ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLAGE OF BISNUSSE AND ECONOMICS

CHALLENGES OF RURAL LIVELIHOOD DEVELOPMENT: THE CASE OF EMDEBER EPHARCHY, IN ENEMORENAENIR WOREDA, GURAGHE ZONE, SNNPRS, ETHIOPIA




BY: ABRAHAM HAILE TEREGA

JUNE 2014
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TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

Tables

Figures

ABBREVAITONS

ADPArea Development Program

ARDB Agriculture and Rural Development Bureau

CARE Cooperative Assistance and Relief Everywhere

CSA Central Statistical Agency

DAP Di Ammonium Phosphate

DAs Development Agents

DPFSO Disaster Presentation and Food Security Office

DPPB Disasters Prevention and preparedness Bureau

EC Ethiopian Calendar

ECC-SDCO/EmCS Ethiopian Catholic Church Social and Development Coordination Office of Emdeber Catholic Secretariat.

ECS Ethiopian Catholic Secretariat

EEA Ethiopian Economic Association

EPI Expanded Program of Immunization

FAO Food and Agriculture Organization of United nations

FBOs Faith Based Organization

FGD Focused Group Disruption

FHH Female Household Head

FMOJ Federal Ministry of Justices

FSP Food Security Program

Gg Kilogram

GR Grade

GTP Growth and Transformation Program

Ha Hectare

HEWs Health Extension Workers

IDSInstitute of Development Study

IFAD International Fund for Agricultural Development

IG Income Generating

KA1 Keble one (Wonche)

KA2 Keble two (Mekanna)

KA3 Keble three (Hured)

KAs Kabeles

KII Key Informant Interview

KII3 Key Informant Interview from Keble three.

Lt Liter

MHH Male House Head

MoFED Ministry of Finance and Economic Development

OVCs Orphans and Vulnerable Children

PASDEP Plan for Accelerated Sustainable Development to End Poverty.

Qt Quintal

SHH Sample Household

SLA Sustainable Livelihood Approach

SLFSustainable Livelihood Framework

SNNP Southern Nation and Nationalist Peoples

SNNPRS Southern Nation Nationality and People Regional State

UNCEDUnited Nations Conference on Environment and Development

UNDP United Nation Development Program

WECD World Commission on Environment and Development

WVADP World Vision Area Development Program

GLOSERY FOR LOCAL TERMS

Woina Dega Agro climatic zone tha lies between 500-1500 meters above sea level

Taffe -Type ofgrain used to make Enjera

Shoats-Sheep and Goats

Enset-plant/crop used to prepare Kocho

Kocho-type of food prepared from Enset

Keble-Lowest Administrative unit in Ethiopia

Woreda-An administrative Unit in Ethiopia that is below zone and above Keble

Birr-Ethiopian Curency

Chat-Stimulant leaf.

ABSTRACT

The objective of this study is to examine challenges of rural livelihood development in the four KAs of Enemorena-Enir Woreda in Southern Nation Nationality and Peoples' Regional State. To attain this objective, research questions that lead to research findings have been developed. Appropriate literatures were reviewed based on relevance to the subject matter under consideration. Findings were drawn from data generated through the combination of both qualitative and quantitative methods. The research employed key informant interview, focus group discussions, direct observation and in-depth interviews mainly to collect qualitative data, and household survey was conducted on 120 randomly selected households. The findings of this study has revealed that, although different actors were putting efforts to develop livelihood status of the area, efforts made by development actors were challenged and undermined by erratic rainfall patterns, livestock and crop diseases, rapid population growth, shortage of land and other problems like lack of awareness, community participation, not wall designed projects . Households in the area covered are found to be engaging in non-farm activities to supplement the income gained from farming. Petty trade, craftworks, migration and local wage employments are the major off-farm or non-farm activities that households in the study areas are engaging themselves in. In addition to this, research findings also testified that people who have arable land, water have better diversified their activities. Meaning, wealthy households mainly relied on mixed farming (crop and livestock) and other activities such as petty trading. As poor households are resource poor, they intended less to participate on high return activities. The study also revealed that a higher proportion of female-headed households found to diversify than their counterparts, but mostly towards low return activities. The male-headed households diversify relatively to high return activities such as trade and crafts. The participation of poor households in high return income generating activities is found to be poor. This was constrained by multiple factors including poor resources (natural, physical, human, financial and social). It is also found to be important to address the constraints of poor households by widening their access to resources and make them realize the advantage of choosing farm activity over non-farm activities. This in turn requires the improvement of households' access to education, special skill training, financial resources and credit service in order to address issues like population density, asset depletion, and livelihood insecurity.

CHAPTER 1: INTRODUCTION

1.1. General Background

Ethiopia is a country with a total area of 1,251,888 square kilometers and with 93 million populations (UNDP2012), this fact brought the country the second most populous country in sub- Saharan Africa (CSA, 2009). According to the evaluation report of World Bank (2013), the growth rate of Ethiopia's population was 2.3 % per annum. With a population of over 93 million, the majority of the population is engaged in rural and agricultural based economic activities (EEA, 2008), and agriculture accounts for 46% of the GDP (EEA, 2012).

Agriculture is thus, the backbone of the economy and so what has happened to it automatically affects the economy. However, the sector has continually blamed for its failure to meet the growing livelihood need of the rural population, let alone to generate surplus for national economic growth. A significant number of people still suffer from food shortage and poverty. As result, the government of Ethiopia has issued Food Security Program (FSP) under the umbrella of the Plan for Accelerated Sustainable Development to End Poverty (PASDEP) to tackle livelihood insecurity (food and poverty). Efforts made to improve the production of agriculture through research and technology generation and extension service and input supply by government, NGOs, FBOs, and CBOs. Nevertheless, large-scale improvements in the living conditions of farmers and the rural population have been far from being achieved (EEA, 2005).

According to the report of MoFED (2008), poverty remains widespread in the country so that food poverty occurrence is about 38.7% at national level, 35.1% in urban areas and 39.3% in rural areas in 2004/05. Poverty is not merely economic scarcity, but it is also life expectancy, education, health and access to clean water.Socio-economic indicators such as food consumption per capita, nutritional levels of households and individuals, health and sanitation conditions, access to safe drinking water, housing conditions, and development of infrastructures are still at lower level.

Based on the lessons from the PASDEP period (2004/5-2009/10), the government has designed and implementing a new ,rather more ambitious development strategies known as the Growth and Transformation Program(GTP)for the 2010/11 to 2014/15 period. A key strategic direction during the GTP period is to ensure that smallholder agriculture becomes the main source of agricultural growth by scaling up interventions based on experience

gained, and identification of successes achieved in the previous plan period. The result realized to date show that it is possible to transform subsistence agriculture to more market led production (MoFED, 2011),

The GTP identified three strategic directions to make smallholder agriculture the main source of agricultural growth and this includes scaling up of best practices witnessed during the PASDEP period, expansion of irrigation development and production of high value crops. Recognizing huge productivity gap between average farmers and best performers, the GTP aims to bring up the productivity of most average framers closer to those of best framers who currently harvest two to three times more production from the same farmland.

Similarly, the GTP promises a gradual shift from production of low to high value products for the selected crops and livestock products (in agro ecologically suitable areas). This envisages increasing income of farmers and pastoralists as well as hard currency for the economy through export to international markets (EEA, 2012).

Having this overall GTP plan in mind, the researcher took Enemorena Enir Woreda, Guraghe Zone in SNNPRS to see how the resource poor farmers are applying these ambitious development strategies in their locality. Moreover, the researcher is eager to know the reasons that kept the situation of livelihood security unchanged in this research area even after the development actors put their efforts. Thus, the result of the assessment would help to see and widen different and alternative options that fit to the condition of sustainable livelihood plan for the research area, by identifying the challenges that undermine the efforts of livelihood development of the place. It also will fill the gap, built on, and add to the existing knowledge about the livelihood challenges in the research area. Efforts that have been done by_

1. Different actors (government, NGOs, Charity organizations),
2. Level of community Participation
3. Sustainability of the works done by different actors and challenges of livelihood development in the research area were some of the crucial points that the researcher wonted to examine.

1.2. Statement of the Problem

In Ethiopia, agriculture is the dominant economic sector. According to the latest census (CSA, 2008), 84% of the population lives in rural areas and makes a living from agriculture and related activities. Agriculture also generates 46% of the Gross Domestic Product and

90% of the foreign exchange earnings (CSA, 2012). However, despite these contributions to the Ethiopian economy, agriculture remains rain-fed with a limited use of improved farm technologies and inputs. Productivity is low and much of the reported production increase comes from area expansion rather than increases in yields per hectare (MoARD, 2009). This indicates that the vast majority of rural population of which more than 80% is dependent on agriculture is still exposed to poverty. Since poverty remains widespread in the country, especially in places where area expansion is not possible for long period. As a result, more than 38% of rural households fall below poverty line, and 47% of children under five suffer from stunting in 2004/05 (MoFED, 2008). The major causes of poverty and food insecurity in rural areas include land degradation, recurrent shocks, population pressure, low input subsistence of agricultural practices, lack of employment opportunities and limited access to services. Therefore, to see livelihood development challenges at micro level, Enemorena-Enir Woreda was taken as a sample area to this study.

Enemorena Enir Woreda is indeed, among the most densely populated areas of the Sothern Nations Nationalities and People's Regional State (SNNPRS, livelihood profile, 2006), and available land per household leaves for little or no production margin to withstand shocks that related to the livelihood insecurity. Nearly all households in these areas are unable to cover food needs from their production, and at least 80% of the targeted KAs' populations are seasonally food insecure. People in the area are selling their labor for 600-900 birr/month. Seasonally large number of laborers migrate elsewhere in the eastern and central part of the country to sale their labor in big farms or other income activities. As per the Woreda rural development office data, 70% of the households in the project area cannot cover more than three months family food consumption without external support. The problem analysis during the need identification indicates that low crop and animal productivity are the priority problems that lead target community to chronic food insecurity. To mitigate these and related problems, different actors like, Government, Catholic Church and other organizations have made an effort to improve livelihood situation of the area by applying socio-economic activities. However, the magnitude of challenges that exist in the area undermines the efforts done by development actors. People are stile exposed to poverty, degradation, and high population growth, low input and limited access to service. Poverty in the area is not merely economic security, but it is also life expectancy, education, health, and access to clean water, nutritional level of HHs and individuals, sanitation conditions. Therefore, this study would contribute to find appropriate answers why the expected results were not achieved even with

the efforts of development actors. The answer will help to create livelihood option for the area and to fill gaps that existed on empirical literatures.

1.3. Purpose of the study /General Objective/

Effective and sustainable ways to deal with challenges to develop livelihood security in rural Ethiopia must first identify the underlining causes of vulnerability by undertaking more research on localized, small-scale vulnerabilities at household level. I do believe that interventions designed to support rural livelihood development has to be programmed more strategically by undertaking activities that reduced households' exposure to risk and increase their resiliencies to shocks. As a result, the primary emphasis should be on the livelihood systems, risks and resiliencies of households and communities. Household livelihood security studies explain the issues of what and how households make their living in different communities, cultures, localities, across wealth categories and agro-ecologies. The findings bear implication for the types of interventions appropriate for enhancing livelihoods in the particular context by addressing the multiple constraints facing households.

Bearing this key points in mind, **the general objective** of this study was to examine and understand the challenges to develop rural livelihood in selected Kebeles(kAs) of Enemorena Enir Woreda of Guraghe zone,SNNPR.

1.3.1 Specific Objectives

- To examine the livelihood strategies of different wealth groups in the research area (four KAs)
- To examine efforts made by development actors to develop the livelihood conditions of the area.
- To identify the challenges that undermine the livelihood development of the research area
- To examine the situation of livelihood sustainability in the studied area

1.4. Research questions .

1. What are the livelihood strategies of different wealth groups in the research area?
2. What are the efforts made by different actors to improve livelihood conditions of research area?
3. What are the main challenges and respective causes of livelihood insecurity in the area?

4. What are the possible solutions to develop sustainable livelihood security of the area?

1.5. Significance of the Study

This study has contributions at the national and local levels. First, a careful study and generation of knowledge at grassroots level about agricultural land scarce community. Livelihood strategy is crucial to design interventions that have the greatest impact and benefit to the macro level policies that seek to secure sustainable rural livelihoods and rapid poverty reduction through intended interventions. Second, the sustainable rural livelihoods approach, as a powerful methodological tool it appreciates the existing livelihood strategy and the household‘s capacity to survive. This study therefore, could benefit policy makers, development practitioners, and researchers who are working and interested to work in rural areas where the livelihood strategies are changing because of the growing problem of arable land scarcity, population growth and degradation of natural, human and capital resources.

1.6. Scope and limitations of the Research

Due to the time and resource constraints, this study confined itself to only four KAs of Enemorena Ener Woreda of the Guraghe Zone, SNNPRS. Households were the units of analysis in this study. This study was emphasizing only on household level situations by taking snap-shots at a particular period and specific households who are categorized as poor, medium and rich according to the local community criteria .Resource and limited time did not allow me to include households who are very poor and very rich. In addition to the above limitation sample, size used was restricted to 120 households and this might have an impact on the quality of the research. I have cited literatures (books) that were published in 1990’s to bring the different debates to the present time and triangulate the present situations.

CHAPTER 2: LITERATURE REVIEW

2.1. The concept of Livelihoods

Among a number of definitions of livelihoods that have been given by different Scholars Chambers (1989: 7) is the one who defined livelihood as ‘‘adequate stocks and flows of cash to meet basic needs’’.

Chambers and Conway (1992) who described livelihood as the capabilities, assets and activities required for a means of living. Later elaborated this in attempt to bring together various definitions, accordingly Ellis (2000:10), defines livelihood as: “A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) together determine the living gained by the individual or household.”

Despite the many definitions of livelihoods available, the most widely accepted definition of a livelihood is the one, which was given by Chambers and Conway (1991:5):“A livelihood comprises the capabilities, assets and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; which contributes net benefits to other livelihoods at the local and global levels and in the short and long run”.

Therefore, from the definition, a livelihood encompasses both cash and in kind, income, social institutions (kin, family, and community networks), gender relations and property rights required for sustaining a given standard of living. Social networks are important for facilitating and sustaining diverse income portfolios. This does not exclude access to, and benefits derived from, social and public services provided by the state such as education, health services, roads, and water supplies etc., which also constitute livelihoods (Ellis 1998:3).

Though many writers, Carswell et al., (1998: 10), notes that the definitions of sustainable livelihoods are often unclear, inconsistent and relatively narrow. Hence, without clarification, there is a risk of simply adding to a conceptual confusion, however, in summary, a livelihood consist of capabilities, material and social resources and activities required for a means of living which also takes into account the role played by structures, policies and processes in

influencing the choice of livelihood strategies by the rural poor. It is considered sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining its natural resource base (Scoones 1998:5).

Taken together these definitions, the term livelihoods is a multi-faceted concept referring to what people do to make a living with the assets at their disposal and what they accomplish by doing it in a particular context (Niehof, 2004:322). The concept of livelihood is therefore about individuals, households or communities making a living, attempting to meet their various consumption and economic necessities, coping with uncertainties that lead to the vulnerability and responding to new opportunities (de Haan and Zoomers, 2005:28).

2.2. Vulnerability Concepts

Chambers (1995:20) attributes vulnerability to exposure and defenselessness and he distinguished two sides of vulnerability, an external side that comprises exposure to shocks, stress and risks experienced by a population and an internal side, which relate to inability to cope with those shocks. Vulnerability has also been defined as "a human condition or process resulting from physical, social, economic and environmental factors which determine the likelihood and scale of damage from the impact of a given hazard"(UNDP,2004).

In his discussion of the dimensions of deprivation, Chambers (1995) pointed out that vulnerability context has increased for millions of people in the world and its implication is that their livelihoods have become less secure and sustainable though their incomes have grown. He further noted that more people live in insecure environments and most of them living in such areas are exposed to the risks of famine, flood, storm, diseases, war and political turmoil. Thus, due to the loss of their livelihood assets and the absence of the means to cope with it, many are more vulnerable and as a result, they can easily be plagued by famine. He also argued the famine that occurred in Ethiopia, for instance, takes this form, where the earlier loss of livelihood assets and lack of coping mechanisms exposed the people to famine easily in which drought was the immediate factor in triggering the crisis (Chambers, 1995).

On the other hand, a coordinated and rapid government intervention can possibly prevent drought from triggering famine and this made possible in Zimbabwe. However, despite this fact, Sudan and Ethiopia are such countries that are highly susceptible to drought- induced famine due to political and economic systems weakened by repeated crises overtime that led to the loss of assets and means to cope (Von Braun et al., 1999).Vulnerability conception has

been amended and adapted in various approaches. For instance, the biophysical approach mainly focuses on vulnerability to the degradation of biophysical conditions and this approach has been widely used in the studies of vulnerability to natural hazards and climate change. The political economic approach studies vulnerability based on marginalization and theory of food entitlements (Sen., 1981). Sen's influential entitlement approach links vulnerability to the lack of access to assets, which includes both tangible and intangible ones.
Though influential, motivational preference approach has been criticized for neglecting historical diversity of responses, under emphasizing the role of human agency and underestimating the role of the environment as an independent factor that affects social relations (Bryant 1992; as cited in Philip and Raynham 2004). Critiques also point out that access to assets which emphasized in the theory, offers no guarantee that the assets will be effectively used to reduce vulnerability (Scaramozzino, 2006).

2.3. Household Vulnerability and Livelihoods

People's lives are dynamic and from time to time move in and out of poverty due to changes and influences from the environment they live in. This environment referred to as the vulnerability context, which forms the external environment in which people exist and gain importance through direct impacts upon people's asset status (Devereux, 2001).
It consists of trends (demographic trends, resource trends, trends in governance), shocks (human, livestock and crop health shocks, natural hazards, like floods or earthquakes, economic shocks, conflicts in form of national or international wars)and seasonality (seasonality of prices, products or employment opportunities) Ellis, 2000). Thus, people's livelihoods and assets affected by trends, shocks and seasonality over which they have limited or no control.
Vulnerability depends upon the assets that a household has and the extent to which the asset holders can adapt (Carney, 1998). Therefore, vulnerability is characterized as insecurity in the well-being of individuals, households, and communities in the face of changes in their external environment (Devereux, 2001).However, it is important to point out that the same framework falls short of addressing the positive side of the trends that exist. Not all trends and seasonality must be considered as negative; they can move in favorable directions, too. Trends in new technologies or seasonality of prices could be used as opportunities to secure livelihoods (Carney, 2002). In other words, the term 'vulnerability context' suggests that these trends are directly or indirectly responsible for hardships faced by people, but it is not

always the case.

2.3.1. Rural Livelihoods and Vulnerability Contexts in Ethiopia

In Ethiopia, about half of the population lives under the poverty line where agriculture forms the main sources of livelihoods for more than eight out of ten Ethiopians. The productivity of the agricultural sector is extremely vulnerable both to climatic conditions and to the disruptive impact of war and civil strife. It has been indicated that recurring drought expose poor farming households to food shortages causing periodic famines. In this regard, persistent lack of rainfall considered, as a major factor in rural poverty (IFAD, 2006) .Small-scale farmers constitute the largest group of poor people in the country. They generally have least access to natural resources, entitlements, employment opportunities and income making them more vulnerable to external shocks such as droughts, floods and pests exacerbating their already precarious situation. According to report from FAO, almost 40 percent of farm households have less than 0.5 hectare of land, and more than 60 percent have no more than 1 hectare from which to support a family of between six and eight people (FAO, 2010).As it is revealed on the later chapter of this paper, households in the study area of Enemoreena enir Woreda has faced similar problems that emerges from small plots of arable land coupled with poor soil fertility condition.

Today, it was realized that droughts have demonstrated an enormous capacity for destruction and the erosion of human development gains. Droughts affect the rural poor through decreased production, loss of livestock and soil fertility, extreme shortages of drinking water and increased vulnerability to livelihood insecurity.

Drought has been recorded from as far back as 253 B.C. in many parts of the Horn of Africa. In this part of Africa, there has been at least one major drought episode in each decade in the last 30years (Ramakrishna & Assefa, 2002; Degefa, 2005; FAO, 2006). For instance, there were serious droughts in 1973/74, 1984/85, 1987, 1992 to 1994, and 1999/2000, 2007/8. The 1984 drought affected8.7 million people, about 1 million died and 1.5 million livestock perished in Ethiopia alone(FAO, 2006). When Crops fail and livestock die, poor households' lose their income, their livelihood insecurity situation worsens, and restoring lost assets can take many years. According to Human Development Report (UNDP, 2006), in 2005 more than 20 million people were at risk from drought in the Horn of Africa alone. Drought is, therefore, a recurring phenomenon causing tremendous damage to society.

Although drought and adverse weather patterns have been a convenient scapegoat, yet there

are also many factors that are causing and exacerbating rural poverty in Ethiopia. Study on household seasonal food insecurity in Oromiya Zone by Degefa (2002) found that a multitude of factors notably environmental, demographic, economic, infrastructural and social factors causing seasonal food insecurity in the study area. The study identified drought, erratic rainfall patterns, livestock and crop diseases, rain fed agriculture, pests, rapid population growth, and small size of land and lack of investible capital as main factors (Degefa, 2002).

The Ethiopian economy is dependent on low productivity rain fed agriculture and rainfall is the single most important source of water for cultivation that created dependence on a single harvest per year. This dependence on unreliable and low-productive rain-fed agriculture may well be the primary determining factor of its household food insecurity (Devereux, 2000b).

The problem for Ethiopia, where livelihoods for the vast majority of people depend on rain fed agriculture, is uncertainty. Rainfall Variability estimated to have pushed an additional 12 million people below the absolute poverty line in the second half of the 1990's. With more than 80% of the population living in the countryside and half of them undernourished, water holds the key to human development prospects for households. This is why poor people themselves identify variable rainfall as the greatest threat to their livelihoods. However, as in other predominantly agricultural countries, failed rains in Ethiopia send shock waves beyond the household and across the entire economy. A single drought event in a 12-year period will lower GDP by 7%-10% and increase poverty by 12%-14%.Inability to mitigate the effects of rainfall variability reduces Ethiopia's potential for economic growth by a third-with obvious consequences for reducing poverty.

