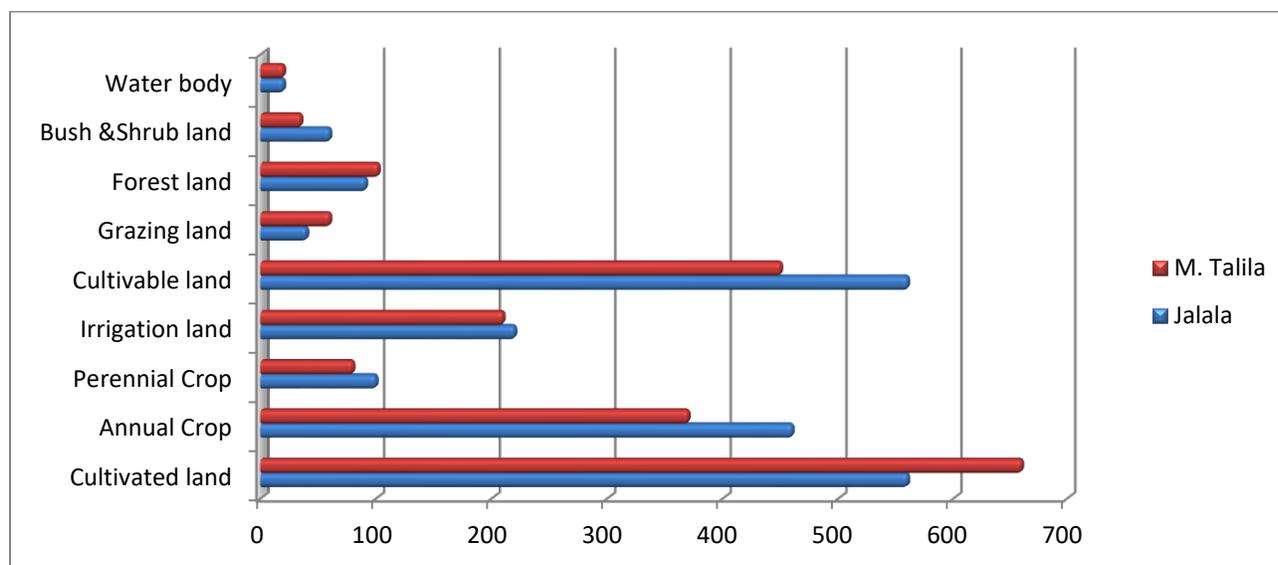
The term land use refers to the ways that people/communities use land and the natural resources for different computing uses.

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. The common land tenure system in the project areas are: allocation by government inherited from families and /or rented. The following presents the land use pattern of the two project kebeles

Table 9 : Land Use pattern of the project kebeles in Ha for 2009 E.c

No	Land Use type	Unit(ha)	Jalala kebele	M. Talila	Remark
1	Cultivated land	ha	560	660	
	Annual Crop	“	460	370	
	Perennial Crop	“	100	80	
	Irrigation land		220	210	
2	Cultivable land	“	580	204	
5	Grazing land	“	40	60	
6	Forest land	“	91	102	
7	Bush &Shrub land	“	60	35	
8	Water body		20	22	

Source: The respective kebele DA office

**Figure 15 :** Shows land use pattern of the study areas

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 less favored societies regarding their proximity to educational opportunities and facilities when compared to the other communities in the district. This is mainly due to the fact that the area has less road connection and at remote distance from the district center (Doba) and from other Government infrastructure facilities.

Table 10 : below shows School enrolment condition of Jalala kebele (2008-2010)

Grades	2008 E.C		2009		2010		Total		G.Total
	Male	Female	Male	Female	Male	Female	Male	Female	
1	115	96	113	111	114	110	342	317	659
2	60	50	107	86	102	92	269	228	497
3	23	24	54	29	80	49	157	102	259
4	22	9	20	25	26	16	68	50	118
G.Total	220	179	294	251	322	267	836	697	1533

Source: Mullisa Haka School

According to the information obtained from Mullisa Haqaa elementary School Director, the School was established in 1975 E.C. which counts about 36 years, by community participation and partially supported by Government, but there was no any visible improvement observed in the School. As observation made during this particular survey, there are about 224 students learning in one Class in Grade 1, in such hot environmental condition and where there is not enough seat for students. As can be observed from the above table-10-- and Figure-16- below, as the grade level increases the number of students in the following Class level decreasing and this may be due to the fact that as the age of children increases they are needed for their labor by their families and the students frequently dis-continue the class to search for another Job in the nearest District/small towns.