Hydrological variability estimated to increase poverty levels in 2015 by between a quarter and a third, or some 11 million people. (UNDP,2006:157).Workneh and Michael (2002) argue in favor of the commercialization of farm production as an important strategy of transforming the low productive subsistence production of small farm holders into surplus and market oriented production systems. Against their argument, the study they have conducted in South Wollo in Northeastern Amhara region revealed that the amount of marketed food crops is substantially low which amounts about 8% of the total food crops produced.

In this regard, the study identified access to market place as the significant factor affecting the commercial participation of farmers and also clearly showed that size of farm cultivated and fertilizer are the most important and significant factors that determine food production.

No doubt that with improved market opportunities, many smallholder producers can build

their asset base and make the transition to commercially oriented farming systems (World Bank, 2003).

2.4. Livelihood Strategies and Activities

Livelihood strategies comprise the range and combination of activities and choices that people undertake in order to achieve their livelihood goals. Decisions on livelihood strategies may invoke natural-resource based activities, on-natural resource based and off-farm activities, migration and remittances, pensions and grants, intensification versus diversification, and short-term versus long-term outcomes, some of which may compete. This means, they have to be understood as a dynamic process in which people combine activities to meet their various needs at different times and on different geographical or economical levels, whereas they may even differ within a household.

Studies have drawn attention to the enormous diversity of livelihood strategies at every level-within geographic areas, across households and over time (DFID, 1999; Scoones et al., 1998). A common manifestation of this is at the household level where a member of the household lives in different places, temporarily or permanently through migration. At the same time, this member engages in gardening and off-farm work when they are in the household. Essentially, it is important to analyze households and communities' strategies within their wider context (Scoones, 1998).

2.5. Livelihood Diversification

Diversification of livelihood is an important strategy for household livelihood security. Livelihood diversification as a strategy depends on the contextual settings, capital availability, and the ways in which institutional arrangements operate (Devereux and Maxwell, 2001). It has been defined as "The process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living" (Ellis, 1998:7).

In low-income countries like Ethiopia, rural households pursue diverse livelihood strategies to derive income from a wide range of sources such as farm, off-farm and non-farm activities (Ellis, 2000). Most of the time, subsistence oriented farmers operate in less-favored production environments and often lack most types of productive assets. Even though, they operating outside of the market and are prone to high levels of poverty and food insecurity, they have varied types of livelihood strategies (World Bank, 2003).

Income diversification as one of rural livelihood strategies is also important in Ethiopia. The

typical rural livelihood strategies in Ethiopia, as evidenced in this study in Enemorena Enir as well, combine crop and livestock agriculture, off-farm income generating activities (e.g. daily labor, petty trading, seasonal migration and begging). In addition to their low returns, the main problem associated with the available off-farm economic activities is that most of the activities are directly or indirectly affected by rainfall. It has also been indicated that off-farm employment opportunities are limited in both availability and income generating potential in rural Ethiopia (Devereux, 2000). Survey report by the Ministry of Labour in 1996 indicated that only 44% of rural households surveyed pursued anyone-agricultural activities as source of their income and these sources contributed only 10% to household income (Befekadu and Berhanu, 2000cited in Tesgaye Moreda2008).

Degefa(2005) also found in Oromiya Zone the main discouraging factors for expanding non-farm income earning activities which includes notably the lack of waged labour opportunities, lack of initial financial capital, limited knowledge and skills, lack of raw materials, and limited markets. This was strengthened by other study conducted in North Wollo, looking that sample households depend on different survival mechanisms to respond food insecurity and famine crises. These mechanisms include crop diversification, relying on wild fruits, selling livestock, participating in food-for-work programmers', migration, and other coping mechanisms of female-headed households such as working as daily laborers, preparing drinks(Areki, Tella), selling firewood and dung, and child labour (Ramakrishna and Assefa, 2002).

Consistent with empirical evidences from South Wollo in northeastern Amhara region discussed earlier, other rural livelihoods study conducted in Kersa and Babile Woredas in Eastern Highlands of Ethiopia, found out that food crop sales are very rare events for households in the study areas, because only very few better-off farmers who can sell food crops as a true surplus over home consumption , though the poorer households are also forced to sell some part of their harvest to attain exchange entitlement. In addition, it has identified the most important sources of cash income, which includes 'Chat' production, Eucalyptus tree, Coffee production, distress sales of food grains, sales of livestock products and by-products, petty trading, firewood and charcoal sales and causal labour (Belaineh, 2002).Regarding the determinants of the sustainability of livelihood strategies, Kebebe et al., (2006) found in a study conducted in Southern Ethiopia that rising population levels, illiteracy, declining land productivity, increasing costs of technological inputs, low asset endowment along with lack of viable livelihood diversification opportunities have left

farmers in appealing living condition. The study also revealed that households studied were able to feed themselves on average for only8 months in a year from their own production, forcing the farmers to be expectants of food aid. In recent years, it has been realized that livelihood diversification is contributing a lot to rural livelihoods even if policy makers have often neglected it.

In this respect, Belaineh (2002) argues that although the contribution of rural livelihoods diversification often ignored in policy terms, it is an important feature of survival in rural areas in Ethiopia. He found different groups pursuing widely different objectives and, these groups have widely different and dynamic perspectives in diversifying their livelihood in Eastern highlands of Ethiopia. Based on his findings, he concluded that the misconception of rural development that is focused on enhancing the productivity of agriculture needs to be re-examined and emphasized on food security as only one of the central concerns of households but not the only one.

Similarly, research findings on livelihood diversification from southern Ethiopia showed that diversification activities are critical to livelihoods in the study region. This research also outlined some of the key determinants of diversification operating at different scales that includes, household size, structure, and gender of household head, as well as wealth group, ownership and access to assets and access to transport, markets and services (Carswell et al., 2000).In confirming the importance of livelihood diversification, Devereux (2000), asserts that Ethiopia's food insecurity problem derives directly from its dependence on undiversified livelihoods that based on low-input rain fed agricultural activities.

2.6. Determinants of Livelihood Diversification

Diversification among rural households mainly influenced by differences in resource endowments such as land, labour, capital including access to markets and institutions (Barrett et al., 2001:326). Opportunities to diversity vary among households with asset portfolios determining whether the effects of diversification are positive or negative. Households may have similar endowments and opportunities but do not always select the same portfolio of activities. Differences occur in preferences for income, consumption, wealth and status and risk in addition to subjective elements such as enterprise styles. However household's ability to adopt more profitable diversification strategies also be determined by skills, location, capital and social connections to pursue other activities (Hussein and Nelson, 1998:10).

Improving household food security and incomes may motivate a household to diversify, but some of the factors explained below determine the selection of actual strategies by a

household.

2.6.1. Access to Markets

Households through diversification may use diversification as a risk management and survival strategy in instances where the absence of markets compels self-provision of some goods and services. Several studies have noted that where physical access to markets is costly and causes product markets failures, households diversify production patterns partly to satisfy own demand for diversity in consumption. In addition, earnings from diversification where access to credit is non-existent can enable overcoming working of capital constraints, purchasing necessary inputs, equipment or capital improvements on one's farm (Barrett, 2001:321; Omamo, 1998).

Closeness to urban markets may create opportunities for diversification into rural non-farm activities such as pre-urban areas where possibilities exist for earnings from commuting (Davis, 2004:19). However, it should not be overlooked that in some cases, closeness to urban areas exposes rural non-farm manufacturers to high competition from factory-made substitutes sold in rural market centers. This may lessen the extent to which rural households can diversify.

2.6.2. Climate Variability

Climate variability affects farm production especially for smallholder farmers. Persistent diminishing returns from agriculture, which threaten food security, may prompt household to diversify. This implies that a key motivation for diversification is environmental uncertainty related to unreliable rainfall or drought which makes diversification "a form of self-insurance" Barrett et al.,(2001:322.This means the decision to diversify may also be driven by the need to cope with climatic variability or extreme weather patterns such as drought. Diversification is then seen as a natural response to climatic risk and transactions costs in lower potential agricultural areas (Haggblade, Hazell, Brown, 1989).

2.6.3. Available Asset Portfolios

The availability of assets such as savings, land, labour, education, access to market or employment opportunities and other public goods is a primary factor in determining a household's capability to diversify, Warren (2002:5). Opportunities to diversity vary among households (Mutenje et al., 2010:341),with differences in resource endowments (land, labour, capital) and access to markets and institutions playing a central role in the extent to which diversification occurs (Barrett et al. 2001). The extent of diversification of the household

portfolio of activities is determined not only by asset portfolios but also by it having the skills, location, capital, credit and social connections to pursue other activities.

2.6.4. Education& Skills

Educational attainment identified as one of the most important determinants of non-farm earnings. The skilled and educated maybe self-employed or can secure stable long-term employment at relatively high salaries, while the unskilled and uneducated depend on more erratic, lower paying casual wage labour in the farm sector. Educational attainment can therefore serve as an entry barrier to better paying nonfarm employment or self-employment in rural Africa. (Barrett et al., 2001:325).Education is also critical since the better-paid local jobs require formal schooling and that there is a correlation between education with rural non-farm business success (Davies 2004: 7). However, the same authors note that it is not clear how schooling beyond primary level and the achievement of literacy and numeracy, provides skills that matter in the majority of rural non-farm activities. Since access to education and low wealth status limits opportunities to diversify for poor households (Hussein and Nelson, 1998:19), diversification can also take the form of investing in human resources in the present in order to diversify the future resource-base of the (parental) household. Several studies have shown that investment in children's education can be a long-term livelihood strategy aimed at creating a source of income transfers for the parents when they reach old age. (Niehof, 2004:333)

2.6.5. Access to Credit Markets

Constrained access to credit and financial savings can hinder acquisition of assets necessary to diversify out of crop agriculture to non-farm activities. Restricted access to capital is the major obstacle to investment and entrepreneurship (Davies, 2004: 9). The poor are consequently left with less diversified asset and income portfolios, forcing them to bear both lower returns and higher variability in earnings. Ellis (2000:296) attributes low rural credit availability to high costs of setting up banking operations in rural areas, the difficulty and cost of securing adequate information on potential borrowers, the risk of default on loans, and the absence of collateral to put up against loans.

This means credit market failures can also provide another motivation for diversifying livelihoods. In the absence of lending facilities, households will engage in activities that generate cash funds to be utilized in purchasing agricultural inputs or farm equipment (Binswanger, 1983; Reardon, 1997quoted in Ellis 2000:296).

2.6.6. Gender Relationships

Diversification is also shaped by gender relationships. Women have the potential to undertake a similarly wide range of diversification activities as men, but in many contexts, men are able to avail themselves of diversification opportunities that are not open to women due to cultural constraints (Husseinand Nelson, 1998:8). Gender relationships can constrain or promote access to some household assets or the mobility of certain gender and age groups. This means that the degree of involvement in diversification activities and the unequal distribution of their benefits vary between genders (Ellis, 2000:295;Gladwin et al., 2001).

Within the 'poor' and 'average' well-being groupings, women were mainly engaged in agriculturally related activities, crop and small livestock production, cottage industries and some farm labouring. The men within these groupings were identified as the most active diversifiers, both in the range of livelihood activities, and the number practiced by individuals."Historically African women are known to have been active in combining farm and non-farm income-earning activities as an adaptive strategy during periods of chronic or transitory food insecurity (Devereux, 1999; Maxwell and Frankenburger, 1992).

Impediments to effective diversification by women are deeply ingrained in the cultural and socio economic set up in many societies where perceptions are that cash crops and income-earning activities are part of the male domain; while production of subsistence food crops consumed in the household are in the female domain. This means women food producers do not have access to cash from the sale of cash crops with which to buy yield-increasing inputs (Due and Gladwin, 1991).

African women tend to define themselves by their roles and social identities as the food providers in the household. Gender is also a factor in the ability to access income-earning opportunities (Niehof, 2004:330) as women's ability to engage in income generation is also constrained by time-consuming activities they engage in due to a lack of environmental resources. Women's opportunities to find additional or alternative sources of income are limited by this external gender division of labour. Women grow food crops for subsistence and market excess food crops, on the other hand men engage mainly in cash cropping and off-farm activities. Fetching water and collecting fuel wood are activities that absorb most of the time of women and children.

Gladwin et al., (2001:196) have argued that though women dominate many of the non-farm

activities such as food processing and preparation, tailoring, trading etc. they still face powerful constraints which prevent them from generating much if any cash income. It must still be emphasized that the greater body of evidence suggests that diversification activities open to women are often less rewarding than those pursued by men (Gladwin et al., 2001:194)

2.6.7. Seasonality

Seasonality, as an inherent feature of rural livelihoods is evident through varying returns to labour time i.e. income that can be earned during the year in both on-farm and off-farm labour markets (Ellis 2000:293). Furthermore, Niehof (2004 332) based on a paper on how the seasonal calendar explains the timing of migrant labour in India indicates that in rural communities the need for and possibilities of livelihood diversification depend on seasonal time.

Seasonality causes changes in occupation to occur as labour time switched from lower to higher return activities (Alderman and Sahn, 1989: 82). For this reason, an important motive for income diversification associated with seasonality is to reduce seasonal income variability, which then requires income-earning opportunities, which are not synchronized with the farm's own seasons. Livelihood options for households that influenced by seasonality are included seasonal migration to other agricultural zones, circular or permanent migration to non-farm occupations (Alderman and Sahn, 1989).

2.6.8. Adaptation to Risk

One rationale for diversification is to create a portfolio of livelihoods with different risk attributes. (Hussein and Nelson, 1998:10; Reardon and Vosti, 1995: 1500–01).This implies that diversification may mean that households accept lower economic returns as long as there is greater security and lesser risk.

Previous experience of crop or market failure can provoke diversification as a means of spreading perceived risk and reducing the impact of total or partial failure on household consumption (Warren, 2002:5).However, such a decision may compromise productivity gains from specialization. Situations where there are decreasing or seasonally varying returns to labour or land; imperfect markets for assets, finance and commodities, diversification can be an immediate response (Barrett et al, 2001:323).With diversification risk adverse households may choose the second best income-generating alternative, which entails giving up a certain amount of income by diversifying rather than face a total failure hazard (Warren, 2002:5).

Therefore, diversification maybe a response to shocks to income such as crop failure or livestock losses that may force households to reallocate labour to other pursuits, such as wage labour, informal employment off-farm or nonagricultural activities on-farm (e.g. weaving, beer brewing).According to Ellis (2000: 294) whether or not risk spreading involves a fall in income, one of the critical motives of livelihood diversification for risk reasons is "the achievement of an income portfolio with low covariate risk between its components." Put simply, this means a household will try to ensure that the factors that create risk for one income source are not the same as the factors that create risk for another income source. Diversification on the farm whereby farmer takes advantage of differences in the risk-proneness of crops to adverse weather is only partial. By contrast, non-farm livelihoods also help in ensuring low risk correlations between livelihood components.

2.7. Livelihood Security Concept

It was in the late 1990s that sustainable rural livelihoods emerged as a theoretical framework for analyzing rural poverty, food insecurity and vulnerability initiated by scholars associated with the Institute of Development Studies (IDS) (Scoones, 1998; Carney, 1998). However, early definition of Sustainable Development can be found in the Brundtland Report of World Commission on Environment and Development (WECD, 1987), as shown above, most of the current definitions of livelihood security used are derived from the early 1990s work of Chambers and Conway(1992).

Empirical field studies were conducted in Bangladesh, Ethiopia, Mali and Zimbabwe by the IDS sustainable livelihoods research programme employing the sustainable rural livelihoods framework (Scoones, 1998; Degefa, 2005). For example; some case studies were conducted in various parts of Ethiopia using the livelihoods framework (Caswell et al 2000; Belaineh 2002;Kebebe et al 2004; Degefa and Baudouin, 2004; Degefa, 2005).A number of researchers, institutes and donor agencies have adopted a sustainable rural livelihoods approach, for examining and understanding rural poverty in developing countries. Particularly, development agencies have now adopted this approach, which focuses on rural risk management aimed at reducing vulnerability in helping people to develop resilience to external shocks and increase the overall sustainability of their livelihoods (Carney, 1998). In this respect, though the framework currently in use draws heavily on work conducted at the Institute of Development Studies, it has been adapted by various development agencies such as CARE, Oxfam, FAO, UNDP and DFID in which they used as it is or with modification to

accommodate their particular concerns and practical objectives.

The approach is holistic and dynamic and recognizes the many complex interactions in rural livelihoods. It endeavors to be participatory and comprehensive by considering non-agricultural income diversifying activities and emphasizing the social and environmental as well as economic dimensions of rural life. It also explicitly emphasizes the importance of rural institutions and organizations to livelihoods. As a means for understanding livelihoods, the target population of the framework consists of 'rural', rather than 'peasant' or 'agricultural' households. In addition, in the approach, means of production of farmers' notably land, labor, and capital has been replaced with 'capital assets' defined widely to include natural, physical, financial, human and social forms of capital upon which individuals draw to build their livelihoods (Carney, 1998; Bryceson, 1999).However, it has been commented that the sustainable rural livelihoods approach has analytical blind spots and internal inconsistencies that could undermine its good intentions. One of the most salient issues is the fact that the 'rural' nature of the approach cannot be taken for granted. In this case, the rural-urban continuum in which many rural settlers conduct their livelihood strategies can render a primarily rural based approach out of its target (Bryceson, 1999).

Recently the importance of viewing food security in a broader perspective has led for the adoption of Household livelihood security Approach that allows a holistic and comprehensive understanding of livelihoods. This framework evolved out of the perspective that food security is not independent of the wider livelihood considerations of households and thus, food is seen as only one subset of the objectives pursued by households (Frankenberger and Drinkwater, 1999).Therefore, it can be concluded that livelihood security is a very broad concept that goes beyond food security aspect and food security is seen as one of the major components of household livelihood security.

Household livelihood security approach, which has become the basic framework for CARE, thus, intends to provide comprehensive socio-cultural, economic and ecological assessments of a given area. The approach enables an understanding of local livelihood systems, which includes economic, socio-cultural, and political systems and the constraints, vulnerabilities, marginalization, and risks of poor families within their context. The approach perceives vulnerability as characteristic sets of households that have inadequate existing livelihood strategies and vulnerability arises out of the everyday conditions that people live because of their livelihood opportunities (Frankenberg et al. 2000).

2.8Sustainable livelihood

2.8.1. What does sustainable livelihood mean?

The sustainable livelihoods idea was first introduced by the Brundtland Commission on Environment and Development as a way of linking socio-economic and ecological considerations in a cohesive, policy-relevant structure. The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that sustainable livelihoods could serve as 'an integrating factor that allows policies to address' development, sustainable resource management, and poverty eradication simultaneously'. Most of the discussion on SL so far has focused on rural areas and situations where people are farmers or make a living from some kind of primary self-managed production. Practical concepts for the 21st Century, Robert Chambers and Gordon Conway proposed the following composite definition of a sustainable rural livelihood:

"A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living, a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term''.

While the definition of a livelihood can be applied to different hierarchical levels, the authors stressed that it is used most commonly at the household level. Even then, it is also important to recognize variations in wellbeing and access at an individual or intra-household level, as well as at the broader levels of the extended family, the social group, and the community. Of the various components of a livelihood, the most complex is the portfolio of assets out of which people construct their living. This portfolio includes tangible assets such as stores (e.g, food stocks, stores of value such as gold, jeweler, cash savings) and **resources** (e.g. land, water, trees, livestock, farm equipment), as well as **intangible** assets such as claims (i.e., demands and appeals which can be made for material, moral or other practical support)and access.

A distinction is made between environmental sustainability, which refers to the external impact of a livelihood on other livelihoods, that is its effects on local and global resources and other assets, and social sustainability, which concerns the internal capacity of a

livelihood to withstand outside pressure, that is to cope with stress and shocks and retain its ability to continue and improve over times.

Stresses defined as pressures, which are typically continuous and cumulative, and therefore to some extent predictable, such as seasonal shortages, rising populations or declining resources, while shocks are impacts, which are typically sudden, unpredictable and traumatic, such as, fires, floods and epidemics. Any definition of livelihood sustainability, the authors argued, has to include the ability to avoid, or more usually to withstand and recover from, such stresses and shocks.

2.8.2. Sustainable Livelihoods Approaches, Its Framework and principles.

The sustainable livelihood approach is a new approach to poverty alleviation. The analysis of poverty conventionally takes into account mainly income and consumption as criteria. Based on this criteria, a person is poor only if his/her income level is below a certain poverty line, or if consumption falls below a stipulated minimum (Farrington et al. 1999:2). According to Chambers (1987), however, income is only one of a range of aspects, which the poor themselves highlight when they were asked what poverty means to them. Others include, a sense of insecurity or vulnerability, lack of a sense of voice, level of health, literacy, education, access to assets, etc. (Farrington et al. 1999:2).

As income /consumption model was found to be ineffective in the analysis of poverty, the basic needs perspective was developed as alternative approach as it views poverty beyond income and include the need for basic health and education, clean water and other services which assumed to prevent people from falling into poverty (Farrington et al. 1992:2). More recently, poverty has been defined in terms of the absence of basic capabilities to meet these physical needs, but also to achieve goals of participating in the life of the community and influencing decision-making.

Sustainable livelihoods (SL) approaches draw on this improved understanding of poverty, but also on other streams of analysis, relating for instance to households, gender, governance, and farming systems, bringing together relevant concepts to allow poverty to be understood more holistically (Farrington et al. 1992:2).

2.8.2.1. Sustainable Livelihoods Framework /SLF/

As a measure to reduce the number of poor people living in extreme poverty by half by 2015, Department for International Development (DFID) of UK consulted widely in order to increase its understanding of the nature of poverty and how it might be addressed. One of the

outcomes of this consultation was the sustainable livelihoods (SL) framework. The framework is an analytical device for improved understanding of livelihood and poverty. (Farrington, et al. 1992:2).Similarly, according to Swift and Hamilton, the sustainable livelihood framework is analytical framework, which attempts to widen our insight of how people use the resource at their disposal to construct their livelihood (Swift and Hamilton, 2001:82).

As livelihoods itself, the sustainable livelihood framework is dynamic that different scholars based on .Scoones have modified and attempted to put it in basically similar but with a slight different form to suit their analysis. In most of the presentations of the framework, the major five components are usually recognized with different terminology and sequence. These are the context, livelihood resources, institutions, livelihood strategies, and livelihood outcomes (Scoones, 1998:2, Ellis, 2000:31,Swift and Hamilton, 2001:82, Degefa, 2005:89). However, some scholars like Scoones (1998:2), Ellis (2000:30), and Degefa (2005:89) differentiated and disaggregated the livelihood activities and the adaptive and coping strategies and made the major components of the sustainable livelihood framework into six as context, resources, access modifiers, productive activities, coping and adaptive strategies and outcomes. In most of the works of the scholars the sustainable livelihood framework is presented in sequential two dimensional view (Scoones, 1998:2, DFID, 1999, Ellis, 2000:31, Swift and Hamilton, 2001:82, Degefa, 2005:89).However, recently International Fund for Agricultural Development(IFAD) developed an alternative livelihood framework. The IFAD team criticized the original sustainable livelihood framework developed by DFID and others for not actually placing the poor in the center of the framework. Moreover, the “horizontal” arrangement of the sustainable livelihood framework of DFID and others is criticized for it encourages a “left to right” reading. According to IFAD team, the poor themselves tend to be easily lost within the livelihood framework previously designed by DFID and modified by others (Hamilton J, 2002:2). IFAD’s SL Framework is less sequential and it is circular and puts the poor at the center and rearranged all-important linkages among different elements in the framework. The rearrangement has given greater salience and the relations among different elements have become more immediately apparent (Hamilton, 2002:3). Moreover, the IFAD, alternative SL Framework incorporated additional group of livelihood assets- ‘personal’ assets to the five contained in the original SL Framework.

2.8.2.2. Major Components of SLF

A. Contexts/Settings

The contexts or the settings are the most important aspects of the sustainable livelihood framework in the analysis of rural poverty. According to Scoones (1998) the contexts are the conditions and the trends which include history, politics, economic trends, climate, agro-ecology, demography, and social differentiation. Similarly, Carney (1998) named it as 'vulnerability context', which comprises many of the same factors listed under context by Scoones (Carney cited in Ellis, 2000:37).

Ellis similarly based on Scoones (1998) and Carney (1998) adopted the framework and acknowledged the importance of context in livelihood analysis. According to Ellis, livelihood is constructed in a context of trends and shocks.

In his adopted SL Framework, the trends include population migration, technological change, relative price, macro-policy, national economic trends, and world economic trends. The shocks include natural and manmade catastrophes like drought, floods, pests, diseases, and civil wars.

Degefa (2005:89) in his part adopted the SL Framework from Scoones (1998) Carney (1998), Ellis (2000) and Devereux (2003) and categorized the context in to three – namely shocks, trends, and broader contexts (which include government changes, ideological shifts, inappropriate rural policies, land reallocation, and marketing situation) while analyzing rural poverty and food insecurity in Ethiopia.

The emphasis given to context in almost all analysis of sustainable livelihood is with the belief that development and change is path dependant that present livelihood options are affected to certain degree by the previous events (Swift and Hamilton, 2001:84). Moreover, development efforts at community or micro level could be affected by socio-economic, political, and policy environments at national or global leveling sustainable livelihood analysis of the resource poor communities in the Enemoreena Enir Woreda.The contexts could be the overall national economic development trends, especially rural development trends, the overall political and socio-economic condition of the country, ineffective and exclusive rural development policies which give relatively less attention to resource poor community, trends of population pressure, trends of rural to urban migration, market, up-stream deforestation .e.t.c.

B. Assets

The other basic components of the SL Framework are the assets. The assets could be those, which are owned, controlled, claimed or in some other means accessed. They are the capital base upon which households are able to undertake production, engage in labor markets, and participate in reciprocal exchanges with other households. According to Scoones assets are the basic material and social, tangibles and intangibles upon which the ability of a household depends to pursue different livelihood strategies (Scoones, 1998:5).

Similarly, Ellis describes assets as stocks of capital that can be utilized directly, or indirectly, to generate the means of survival of the household or to sustain its material well-being at different levels above survival (Ellis, 2000:31).

In the analysis of SL, different researchers have identified and grouped assets into various categories. Among others, Swift (1989) grouped assets into three broad categories namely investments, stores and claims. According to the same writer investments include human, individual and collective assets; stores include food stores, items of value such as gold, and money in the bank; and claims include reciprocal claims on other households, and claims on patrons (chiefs, etc), government, and even on the international community. On the other hand, Maxwell and Smith (1992) in a food security context, grouped assets into productive capital, nonproductive capital, human capital, income and claims(Maxwell and Smith cited in Ellis, 2000:32). Similarly, Reardon and Vosti (1998) classified assets into natural resource assets, human resource assets, on-farm physical and financial resources, off-farm physical and financial resources (Reardon and Vosti cited in Ellis, 2000:32). Moser (1998) on his part categorized assets of a household into labor, human capital, productive assets, household relations, and social capital (Moser cited in Ellis, 2000:32).

Recent literatures on the analysis of SL by DFID, Scoones (1998:5), Swift and Hamilton (2001:83), Ellis (2000:32) categorized the assets into five group's namely natural capital, physical capital, human capital, financial capital, and social capital. However, very recently, the IFAD team came up with a new alternative sustainable livelihood framework as indicated earlier and it incorporated a new asset. The IFAD team calls it 'personal' assets. According to the IFAD team, the 'personal' assets are those factors, which may affect the choices of individuals and households regarding their livelihoods. The personal assets include people's internal motivations, their will to act and promote change, their drive to assert their right, and their spiritual side of their lives (Hamilton et al. 2002:4). From this, it is evident that as sustainable livelihood itself is dynamic, the framework used to analyze it is also changing

with new concepts and ideas. Thus, it is too difficult to list exhaustively all the assets of sustainable livelihood and categorize them into distinct groups. The categorizations used in most of the scholarly works by (Scoones; 1998, Ellis: 2000, Swift and Hamilton, 2001) have been reviewed in brief in the following section.

Natural Capital: include the land, water, and biological resources, which people use to generate means of survival. Sometimes natural capitals are termed as environmental resources and are thought of jointly as comprising the environment (Ellis, 2000:32). In agricultural resource, poor community like Enemorena Enir woreda land is the most important natural capital.

Physical Capital*:* are physical assets that are created by economic production process. In economic terms, it is defined as producer goods as it is purchased in order to create a flow of output in the future (Ellis, 2000: 33). It includes buildings, irrigation canals, roads, tools, machines, and soon. Infrastructural assets like roads, power lines, and water supplies are also important physical assets that facilitate livelihood diversification. (Ellis, 2000:33)

Human Capital: According to Carney (1998), human capital refers to the labor available to the household: its education, skills, and health (Carney cited in Ellis, 2000:33). Investment in education and training and the skills acquired through pursuing one or more occupations improve the human capital of a household. Similarly, better health condition of a household improves the efficiency and effectiveness of labor as an asset (Ellis, 2000:34).

Financial Capital*:* refers to stock of money to which the household has access. It comprises savings, access to credit in the form of loans. According to Frank Ellis, the absence of financial markets or distrust of such financial institutions in many societies, result in savings being held in other forms.

In rural Sub-Saharan Africa, the keeping of livestock often plays an important role as store of wealth and as security to bad times (Ellis, 2000:34). Similarly, according to Swift (1989) gold, jewelry, and food stocks are put as alternative means of holding for varying periods (Swift cited in Ellis, 2000:34).

Social Capital: Moser (1998) defined social capital as reciprocity within communities and between households based on trust deriving from social ties' (Moser cited in Ellis, 2000:36).According to Frank Ellis, however, the definition given by Moser puts the emphasis on localized reciprocity. Ellis in his part broadens the definition of social capital as community and wider level social claims in which individuals and households can draw by virtue

of their belonging to social groups of varying degrees of inclusiveness in society at large (Ellis,2000:36).

C. Institutions/Organization

According to North (1990) institutions are the formal rules, conventions and informal codes of behavior that comprises constraints on human interaction. Example of institution, include laws, land or water tenure arrangements, the ways market work in practice (North cited in Ellis,2000:38),whereas organization are groups of individuals bound by some common purpose to achieve objectives (North cited in Ellis, 2000:38). Government Agencies, Administrative bodies, NGOs, FBOs, Associations and Private companies are examples of organization .Why institutions are important in the analysis of the SL. According to Scoones, institutional process allows the identification of restrictions/barriers and opportunities (or 'gateways') to sustainable livelihoods. The writer further argues that understanding of institutions and organization is the basis to designing interventions, which improve sustainable livelihoods (Scoones, 1998:11).

The author argues that institutional sustainability may be put into question when significant change occurs in contextual setting. According to Scoones, institutions are dynamic, continually being shaped and reshaped over time. They are part of a process of social negotiations, rather than fixed 'objects' or 'bounded social systems' (Scoones,1998:10).As power relations are implanted within institutional forms, individuals and groups to construct their own strategies of resource access can manipulate institutions and organization. Different institutional arrangements frame access to and use of resources differently for different groups (Swift and Hamilton, 2001:85).

D. Activities and Livelihood Strategies

Livelihood strategies are composed of activities that generate the means of household survival. According to Barrett and Reardon (cited in Tesfaye 2003), activities are the particular uses to which productive assets are put .The activities carried out by rural households can be categorized in different ways. Ashley and Carney (1999) grouped activities on the basis of whether activities use natural resources as input or not, natural resource based activities include, collections of item such as fuel wood and fruit, food cultivation, non-food cultivation, livestock keeping, weaving, clay work so on. Non-natural resource based activities include trade, services, manufacturing, remittance, and other transfers (Ellis, 2001:41, Ashley and Carney cited in Tesfaye, 2003:119). On the other hand,

Barrett and Reardon (2000) as cited in Tesfaye (2003) classified livelihood activities by sector as farm versus on-farm, by function, wage versus self-employment and by space, local versus migratory (Tesfaye, 2003:119).

According to Scoones there are three strategy types, with respect to which different configurations of assets, these are:

1. Agricultural intensification: refers to the increase of output per hectare of land or animal by application of more labor, capital or technology. In the case of farming, it could be increase of production per hectare of land body by applying more labor or improved technologies without actually passing the maximum sustainable yield. The key assets here are land for agricultural intensification, attention is directed towards the institutions and organizations that facilitate technical change in agriculture (Ellis, 2000:41, Swift and Hamilton, 2001:86).

2. Extensive Agriculture: refers to a strategy of livelihood where more land, or animal, is brought into production process at the same levels of labor, capital, or technology (Swift and Hamilton, 2001:86)

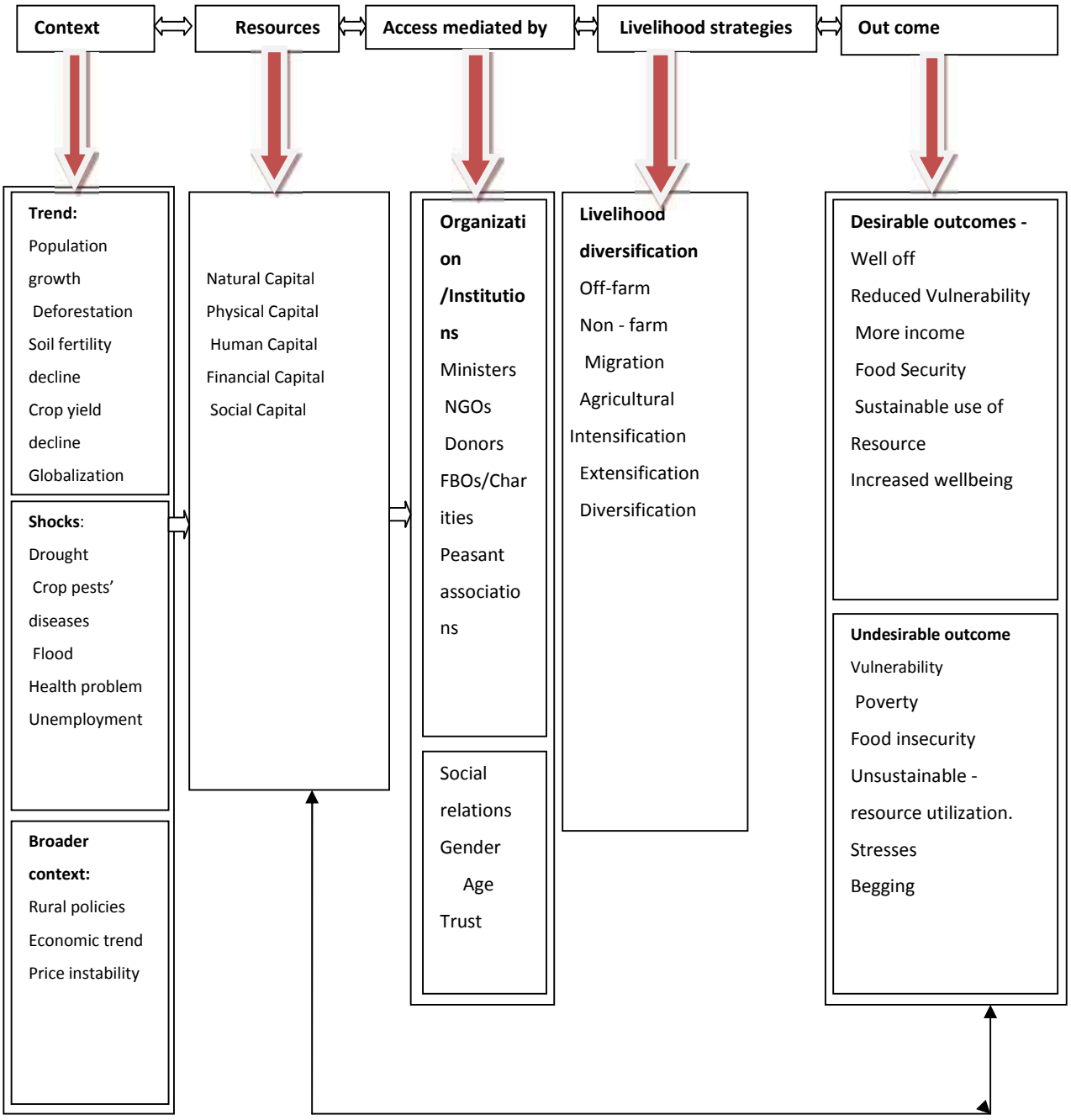
3. Diversification: Refers to the processes by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living (Ellis, 1998:7)

2.8.3. Conceptual Frame Work

The conceptual framework developed for the study of households' livelihood diversification, strategies, variables, and food security are sustainable livelihoods approach (Scoones 1998; Ellis 2000). Rural households derive their livelihoods from a diverse collection of activities using different types of resource for which they have access to achieve their livelihood goals. However, a combination of livelihood strategies is not available for all households. The involvement of households in a combination of activities and its outcome depends on resource endowment and risk factors, and the existing institutional and organizational factors asset level and income status of the household (Scoones 1998, Ellis, 2000; Dolan, 2002). Hence studying households' involvement in a combination of activities requires the understanding of the overall livelihoods of the households. In this regard, Scoones (1998) and Degefa (2008) emphasize the importance of the livelihoods approach and Sustainable Livelihoods Framework (SLF) to use to understand households livelihood strategies. The key features of a livelihoods approach include a focus on resources (or 'capitals'), and on factors mediating access (institutions, organizations and social relations) to the resources needed to

construct viable livelihood strategies. The relative success of these strategies will also be influenced by contextual variables (trends, shocks, the broader economic and political context) over which the individual or household has very little control. The product of all these variables operating in combination will be a unique livelihood outcome that characterized as sustainable resource use, well off, reduced vulnerability, more income, and food security, or food insecure, unsustainable resource utilization, poverty. To understand this framework it is depicted in following figure.

Figure 1:-Rural livelihood Framework for analyzing household livelihood diversification



Source: Adopted from Scoones 1998, Ellis 2000, and Degefa2005.

2.8.4. Principles of SLA

A fundamental truth or proportion serving as foundation of sustainable livelihood approaches identified in the following ways.

2.8.4.1. Focus on People

Sustainable livelihood approaches (SLAs) put people at the center of development. This means, practical application of SL concepts start with an analysis of people's livelihoods and how these have been changing overtime. It fully involves people and supports them in achieving their own livelihoods; focus on the impacts of different policy and institutional arrangements on people's livelihoods. It also should show how informal institutions often fit situations better than formal ones and seeks to influence institutional and policy arrangements to promote the agenda of the poor. (Farrington et al., 1997:4*)*

2.8.4.2. Holism

SL approaches allow the identification of livelihood related opportunities and constraints regardless of where these occur. SL approaches has to be non-sectoral and applicable across social groups, recognize multiple influences on people, and seek to understand the relationships between these influences, recognize multiple actors (private sector, NGOs, Government bodies, Community Based Organizations, Communities, so on). It also should be provide complex picture they give a truer impression of rural life and poverty and hast to seek to achieve multiple livelihood outcomes, to be determined and negotiated by people themselves. (Farrington et al., 1997:4)

2.8.4.3. Macro-Micro Links

SL approaches attempt to link the micro, and macro and meso levels, and ensure learning and information sharing at all levels (Toner and Franks, 2005:5)

2.8.4.4. Dynamism and Optimism

SL Approaches place current events in their dynamic context, rather than looking at a 'snapshot' of a Situation at a single moment in time. It views current situation as outcomes of past changes (Swift et al., 2000:91).And are optimistic as indicated by Moser (1998) SL Approaches seek 'to identify what the poor have rather than what they do not have' and 'to strengthen people's own incentive solutions, rather than substitute for' block or undermine them (Ellis, 2000:23).

2.8.4.5. Sustainability

SL approaches final target is ensuring sustainable livelihoods. Thus, to make sure a given development is sustainable the approaches seek to examine the following four levels:

1. Financial sustainability – where the system is sustainable without outside funding.

2. Institutional sustainability – to what extent the newly introduced institutions to alleviate poverty fit or integrate with the existing institutions.

3. Environmental sustainability – to maximize the sustainable use of natural resources with minimized waste and pollution.

4. Social sustainability – minimizes social exclusion, and complements the local cultural context (Toner and Frank, 2005:5).

CHAPTER 3: RESEARCH DESIGN AND PROCESSES

3.1. Description of the Study Area and Selection of the Samples

3.1.1. Description of the Study Area

Enemorena-Ener Woreda is found in Guraghe Zone in SNNPRS. The main town of the Woreda Gunchire is situated 198kms west south of Addis Ababa. It has 64 rural and two urban Kebele's. According to Woreda information desk (2014), the total population of the Woreda is estimated 167,745 (88,551 female and 79,194 male) with a crude population density of over 275 people per square kilometer. The average family size is 5.7 and the average land holding size is 0.25ha.

Agro ecologically the Woreda lies under dry highland and mid highlands with altitude range from 1000masl- 2730masl. The Woreda has bimodal rainfall pattern and the annual rainfall ranges from 800mm-1168mm.

The main livelihood of the people in the Woreda lies in agriculture and the major stable food of the Woreda are Enset, maize, wheat, Teff (Woreda information dask, 2014). The most dominant livelihood of the community are depends on mixed farming, Maize, 'Enset' (false banana), potato, wheat and 'Teff'. Other than these crops, economically less important crops are also grown. Maize is the most common staple crops next to Enset.As per food security project (project survey, 2010) food access in the Woreda is highly seasonal and depends upon rainfall pattern and crop production levels. In most years, the hunger season lasts from April, when main season crops run out until June. Although better-off households produce more crops and cover a higher proportion of needs from their own production, all wealth groups depend on markets for the purchase of food items at some point during the year, particularly from April to June.

Livelihood profiles of the Woreda demonstrate that in average production years fewer than 1 in 5 households – i.e. the better-off– obtain sufficient staple food from their land, while the 'poor' produce at most only 40 % to 50 % of their annual food needs (source: SNNPR, Ethiopia, Livelihood profile 2006).

Leading factors explaining low crop production are limited farmland, reduced soil fertility, poor productivity of locally available seeds, limited access to improved agricultural inputs like irrigation facilities and limited extension services.

Cattle, sheep, goat, and chickens are the most dominant livestock types on which

community's livelihood depends. In the Woreda, income from livestock and livestock Productions estimated to cover 20 to 30 % of household consumption and expenditure. Also, demand for (fattened) livestock and livestock products are increasing at national level. Yet, livestock production and productivity remain low. On the one hand, especially 'poor'' households own few animals (see wealth ranking table below). On the other hand, animal productivity is limited. For instance, local breed milk cows give at most 1.5 to l/day during the first 3 to 4 months of the lactation period, diminishing further to less than 1 /day at the lactation period's end. Besides low productivity of local breeds, pasture and fodder scarcity, and high mortality due to lack of veterinary services also restrict livestock production and productivity.

People in the area are selling their labor for 20 birr/day. Every year large number of laborers used to migrate seasonally elsewhere in the eastern and central parts of the country to sale their labor in big farms. Most of the households in the project area depend on own production only five to six months of the year. As per the Woreda rural development office data, 70% of the households in the project area cannot cover family food consumption without external support. This is a cumulative effect of the above stated problems.

The problem analysis indicates that low crop and animal productivity are the priority challenges that lead target community to chronic food insecurity. The basic causes for low crop productivity are limited arable land, reduced soil fertility, poor productivity of locally available seeds, limited access to improved agricultural inputs like irrigation facilities and limited extension service. Similarly, the cause for low animal productivity were shortage of grazing land and water, prevalence of animal disease and limited veterinary service are the common future of the area.

To mitigate the mentioned problems, different actors like Ethiopian Catholic Church Social and Development Coordination Office of Emdeber (ECC-SDCO/EmCS) has selected the project KAs with Woreda government line office on the basis of the needs of the area:-

- To increase annual crop productivity production of households
- To improve livestock productivity and income of households; and
- To strengthen quality of extension service through construction of animal health posts.