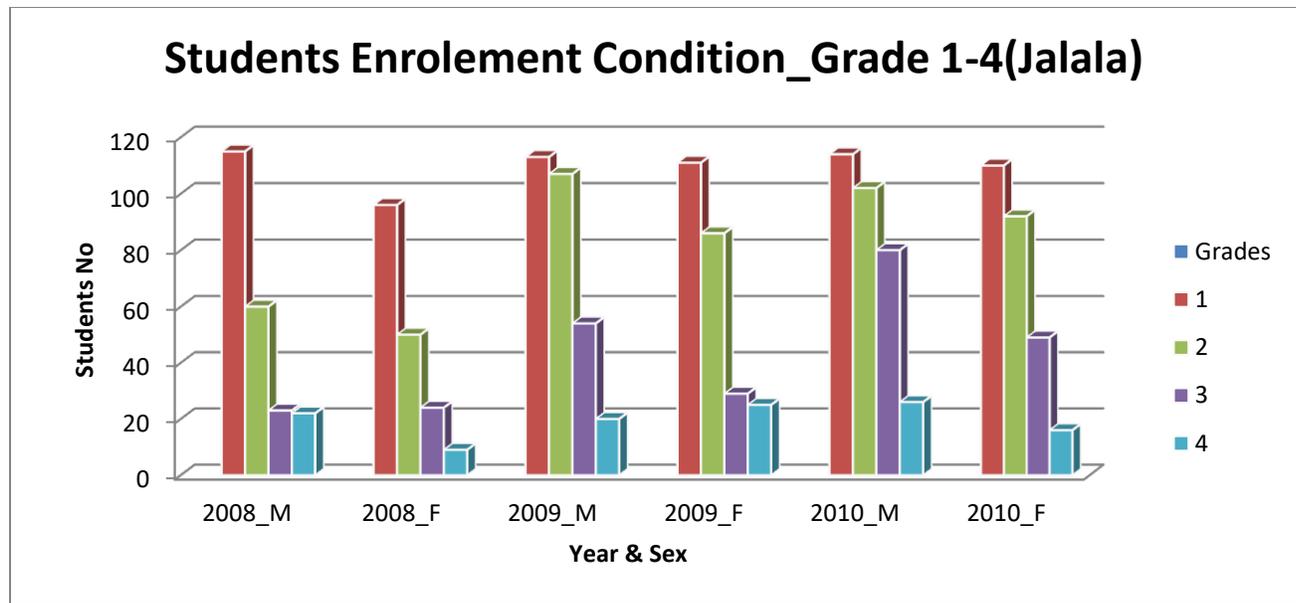


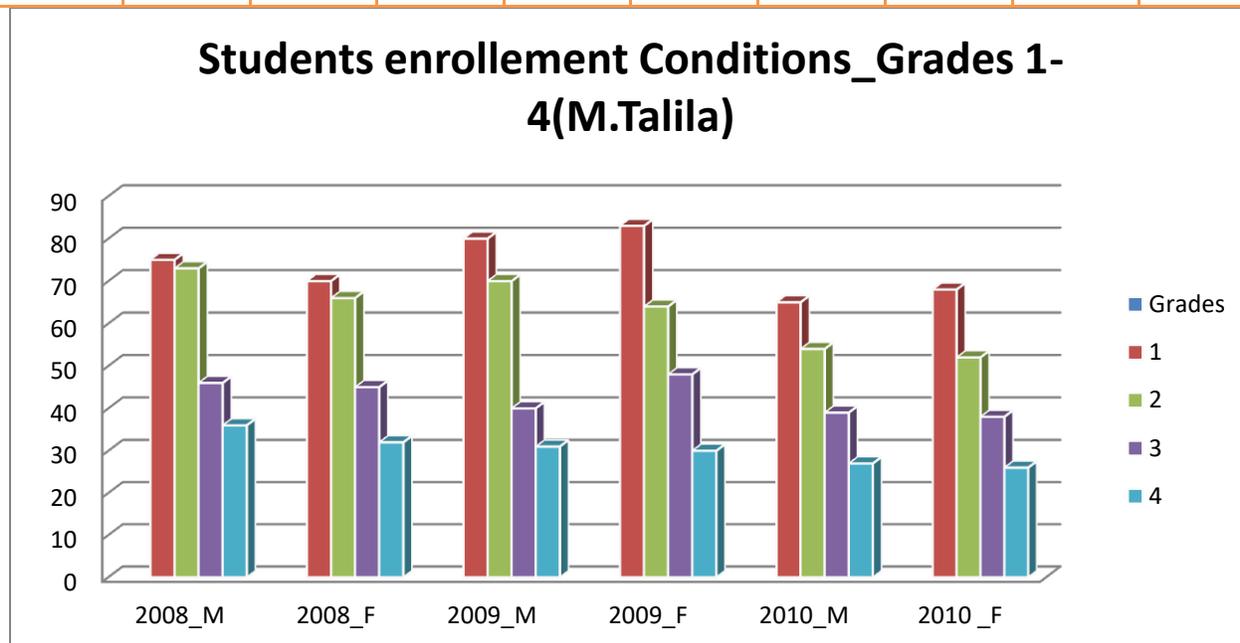
Figure 16 : Partial view of elementary School & Grade 1 students attending Class in action