However, the livelihood security efforts were a drop in an ocean and the livelihood challenges in the area were not solved, so the statement of this study has aimed to identify the challenges that undermine the development efforts of different actors. This will help to look

different options in the future implementation of development projects in the area.

3.1.2 Catholic Church, Eparchy of Emdebir.

3.1.2.1 Institutional framework of Catholic Church in Ethiopia

The Archbishop of Addis Ababa leads the Catholic Church. Ethiopia is divided in to twelve dioceses, which serves approximately 560,000 people in total. The Episcopal archdiocese is based in Addis Ababa. However, there are apostolic vicariates in Awasa, Soddo,Hosanna, Harar, Meki , Nekemte ,Adigrat, Jimma, Emdebir Eparchy,Gambella and Balle Robe has been added as an apostolic prefecture.

Overall policies are set at the Ethiopian Episcopal conference. Each Bishop however, is responsible for the activities of the church in his diocese. In Ethiopia, there are also religious orders (43 female and 13 male), working in parishes, hospitals, clinics, schools, WID programmes etc.

The Ethiopia Catholic Secretariat (ECS) has been established in Addis Ababa for coordination at national level of Church activities, social work, human development, and welfare and relief services. There are eight different departments among others, education, medical services, and welfare, Social, and development are some.

The Ethiopian Catholic Church Social and Development Commotion (ECC-SADCO) has obtained the license as Church based social and development wing by the Federal Minister of Justices (MOJ) and has also signed an operational agreement with the Disaster Prevention and Preparedness Agency(DPPA) covering the entire Social and development Programmes of the catholic Church through Ethiopia.

In turn, the Diocesan Secretariats are delegated to sign project agreement with the Disasters Prevention and Preparedness Bureau (DPPB) and Line Bureaus for the insertion, realization and evaluation of development projects and on-going programmers. On behalf of all Catholic Church personnel, the Ethiopian Catholic Secretariat liaises with the relevant Federal Government offices and Ministers for visas, work permits and other necessary business, related to its socio-pastoral and development activities.

3.1.2.2. The Eparchy of Emdebir

The Eparchy of Emdebir comprises the whole Gurghe Zone of Southern Nations, Nationalities and Peoples Region (SNNPR),and Woliso Zone of the Oromia Regional State. It has an area of 10,700sq.km. Population is 4,72300 out of this Catholics are counted 19,749.Among different areas which are identified as parts of Emdebir Eparchy, Enemorena

Enir woreda is one in which different social and developmental activities of the catholic churches are running for the reason that it is known for its food insecure situation. Like any other food in-secured districts of the country, government line offices and different NGOs like Ethiopian Catholics Secretariat, World Vision Ethiopia and Farm Africa have been implementing different food security related projects in this Woreda to alleviate the food in-security problems. As a continuation of this effort, ECC–SADCO has planned a 22-month food facility project based on government strategy and policy, the felt needs of the community and the development priority of the Woreda. It was very much linked with Ethiopian government plan to foster broad based development in a sustainable manner .So it was government and catholic churches plant increase both crop and livestock production and productivity by making use of irrigation, improved agricultural technologies like improved seeds and working towards animal feed and breed improvement. In addition to these agricultural marketing, staff and community capacity building, strengthening agricultural research and extension system are vital to enhance poverty alleviation strategy. Therefore, it is needless to mention that the Catholic Church is using this opportunities to strength her objective that links with integral human development by applying different development projects in this identified area. However, to the specific project (food facility project), it was reported that some of the indicators were not SMART. As result, an effort made by the project to improve the situation of the targeted community was not enough to bring desired outcome. Therefore, the Coordination Office of Emdeber Eparchy made an evaluation and changed the food facility project to food sustainability by revising its weaknesses. Currently the food sustainability project is working in different areas Eparchy to mitigate challenges related to livelihood development in more organized way.

3.2 Research Design and Sampling Techniques

The research used in this study was employing both qualitative and quantitative approaches. Site selection was one of the first steps in carrying out research. Enemorena Ener Woreda has been selected purposively. The selection had undertaken through close discussion and consultation with the experts of Zonal disaster prevention and food security office. Factors that had been considered during the selection of Enemorena Enir Woreda as a case study area is classified as food in secured, economically vulnerable, inadequate resources and limited availability of arable land by SNNPRS(Southern Nation Nationality and People Regional State) . On the contrary, there are also a number of development actors' like Local Government, CCE/SDCO, and World Vision working in the study area with the objective of

solving the livelihood challenges. However, the challenges to develop livelihood security are still exhibited in the stated KAs. Therefore, to examine reasons behind these unsolved challenges even the actors are striving to solve it is the purpose of this study that deserves research techniques and design to meet proposed objectives.

The selection process to identify the study KAs and households in the survey had involved the following criterion. From the target population of 64 rural KAs, which resides in the cited Woreda; four KAs were selected purposively based on resource availability, public infrastructure and services. Besides, KAs which broadly represent rural livelihood patterns in different wealth-ranking and that, enable to capture factors that determine households' livelihood diversifications, strategies, efforts done by different actors and their challenges has been considered. The Selection was made together with Woreda Agriculture and Rural Development Office experts those who are familiar with the study area for which more challenges are relatively concentrated on it. As a result Wonche,Mekanna,Hured and Woshezweier KAs were selected as the sample size of this study. After the selection of study KAs, sample households selection was also undertaken systematically. The list of households in each sample KAs has revised and stratified in to three-wealth rankings (poor, medium and better-off) to select 120(10% of population) sample households using interval of 10(every tenth HH) through the prepared lists .The KA administrators, development agents and other key informants were the major organs that classified households in to different wealth rank based on the local definition of wealth and determinant assets. In all research sites, the possession of productive assets such as farmland, oxen, cow, goats, productive labour force in the family and length of food security per year were the major parameters that the local government used to classify the households in to different wealth rankings. According to the key informants of the KAs, the households in each wealth rank have the following characteristics.

Table 1: Wealth-ranking criteria

Poor	No oxen, land holding ranging from 0.125 to 0.25 ha, one cow, 1-2 goats, 1-2 productive labour force in the family, can feed themselves up to 4-6 month under normal circumstances. They account for 48.3% of the total sample household (120 SHHs).
Middle	Land holding ranging from 0.25 to 0.5 ha, one ox, one cow, 200-400 coffee tree and can feed themselves for 9-10 months under normal circumstances. They account for 36.6 % of the SHHs
Better off	At least 2 oxen, 2 cows, 4 goats, land holding above 0.5ha, one mule, one donkey, 2 or more productive labour force in the family, 400-1000 coffee/chat trees. Can feed them throughout the year. They account for 15% of the SHHs(sample house hold-120)

Source: Key informant from KA1, 2 and3, 2014

3.3 Methods of Data Collection

The study engaged qualitative and quantitative research methods to confine applicable information that address research questions. The mixed approach of this kind can potentially overcome the drawbacks of using single research method and help to take their complementarities (Degefa, 2006).

3.3.1. Secondary Data

Various documents have been reviewed to collect secondary data. Among the various office contribute to this secondary data were Agriculture and Rural Development Bureau (ARDB), Disaster Prevention and Food Security Office (DPFSO), Bureau of Workers and Social Affairs, Credit and Saving Institution and others related offices fond in Gutaghe Zone. Materials like semi-annual, annual reports, published and unpublished sources' have been reviewed.

3.3.2. Primary Data

Primary data were collected through structured Household Survey Questionnaire; Key Informants Interview; Focus Group Discussions (FGDs); Direct Observation and case studies.

a) Household Survey Questionnaire

A questionnaire, comprising of household demographic characteristics, livelihood assets, livelihood activities and strategies and vulnerability context has been developed together both quantitative and qualitative data.

Four enumerators who have an experience in animal and plant science were recruited from each KA and given one-day orientation. After the training, the questionnaire was pre-tested on few households to develop practical experience for the actual interview. Then after, the actual fieldwork for the household survey was undertaken from February 10 to March 10, 2014.

b) Focus Group Discussions (FGDs)

Discussions were made with three focus groups in three KAs (KA1, KA2, and KA3) each group consisting of 6-20 individuals. The composition of focus groups in each KA were one group from poor wealth category and the other from better-off households, and the selection was made purposively. For FGDs, checklist has been developed in advance. The discussions aimed to extract different views and social perceptions of various wealth groups. Male and female-headed households and recourse poor households from each wealth group have been included in the discussion. Interactive discussions on resource ownership and access, credit

service, access to market, livelihood strategies was attended. More importantly, the FGDs have entailed the identification of major challenges of livelihood development in the area

c) Key Informant Interview (Kll)

In each of the sample KA, interviews with key informants consisting of 4 to 6 individuals that include KA administrators, identified elder groups, religious leaders and development agents were conducted. Experts from Woreda sector offices were also included. Information on community resources such as roads, public transport, schools, health, access to markets and services; on livelihood resources, diversity of crops and other livelihood activities and challenges that undermine the efforts of different actors were points of discussion. The KA key informants discussion was arranged and facilitated by the help and involvement of KA administrators, parish priest of Catholic Church of that area and the experts of the Woreda Agriculture and Rural development Office.

d) Direct Observation

This was a sort of inventory, particularly emphasized on physical observation of the conditions of productive assets such as arable land quality, land degradation and vegetation cover and physical condition of livestock.

e) Case Study

An interview with two household heads found in Hured KA one from medium and one from well-off wealth category have been carried out. This aimed at understanding of households' decisions in allocation of resources to pursue a particular pattern of livelihood activities.

3.4. Methods of Data Analysis

Data collected using qualitative approach were categorized into research themes, coded and analyzed qualitatively through description or narrations, and quantitative data collected from the household survey were entered and analyzed using SPSS (Statistical Package for Social sciences) program. For quantitative data analysis, descriptive statistics, such as percentages, mean, were used. To summarize what has been said the following table is provided.

Table 2: Selected KAs general Characteristics.

Characteristics	Wonche KA/1/	Mekanna KA/2/	Hured KA/3/	Woshezewiyar KA/4/	Total
Population	2,052	2,111	1896	1272	7,242
Household	337HHs	342HHs	316HHs	212HHs	1,207
Sample Hose holed/10%	34	34	31	21	120
MHH(Male Households)	34	27	19	13	93(77.5%)
FHH(FemalHose Hold)	0	7	12	8	27(22.5%)
Poor	18	14	22	4	58(48.3%
Medium	13	14	6	11	44(36.7%)
Well-off	3	6	3	6	18(15%
Average land holding	0.25	0.25	0.25	0.25	
Agro climatic condition	*Moist HL	Moist HL	Moist HL	Moist HL	
Health Facility	Health post	Health Post	Health Post	Health Post	
Cultivated land	455hc	505hc	520hc	475hc	1955hc
*FTC	No	yes	No	No	
Animal health post	No	yes	No	No	

Source-Households survey, KII from 1-3KAs and Woreda agricultural office, 2014

* HL Highland, FTC= Farmers Training Center

CHAPTER 4: FINDINGS AND DISCUSSIONS

4.1 Socio demographics characteristics of the survey area

The socio-demographic and other essential household data was collected from 120 households in the four KAs. These domestic units constitute 7,242 persons, with an average family size of 5.7 persons per household. The male to female population ratio is slightly lower in the survey area, female represent 52.1%. In relative terms, the proportion of female household heads is low (22 %).

Table 3. Relation of HH Members to HH Heads (N and %)

	Sex		**Total**
Sex of household heads	**Male(N=93)**	**Female(N=27)**	**Both(N=120)**
Proportion of HH (%)	78	22	100
Average HH size (N)	2.8	2.9	5.7
Average age of HHH)	43.2	44.4	43.8

Source: Household Survey, 2014.

Table4 shows that, data on age distribution of persons in the sample shows that individuals in the age range of zero to 14 years count for 45.4 % of the population. About 46.8 % of the population are not economically active (those less than 14 years old and above 59 years old), and a higher dependence rate was observed on those economically active persons.

Table 4: percentage/%/ of HH Sex Composition by Age

Age Range	**Male**	**Female**	**Total**
< 15 Years	44.3	46.5	45.4
15 - 60 Years	54.2	53.2	53.2
> 60 years	1.5	0.3	1.4
Total	100	100	100

Source: Households Survey, 2014.

4.1.1. Education services

As it was mentioned in the literature part, human capital refers to the labor available to the household: its education, skills, and health (Carney cited in Ellis, 2000:33).It was wall mentioned that investment in education; training and skills suing one or more occupations improve the human capital of a household. When we came to the studied area, about 43

percent of respondents were illiterate. This is very much indicative of how much work is left to be done in rural area , not only to enable nearly half of the farmers to read and write but also to help them become more informed and critically thinking decision makers in matters affecting their agricultural activities as well as their cultural, social and political lives. As shown in Table 5, about 7 percent of them have received basic literacy whilst those with elementary school (grades 1 to 8) accounted for more than one-third (41) of the total. Interestingly, one in every ten of our respondents has been in a secondary school while about 2 percent has received even a post grade 12 education.

Table 5: Percentage of education level of household (%)

Illiterate	%	Basic Literacy	%	Grade (1-8)	%	Grade (9-12)	%	Post GR.12	%
52	43	8	7	49	41	9	7.5	2	1.6

Source: Household Survey, 2014.

4.1.2. Habitat and Household physical structure

The walls in most households are made of wood with mud or cow dung in 90% of all households, followed by bricks walls made of mud or clay in 10% of households. Most houses' roofs were made of wood and grass (78%). The majority of the households (79%) are living in one-room homes. Very few houses have two rooms, at only 17%. In addition, the majority of households, at 79%, share their living space with their animals. The house construction is also varies according to wealth group. As vulnerability has been defined in the literature part of this study, it is a human condition or process resulting from physical, social, economic and environmental factors which determine the likelihood and scale of damage from the impact of a given hazard(UNDP,2004) thus, the situation of the studied area(living with animals in one small house) shows that most of the residents are poor people who are vulnerable to different health problems resulting from physical, economic and environmental factors.

Figure 2: housing area of medium wealth group

Source: Photo by author

Figure 3: poor condition of household

Photo: by author, Wanche KA

Table 6: characteristics of homes per livelihood zone

Description of Home		% of HH per Livelihood Zone			Total
		Poor	Medium	Better-off	
Main wall materials	Wood/mud	100(58)	86(38)	67(12)	90(108)
	Mud/clay	0.0	0.0	0.0	0.0
	Concrete block/bricks%(N)	0.0	13(6)	33(6)	10(12)

Main roof materials	Corrugated iron sheet(N&%)	8(13)	12(27.8	6 (33)	26(22)
	Wood with grass(N&%)	50(86)	32(73)	12(67)	94 (78)
	Stalks with mud/dung	0.0	0.0	0.0	0.0
No. of rooms in the main house of the HHs	One(N&%)	54(93)	35(80)	6(33)	95(79)
	Two(N&%)	4(6.9)	7(16)	9(50)	20(17)
	Three or more(N&%)	0.0	(2)4.5	(3)17	2(4)
HH who Share/stay in the same home with animals		54(93)	35(80)	6(33)	95 (79)

Source: -Households Survey, 2014.

4.1.3. Sources of household energy

The most common lighting method used in homes is Kuraz at 82.5% followed by Fanos at 6.7%, and firewood at 10.8%. Households could use multiple sources of energy for cooking. The majority of households (91.7%) in the survey area are using firewood as a source of energy for cooking, followed by kerosene at 8.3%. It is not a positive sign that the majority households are using firewood for house lighting and cooking. As per Woreda Health and Agriculture Desk information, the most common problem of the area is eye problem, which could be as effect of smock and relative reasons. It was also mentioned by KII fromKA2, that using firewood as source of energy for light and cooking has a negative impact on human health and the ecosystem of the Woreda/deforestation/.

Table 7: Household lighting and cooking methods (%of HHs)

	Poor	Medium	Better-off	Total
Lighting Methods				
Fanos(N&%)	0.00	2(4.5)	6(33)	8(6.7)
Kuraz (N&%)	49(84)	38(86.4)	12 (66.7)	99(82.5)
Electricity	0.00	0.0	0.0	0.0
Firewood	9(15.5)	4(9)	0.0	13(10.8)
Lantern (Masho)	0.00	0.0	0.0	0.0
Cooking method				
Firewood	58(99.7)	38(86.4)	14(78.3)	110(91.7)
Kerosene	0.0	6(13.6)	4(22)	10(8.3)
Cow dung	0	0.0	0.0	0.0

Source: -Households Survey, 2014.

4.2. Livelihood system and characterization

4.2.1. Relative wealth characteristics of the households

In order to understand the relative levels of well being, the root causes of poverty, vulnerability and resiliency of household within each household, households living in each KAs, categorized into three different groups based on their relative wealth accumulation. The criteria used to differentiate the relative wealth accumulation and living standards of a household were collected using different techniques. The process of categorizing households into different standard of living levels was done through qualitative survey focus group discussions. Focus groups were able to establish criteria to categorize households into different groups according to their "well being". Based on the community set criteria, in each household, three levels of wealth status were identified including: poor, middle and better off. The criteria were:

- Livestock ownership;
- Size of land farmed;
- Household food availability during months; and
- Household size

In the KAs, 48.3% of the population in the target area is categorized as poor 36.6% is categorized as middle and 15% of the population is categorized as better off. The poor households, on average own less than half ha of land while the middle and the better off on average they own between 0.5ha to one ha of land.

Table 8: Wealth group characteristics

Wealth Group	HH size	Land Holding	Crops Grown	Food availability at HH	Livestock Holding (N)	
					Shoats	Cattle
Poor	8-9	0.25-0.5 ha	Maize,	Three months		
Middle	8-7	0.5- 1 ha	Enset, Wheat, Maize, Irish potato, chat, coffee, vegetable (onion, carrot, garlic, cabbage).	Six months	1-4	1-2
Better-off	6-8	0.75-1ha	Enset, Wheat, Maize, Irish potato, Chat, coffee, vegetable (onion, carrot, garlic, cabbage)	12 Months	10-12	3-5

Source: -Households Survey, 2014.

According to the focus group discussion/KA1/, that most of the households do not have enough food through the year. In addition, they strongly confirmed that one of the main reasons for food insecurity and poverty is small land size and fragmentation. Furthermore, data from agricultural office shows that 91% of the households did not produce enough food throughout to feed their families during bad season.

4.2.2 Major livelihood sources and strategies

As per FGD1,2and3 the majority of food and cash income in the KAs is earned through farming activities, although agricultural labor work has become a major source in recent years for most poor households. More and more people have to engage in agricultural labor work in neighboring better-off farmers to supplement the household needs. Usually at the food shortage period, the poor households will borrow food or money from the better off households to payback when they harvest their crop production. If they are unable to pay back in cash or in kind from their production, which was usually the case for most poor households, they pay it in labor by working on the lender's farm. Normally the labor pay back is cheaper than the usual daily labor wage. This activity was reported undertaken throughout the year.

It was observed that Chat and Coffee are their major source of income, followed by the sale of vegetables. Furthermore, there is income from sale of firewood, charcoal, pottery products particularly for the poor households. The most favored off farm activity for women is petty trading, which carried out in the nearby market. However, women are constrained by a lack of capital, lack of credit system and lack of time due to the high burden of household responsibilities. This prevents them from participating fully in different income earning activities. As identified through the FGDs1, the poor household livelihood strategies are diverse and complicate. In order to cover the household needs, the poor households diversify their livelihood strategies to include a range of off-farm income earning activities. This includes moving away temporarily to the neighboring KAs or some times to the nearby cities even to Addis Ababa seeking employment or sending their children to shine shoo in the nearby cities.

Many of the better off households employ local labor to make up for shortfalls during the year. Payment for piece of work made in the form of money or in kind. It is normal for the poor and for some medium households to engage in agricultural labor work for the majority of the year to pay off the debt they took from the better-off households. This affects their own

household agricultural productivity in terms of reduced time spent in their own fields and the resulting tendency to plan crops late or with inadequate land preparation. The result is poor yields, general food insecurity for the majority of the year, and a continued dependence on labor work making it difficult to break out from the vicious circle of livelihood insecurity and vulnerability. The effect of natural hazards, such as drought, in the KAs affected the poor households twice over. First, the poor households lose their production like everyone else in the KAs. Secondly, they lose the employment opportunity from the better off household, as the better of households affected by the hazard and no require extra labor for his/her farm.

4.3. Historical trend review

An analysis of historical trends the community dating back to the past few years showed that there have been a number of interesting changes over the years. The general patterns of change in a number of positive and negative circumstances identified by key-informants include:

a) A decline in the soil fertility of the framing land and a high demand for fertilizers. The reason given was that in addition to soil erosion, the decline in land fertility is because the population is growing at an alarming rate, which results in land fragmentation. The farmers have to intensively cultivate a single type of crop on their farmland without rotation, which has led to the depletion of the mineral content of the soil. As the demand for fertilizer increases, the price of fertilizer is drastically increasing and becoming unaffordable by most poor segments of the society.

b) It was reported that the household living condition trends for the poor, regardless of their livelihood system, are declining and crop production is decreasing. This is linked to increasing pressures on land resulting in fragmented farming land, reduced soil fertility, the inflated prices of fertilizer and other essential commodities, which continue to push far beyond the reach of most households. On the other hand, household living condition trends for the middle and better off household are improving, especially in livelihood systems.

c) Chang of rainfall pattern in amount, distribution and occurrence across is a common phenomenon over the past five to eight years.