In both project kebele Schools shortages of teachers was reported as one of major problems and sanitation condition of the schools are also at its low condition. For instance there no is separate Toilet for Male and female students. Family migration, Food security and Female students marriage are among the cause for Students drop-out.

However, there is improvement in students school dropout in Mulisa Haka elementary School, because, the School has got the chance of emergency School feeding by the school aid granted from WFP(World Food Program).

Table 11; Shows School enrollment situation of Mada Taliala kebele

Grades	2008 E.C		2009		2010		Total		G.Total
	Male	Female	Male	Female	Male	Female	Male	Female	
1	75	70	80	83	65	68	220	221	441
2	73	66	80	64	54	52	207	182	389
3	46	45	80	48	39	38	165	131	296
4	36	32	80	30	27	26	143	88	231
G.Total	230	213	320	225	185	184	735	622	1357

**Figure 17: Students enrollment Situations in the Mada Talila kebele**

The other general problems raised by the discussants during community consultation regarding teaching and learning process were including the following among others:

- In both kebeles of the project areas students, who promoted to 5th grade are forced to go to other Schools placed at other neighboring kebeles like(Jarra,Ifa Rahamata) and those who pass the 8th grade lesson forced to go further areas to District towns(Dobba or Hirna).
- Shortage of Library and Laboratory
- Shortages of Teachers and Class rooms

- None existent/Shortage of drinking water in both School and students obliged to go to the nearest village to drink water when get thirsty even at mid learning and teaching process and some remain at home
- Students whom their family face food insecurity forced to drop out their school as they cannot get (Breakfast, Lunch and Dinner) at normal schedules.

4.5.2. HEALTH SERVICES

According to data obtained from Dobba District health Office, there is a health post in both Jalala and Mada Talila kebeles with two health extension workers one at each kebeles working on some of the 15 health packages. A health center is also available at district center, Dobba town. Health service coverage of the district is reported nominally as 84% and 65 % as per standard for health post and health center respectively. However, due to the remoteness of the project areas and shortage different drugs and educated man power, there is less health services given to the needy communities of the area. Most of the mothers in the project areas are reported to give birth at their home and there is less pre-natal and/or post natal vaccination services for the new born children. If somebody fall sick, and need further treatments, capable family member sent to Dobba or Hirna towns in telling the symptom of the diseases to the pharmacist or Health technician at the nearest town as the area is hardly passable to public to public transportation and other vehicles except Motor cycle which cannot load the sick persons in such road conditions.

In general according to the Dobba district health office report, the ten top diseases prevailing in the areas are presented in the following table(according to their descending order)

Table 12: depicts lists of ten-top diseases in the district (2009 E.C).

No	Ten top diseases prevailing in the Dobba district 2009 in descending order		Percentage share of each disease type
	Type of diseases	Number of people affected by diseases	
1	Trauma	1,665	22.14
2	Pneumonia	1225	16.29
3	Diarrhea	1037	13.79
4	Tuberculosis (TB)	967	12.86
5	AURZ	823	10.94
6	AFI	578	7.68
7	UTI	353	4.69
8	Diarrhea with blood	346	4.60
9	Helementhiasis	311	4.13
10	Dyspepsia	217	2.88
	Total	7,522	100.00

Source: Dobba district health office

Traumatic injury, Pneumonia followed by Diarrhea stands first to third in the **ten-top-diseases** in the table above, among which traumatic injury stands first in the list of all health problems and this is an indicative that there is no sufficient transportation facility and most of the road condition is impassable for car and 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 seem out of the control of the traffic polices operating in every less accessible corner of the west Hararghe zone in general and the study district in particular. As there is not enough potable water in the project areas and water-borne and related diseases usually occur in the district and the project areas where typhoid is the most common one. Pneumonia is also common due to less care while the communities using Motor cycle transportation in such open air and consuming raw food like (Milk) and may be exposed to bronchitis & other Lung diseases like (TB).