As defined in the new disaster prevention and preparedness policy of Ethiopia, disaster is the cumulative effect of various hazards. The major types of hazards occurred repeatedly since

1960 in the Woreda were drought, epidemics, flooding, water logging, and pest infestations. The most frequently mentioned years of disasters, especially for drought and epidemics are 1965, 1977, and 1991. Drought occurred in the years 1965, 1977 and 1991 had caused death of both human being and the livestock. The highly affected groups by the effect of drought of the above-mentioned years were children, pregnant women, mothers, old age group and the poor households in general. Most of these population groups are less mobile to cope up with the consequences of drought. The occurrence of human epidemics were often associated with drought and ended with the death of considerable number of human being. Cholera, Meningitis, Malaria, Typhoid and Diarrhea were the most common types of diseases occurred at epidemic level since the end of 1950s. Some types of diseases such as Malaria, Typhoid and Diarrhea, were identified to have been occurring repeatedly during the mentioned period covering the whole Woreda. On the other hand, the occurrence of the Livestock epidemic outbreaks were reported in the years 1955-1957,1965, 1981,1989 and 1991. These outbreaks of epidemic attacks were ended up with the death of large number of livestock population. This in turn resulted to sharp reduction of livestock products like Milk, Butter and Cheese. Children, pregnant women and mothers, and old age were the highly affected groups of population. Besides, people settled at flat plains, overcrowded areas, areas with poor infrastructures and essential services like roads and health institutes were among the highly affected group of population by the epidemic outbreaks. The attacks of crop pests and diseases have been significantly contributing to the occurrence of famine and poverty. Referring to times of occurrence, crop pests were reported in the years 1975, 1980, 1985, 1987 and 1991 in the weina dega and in the years 1983, 1985, 1987, 1990 and 1991 in Kolla parts of the Woreda. KII from agricultural office of the Woreda, which improved seeds supplied by the extension agents were found less resistant to most crop pests and diseases. As to crop diseases, and Alloya, /the type of disease, which attacks Enset plant /, that, are reported in weina dega part of the Woreda

4.4. Livelihood Outcomes

4.4.1. Household food availability and access

Achieving food security at the household level requires that the aggregate availability of physical supplies of food is sufficient, that households have adequate access to those food supplies through their own production, through the market or through other sources, and that the utilization of those food supplies is appropriate to meet the specific dietary needs of

individuals. Thus, each sampled household were asked to report on annual food availability on a monthly basis for their household consumption. Their responses were categorized and presented in Table 10. The mean number of months a household could survive on food from their own production (for both household consumption and food purchases from sale of crop) was calculated to be approximately 5.2 months. The availability of food for the household was collected on a monthly basis for 20012/2013. Based on this timeframe analysis, 9.3 of all households, on average, had enough food to eat at all times during the year in 2012/13. Thus, the great majority of households suffered from food insecurity at some point during the year. As expected, households that are male headed tended to have more months with enough food compared to female-headed households; on average the number of months with enough food for female-headed households is 3.4, by contrast the average number of months with enough food for male-headed households is 5.7 months.

Table:9 Households with enough food to cover consumption needs from their won production (%)

Month	Poor	Medium	Better-off	Total		
				MHH	FHH	ALL
None or month	99.6	100	100	22.3	16.8	17.4
1-3 months	87.2	88.0	100	46.0	36.2	45.8
4-6 months	21.3	62.6	100	38.4	33.8	24.2
7-9 months	0	67.5	100	18.3	16.4	16.3
10-11 months	0	24.6	100	6.7	5.8	5.4
All the time or 12 months	0	9.9	100	2.2	5.3	10.7
Mean number of months with enough food	3.3	7.8	12	5.7	3.4	5.2

Source: - Households Survey, 2014.

Households and key informants were further asked to provide their perceptions on the causes of the food insecurity they were facing. The causes of food insecurity vary from household to household. Respondents gave multiple answers for the causes of food insecurity, but the one most frequently cited was the shortage of land and recruiting drought (22%) in the woreda. On average, about 50 percent of the household's link food insecurity with land shortage, while 11 % of households link the current food shortage with the prevalence of crop damage due to pest and disease and finally the households who said the food insecurity was due to shortage of rain and in some cases excess rain was 9.2

Table10: Reasons for household food shortage (%HH)

Reasons for HH food shortage	Poor	Medium	Better-off	Total
Drought(N&%)	12(20.7)	6(13)	8(44)	26(22)
Land shortage(N&%)	30(52)	26(59)	4(22)	60(50)

Oxen shortage(N&%)	3(5.2)	4(9)	2(11)	9(8)
Pest disease and wild animals(N&%)	9(15.5)	4(9)	1(6)	14(11)
Rainfall patter(N&%)	4(7)	4(9)	3(16)	11(9.2)

Source: Households Survey, 2014.

Food security status of the households is mainly the reflection of their resource base. Accordingly, majority of the households in the KAs were found either temporarily or permanently food insecure. Besides, about 85 % of the households responded that their total annual income and/or production are too small or much too small to satisfy their families' food requirement. Only 15 % of the total households responded that their total annual income and/or production is sufficient to satisfy their families' food requirement. It is also revealed by the key informants and the participants of community focus group discussions held at the sample KAs3 of the Woreda, that there are specific months during which the majority of the community faces severe food shortage in the normal year.

A normal year, here, meant by the community is to be a year without significant weather shock. According to the key informants (KII3), these months of critical food shortage last from February to July in lowland area and from February to June in mid land area. As a result, it can be said that the whole Woreda faces critical food shortage problem in the months from February to July, at which the number of meals per day will be reduced to be only one. This period of critical food shortage was coincides misfortune with the time of heavy labor requirement for the farming community in the KAs. It is widely believed that poor households are the ones to be more vulnerable to disaster during the incidence of hazards like drought and epidemics.

4.4.2. Coping with food insecurity

The ability of a household to be able to cope with and recover from stresses and shocks, with minimal disturbance (minimal assets depletion), is central to a sustainable livelihood. Thus, this study examined the types of coping strategies that were used by households who are faced with severe food shortages. Respondents identified about eight different types of coping strategies they typically resorted to during food shortage seasons. These strategies presented in Table 12 below. The majority of the household has employed less debilitating coping strategies such as eating fewer meals per day, reducing quantity of food per meal and

borrowing cash or grain. Households typically utilize more than one type of coping strategy at a time to struggle through food shortages, depending on the severity of the food insecurity faced.

Table11: percentages (%) of HH mechanisms during food shortage periods

Coping Mechanisms	Poor	Medium	Better-off	Total
Ate fewer meals per day(N&%%)	20(34.4)	10(23)	5(28)	35(29)
Reduced quantity of food per meal(N&%)	9(15.5)	23(52)	11(61)	43(36)
Borrowed cash or grain(N&%)	6(10.3)	4(9)	0(0.0)	10(8)
Sold animals(N&%)	2(3.4)	2(5)	2(11)	6(5)
Migrated to find work(N&%)	11(19)	0	0	11(9)
Sold HH utensils(N&%)	3(5.2)	1(2.3)	0	4 (3)
Sold productive assets(N&%)	4(7)	1(2.3)	0	5 (4.2)
Consume seed stock(N&%)	3(5.2)	3(6.8)	0	6(5)

Source: -Households Survey, 2014.

During Focus Group Discussion (FGD, KA1) it was investigated that the local capacities that helped the community in preventing the disasters occurred in the past include:

- The existence of local institutions, like Edir, accountable to the community at large, to prevent the consequences of the problems that occurred frequently and affects life in the localities. These institutions were able to mobilize the community members to help the victim families according to their statement of formation;
- The communities' common consensus in preventing the consequences of the occurred disasters through sharing resources, especially, food and shelter, taking responsibility of the activities of preventing the occurred risks;
- The practice of growing drought resistant perennial crops such as Enset, Banana, Sweet potato;
- The communities' willingness to contribute cash, free labor, and construction materials such as sand, stone, and wood free of charge when necessary to support the activities of preventing risks and promoting development in the localities;
- Even though they are with low quality service, the physical availability of health

institutions. The health institutions are evenly distributed in two hours walking distance among the community of the Woreda;

- Good road net work, i.e. the whole Woreda is accessible to roads of different grades,
- Good market access Resilience refers to household's recovering capacity to shocks of disasters. Some households are more resilient and others are less due to various interrelated factors.

Household's resilience status partly depends on their copping strategies as well as the degree of effectiveness of the local institutional support. Establishment of more service centers, improved supply of modern agricultural inputs, enhanced soil and water conservation works, improved awareness as well as better access to information, improved reporting system during disasters and strengthened relief and rehabilitation works were mentioned as major reasons for improved resilience. Whereas, rapid population growth, diminishing households' land holding size, soil depletion, repeated outbreaks of epidemics and deteriorated supply and quality of food were mentioned to have been the major reasons behind deteriorated resilience to disasters.

4.4.3. Asset Holdings

The ability to pursue different wealth group strategies is dependent on the material and social, tangible assets that people have in their possession. Drawing on an economic metaphor, such livelihood resources may be seen as the ‘capital’ base from which different productive streams are derived from which livelihoods are constructed. Based on this premises, the survey collected data on household assets accumulation and calculated the mean household assets index. Household asset holding data that was collected during this study has been summarized into three utility-based groupings: productive assets, domestic assets and livestock assets. The results for these groups were presented in the following sections.

4.4.3.1. Productive Assets

Productive assets, which are mainly tools for crop farming owned by households, were presented below in Table 13. The majority of households across the entire wealth group own basic tools (hoe, axe, gesso and stickle) and own the main framing tools such as spade/shovels, plow. The household mean, tool asset value index of Birr, 583 represent the overall average value of tools for the set of sampled households in this baseline.

Table 12: Percentage distribution of HHS by asset ownership

Asset	% of HH owning				Average value of HH assets in Birr	Total contribution to HH wealth accumulation (%)
	Poor	Medium	Better-off	Total		
Gasso	82.3	99.2	100	93.4	750.2	4.8
Sickle	74.3	100	100	97.8	105.3	3.2
Axe	78.7	100	100	88.6	115.7	4.2
Plow	62.8	100	100	82.6	124.2	3.4
Hoe	32.1	100	100	57.88	156.2	0.3
Traditional beehive	0.00	1.3	1.6	1.3	115.2	0.5
Mean productive asset index, Birr 583						

Source: Households Survey, 2014.

4.4.3.2 .Domestic Assets

The most widely domestic assets in households were jerican and coffee pots. The second most widely owned assets are clay baker/metade and clay pots (ensira). Overall, the surveyed households had a mean index value for domestic assets of birr 201.

Table 13: domestic asset holdings

HH Items	% of HH owning			Average value of assets per HH in Birr	Overall contribution to HH wealth accumulation (%)
	Poor	Medium	Better-off		
Coffee pot	100	100	100	23.5	3.5
Jerican	100	100	100	30.7	3.7
Clay beaker(metad)	100	100	100	43.2	4.1
Radio	45.3	68.7	100	350	14.3
Masho /Kuraz	86.6	100	100	40.6	2.1
Chair/bench	0.00	86.3	100	155	7.9
Mean domestic asset index, Birr 201					

Source: Households Survey, 2014.

4.4.3.3. Livestock Assets

Based on the data obtained during the HH survey, the major households own one or more of the most commonly known animal types including Cattle, Sheep, Goats, Equines/donkey and Chickens. More than 65.4 of households reported owning one or more goat and sheep. About 75.3% of households reported owning one or more chicken. 43.6 % of households own milk cows, while 34.4% of households own oxen for plowing. In addition, 92.3% of the households reported owning one donkey. Overall, the surveyed households had a mean index value for livestock assets of Birr 2450.

Table 14: livestock asset ownership

Type of Animals	% of HH Owning				Average Value of HH Assets in Birr	Total Contribution to HH Wealth Accumulation (%)
	Poor	Medium	Better-off	Total		
Goats	0.01	87.3	100	65.4	345	14.6
Chicken	2.4	92.3	100	75.3	25	2.2
Donkey	0.3	99.3	100	92.3	980	34.6
Milk cows	0.00	72.3	99.4	43.6	2100	67.8
Sheep	0.04	83.4	100	54.3	350	15.1
Oxen	0.00	62.3	99.5	34.4	3,500	78.6
Mean livestock asset index, Birr	2,450					

Source: House-holds Survey, 2014.

Based on the analysis of the overall household asset holdings at the time of this study, the average value of assets owned by households as domestic assets was birr 583 productive assets were valued at birr 201 and livestock assets were birr 2,450. The total average household asset is equal to Birr 3,234. Livestock appears to be the most important wealth accumulation strategy, accounting for about 75.34% of the average total value of household assets, followed by productive assets at 18.03 % and domestic assets at 6.22%.

4.4.4 Agricultural Production

Crop production in the KAs both varied and diverse, with farmers growing a variety of different crops including Enset, maize, wheat, barley, haricot beans, Irish potatoes, sweet potatoes, cabbage, onion, pepper, coffee and chat. Agriculture is the major economic activity in the area and some form of agricultural activity punctuates each month.

Figure 4: agricultural field at Hured KA

Source: Photo by Author

Fertilizer is in high demand for all types of crop production. However, only a few farmers, the medium and the better off, can afford it, as it is generally too expensive for the majority of the farmers.

The main staple foods crops are Enset and maize followed by wheat, barley and Teff. The production of these crops is heavily dependent in rainfall patterns. It is possible to conclude that there is no developed irrigation system. Intercropping is a common practice in the KAs. Enset with haricot beans and maize with horse been are the most common intercropping practices.

Crop rotation is not the most Practiced activities by most framers. Due to the differences in soil types, climate and the distribution and occurrence of rainfall, the crop calendar for different crops varies slightly. Disease and pests cause major challenges for the crops in the KAs.

Agricultural and pastureland shortage for crop production and live stock production as well as a lack of technology in irrigation development are major and acute production barriers. Based on household interviews, the average size of land owned by one household in the sampled communities is less than a half hectare (0.40Ha). Table 17 shows average land holding for each household group.

Table 15: land-holding size in Ha,for the production period 2012/2013GC (% and N)

Land Holding	HHS							
	Poor		Medium		Better-off		Total	
	% of HH	Means (ha)	% of HH	Means (ha)	% of HH	Means (ha)	% of HH	Means (ha)
Own land	55	0.37	32.5	0.53	9.3	0.89	97.2	0.40

Source: -Households Survey, 2014.

When considering the main cereal crops, the yield performance vary between wealth ranking scales. This is not surprising given the modes of farming. Regardless of the mode of farming yields recorded, everywhere low. Maize yields were 42.5qt/ha, Teff, reached 13.2qt/ha, Horse been was 20.6qt/ha. These yields are low when compared to their theoretical potential. Maize for instance, theoretically produces between 60quntal/ha depending on the variety. As per KII 2, all crops considered here show lower ratios when compared to their theoretical potential.

Table 16: Average level of crop productivity achieved per hectare by wealth ranking for the period 2012/13 (N)

Crop Type	Groups			Total actual Yield
	Poor	Medium	Better-off	
Maize		41.2	43.6	42.5
Teff	NA(not applied)	12.3	14.5	13.2
Barley	NA	23.6	26.4	24.6
Wheat	NA	22.7	25.2	23.5
Haricot beans	NA	19.6.3	22.6	20.6
Beans	NA	20.2	23.4	22.6
Potatoes	45.2	56.3	68.3	58.3
Irish Potato	52.3	60.3	66.4	64.2

Source: - Households Survey, 2014.

As it was shown clearly in Table 18, agricultural productivity is very low and varies between wealth groups. This is because of agricultural technology use among different groups varies, for instance the better-off farmers use fertilizer application than poor groups. In general, this low productivity has to be understood within the context of the various determinants of agricultural performance. The most important of those determinants includes the quality and quantity of land available to farmers, availability of labor, moisture holding capacity of the farm, use of improved agricultural practices and improved agricultural inputs. The survey

also collected information on how farmers disposed of their agricultural production. Sampled farmers were asked to distinguish from the total quantity of crops they harvested: the quantities they retained for seed and how much they sold. Using the average prices of crop that was collected at the community level, the value of the crops produced per households is estimated and presented under Table 19. On average, in each household Birr 7,800 of crop values were harvested. Of this value, birr 600 crop value was retained for seed, birr 3,306 was sold, Birr 574 was given out as rent or for social case (labor)

Table 17: Average crop value for 2012/13 (birr)

	Poor	Medium	Better-off	Total
Harvested	3,700	8,500	11,200	7,800
Retained for seed	420	630	750	600
Sold	720	2,700	6,500	3,306
Social services (labor/land tax…)	176	720	825	574

Source: - Households Survey.

Data on the sources and types of technology that were used by the farmers were collected including the use of improved seeds, the use of fertilizers, and use of irrigation. As the data shown, farmers use more of the traditional technologies, with very limited use of modern inputs. The use of improved seeds is very low. During the 2012/13 production season, the number of farmers using improved seeds ranged from ten to eleven. It was found that the poor group did not use improved seed as well as fertilizer application. Mainly wheat and maize were the main improved seed used by the farmers.

Table18: Households that used improved seed by crop and wealth group 2012/13 (%)

Crop Type	Poor	Medium	Better-off	Total
Maize	0	3(7)	7(39)	10(8.3)
Wheat	0	8(18)	6(33)	14(11.5)

Source: -Household survey.

Most (27.5%) farmers access their seeds through the Woreda office of agriculture or through their own production (19%) that is saved for this purpose. About 8.3% of the farmers reported that they use seeds obtained from other farmers. 30.8% of the farmers received seeds from NGOs, 12.5% of farmer's received seeds from local markers.

Table19: source of agricultural inputs (N&% of HH)

Source of Improved Seed	Poor	Medium	Better-off	Total
Extension Office	18(31)	13(29.5)	2(11)	33(27.5)
From own product	0.0	15(34)	8(44)	23(19)
Other farmer	4(6.9)	6(13.6)	0.0	10(8.3)
From cooperative office	0	0.0	2(11)	2(1.7)
From local market	3(5.2)	6(13.6)	6(33)	15(12.5)
NGO	33(57)	4(9)	0	37(30.8)
% of farmers used improved seeds				
Maize	36(62%)	19(43)	7(38.8)	62(51.6)
Wheat	2(3.6)	11(25)	5(27.7)	18(15)
Barley	0.0	4(9)	2(11)	6(5)
Teff	0	3(7)	1(5.5)	4(3.3)
Potato	20(34)	7(16)	3(16.6)	30(25)

Source-Households Survey

The use of commercial fertilizer compared to other agricultural technologies is better. More than half of the sampled framers were reported using chemical fertilizer for maize, wheat and Potato.

Table20: Households used fertilizers by crop type in 2012/13 G.C (%)

Crop Type	Poor	Medium	Better-off	Total
Maize	0	14(32)	3(16.6)	17(16)
Wheat	0	20(45.5)	10(55.5)	30(25)
Potato	0	10(22.7)	5(27.7)	15(12.5)

Source-Household survey, 2014

In addition to the limited use of commercial fertilizers, the quantities used per unit area among households that use fertilizers were very low. Looking only at urea and DAP, the commercial fertilizers most commonly applied, we found that on average 20 kg/ha of DAP and 16.5kg/ha of urea were used for maize as well as 29kg/ha of DAP and 14kg/ha of urea for wheat during the 2012/13 G.C. production season. See Table 23. All those were well below the usual recommended application rate.

Table21: HH used different Fertilizer for Crop types 2012/13 (Kg/ha)

Crop Type	Fertilizer Type	Poor	Medium	Better-off	Total
Maize	DAP	0.00	18	22	20
	Urea	0.00	22	11	16.5
Wheat	DAP	0.00	31.8	27	29.4
	Urea	0.00	13.6	16	14.8
Teff	DAP	0.00	13.6	22	17.8
	Urea	0.00	0.0	0.0	0.00

Source: Households Survey, 2014.

A farmer's knowledge and practices of improved farming techniques should also have an impact on agricultural performance. Such techniques are necessary for agricultural intensification and the effectiveness of agricultural production. The survey collected extensive information on this issue. Table 24 examines the different varieties of modern farming techniques known and currently practiced by the farmers. The improved techniques most often mentioned by farmers include intercropping, crop rotation, seed selection, intermixing, planting techniques (i.e. row planting) and fertilizer application. In addition, farmers were further asked whether they were practicing the improved agriculture techniques they know, and if not, reasons for not practicing. Even though the majority of the farmers have awareness and experience of the improved agricultural practices, a small percentage of households did not show interest in practicing the improved agricultural techniques.

Table 22: Households practicing improved farming techniques (%)

Type of agricultural technique	HH practicing	HH not practicing
Green manure	0.00	0.00
Seed preparation/selection	28(23.3)	92(77.6)
Crop rotation	32(27)	88(73)
Post-harvest handling	24(20)	96(80)
Row planting	100(83)	20(17)
Inter/mixed cropping	98(81.6)	22(18)
Fertilizer applications	62(52)	58(48)

Source: Households Survey, 2014.

The reasons given for not practicing the improved agricultural techniques they know vary from farmer to farmer. Respondents gave multiple answers for not practicing improved agricultural techniques, but the one most frequently cited by most households were constraints such as shortage of land, lack of labor, lack of credit facilities, lack of technical support and lack of oxen.

The seasonal calendar (Figure 1) shows the annual cycle for major activities of a household

within the Woreda. The peak hunger season coincides with the peak food purchase season, animal and human disease, where the households have to make decisions and tradeoff among the competitive household demands based on the availability of resources, affordability of the services and also based on the relative importance of these services.

Figure5: seasonal calendar for major agricultural activities in Enumure Ena Ener Woreda

Seasons	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Dry					Rainy season				Dry		
Land preparation												
Maize												
Wheat												
Teff												
Vegetable												
Planting												
Maize												
Wheat												
Teff												
Vegetable												
Harvesting												
Maize												
Wheat												
Teff												
Vegetable												

Source: Enemorena Enir Woreda Agriculture office

4.4.5 Livestock Production

Livestock are the most important household asset and means of livelihood for most of the population in study area. Livestock were the main source of cash income and food, as well as the foundation of prestige and power. In addition, they were a critical means of asset stocking for the majority of the households. Despite its high economic importance for the household, the number of livestock was reported declining because of a shortage of grazing area. In the KAs different types of livestock were found including goats, sheep, cattle, chickens, donkeys,

horse and mule. However, the number of livestock owned by household was small. In most cases, cattle found only in the better off households, and at most, they only have one or two cows or oxen, a few goats and a few sheep and some chickens. Oxen predominantly used for plowing. In addition, livestock product and productivity hampered due to a number of reasons including poor veterinary services. In over all, few households (58%) have two cattle. About 3% of households reported owning one or more goats, about 15% households reported owning one or two sheep, and about 15% of households reported owning one or more donkeys at the time of this study. In addition, about 49 % of household reported owning one or more chickens and 23% of them reported to owning one or more traditional beehives.