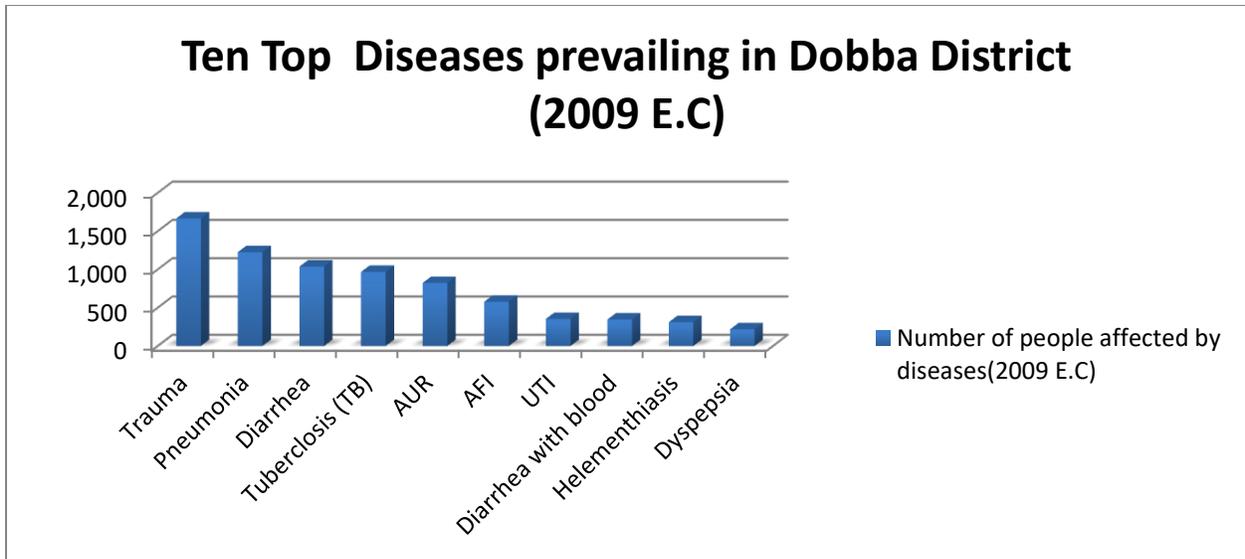


Figure 18. The major ten top ten diseases in the district



Figure 19: Human Health post(Left)& DA office(Right) at Jalala Kebele

4.5.3. WATER SUPPLY SITUATIONS

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

However the water supply condition of the two adjacent kebeles of the project areas and its surroundings are highly less favored including the Capital town of the district (Dobba). According to the visual observation made to the project areas, there was no any water supply infrastructure in the two project kebeles and the communities of the areas are using the

Wagur/Karaba river for every purposes(To irrigate their crop land, Drinking(both for Humans and Livestock), Sanitation purposes. As potable water supply is reported as the among the most problems of the district, leave alone the project areas, the District Capital (Dobba) town is also get water fetched from other areas and transported to the area by Vehicles and rationed to the town community on daily bases.



Figure 20 : Photo shows the magnitude of water supply problem in the District town (Dobba)

With regard to the project site, as indicated above, the main source of water supply in the area is Karaba River which is found at far distances from some of the home of project households of either side of the River(Jalala& Mada Talila). No alternative sources of water supply for all purposes except this river. The water is used for all domestic purposes and is also used for livestock drinking. Except the sanitation issues, the water supply volume from the river is sufficient for the village residents all year round. However, the water is not properly protected and its safety is so doubtful for human health (water borne diseases). Women and children have the highest share in fetching water from these sources.

Generally the Karaba 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 re-design (head work construction) water for Livestock and irrigation as well as potable water for human consumption has to be re-considered independently and /or with mutual win-win integration and with due precautions for its long and sustainable use.