Table 23: Number of livestock owned per household during 2012/13 (% and N)

		Cattle	Sheep	Goat	Donkey	Chicken	Beehives
Poor	0	27(46.5)	58(100)	58(100)	58(100)	37(63.8)	55(94.8)
	1	31(53.4)	0.0	0.0	0.0	12(20)	3(5.1)
	2	0.00	0.0	0.0	0.0	9(15.5)	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00
	>5	0.00	0.00	0.00	0.00	0.00	0.00
Medium	0	0.00	19(43)	44(100)	0.00	0.00	0.00
	1	17(38.6)	14(31)	0.0	8(18.2)	4(9.1)	5(11.3)
	2	19(43.1)	11(30)	0.0	0.0	26(59)	7(15.9)
	3	6(13.6)	0.0	0.0	0.0	18(40.9)	0.00
	4	2(4.5)	0.0	0.0	0.00	0.0	0.00
	>5	0.0	0.0	0.0	0.00	0.0	0.00
Better-off	0	0.00	0.00	15(83)	0.00	0.00	5(27.7)
	1	0.00	4(22.2)	0.0	7(388)	0.0	10(55.5)
	2	3(16.6)	3(16.6)	0.0	0.0	6(33.3)	3(16.6)
	3	7(38.8)	0.0	3(16.6)	0.00	5(27.7)	0.00
	4	5(27.7)	0.0	0.0	0.00	0.0	0.00
	>=5	3(16.6)	0.0	0.0	0.00	0.0	0.00
All	0	27(46.5)	100(83.3)	17(97)	105(87.5)	37(30)	60(50)
	1	48(40)	18(15)	0.0	15(12.5)	18(15)	18(15)
	2	22(18.3)	0.0	0.0	0.0	41(34.1)	10(8.3)

Source: Households Survey, 2014.

4.4.6. Pasture and water Availability

The Woreda has very poor potential for livestock production for cattle, sheep and goats; which was constrained by result of shortage of pastureland and water. In most cases, the only potential pasture for the livestock was the cut and carries system. The proportion of households that depend on private grazing lands, was very small and about 5.5%. 72% of the farmers have access to communal grazing lands as grazing areas were either non-existent or in short supply. Given that the overwhelming majority of the farmers simply cannot afford to lay aside any portions of their crop land for grazing purposes, most of those lacking access to communal grazing areas would be forced to keep their cattle around their homesteads for a good part of the year. Only 3.6% of the population has access to cattle trough and the majority of the communities were using river water for their livestock.

Table 24 Pasture and water availability

Sources of pasture	HH respondents (N&%)
-Communal land	86(72)
- Own grazing land	10(8)
-Cut and carry system	14(12)
-Crop leftover/residue	6(5)
-Forage and fodder	4(3.2)
Sources of water	
-River	115(96)
-Cattle trough	5(4.1)
-Pond	0.0

Source: House- holds Survey, 2014.

The adverse impact of the scarcity of grazing land was not limited only to the nutritional deficiencies that emanate from the shortage of animal products, it was also limiting in terms of crop production because it significantly constrains the amount of manure that was available to the average household. Here it is important to bear in mind the fact that manure has to be applied in reasonably large amounts to cultivated fields in order to effectively raise crops yields to acceptable levels. Since this was impossible for the majority of the farmers they remain heavily dependent on chemical fertilizers which is mostely expencive for those people who are categorized as poor and midum.

Based on the focus group discussion(FGD1), except three monthes (May to July) there is serise shortage of livestock feed. Infact, trhough out the period there is shortage to feed livestock and water except during the rainy season.

4.4.7. Livestock Disease and Veterinary Services

Among other things, the prevalence of animal disease coupled with weak infrastructure and a low coverage of veterinary services, hampers the productivity of the livestock in the Woreda. Based on the report from the Woreda agricultural office and the community the major livestock diseases, in the order of importance, in the Woreda include black leg, anthrax pastroliosis, internal and external parasite. Currently in the Woreda there is one animal health facilities, which is primarily, engage in providing curative and vaccination services. The veterinary facilities were understaffed and its service provision was below their potential.

Table 25: Household access to vet. Services and hybrid (N&%)

Description	Wealth group			Total
	poor	medium	better-off	
Vet. Services	0	5(11.2)	3(17.6)	7(9.6)
Improved cattle	0	3(7.1)	2(11.2)	5(4.1)
Improved goats	0	1(2.5)	2(1.6)	1.3
Improved sheep	0	0	0	0

Source: Households Survey, 2014.

Following the above table, 9.6 % of the target population has access to vet. Services in Woreda. This figure was below the standards given by regional government which is equal to 37 % of the population has access to vet. Services.

4.4.8. Access to agricultural extension and services

4.4.8.1. Agricultural extension

The availability of quality agricultural extension is very important in improving the livelihood status of the rural communities to make them less vulnerable to various risks. Extension services should be diversified in order to bring more sustainable changes. The ever-rising prices of agricultural inputs, falling prices of grains and the shortage of cultivable land were the major causes for the low level of participation in food crop extension. The key informants, both at Wored as and KAs level did not deny that the agricultural extension program in the Woereda is with great emphasis to cereals. Extension programs like natural resource management and livestock improvement were almost forgotten. On the other hand, availability of extension agents (DAs) closer to the local community was among the most important inputs to make the extension works successful. Not only their presence but also their number should be reasonably proportional to number of beneficiaries. In 2013, one DA

was serving about 500 households on average. It is not easy for a single person to serve 500 households properly. When the actual situation of the distribution of DAs shows that in some areas, one DA is serving about two KAs and in some KAs even there were no assigned DAs at all. Besides this, the focus group discussion participants were found criticizing the DAs for their great emphasis to distribution of inputs and collection of debts and even land taxes rather than teaching and helping the farmers to improve their capacity of managing farms and improve productivity.

4.4.8.2. Farmers Training Centers

Figure 5: FTC indicator at Mekanna KA

Source: Photo by author

Figure 6:FTC at Mekanna KA

Source: Photo by author-

On the MoARD FTC standard and other observable realities, FTCs in the target KAs were been assessed through direct observation. Present status and their problems in organizing effective training program and in implementing the mandatory roles of FTC were been examined. During discussion with agricultural office, some of the indicators expressed in the

agricultural office guideline document such as infrastructures to be fulfilled, number of extension agent needed, teaching materials required, number of seats, amount of demonstration area etc. were discussed. Based on agricultural office document and discussion, currently, there is three FTC in Woreda and one in targeted KAs. The minimum distance of FTC from the Woreda agricultural office is 2 km and the maximum distance is 28km. According to the information obtained from the extension agents of the centers, most of the FTCs were established in 2004/05. Only one of the FTCs are constructed with stone, bricks and corrugated iron roof, however; the remaining FTCs' wall and roof were constructed by corrugated iron. The construction design of all FTCs is the same. Each FTC has one classroom, one store and one office. Except one FTC most of them have a toilet. The windows of three FTCs are very open. Even if, on the MoARD guideline it was indicated that every FTC will have workshop, exhibition hall and metrology center, we could not found any of these facilities during the assessment. According to the focus group discussion (FGD1), some FTCs have been constructed far away from villages. Almost, all the FTCs have water problem, especially for watering nursery seedlings and to conduct demonstration throughout the year. The extension agents working in the Woreda are 35 in number. Twenty-three of them are male and twelve are female. All of them have TVET diploma and most of them are specialized in plant science (47%), in (23%) animal science (18%) and natural resource (12%). Most of the extension agents lack practical skills and experience. It requires a lot of money for buying stationery and for duplicating the curriculum to give for the others. Most of the extension agents do not have a module/a guideline. Most of the DAs teach farmers by preparing their own outline. Most of the extension agents agree on the presence of an organized body (development committee) that runs the work activities of FTCs in every KA. The chairperson of the development committee is the chairperson of the KAs but it was observed that, most of the work burden was left for extension agents and supervisors. Almost all FTCs have less than one hectare of land for demonstration purpose, none of them were not fulfilled the recommended area, which is 3-5 ha. Most FTCs are not fenced. Due to this fencing problem, different trials carried out and the seedling of trees, forage and fruits, which were planted by DAs, have been damaged and eaten by livestock.

4.4.8.3. Irrigation practices

The household survey indicates there is no irrigation practices in the KAs except in few special cases. Out of the interview households, only two households respond and exercised traditional irrigation activities.

4.4.8.3.1. Case study interviews

The case study interviews intend to both validate and deepen the understanding of practice of traditional irrigation program.

Cases study1:

InHured Kebele, two households justified that they are using traditional agriculture from borehole. They used to grow chat, coffee, cabbage, sweet potato, pepper and onion. They are benefiting from the practice and can generate Birr 3500/year. Similarly, they are constrained by agricultural inputs and extension services. In some period particularly due to dray season the water is getting dry that result in sudden crop failure.

Source: Qualitative Survey Interview, Hured Kable.

4.5. Income Generating Activities

Household strategies as home-based income generating (IG) activities used by household members were investigated through the survey. Although most households depend on primarily on agriculture for their livelihoods, there was some amount of diversification in the rural economy in with regards to various income-generating activities found in the sample area. However, the relative economic importance of those alternative sources of income varies among livelihoods. The most important difference in each wealth group was the percent of households involved in different IG activities. For instance, the most commonly practiced IG activities in the middle and better-off farmer are goat or sheep rearing and small trading, such as selling of Chat, coffee and Gesho. In very few cases, there were also pottery and rope sales. The main IG for the poor household was engaging in laborer activities for the middle or better off farmers or otherwise migrating to the nearby cities such as Gunchere, Wolkite, and Addis Ababa.

4.6 .Household income and expenditures

The majority of income in the area was earned from farming activities including the sale of chat and coffee being the biggest income earner for most households. There was also a variety of other off farm income sources such as the sale of charcoal and firewood. For all households, agricultural production was the most important food sources and its contribution to annual food needs increased as the wealth of the households increased. Households obtain most of their food from purchase of food and livestock as well as livestock product sales. However, poor households supplement these sources of food and income with self-employment such as firewood and charcoal sales. Casual employment included local

agricultural work for better-off households, particularly during the planting and harvesting seasons. Poor households were unable to satisfy the household needs of their members throughout the year from what they produced. The medium households cover the food and income needs of their members throughout the year from what they produced and other sources including purchase. On the other hand, the better off household were able to satisfy the food and income needs of their members throughout the year from what they produced and other sources including purchase and livestock product.

Table 30 shows the sources of cash income for households in different wealth groups for the 2012/13 period. For better-off and medium wealth groups, the sale of own crops such as chat and vegetable, livestock and livestock products were the most important means of generating cash income. Casual employment was the main alternative cash income source for poor households. In most cases, shocks/hazard that affects crop production in the KAs, affects the poor households. Any hardship affecting crops not only affected their own crop production, but also their income from local employment as better-off households tend to employ less external labor in bad years. Poor households supplemented their main income sources with self-employment and other income.

Table 26: household source of Income for the period 2012/13 (N&%)

Type of Income	Group			
	Poor	Medium	Better-off	Total
Crop sales	0.00	15(34.6)	15(82.4)	30(25)
Livestock product sales	0.00	6(12.6)	14(76.3)	20(17)
Self-employment	26(44.6)	3(6.8)	0.0	29(24)
Petty trading	9(15.6)	4(9)	0.00	13(11)
Sales of chat fee,	1(1.7)	13(28.6)	6(32.6)	20(17)

Source: Households Survey, 2014.

4.7. Access to basic services

Under this section data on access to and utilization of basic services was gathered in each KAs and the following services were considered: i) commercial such as rural financial institution and markets and ii) Infrastructure such as communication and roads. In addition, information on the presence, distance and means of access to the closest weekly market, agricultural input supply facility and veterinary health post were obtained. The distance to the nearest means of public transportation was also recorded. This information is important for a

number of reasons. In particular, it relates to economic production i.e. proximity to markets and sources of supplies invite produces to interact with market operations in a more consistent manner. However, the general proximity of the KAs to the larger market centers should be looked at perspective, considering market access in relation to the benefit that producers would gain. Given this presumption, I would hypothesize that the closer the distance to market outlets, the higher the number of market exchanges taking place. It may also be hypothesized that shorter distances to markets increase producer's access to market information, improving their relative position. In addition, the proximity of commercial services offers producers a means of acquiring key agricultural production inputs such as fertilizer, seeds, and other commodities. Finally, the availability of roads and the use of public transport enable producers to bring their commodities to market and to return to their homes with the necessary supplies for production activities.

Table 27: Average distance to basic services (Minutes)

Infrastructure	For all Livelihoods	
	Average distance in minutes	% of communities have access
Veterinary service center	50	25
Grain mill	40	83
Livestock market center	55	78
Food grain market center	55	78
Agriculture input distribution center	90	82.3
Public transport	130	78.8

Source: Households Survey, 2014.

During focus group discussion(FGD1) the essential services and infrastructures to which the community's accessibility situation are assessed include primary schools, health institutions and immunization services, agricultural extension, clean water supply, roads and major weekly markets. Primary schools are among the most important socioeconomic infrastructures up on which communities' vulnerability to various risks.

4.7.1. Education services

According to the secondary data sources, about 45 % of the rural KAs in Woreda do not have primary schools within the KAs. This shows that children in the remaining 45 % of the KAs in the Woreda are either attending schools with greater difficulty or unable to attend primary school level education at the right age. Due to the lack of age data for children enrolled in

primary schools, net enrollment ratio for the KAs was not calculated. As a result, only gross enrollment ratio was computed. Here, gross enrollment is meant to be the ratio of total number of students enrolled in primary schools regardless of their age to the total expected age group (7-14 years) of population in the given area. The current gross enrollment ratio in primary schools of the Woreda, were about 43 % and 28% for boys and 15% girls respectively, revealing that boys were better enrolled than girls were. On the other hand, the current dropout rates are 29.6% for boys and 19.6% for girls. The major reasons behind dropouts from primary schools for boys were mainly related to poor economic backgrounds of their families. The details include low level of family income, lack of awareness about the benefits of education, sickness, problem of the family, circumcision during regular education program, shortage of school furniture, family enforcement towards early marriage, and language barriers for grades above 4. Whereas, the major reasons behind dropouts from primary schools for girls are manly-included negative attitude of the community towards girls' education, fear of abduction, family enforcement towards early marriage, beginning primary education at late age, outbreaks of epidemics are some. According to the key informants as well as community focus group discussions, the quality of education is deteriorating in the Woreda due to very high student classroom ratio, shortage of qualified teachers, shortage of books, absence of libraries, absence of pedagogical centers for both teachers and students, shortage of school furniture, and absence of school compound fences. The absence of adult literacy programs in most of the rural KAswere also contributing to the increasing rate of illiteracy of the inhabitants

4.7.2. Health service

Currently the Woreda has one health center (found in Gunchera), seven clinics and three health posts. According to focus group discussion (FGD1) most of Woreda's populations are accessible to the health posts within two hours single trip walking distance and almost all of the inhabitants are accessible to clinics within two hours walking distance. Thus, the physical availability of health institutions is bad. Furthermore, the quality of the service rendered by all the existing health institutes is very poor due to shortage of professional health personnel, lack of necessary medical equipment, shortage of drugs/medicines/ and supplies, and lack of vehicles to provide mobile health services. Immunization programs were among the most essential health services upon which the health status of the community depends on. According to the Woreda health office, the coverage was very low except for Polio. The

proportions of eligible children received vaccination of Polio, BCG, DPT3, and Measles were 75%, 12.1%, 35.2% and 14.4% respectively. It was only 5.4% of the KAs eligible children who were found fully vaccinated.

4.7.3. Water supply

To examine the situation of water supply condition the sample households were asked their status concerning domestic water supply. In total, about 77.7% of the population in the sample area has no protected water sources for human consumption. Everyone in the KAs has serious problems about clean water supplies for household consumption. The situation of water supply deteriorates during the dry season, in which a higher proportion of households fetch water from unprotected sources.

Figure 7: Protected water found at Makanna KA

Source: Photo by Author

Table28: source of domestic water (% of HHs)

Season		Total
Wet season	Protected	20.1
	Unprotected	79.9
Dry season	Protected	15.0
	Unprotected	85.0

Source: House-holds Survey, 2014.

Respondents were asked about the time required to obtain drinking water, comparing again between the two main seasons of the year. Regardless of the season, people overall spent nearly between 40 minutes to 65 minute to retrieve drinking water from its source.

According to the 2007 Population and Housing Census, only 20.3% of the total rural households were accessible to potable water. However, data from the key informants and households survey result indicated that the proportion of households accessible to potable water has increased to 26.6%.

4.7.4. Women's role in Enset production

As per selected KAs survey, gender roles was highly integrated with Enset production and marketing. Without women, there would be no food produced and it would simply be an ornamental plant, as it is in Addis Ababa. Nevertheless, women's work is often lower to lesser significance than men's are. During household interview, male farmers often believe that women are involved "only" in processing and cooking of the Enset, and rank these tasks below cultivation tasks. During focus group discussion and field examination women, in fact, do participate in some areas and in some households in production activities. Interestingly, in households where there are no women knowledgeable about Enset clones and processing, Enset is not eaten unless others are paid to process and cook it. Based on the focus group discussion (FGD3) women in better-off households became labor managers by hiring poor women to process and poor men to cultivate. Women in middle income and poor households exchange labor for processing. Men are believed to be banned from Enset processing areas, but were observed helping among each other. Locally, women market small amounts of kocho, bulla, and amicho to obtain money for household consumables (e.g., kerosene and salt). They strategize as to the amount of surplus kocho and bulla they can sell off and still have enough for the household. Both sexes sell non-food Enset products (e.g., leaves, mats, rope, and other construction materials).

Despite the considerable number of rural women in the selected KAs, only 8% of the sampled households have access to land. Their contribution in food production, processing, preparation and provision is yet remains under their shoulder. The findings of the study indicated that female headed households compared to male-headed households were found at a low level of food security and were non- self sufficient in terms of the food requirement of their households and the amount they produce within a year. They were food self-sufficient only three months of the year. A number of factors cause the difference in food security status between female and male-headed households. Female-headed households were constrained by lack of access to important factors of production such as labor, plough oxen and credit and other agricultural inputs. Moreover, cultural and social constraints in a form of gender biased customs, stereotypes and misconceptions about women are the major challenges for female-headed households in the study area.

4.8 Natural resource management

Figure 8: soil erosion management at Woshzewier aKA

Source: Photo by author

It was found that the average land holding size for the KAs was 0.4 indicating that land is the most- scarce resource throughout the area and is beyond the carrying capacity, which results in high depletion of land resource. The Woreda Agricultural office data indicated that about 90 % of the total land areas were already cultivated. Practices such as land fallowing were almost impossible due to shortage of land. Similarly, land area with natural forests was almost non-existent at present. Rather, every field was invaded by Eucalyptus plantation. Due to repeated cultivation, soils were exposed to both visible erosion and invisible depletion. Land holding was not only small but also less productive in the KAs. Both the key informants and the community focus groups loudly stated that it is becoming impossible to produce without the application of chemical fertilizers. The major environmental problems reported to have been affecting the livelihoods in the Woreda were soil erosion and depletion, land fragmentation, deforestation, pasture problems and flooding and water logging. The root causes and their consequences were reported in the following table.

Table 29: Environmental Problems and Their Consequences

Type of Natural Resource problem.	Root Causes	Consequences in the Livelihoods.
Soil erosion and Depletion	- Deforestation. - Mono cultural practices. - Over cultivation. - Planting Eucalyptus trees near and in the farming fields. - Using dung as fuel wood	- Decreased productivity of the land. - Increased poverty - Shortage of fertilizer/natural/
Deforestation	- Rapid population growth. - Expansions of farm lands. - Search for fuel and construction woods. - Charcoal production.	- Exposure of top soils for erosion. - Formation of gullies. - Loss of top soil and moisture
Pasture problems	- Rapid population growth. - Expansions of farm lands. - Search for fuel and construction woods. - Charcoal production.	- Exposure of top soils for erosion. - Formation of gullies. - Loss of top soil and moisture
Flooding and water logging	- Deforestation. - Non-integrated soil and water conservation works. - Flat topography of land. - Heavy clay soil. - Hilly/sloping/ topography	- Poor soil drainage - Destruction of crops. - Favored conditions for the reproduction of vector insects.

Source: Households Survey, 2014.

All sample KAs displays a substantial presence of cultural vegetation such as eucalyptus and Enset, which together with crop covered fields give the impression that the land is overwhelmingly green especially during the pre-harvest seasons. This however, is misleading as the land is for the most part devoid of its natural vegetation save for the patches of grassland that have replaced original forests and the few shrubs and sparse woodlands that occur in areas that are protected for grazing purposes. Were it not for the extensive presence of the woody biomass supplied by eucalyptus, it would be hard to imagine how life could be possible given its rather huge pressure of population on land. The few still standing species of such trees as zigba or podocarpus trees that sparsely dot up some of the recently colonized hillside farms of the KAs were very much suggestive of the fact that substantial parts of the

KAs were covered by temperate evergreen forests until the recent past. There are also sufficient indications that various types of mostly broad-leafed tropical and subtropical forests once mainly covered extensive parts of the area. Overall it appears that temperate evergreen or predominantly needle leaf trees were the last to disappear. According to key informants, temperate evergreen forests were in existence during the second half of the 1960s. Although interest in reforestation appears to be strong in the Woreda, efforts made to improve the vegetation cover were being increasingly frustrated partly by the shortage of arable land, which forces the farmers to continue cultivating areas that could have better been kept under forests or shrubs. For now the people's demand for timber and firewood are met by the eucalyptus groves that tend to be found near homesteads and as fencing or windbreakers on the boundaries of farms. Their needs of grass for thatching roofs are met with the stalks of either harvested barely or wheat.