4.5.4. ROAD AND TRANSPORTATION

The project area is located approximately at about 25km up to the project head work area from Dobba town in the North east direction. The road away from the district town to the project area

is all weather road which is rough hardly passable for small vehicles as it was constructed on highly steppe sloped, rolling and ragged topography along the way to the project site, & which is highly exposed to erosion. The Bridges along the way are also on the verge of being demolished may be in the coming rainy season unless get due follow ups and maintenances by concerned bodies in short period possible.



Figure 21 : Photo depicts Partial view of rough Road Condition to the project areas

There is no public transportation to the area at normal times unless Ambulances to help patients who referred to the nearest Hospitals (Hirna or Chiro) and to transport Mothers with delivery complications and some Government small vehicles for official government assignments and vehicles like “ISUZU” go to the area with difficulty for loading some produce to the nearest town.

Generally the project site is not easily passable for motorized vehicle (Car) except Motor-cycle and the communities are remain marginalized from normal access to social and infrastructural facilities as well as to sell their produce and buy non-home made consumable goods & items and other non homemade sanitary materials for the past years. Due to road problem the local agricultural produce (Crop and Livestock) cannot easily 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 hardly reach the needy farming communities of the project area. Thus, though it does not demand new road construction, maintaining the existing road infrastructure should take the first priority for the smooth implementation of the intended irrigation project.

Currently the Motor cycle owners are exploiting the communities in charging un fair price/head and loading up to four(Five) passengers at single trip to the nearest town and from town to the project villages.

4.5.5. OTHER SERVICES

4.5.5.1. ENERGY SERVICES

Currently, electricity service is not available in and around the rural project kebeles. 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. TELECOMMUNICATION 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. Dobba town.

4.5.5.3. FINANCIAL SERVICES

The major financial institutions providing services in the district is only Commercial Bank of Ethiopia. But other financial institutions and all other Banks are available at near distance Hirna town.

4.5.5.4. INSTITUTIONAL SERVICES

The major institutional services available in the study areas include: agriculture(Development agent offices) to give extension services 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 familiarize the farming communities with the modern agricultural technologies adaptable to the areas.

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) are 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 respective Farmers training center and supporting the communities with their knowledge and skill of their respective discipline by demonstrating adaptable technologies at FTC..

In this regard, there are some Development Agents in the two project kebeles, but FTCs are completely not functional at the time of this particular survey period as there is less concern and integration with the line district and zonal offices so as to deliver the messages to the grass root users. In some cases the professionals are deployed to the kebele but no service delivery facilities, for instance, Animal health technician is deployed but (no Animal health CLINIC at Jalala kebele) and No Plant and Animal Sciences Development agent in the kebele at all. Generally there are different irregularities in utilizing the development agents and services in the areas. Therefore, the farming communities are not in a position to get full packaged agricultural and human health services in the two project kebeles.

4.5.5.4.2. Cooperatives and Credit Services

Access to the provision of 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 as it more dependent on prevailing climate. Therefore, so far there was no any credit facilities arranged for the project influence areas. With regard to service cooperatives in the two project kebeles, there are two saving and credit association one at each kebeles as indicated in the table below.

Table 13: Service Cooperatives & credit associations in the study areas

Type of cooperatives & Years of establishment	Jalala kebele			Mada Talila kebele			Current Total Capitl (Jalala)	Current Total Capitl (M.Talila)
	Male	Female	Total	Male	Female	Total	(ETB)	(ETB)
Saving & Credit (1997 E.C)	77	140	217	68	211	279	79,000.0	92,000.00

According to the report of the Cooperative development expert in the kebeles, the majority of the members are Women and their credit re-pay status so far is good. The members are mostly take the credits for their individual petty trade and other businesses as the revolving fund at 10 % interest rate and can re-take the credit based up on their repay history for the previous credit they took.

The major problems, raised by the discussants were, lack of sufficient capital and educated man power like (Professional Accountant) who timely calculate their financial status as a group and individual bases.

4.5.5.4.3. Input Supply and Use

Farmers of the project areas 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 less organized institutions in the area, farmers reported that they less access to different input supply and those who have the capacity to use by their individual effort are also don't use the recommended full packages in its due time. The following table shows the input utilization condition of the two project kebeles.

Table 14: Input utilization of Jalala kebele

User kebele Name	Input types (Unit of measurement)	Years (E.C)		
		2007	2008	2009
	Fertilizer	2007	2008	2009
Jalala Kebele	DAP (Qtl)	45	50	50
	UREA (Qtl)	40	45	29
	Herbicide (Lit)	0	0	0
	Insecticide(Lit)	0	0	0
	Pesticide (Lit)	0	0	0
	Improved Seed (Qtl)	0	0	0

Table 15: Input utilization of Mada Talila kebele

User kebele Name	Input types (Unit of measurement)	Years (E.C)		
		2007	2008	2009
	Fertilizer	2007	2008	2009
Mada Talila Kebele	DAP (Qtl)	80	80	210
	UREA (Qtl)	80	80	130
	Herbicide (Lit)	10	10	0
	Insecticide(Lit)	10	10	0
	Pesticide (Lit)	0	0	0
	Improved Seed (Qtl)	6	5	5
	Others			

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. These includes (Cooperatives, Iddir and Dabo)

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 have transpiration problems or less aware of about the significance of the service cooperatives in alleviating their day to day household social obligations.

“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 the membership depends upon the local 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 formed based on 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 labor or material contribution.

6. NGOs OPERATING IN THE AREAS

The major NGOs operating in district and the project areas are operating under the USAID program include the following:

Table 16 : NGOs Operating in the district

Name of NGOs	Areas of Operation	Remark
Care Ethiopia	All Livelihood, Free seed distribution	
World Food Program	Nutrition(School feeding)	
IFAD	SSI, Livelihood, Nutrition	Currently not functional

But currently there is no NGOs reported to operate fully in any development endeavor of this particular project area except WFP give nutritional support service at some schools including the project areas..

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 parts 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 like in the neighboring districts and kebeles there is no purposive domination of men over women counter parts in this particular project areas, 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 in this areas too. Whereas jobs like Farm land preparation, plowing, harvesting, threshing, large animal marketing are the duties of males.

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 10 to 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. In decision making over the resources of the family vary from household to household, but the lion share still goes to Male than Female counterparts.

Women in the study areas also underrepresented in institutions at local levels, and have very little say in decision-making and to raise matter during community consolation in the project area. This may be emanated from Gender-based barriers that limit women's participation and reinforce power gaps. As civil society women's organizations in the area is not reported during this particular survey which may be an important resource for strengthening gender based social institutions in their local, district and beyond.

Therefore, it is generally important to look at a broad range of significant indicators when we consider the issue of women's status in society and gender differences like they constitute nearly 50% of the population nationally and account for a larger percentage of the agricultural labor force, and they also bear primary responsibilities for the care and nutrition of the whole family. Therefore their role in the overall development endeavors of the rural areas of the country in general and the study area is either mis-understood or totally underestimated.

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 Wagur project 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 Wagur/Karaba River to irrigate their farm land. The level of participation is esteemed 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 Wagur irrigation project was already functional for the past long years and the user communities are well aware of how to manage and use the water according to their normal schedule up until the head work was demolished by erosion and the participation level of the beneficiary communities is estimated to be 100%.

9.1. Community Attitude towards the Irrigation Scheme

As indicated in the introductory section of this report, the Wagur Small Scale irrigation project is not a new one, but it is the re-designing and/or re-construction of the already existing project. The irrigation structures under the head work site are almost functional except some may need minor maintenances to make it fully operational.

The experience of the beneficiary communities in using both modern and traditional irrigation is a common phenomenon in the west Hararghe zone and the districts in general and the project communities' also well awared as the project boost their livelihood to the higher level. And, the people in the command area have long years of using traditional irrigation and they used the currently demolished Wagur modern irrigation. Currently they are so eager to the re-launch of Wagur modern small scale irrigation so that they start to feed their family in sustainable manner and supply the surplus produce to the nearest market and ensure their food self sufficiency. Secondly they already know how to manage and utilize the 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 other neighboring farmers have managed to use water in their scheduled turn between two adjacent kebeles and there would not be any problem when they become beneficiary of the modern irrigation scheme.

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 re-launch of the project. They had over years 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, even where no external support is available.

By the time of this study, it is clearly known that there would not be much plots of land will be taken and no one's property will be damaged due to this project. Generally, 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 re-construction of this particular project. Thus, it is not difficult to understand that the project would not bring any destruction as it is the extension of the already previously existing irrigation scheme. 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 during re-construction/maintenances of the scheme. 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 not using Wagur River for modern irrigation on their farm land as they are situated at a very steppe sloped areas. So there would not be a fear of the reduction of quantity of water when this project will become fully operational with adding more irrigable areas. Thus there would not be or less likely to bring about conflicting interests in the future with the u stream communities or kebeles. Another issues with the downstream

communities of the area, the Wagur river is recharged with additional spring before it reaches Karaba river of Mada Bilisuma Kebele and it is less likely that the conflict will occur due to water scarcity between the Wagur project beneficiaries and the downstream 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.