4.9. Efforts made by different actors and their challenges to develop livelihood security in the studied area.

As it is known, government, NGOs, Charities and CBOs are putting development efforts in different ways. Especially after GTP development plan, government opened its door for development actors to participate in development activities in local communities. Among the different actors that used the opportunity are-

- World Vision
- Catholic Church

In this section, the efforts of the above-mentioned organization is discussed to examine what they have planned, accomplished and challenges they have faced. The information that helped to build these discussions collected from personal visit, terminal reports and key informant discussions.

4.9.1. Efforts made by World Vision in Enemorena Enir Woreda

With the objective of ensuring sustained wellbeing of children within families and communities, especially the most vulnerable, World Vision Area Development Program(WVADP) is believed that the livelihood of HH in the program area has to be secured, hence, to increase crop production and productivity, working on irrigation development was a wise way for ensuring food security of HHs. In line with this, the ADP purchased and distributed four motorized Pumps to group of 49 farmers that were familiar with irrigation, however as it was seen during visits and as per FGD2; these four motorized Pumps were not effective because of water shortage and geographical setup.

To increase productivity of crops the distribution of farm tools were undertaken for 150people with total cost of 131,366 Birr. In the same period, 160kg of coffee seed was purchased and given to government nursery to enable produce seedlings for distribution to farmers. About 2000 farmers received 51,000 coffee seedlings Moreover, 160 farmers received 80kg of vegetable seeds however, as per information's from the focused group discussion (FGD2), World Vision supplied crops and farm tools but to utilize this, enough arable land and water supply was mandatory. As also, mentioned earlier most of the people living in this area are poor who strives to collect their daily bread, so it was clear that most of the beneficiaries sold what they have got from the organization to those who have enough land and accommodate water problems.

With the mined to increase, the knowledge and skill of farmers in crop production 69 farmers were trained in vegetable production and 94 farmers got training on coffee production, all these attempts were believed to improve crop productivity and production. As per KII2 and FGD2 the efforts made by World Vision was appreciated, changes were observed in selected areas and selected HHs, however challenges like keeping daily laborer/people whose lives are based on daily labor/ with trainings, giving seedling for peasants who don't have land were reported as irrelevant to recourse poor farmers (poor people). It was more relevant for those people who have adequate space to plant the seedlings, vegetables and time to participate trainings. Per Diem was also mentioned as challenges to run any training. As the key informants explained most of time training without per diem was impossible, this shows that most of the participants used to attain training for the sake of per diem rather than knowledge. Therefore, it was difficult to bring desired results.

To improve livestock productivity and production, various activities that could contribute the sub sector were undertaken. To combat recurrently appearing and pestilential livestock disease, improving veterinary post at Jatu KA and furnished the same for proper functioning.

The ADP considered the problem associated with forge shortage and supplied 80kg of seeds for 140 farmers and provided training on feed management and forge production to 93 farmers. In addition to this effort, 64 modern beehives were distributed to farmers who were organized to improve the traditional honey production practice in area. However, different efforts have been done; improvements in the lives of poor people were like a drop-in the ocean. The reasons given to this challenge was, most of the poor people were not having livestock, so it was again the beneficiaries were medium or rich people who have enough land to feed their livestock and plant forge. It was also surprise to see empty beehives (both

traditional and modern) in most of the HHs as result of water problem, flower and adequate skill in the beekeeping. It was also observed that bees were living in long and concert pole holes that ELPA used to bring electric powers from Gilgel Gibe 1.The FGD2 mentioned also the problem of the poultry production. Among the other things lack adaptation, wild cats and diseases were some of the existed challenges.

As environment is a cross cutting theme the ADP could not afford to bypass activities that protect the natural resources like forest and soil. With these perception trainings on watershed, water and soil management were conducted for 58 farmers and 46 development agents from office of agriculture. In addition to this, 140kg of forest seed were given for the government nursery. As we have observed during the assessment, period trees were planted in some communal lands but it was clearly observed that follow-up was lucking. Most of the planted trees were dried because shortage of water and protection.

The economic development component of food was addressed to increase asset pool for the targets. One of the means to do this was training to upgrade the skill of youth. With the goal of protecting mothers and children from infectious diseases different kinds of activities were undertaken in health project. One of the most important activities in relation to this project was training of communities and government staffs on management of major illness. In this regard, 86 community members were trained on control mechanisms of communicable disease. Furthermore, 164 HEWs (Health Extension Workers) and health volunteers were trained on integrated management of neonatal and child hood illness.

The ADP also supported malaria control campaign and incurred Birr 45065 for per dime payments to supervisors and to those involved in spraying chemicals. Increasing access to health services is one of the major areas of intervention in health project with this mindset the ADP constructed one health post at Gerembo KA and one block building for a health center at Terehogne KA. Other activities like drug support for six health institutions, support to EPI program, finical support to cover medical cost of 548 children were undertaken. During this project, lifespan 172 orphans and vulnerable children were each given a cow and 393 OVCs supported with sheep and goat with a total cost of 759,487 Birr. Moreover, 872 OVCs were given clothes while 3080 OVCs received scholastic materials. The number of OVCs shows that how much the HIV/AIDS affects the area and how it became serious challenges to the community .As it was seen above, WorldVision made different efforts, faces different challenges and got positive results however, due to the extended character of the community problem and mechanism to cop up the situation and lake of community participation efforts

were became insignificant. Some HHs mentioned that to give cows, goats and sheep for those who were affected by different diseases and resource poor people might be rather burden than solving their problems.

To increase the portable water supply 8.4Km pipeline extension and constriction of 7 water pointes was done. However, the attempts to develop four springs failed because of belated beginning of the work, so due to the water supply problem most of water pointes were not active. Beside the challenges mentioned in each activity the ADP also point out the following challenge from the project side.

- The redesign process had significant pressure on the implementation of projects by virtue of the higher budget allocated for the period
- Sector Office were busy in other taxing works
- Poor performance of some Contractors and follow-up
- Belated design submission by sector Office
- High price escalation increased cost of construction and materials
- Government legislation that bans advocacy and other related activities
- Lack of interests to participate in trainings prepared by the projects
- Lack of awareness ,understanding
- Irresponsible actions like not protecting natural resource, not filling belonging nesses towards the development insertions by different actors.
- Feelings of Dependency /waiting from outside/

4.9.2. Activities done by Emdeber Ehparchy to enhance livelihood security in selected KAs of Enemorena Enir Woreda.

4.9.2.1. Increased annual crop productivity and production of households

The annual crop production and productivity enhancement expected result of the project, has been framed under three major and interrelated components: small-scale irrigation development, seed multiplication and natural resource management. The overarching intentions of the ‘expected result was to achieve targeted boost in the production of major crops like Teff, wheat, and root crops and reduce number of food deficit months of targeted farmers. Major interventions in terms of output accordingly were fine-tuned in increasing improved seed availability, increasing area under irrigation, increased area of land under conservation and decrease the effect of water logging in the target area.

The project has made remarkable efforts on some of the target activities through organizing

trainings for beneficiaries, 193.5qt of improved cereal seeds distributed, and 798qt of Irish potatoes planted and the project has facilitated the ground for all construction works. From the first harvest of these improved seeds and root crops, farmers have paid back and these seed were collected for redistribution purpose. However, expected results/livelihood security/ were not attained because of the late start up of the project implementation and poor participation of the beneficiaries.

4.9.3.2. Improved livestock productivity and income of households

Under this expected result of the project, it aims at increasing livestock productivity and thereby income of project beneficiaries through four major focus areas: provision of sheep and goat, strengthening vet service, animal breed improvement through bull and he-goat service provision, animal feed and water enhancement.

With the aim of improving livestock productivity and increasing income of targeted HHs the project has purchased and distributed a total of 323 sheep and goats for each needy family and trained 46 beneficiaries on livestock management and forage production. The project has also introduced 6 improved He-goats and 6 bulls for livestock breed improvements in studied KAs ,however it was known for these new breed, that poor households don't have shelter and enough feed. Livestock disease and problem of adoptability to the situation of the area led to the most of distributed livestock to death. During FGD3, discussants mentioned that to keep improved livestock's in productive ways been difficult for those who have land problem. People/targeted community/ also were not cooperative to the remedies for livelihood insecurity considering that it was not their priorities.

Other activities like 5 veterinary post construction 2-vet clinic strengthening, and 5 communal farm pond constructions for livestock have been planned but not accomplished so far. The forage multiplication centre is not yet started in EnemorenaEnir project; therefore, this unattainable plan brought unstable/dishonesty/ attitudes towards the efforts to mitigate the problem. When we examine the overall achievement of the project, 52.3% of the beneficiaries were used immediately one year after the project were phased out however, currently people who uses he-goat service and bull service are almost zero, because most of the livestock's were died and slaughtered for food consumptions.

The assumption behind live animal transfer was that three household heads that are ranked as primary, secondary and tertiary beneficiaries of the package are tied together in-group. At the start of the action, 2 female goats were given to the first beneficiary and after having given

offspring and stopped lactating (within 7 months), the second beneficiary took the mother goats; after a second reproduction cycle the third beneficiary finally obtained and owned the mother goats which were provided at the beginning of the project period. At the end of the project period, it was expected that each household would have about 2 to 4 goats, the result thus being an improvement of these households' capacity to withstand shocks as well a diversification of their livelihood sources. KAs development committees and village goat husbandry committees told that most of distributed goats and sheep were not pregnant for long time and this means that distributed sheep/goats (shoats) need a pregnancy of 5 months and a lactating period of 7 months before the primary beneficiary pass the mother goats to the secondary beneficiaries and the same time was required before the secondary beneficiaries do the same. Moreover, this means the tertiary beneficiary would not be addressed within the project lifetime and this would in turn reduce the expected number of project beneficiary and the target met. Similarly, the improved bull and he-goats were bought and distributed but some of the Bulls and he-goats did not start the service because of their young age. During the HHs visit, some beneficiaries have expressed that both the bull and he-goats did not address the proposed target .As it has been said so far, almost all activities have been delayed for a significant period and this has automatically affected the total performance of the project and reduced number of beneficiaries addressed.

The project has introduced improved he goats and bulls that can improve the genetic pool of the local animal breed not only for immediate benefit but will affect the animal husbandry at the end. In conjunction with this the project had tried to introduce improve forage seeds and cuttings that can offset the acute forage shortage of the two districts. Nevertheless, as per KII3the effort made so far to avail the necessary forage for those improved animal varieties was yet not met in the project area.

4.9.3.3. Strengthened and improved quality of extension service

With the intention of strengthening the exiting government extension system and improved the service delivery part, the project has planned to construct farmers training centre and equip them with the necessary teaching aids like different posters, leaflets and audio-video material. In addition to these, it has planned to refresh the DAs with training and model farmers' skill training. The project did not accomplish any of the activities populated under this expected results except, building one training center and facilitating the groundwork for the actual activity implementation.

The project has planned to give a practical training to a minimum of 100 farmers (30% of them women) on production and management of vegetables, fruits, cereals and root crops, natural resources, dairy development and fattening for about six months. However, up to now 0nly one FTCs was constructed. Because of this dalliance, the project could not conduct trainings for both the model farmers and DAs on time and as it was expected.

CHAPTER 5: SUMMARY, CONCLUSIONAND RECOMMENDATIONS

5.1. Summary of the findings.

As indicated throughout the previous chapters this research is conducted in Enemorena Ener Woreda of Guraghe Zone, SNNPS. The objective of the study was to examine challenges of rural livelihood development efforts of different actors in this area.

The information that was gathered and analyzed would help to facilitate the formulation of better interventions for long and short-term development plan for the area. The quantitative data in this report was collected using questionnaires through household interviews in 4 KAs. The total households size in the selected KAs for this study is1207 and only 120 households were included in the sample survey. In addition, focus group discussions and key informant interviews were conducted in three KAs.

The group was comprised of 10-20 members from different households. Sampling is made based on systematic random sampling techniques.

The total population is approximately 7,242 with the female population slightly higher representing 52.1%. Population density is 254 persons per square kilometer with an average family size of 5.7 persons per household.

Individuals in the age group of 0-14 years account for 45.4% of the total residents. Farming activities are the main sources of livelihood for the majority of the people in the Woreda. The mean number of months a household could survive on food from own production on average is 5.2 months.

The causes of livelihood insecurity vary from household to household. Respondents gave multiple answers for the causes. However, shortage of arable land, limited practice of diversifications and recurrent drought were frequently cited reasons.

The major coping strategies adopted by households for dealing with food insecurity include eating fewer meals per day, reducing the quantity of food per meal, and borrowing cash or grain.

The average size of land owned by one household in the communities where sample is taken is nearly 0.4 hectares. On the average, a typical household produces crop harvest worth no more than 7,800 Birr.

Most farmers' access improved seeds through the Woreda office of Agriculture or seed saved from their own production. Farmers mentioned crop rotation, inter-cropping, mixed planting

techniques and fertilizer application as the most effective techniques in their crop production system. Some12% of the respondent households reported using chemical fertilizers, though the quantities used were very low.

The majority of household's asset creation and accumulation were in the forms of livestock head count. Cattle are the most important household assets in the surveyed areas. Despite their high economic importance the number of livestock holding was reportedly declining because of the growing shortage of grazing land. Additionally, the prevalence of animal disease coupled with a low coverage of veterinary services hampers the productivity of the livestock in the KAs.

The majority of households across all livelihoods own basic tool. However, few people especially the poor households do not own the main farming tools.

Due to the limited access to good education services (poorly equipped schools and high student numbers per classroom), 46.5% of the population above the age of seven is illiterate.

As most of the focus group discussions confirmed, the main causes for food shortage were lack of inputs (fertilizer, improved seeds, pesticides etc…), shortage of arable land, money from other sources, seasonal rainfall variation, crop disease and climate change.

Livestock production in the KAs is limited and faced livestock production constraints. Among the constraints grazing land, prevalence of black leg disease, shortage of water, anthrax, lack of improved breeds, and shortage of money to buy feed supplements and vet medicines, absence of artificial insemination services, limited access to veterinary posts were the major ones.

Major crops grown in the KAs are Maize, wheat, barley, teff, haricot beans and minor crops like sweet potato and Irish potato. Perennial crops grown in the KAs include coffee, chat, sugarcane, and Enset.

Different actors made efforts to mitigate problems related to livelihood however; the magnitude of cumulative challenges together with local development actors weaknesses mentioned in the previous chapters undermines livelihood development efforts in the research area.

Hence, organized plan, well established system usage and understanding of technology and relevant intervention are some of the pointes that are considered as remedies to the existing challenges in the surveyed 'KAs.

5.2. Conclusions

5.2.1. Household Demography

The average family size among the sample households was 5.7 persons per household. This is regarded as high and is a demographic factor contributing to the prevalence of poverty at large. In addition, it is found that nearly 46.8% of the population was not economically active, and a higher dependence rate was observed on that economically active population. Thus, large family size coupled with a high proportion of economically dependent household members became challenges to develop livelihood of the study area.

5.2.2. Livelihood Security

5.2.2.1. Major Sources of Livelihood

The primary sources of livelihood for the majority of the resident in all livelihoods are cultivated 'own or family land'. The majority of the population in the KAs categorized as poor are 48.3%, and 36.6% are categorized as medium, which have no alternative income sources other than farming and to some extent income labor. During bad year, when the crops affected by any kind of hazards, the poor households being exposed to loss of their own crop production as well as their income from local employment as better-off households tend to employ less external labor in bad years. Therefore, people in the Woreda generally and 4KAs in particular need diversified livelihood strategies within and outside of their current livelihood. Promotion of small economic activities such as petty trading and artisanship could be potential areas to be explored outside of farming.

Another important area to explore for livelihood promotion is enhancing marketing opportunities for both livestock and agricultural inputs and production, including improving access to credit facilities, development of business skills, transparent accountability, and improved market information systems. Furthermore, Irrigation development would be also the key program intervention for crop productivity.

Poor households tend to have less labor force, small to non-land holding size with poor fertility condition and produce fewer cash crops. This could be an area of strategic importance for Project development, as diversification of livelihood options should provide households with a range of assets and reduce shocks to households during crisis periods. In addition to this, improving knowledge and practice in the area of livestock production, agricultural production, provision of affordable credit system and marketing could encourage

diversification of livelihood approaches by households, and make these households resilient against shocks.

The new extension program in Woreda found to be promising since it was able to increase productivity of cereals by considerable amount. However, it should further be strengthened by incorporating lessons learnt from experiences of the recent, past and should not be limited to extension of cereals only. Extension programs like livestock and natural resource management has to be given emphasis if sustainable development is to be achieved.

Despite large livestock population, there is extreme shortage of both veterinary clinic and personnel. Thus, due attention to improve physical availability of veterinary clinics and personnel are needed. Development agents are burdened by additional responsibilities other than the extension work, this may not provided them sufficient time to assist farmers and establish smooth relationship with the agricultural community. Continuous In-service training and short trainings on data documentation for DAs in order to make their involvement in the agricultural development would be more fruitful.

5.2.3. Household Food Security

The analysis on the household annual food availability for consumption indicates that households that are female headed tend to have more months without enough food than male-headed households do; on average, the number of months with enough food for female-headed households is 3.4 while average the number of months with enough food for male-headed households is 5.7. Thus, development intervention that focuses on female-headed household should be on the priority of the development plan. Based on the findings from the food security data analysis, crop farming (mixed cereal crop and cash crops such as chat, coffee and vegetable) with livestock rearing is the major livelihood systems in which households practice a balance between livestock and crop production in order to diversify their asset base. The mixed farming system indicates that it is a coping strategy successfully used by households to reduce risk from shocks.

Farmers in KAs grow a large variety of crops. The households interviewed during the survey mentioned about eleven different types of crops. However, most of those are cultivated periodically, while some basic grains crops are commonly grown. These include maize, Enset, wheat, chat, haricot beans and vegetable such as potato, tomato, cabbage, etc. The average size of land owned by a household in the communities where samples are taken is about 0.4ha. In addition, yield performance for the main cereal crops is very low. The low

performance of agricultural productivity in the KAs is attributed to a number of factors including lack of improved seed, access and use of fertilizer, use of back ward farming equipment, moisture stress.

Livestock are the most important household asset and means of livelihoods for most of the population in the survey area. Livestock is the main source of cash income, food as well as the foundation of prestige and power, not to mention a critical means of asset stocking for the majority of the households. However, livestock productivity is hampered due to number of reasons including poor Vet services.

Strengthening the Farmer's knowledge about improved farming techniques should also have an impact on agricultural performance. Such techniques are necessary for agricultural intensification and the effectiveness of agricultural production. In addition, Strategies for diversification of assets at the household level explored by program implementers and creative solutions should be introduced for households such as:

- Improving knowledge of improved agricultural practices;
- Provision of ox for plowing in the form of revolving loans;
- Introduction of animal product processing and marketing of the product;
- Low cost-community-based veterinary services;
- Development of irrigation program; and
- Improved overall marketing systems.

These strategies, focused on improving capacities at the household level for diversification and intensification of the livelihood systems will improve overall food security in the areas in which the majority of households do not have enough to eat in any given month of the year.

Household food security however, should be considered within a holistic development approach as households do not always focus on the broader reasons for food insecurity. Although more than 48.3% of households in all livelihoods associated food insecurity with the shortage of arable land in the KAs, significant percent of household also linked the current food shortage with the shortage of oxen, drought and crop loss due to pest and crop disease. In addition, for poor communities living on fragile and degraded lands, such as steep hillsides, actions address the deteriorating environmental conditions that undermine their livelihoods and capacity to cope with disasters. Thus, a program intervention that facilitates in protecting and enhancing natural resource through activities such as watershed restoration, reforestation and rehabilitation, can help these communities to secure their livelihoods and improve their capacity for adapting to the impacts of climate change.

If sustainable agricultural development is to be translated into livelihood security, then the active engagement of women is necessary. Their involvement will require for those development agents who want to go beyond traditional approaches to sustainable agricultural development. Food and nutritional security will mean women are included in crop breeding and selection strategies so that crops are not selected on their behalf that they cannot market or process such as hybrid maize when they do not have a hammer mill, and it will necessitate incorporating women in marketing chains. Food security is not just a goal of sustainable agricultural development; it is a right enshrined in the Universal Declaration of Human Rights and amplified by Article 11 of the International Covenant on Economic, Social and Cultural Rights. Women also have the right to be equal partners in the agriculture sector, and to that end, the Convention for the Elimination of Discrimination against Women protects women's equal access to land, credit, and income. Thus, development actors shall call for a rights-based approach to food security that includes gender equality. Woreda offices recognize the interrelatedness of all basic rights and assist in the identification of those whose rights are not fully realized. In this way, they facilitate corrective action and appropriate strategies to enable equal protection for all. Equal representation and active engagement of both women and men in any development program will bring valuable benefit for sustainability. More often than not, however, access to the legal system may be more problematic for women than men, but technical and financial support is also needed if institutions that advance and implement women's rights are to fulfill their mandate.

5.2.4. Asset Holdings

As per the results of findings the average asset values owned by households as domestic assets is birr 201, productive assets birr 583.2 and livestock assets birr 2,450. Livestock appears to be the most important wealth accumulation strategy, accounting for about 75.74% of the total value of the average household assets followed by productive assets at 18.03% and domestic assets at 6.22% of the total mean household asset index value. This will serve as an area of strategic importance for livelihood development projects, as diversification of livelihood options should provide households with a range of assets and reduce shocks to households during crisis periods. The data revealed that livestock production is the most important livelihood means for accumulating assets. Because of this, animal health interventions would be key in ensuring the stability of livelihood conditions. However, poor health and physical condition of animals negatively affects the food and economic security of

households by reducing food supplies and limiting the purchasing power of herders who procure food commodities with the proceeds from livestock or livestock product sales. Thus, strengthening the veterinary capacity at Woreda (government level) would be of vital importance for the improvement of the livelihoods of the population. In addition, options should be explored that will enhance the professional and ethical involvement of the private animal drug dealers and veterinary professionals.