The full positive attitudes of the two kebeles was observed as the communities show their full willingness to support every aspect of the project has been confirmed during community consultation with the public and representatives of administrative officials.

10. Benefits of the Project

After the complete demolish of the Wagur project head work by erosion, the productivity level of the already developed irrigation area is not functional and farmers already switched to use rain fed agriculture as the irrigation structure below the head work do not get water. Therefore provided that this modern irrigation scheme become re-launched, 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 newly modified 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 re-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 can buy in bulk and re-sell the products on retail at the local and distant markets. Farm inputs suppliers are also likely to be benefitted due to increased cycle of production under this project.

During and following the project implementation, necessary infrastructures and government institutions will be established or strengthened 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) in addition to cereals (Maize & Sorghum) & others because of lack of irrigation water & their bulk production and their perishable nature with in short period of time in such remote and marginal areas and now due to this project, water will be sufficiently available for their plot of land and the users ensure their food self sufficiency and it is hoped that infrastructure facility will be improved and producers get more surplus produce and market, so that 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 the intended irrigation project 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 water users associations will be re-organized more 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 less agricultural extension service would be improved and include market information and organize agri-business trainings for the user communities.

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 Wagur small scale irrigation surveyed net command area is estimated to be 60 ha and this can benefit 120 HHs

when estimated to allocate 0.5 ha for each family head and 240 HHs at 0.25 ha estimate for each HH head. Therefore, the project can feed $(240 \times 6.6 \text{ average family size})$ about 1584 families.

Last but not least there is no any fear of community displacement and resource damage or relocation due to this project

Conclusion and Recommendations

- The two adjacent community have a high-level of concern for the re-construction of modern irrigation project implementation as they have sufficient over year's accumulated irrigation experience and the benefits they used to obtained from the previous project and know how to manage the scheme in their vicinity, and have a full hope that the project would affect their life positively. As the "Wagur" irrigation project is currently shows less progress and the production process is interrupted due to water shortage. But as the project is not new and almost all structures are with very less damage and can be maintained with less cost and time, there would not be much resource affected (damaged) due to the intended irrigation project. As the structures below the head work are at their normal place, 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 compensation for destructed resources due to new construction 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 remote areas from the rest of district kebeles, **paving access road** to the site is a necessary condition for transportation and undertaking activities like construction and to improve road accessibility to the project areas and facilitate market links and communication.
- Wagur/Karaba River water shade is serving the surrounding communities in the right and left wing for both Jalala and Madda Talila kebeles and the further downstream communities and during access road construction bridge is mandatory to access the either side communities of the two kebeles and/or for livestock.
- Down-stream users of irrigation scheme may be affected by reduced quantity of Karaba 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, Karaba **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 final report.

- To bring sustainable agricultural development and ensure food self sufficiency of the smallholder farmers in the study area in particular and, the district 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 zone/region are amongst the responsible part to deliver the services in the project area for the realization of bringing about the intended change at the study area and the surroundings.
- 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 and increase farmers productivity.
- The Wagur water shed especially the upstream areas of the project is highly degraded and without vegetation cover and thus effective watershed management as a precondition for reducing the effects of water shortages and minimizing silt deposit at the command areas due to floods that may increase the vulnerability of the farm land and exacerbated land degradation. Thus an integrated approach focusing on improving all aspects of rural livelihoods is what is most likely to bring successful development endeavor in the area. Therefore, due attention should be given to water shed management, managing livestock production, and pasture development strategy, like(grazing lands, livestock watering points), as well as natural resources conservation measures should be undertaken by concerned and relevant development sectors in the areas.



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Annex .I. PROJECT COMMUNITY CONSULTATION MINUTE

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Fig. Previous Irrigation Structures below the Head work

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 Number 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 – 10th; 6) 11 – 12th; 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)_____

Income and Income Sources of the Household

2.3 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) -----

2.4 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?
_____ %

2.5 Estimate of annual expenditure of the household for different purposes? In Ethiopian 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 _____

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

2.6.1 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)

2.7 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) -----;

3. Irrigation Practices and Experiences of the Respondent

3.1.1 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)

4. 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)_____

5. 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:**

S/No.	Type of Crop	Areas cultivated in ha and average yield Quintal/year									
		2006		2007		2008		2009		2010	
		Hecta	yield	Hect	Yield	Hect	yield	Hecta	yield	Hect	Yield
1.	Maize										
2.											
3.											
4.											
	Other s										
Total											

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

S/No.	Types of inputs	Unit	Inputs used				
			2006	2007	2008	2009	2010

1	Fertilizer	Quin					
	Dap						
	Urea						
	Other						
2	Herbicide	Lit.					
3	Insecticide	Lit.					
4	Pesticide	Lit.					
5	Improved seed	Quin.					
6	Others						

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						

No.	Types of Crops	Unit	Years from 2006-2010 EC				
			2006/07	2007/08	2008/09	2009/10	2010/11
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)

Name of the district agriculture and rural development office head

Name: _____

Signature _____

Official stamp

Date _____

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?

S/No.	Type of Livestock	Number of Livestock	Remark
1.	Cattles		
2.	Sheep		

S/No.	Type of Livestock	Number of Livestock	Remark
3.	Goats		
4.	Camels		
5	Horse		
6	Donkey		
7.	Mule		
8.	Poultry		
9.	Beehive		
10.	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?

Type of Veterinary Clinic	Number	Place(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 _____

The National Regional State of Oromia

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 sanitation 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. 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					No. of beneficiaries		
			2006	2007	2008	2009	2010	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 related 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. 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?

S/No.	Type of vegetables	Area cultivated and Yield quintal per hectare									
		2006		2007		2008		2009		2010	
		hectar	yied	hectar	yied	hectar	yiell	hectar	yied	hectar	Yied
1.	Tomato										
2.	Potato										
3.	Onion										
4.	Garlic										
5	Cabbage										

	Total										
--	-------	--	--	--	--	--	--	--	--	--	--

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

S/No.	Types of fruit	Area cultivated and Yield quintal per hectare									
		2006		2007		2008		2009		2010	
		hectar	yield	hectar	yield	hectar	yield	hectar	yield	hectar	Yield
1.	Orange										
2.	Lemon										
3.	Papaya										
4.	Mango										
5	Banana										
6											
7	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

The National Regional State of Oromia**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?

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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 in 2009 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 _____

 Official stamp

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

Irrigation project Socio-Economic Study

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 _____

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

_____ Irrigation project Socio-Economic Study

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 _____

Official stamp

The National Regional State of Oromia

Oromia Water Works Design and Supervision Enterprise

Irrigation project Socio-Economic Study

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												

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	
Technical Level												
Supporting Staffs												
Other												
<i>Total</i>												

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 _____

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 Industry Office**, as the title of the project above describes this study is a detailed **socio-economic study** phase aiming at gathering an overall **Grain 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						
- <i>Teff</i>						
- Sorghum						
- Maize						
Pulses and beans						
- Horse bean						
- Field pea						
- Lentils						
- Chick pea						
- Cowpea						
Vegetables						
- Potato						
- Tomato						
- Pepper						
- Onion						
- Garlic						
- Cabbage						
- Carrot						
- Beetroot						

Items	Unit	Qty	Lowest price		Highest price	
			Period	Birr	Period	Birr
Other crops						
- 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						

Items	Unit	Qty.	Lowest price		Highest price	
			Period	Birr	Period	Birr
- Hired labour male						
- Hired labour female						
Cattle prices						
- 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 Industry 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 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						

Type of Project	Total Capital in Different Years (in Birr)					
	2006	2007	2008	2009	2010	Total
Medium Scale Industry						
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 _____

Official stamp

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?

Grade level	School enrollment				
	2006	2007	2008	2009	2010
Grade 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																		
2																		
3																		
4																		
5																		

xiii. Numbers of students who took national examination

Grade	2005		2006		2007		2008		2009		Total	
	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															
5															
6															
7															
8															
9															
10															

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?

S/No.	Types of vegetables and fruits	Yield /hectare	Remark
1	Cassava		
2	Tomato		
3	Onion		
4	Rubber		
5	Banana		
6	Orange		
7	Mango		
	Total		

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?

No.	Activities	Male	Female	Total	Participation in monetary terms
1	Irrigation cannel				
2	Road				
3	Soil and water conservation structures				
4	School maintenance				
5	Health post maintenance				
6	Fencing				
7	Others(specify)				

▪

Name of Ganda/Kebele/ Office Head _____

Signature _____

Date _____

Official stamp _____