5.2.5. Access to Basic Social Services

Access to and utilization of services within the survey area is limited. In most cases, people travel far to access almost any type of service, this negatively affects the lives of women. Women in particular are travelling long distances to water points, markets and health facilities. Due to the limited access to these facilities, many activities such as grain milling and health interventions were being done in a traditional manner. This burdens households and impacts negatively on the health and well-being of women and other family members. In addition, accesses to credit facilities are also very limited in the KAs. Strengthening the service provision, particularly of outreach services such as community health worker, credit facilities focused on the poor household and other production inputs marketing within an accessible range of the majority of households are proven most successful in this area. Finally, access to information is essential for households to make decisions about livestock prices, crop prices, early warning information and credit. Use of a variety of means for disseminating information will be important for program success in areas related to awareness rising.

5.2.6. Water supply

Access to safe water facilities is very low in the survey area, and could be an intervention area that would have significant and rapid impact on the lives of the people of the KAs. Proper implementation that mediates community participation would allow projects to see immediate positive impact on the lives of women and would improve the overall health of a household.

5.2.7. Natural resource management

It is obvious for everybody that agricultural economy heavily depends on the natural resources. Thus, enhancing conservation of soils, water and land cover is among the priority areas to obtain sustainable yield from the land resources. For physical structures could

compete for the already scarce land resources, biological conservation methods like agro-forestry, inter-cropping, crop rotation and relay cropping are important issues that has to be implemented in the studied area to improve the unexpected livelihood outcomes.

5.2.8. Efforts made by different Actors

Local Development Actors (LDA), like Government, World Vision and Catholic Church has made significant efforts to develop the area. Different approaches and strategies to alleviate rural poverty and to bring sustainable rural livelihood development were practiced and results were recognized, people were helped, strengths were seen over rural development

The micro-level interventions are often implemented at community levels and usually they are focused on basic infrastructure needs. Although they claimed to meet local needs, they are often unsustainable as they rarely tied into local governance systems. It largely occupied in activities often responding to immediate, specific needs and rarely addresses systematic improvements in the local economy. Considerable efforts are therefore, needed to bring together and analyze the situation on economic and social trends, the reasons for policy and institutional failures and ways of overcoming them.

The gap seen in policies and implementation needs to be narrowed through innovative partnership between government, local community, NGOs, Charities, think tanks and private sectors to prevail moderate livelihood development.

Findings of the study indicated that, core principles of SL approaches discussed in the literature part of this study were not implemented as they should be therefore, approaches used by DA has to consider people as epicenter since people are considered as center of development. An activity that aims to upgrade the status of the community has to involve communities. This participation also has to be to support local people in a way they understand and accept in their lifestyle. A special attention is needed to make aware of the changes that occurred overtime, since the idea of changes in the community needs adaptation.

The other component of core principles of sustainable livelihood is holistic. It allows the identification of livelihood related opportunities and constraints regardless of where these occur. Consequently, the approach has to be all-inclusive that recognizes multiple influences on people and recognizes different actors to achieve expected livelihood outcome.

Therefore, actors working in the studied area have to identify opportunities and livelihood outcomes (expected or unexpected) through implementation of holistic principles.

5.3. Recommendations

- Program interventions that may have a significant impact on family planning that aim to control the birth rate is highly needed
- Diversified livelihood strategies within and outside of their current livelihood and promotion of small economic activities such as petty trading and artisanship could be potential areas to be explored outside of farming for the area.
- Enhancing marketing opportunities for both livestock and agricultural inputs and production, including improving access to credit facilities, development of business skills, transparent accountability, and improved market information systems may have a significant impact on the improvement of livelihood of the area. Furthermore, Irrigation development would be also the key program intervention for crop productivity.
- Extension programs like livestock and natural resource management has to be given emphasis if sustainable development is to be achieved.
- Due attention to improve physical availability of veterinary clinics and personnel are needed.
- Continuous In-service training and short trainings on data documentation for DAs in order to make their involvement in the agricultural development would be more fruitful.
- Strengthening the Farmer's knowledge about improved farming techniques will have an impact on agricultural performance.
- In addition, Strategies for diversification of assets at the household level explored by program implementers and creative solutions should be introduced for households such as:
    - Improving knowledge of improved agricultural practices;
    - Provision of ox for plowing in the form of revolving loans;
    - Introduction of animal product processing and marketing of the product;
    - Low cost-community-based veterinary services;
    - Development of irrigation program; and improved overall marketing systems will have contribution for the betterment of the studied area livelihood.
- A program intervention that facilitates in protecting and enhancing natural resource through activities such as watershed restoration, reforestation and

rehabilitation, can help these communities to secure their livelihoods and improve their capacity for adapting to the impacts of climate change.

- Development actors shall call for a rights-based approach to food security that includes gender equality
- Strengthening the veterinary capacity at Woreda (government level) would be of vital importance for the improvement of the livelihoods of the population. In addition, options should be explored that will enhance the professional and ethical involvement of the private animal drug dealers and veterinary professionals.
- Proper implementation that mediates community participation would allow projects to see immediate positive impact on the lives of women and would improve the overall health of a household.
- Eenhancing conservation of soils, water and land cover is among the priority areas to obtain sustainable yield from the land resources.
- Considerable efforts to bring together and analyze the situation on economic and social trends, the reasons for policy and institutional failures and ways of overcoming them is needed from the development actors side.
- The gap seen in policies and implementation needs to be narrowed through innovative partnership between government, local community, NGOs, Charities, think tanks and private sectors to prevail moderate livelihood development.
- Development actors has to give a special attention to make aware of the changes that occurred overtime,
- Approaches used by development actors has to be all-inclusive that recognizes multiple influences on people and recognizes different actors to achieve expected livelihood outcome

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APENDEXES

A: Checklist for key Informants Interview

- Demographic characteristics
- History of the area: landscape, settlement
- Disaster type and History (drought, flooding, pests, animal diseases, etc).
- Land resource change: vegetation, soils, water use and distribution.
- General contextual information: physical and environmental information, key features and trends (social, economic ecological and institutional information).
- Community level social differentiation
- Perception on vulnerability risk factors and coping/adaptive strategies
- Gender roles and responsibilities
- Perception of NGOs intervention
- Perception on principal constraints and opportunities (shocks or risks to which households are exposed, their ability to cope with those shocks and their resilience to future shocks)
- Perception on agricultural extension and rural development policies
- Awareness on appropriate and profitable technologies
- The availability of alternative livelihood options
- Power relations and differential access to resources
- Community livelihoods and food security.

2.Checklist for Focus Group Discussions and In-depth interview with Case study households

Access to Natural Capital

- Size of land holding
- Ways of getting access to land
- Changes in land holding and its challenges
- General soil fertility status
- Communal land and is uses
- Main problems and challenges of farm land
- Land conservation and management practices
- Sources and access to water for human and livestock use and the associated problems
- Access to natural vegetation and perception towards deforestation.
- Problems associated with the exploitation of natural vegetation

- Perception towards resource use conflict (on water resources, grazing land, etc)
- Perception towards the recurrent drought and erratic rainfall distribution.

Financial Capital-

-Productive resources and stores (savings, credit, remittances, pensions, etc)
- Main annual crops grown
- Trends in crop production (increase/decrease/no changes-why)
- Perennial crops grown:
- Types of technological inputs under use
- Livestock types and constraints to livestock rising
- Non- farm employment opportunities available
- Income form non- farm activities and purposes for which the money is used.

Social capital (Social relations, networking and institutional processes)

- Institutions operating in the community
- Participation in informal institutions
- Networks
- Membership in groups
- Social relations and access to wider institutions
- Common property safety nets
- The level of trust and shard norms that exist in the community to reduce risks, access services, protect themselves, from deprivation and acquire information.
- Perception on the role of zone, woreda, and KAs administrations.
- Perception on formal civil society organizations (NGOs, CBOs, Parastatals, cooperatives, churches, etc).

Human Capital

- Skills, Knowledge, Health, The ability to labor

Physical capital (availability and access to rural infrastructures)

- Availability of basic infrastructures e.g. Transport, shelter, potable water source, school, health service energy, communications, credit, irrigation works, market, technological inputs, veterinary service etc.

Livelihood security strategies

- Perception on a range of on farm and off farm activities
- Production and income generating activities

Agricultural production

Off –farm employment

Non-farm employment

Formal sector employment

Outcomes

- Access to food, health care, education, habitat, social network participation, physical safety, environmental protection, life skills capacities.

3.Discussion points with EnemorenaEnir Woreda Agriculture and Rural Development Office Experts at Gunchere.

I. General Physical Environment

- Area of the woreda
- Agro-climate and relief pattern
- Land use type, change and competition
- Vegetation cover, soil conditions and rainfall pattern

II. People and culture

- Population size and related issues
- Main staple foods
- Migration patterns

III .Economy, community livelihoods and food security

- Main economic activities
- Livestock production
- Main field crops and perennial crops
- Main agricultural problems
- Non-farm/off-farm activities
- Trends in food availability

4.**Discussion Points with Development Agents in each KA**

- Main agricultural extension services available
- Constraints to delivering proper services to the community and individual farmers
- Major problems of farmers in the community with regard to crop production, livestock raising, own farm activities, use of common property resources
- Food security trends and current situation
- Vulnerable groups to livelihood and food insecurity
- Causes to households' vulnerability to livelihood insecurity
- Coping mechanisms/ Survival strategies to livelihood crises

B .Household questionnaire interview

It is usual that post graduate students are expected to conduct a research to fulfill his study. So, this questionnaire is prepared to collect relevant and reliable data, which is going to be applicable to produce a research report on Rural Livelihood Development Challenges. The primary objective of this study, is to meet academic requirement and, of course, would have significance to relevant organizations therefore, I strongly believe that my success highly depends on your meaningful and relevant information.

Time interview commenced.	**___ hrs. ___min.**

100. Household identification

This section is to be completed for each household visited

Identification	**Name**	**Code/ Number**
101. Zone Name & code		
102. Woreda Name & code		
103. KA Name & code		
104. Cluster Name & code		
105. Supervisor Name & code		
106. Enumerator Name & code		
107. Date of interview.	Day: Month: Year:	
108. Household ID		

200. Household characteristics (Supervisor, check all columns)

Sr. No.	***201***	**202**	**203**	**204**	**205**	**206**	**207**	**208**	**210**	**211**
	Name of Household members	**Relation to HHH** 1=HHH 2=Spouse 3=Child 4=Relative 5=Non-relative	**Age** in full years	**Sex** 1=Male 2=Female	**Religion** 1=Orthodox 2=Muslim 3=Protestant 4=Catholic 5=Other 6=NA	**Marital status** 1=Single 2=Married 3=Widow 4=Separated 5=Divorced 6=NA	**Highest level of school completed** (Age 5 and above) 0=No Education (Illiterate) 1=Read & write in any language 2=Pre-school 3=Grade 1-4 4=Grade 5-8 5=Grade 9-10 6=Grade 11-12 7=Above grade 12	**Enrolled in school now** (Age 5 and above) 1= Yes 2= No 3=NA	**Primary Occupation** (for Age 10 & above)	**Secondary Occupation** (for Age 10 & above)
									1=No occupation 2=Crop Product. 3=Animal Husbandry 4=Mixed farming (crop & animal) 5= Weaving 6=Tannery 7=Carpentry 8=Black smith 9=Carpet making 10=Pottery 11="Sifet Sira" 12=Spinning 13=Petty trading 14=Daily labor 15=Others (specify)	
1										
2										
3										
4										
5										

Note: for the purpose of this survey "separated" refers to husband and wife who do not live together for more than six months; NA=Not Applicable

300. HOUSEHOLD RESILIENCE

Supervisor use only

301. What is the status of housing ownership?

☐ 1. Owned ☐ 2. Rented ☐ 3. Given freely — 301. ☐

302. Specify the type of housing:

302a. Type of roof of the house:

☐ 1. Grass thatched ☐ 2. CIS ☐ 3. Wood and soil — 302a ☐

302b. Type of floor of the house:

☐ 1. Cemented ☐ 2. Earthen ☐ 3. Bricks — 302b ☐

303. Is the shelter permanent? (Will it still be habitable in five years time from now?)

☐ 1. Yes ☐ 2. No — 303. ☐

304. What is the general condition of the house relative to other houses in the area?

☐ 1. Very poor ☐ 2. Poor
☐ 3. Average ☐ 4. Good — 304. ☐
☐ 5. Very good

305. Years since the house has been constructed

☐ Years — 305. ☐

306. Do you have the following assets? (Tick all that apply)

☐ 1. Bicycle	☐ 2. Radio	☐ 3. Cassette/ CD player
☐ 4. TV	☐ 5. Watch/ Clock	☐ 6. Bed
☐ 7. Mobile phone	☐ 8. Table	☐ 9. Chair
☐ 10. Electricity	☐ 11. Motorbike	

307. Do you have access to land?

☐ 1. Yes ☐ 2. No — 307. ☐

308. If yes, indicate the number of hectares

☐ 1. Owned ☐ 2. Rented/contract — 308. Total
☐ 3. Share cropping ☐

309. Did your family experience food shortage at any time during year 2000/2001 E.C

☐ 1. Yes ☐ 2. No — 309. ☐

310. If yes to the above question, during which months did you experience food shortage?

☐ 1. Meskerem	☐ 2. Tikmt	☐ 3. Hidar
☐ 4. Tahsas	☐ 5. Tir	☐ 6. Yekatit
☐ 7. Megabit	☐ 8. Miazia	☐ 9. Ginbot
☐ 10. Sene	☐ 11. Hamle	☐ 12. Nehase

Total Months 310. ☐

311. How did you cope in order to have enough food?

☐ 1. Reduced the number/size of meals	☐ 2. Borrowed food/money from relatives	311. ☐
☐ 3. Ate less preferred food	☐ 4. Sold agricultural tools	☐
☐ 5. Ate wild food (e.g. leaves, roots)	☐ 6. Sold seeds meant for planting	☐
☐ 7. Children discontinued school	☐ 8. Sold productive equipment	☐
☐ 9. Migrated to get work	☐ 10. Sold land	☐
☐ 11. Sale of firewood	☐ 12. Worked as a daily laborer	☐
☐ 13. Sold livestock	☐ 14. Received relief food	☐
☐ 15. Sold household possessions	☐ 16. Other (specify) _____	☐

400.**Crop Production**

401. Production of major crops in order of importance. Please list up to **five major** important **annual** crops produced by the household in Meher season of the year **2012/2013 G.C.**

MEHER (annual crops)

Name of crop	Crop code	Area planted last year in Ha	Area planted normally in Ha	Quantity produced last year in Qt	Quantity normally produced in Qt	Price in Birr/qt	Did you get a fair price? 1- yes 2- no	When did you sell? 1- Immediately after harvest 2- 1-3 months 3- 4-6 months 4- 6 months later	How much Kgs did you sell?	Sold to whom? 1.wholesalers 2. retailers 3. consumers 4. other	Did you use improved seeds? 1-yes 2-no	Seeds from where? (1) extension (2) bought (3) NGO (4) Own (5) Other (specify)
401a	**401b**	**401c**	**401d**	**401e**	**401f**	**401g**	**401h**	**401i**	**401j**	**401k**	**401l**	**401m**

402. Production of major crops in order of importance. Please list up to **five major** important **annual** crops produced by the household in Meher season of the year **2012/2013 G.C.**

BELG (annual crops)

Name of crop	Crop code	Area planted last year in Ha	Area planted normally in Ha	Quantity produced last year in Qt	Quantity normally produced in Qt	Price in Birr/qt	Did you get a fair price? 1-yes 2-no	When did you sell? 1- Immediately after harvest 2- 1-3 months 3- 4-6 months 4- 6 months later	How much Kgs did you sell?	Sold to whom? 1.wholesalers 2. retailers 3. consumers 4. other	Did you use improved seeds? 1-yes 2-no	Seeds from where? (1) extension (2) bought (3) NGO (4) Own (5) Other (specify)
402a	**402b**	**402c**	**402d**	**402e**	**402f**	**402g**	**402h**	**402i**	**402j**	**402k**	**402l**	**402m**

403.Production of major perennial crops in order of importance. Please list up to **five major** important **perennial** crops produced by the household during the year **2012/2013G.C.**

PERENNIALS

Crop	Crop code	# trees	# mature trees	Qty produced in Kg/Number	Quantity produced in a normal year	Price in Birr	Did you get a fair price? 1-Yes 2-No	Sold to whom? 1.wholesalers 2. retailers 3. consumers 4. other	Where did you get trees for planting? \ (1) Own nursery (2) Government (3) Bought (4) NGO (5) Other specify _____
403a	**403b**	**403c**	**403d**	**403e**	**403f**	**403g**	**403h**	**403i**	**403j**

Crop codes – write the codes in column 2 of the above tables		
Annuals		**Perennials**
1. Teff	2. Faba beans	3. Mango
4. Maize	5. Wheat	6. Guava
7. Sorghum	8. Barley	9. Peach
10. Cassava	11. Chili (Pepper)	12. Enset
13. Yam (Godare)	14. Onion	15. Coffee
16. Vegetables	17. Lentils	18. Citrus
19. Sweet potato	20. Haricot bean	21. Banana
22. Irish potato	23. Field pea	24. Papaya
25. Noug	26. Chickpeas	27. Avocado
28. Linseed 29. Rice	30. Others (specify)	31. Eucalyptus
		32. Others (specify)

400.If production for 2012/2013G.C was below normal years what are the causes?

Supervisor use only

☐	1. Shortage of rainfall	☐	2. Shortage of fertilizer	404. ☐
☐	3. Shortage of labor	☐	4. Shortage of land	☐
☐	5. Pest infestation	☐	6. Diseases	☐
☐	7. Flood	☐	8. Shortage of seeds	☐
☐	9. Hail storm	☐	10. Excess rainfall	☐

401.If production for 2012/2013G.C. was above normal years what are the reasons?

☐	1. Good/optimum rainfall	☐	2. Use of fertilizer	405. ☐
☐	3. Use of improved seeds	☐	4. Use of chemicals	☐
☐	5. No crop pests/diseases	☐	6. Other (specify) _____	☐

402. If you used improved seeds in 2012/13 G.C, how much did it cost you? ☐ 406 ☐

403. If you used fertilizers in 2012/13 G.C, how much did it cost you? ☐ 407 ☐

404. If you used pesticides in 2012/13G.C, how much did it cost you? ☐ 408 ☐

405.Do you have access to irrigation land?

☐ 1. Yes ☐ 2. No 409. ☐

406.If Yes, indicate the number of hectares for

407a	☐	Traditional irrigation	410a ☐
407b	☐	Improved Irrigation	410b ☐

407.What technologies do you use for irrigation?

☐	1. Motorized pumps	☐	2. River diversion	411 ☐
☐	3. Hand dug wells	☐	4. Manual water lifting pumps	☐
☐	5. Springs for irrigation	☐	6. Other _____	☐

408.What do you use to plough your land?

☐	1. Hand tools/hoes	☐	2. Rented oxen	412 ☐
☐	3. Owned oxen	☐	4. Rented tractor	☐
☐	5. Other _____	☐		☐

500. Livestock Production and bee-keeping

Supervisor use only

501. Do you have livestock**?**

☐ 1 Yes ☐ 2 No

501	
502	

502. If yes, write the **number** of livestock in the boxes.

A. Local Breeds		**B. Exotic Breeds**		**A**	**B**
☐	1. Oxen/Bulls	☐	10. Cows		
☐	2. Cows	☐	11. Heifer		
☐	3. Calves	☐	12. Bull		
☐	4. Heifers	☐	13. Sheep		
☐	5. Sheep/goats		Chicken		
☐	6. Chicken				

☐ 7. Horse/Mule
☐ 8. Donkey
☐ 9. Camel

503. What is the source of feed for your livestock?

	A. During dry season	B. During wet season
☐	1. Own grazing land	8. Own grazing land
☐	2. Communal grazing land	9. Communal grazing land
☐	3. Purchased hay	10. Purchased hay
☐	4. Improved pasture/forage	11. Improved pasture/forage
☐	5. Crop residues	12. Crop residues
☐	6. Industrial by-products	13. Industrial by-products
☐	7. Other (specify) _____	14. Others (specify) _____

504. Do you ever practice planting forage seeds/seedlings

☐ 1. Yes ☐ 2. No

505. What are the major livestock problems?

☐ 1. Animal diseases ☐ 2. Shortage of drinking water
☐ 3. Shortage of feed ☐ 4. Poor breed productivity
☐ 5. Other _____

506. If you have milking cows, what is the average milk yield you get from one cow per day?

☐ Liters

503	A	B
504	☐	
505	☐	
	☐	
	☐	
506	☐	

507. Production of Milk and Butter

	Did you produce last year? 1- Yes 2- No	Did you sell last year 1- Yes 2- No	Who did you sell to? 1.Traders 2.Hotels 3.Consumers 4.Others_____	What price did you get?	If not, why don't you sell? (1)used it for own consumption (2) there is no market (3) other _____
	507a	**507b**	**507c**	**507d**	**507e**
Milk					
Butter					

508. Do you practice bee-keeping?

☐ 1. Yes ☐ 2. No

509. What type of beehive do you own?

☐ 1.Modern ☐ 2. Traditional

508	☐
509	☐

510 ☐

510. If you practice bee keeping, what is the annual amount of honey you get?

☐ KG of honey from traditional ☐ KG of honey from modern

511. Where do you sell the honey you produce? 511 ☐☐

☐ 1. Nearby market ☐ 2. Honey processing cooperation
☐ 3. No market to sale

512 ☐

512. How much did you get from the sale of honey during the last 12 months?

☐ In Birr

Supervisor use only

600. Natural resource conservation, reforestation & agro-forestry

☐ 601

601. Do face soil erosion problem?

☐ 1. Yes ☐ 2. No

602. If you face soil erosion problem, what types of soil conservation activities do you practice on your own land?

☐	1. No soil erosion problem	☐	2. Planting trees	602. ☐
☐	3. Farm land terracing	☐	4. Cut-off drainage	☐
☐	5. Check-dam construction	☐	6. Alley cropping	☐
☐	7. Hill side terrace	☐	8. Trench vend	☐
☐	9. No soil conservation practice	☐	10. Others (Specify) _____	☐

603. On which land do you practice soil conservation activities?

☐ 1. Own farm land ☐ 2. Communal land ☐ 3. Both 603. ☐

604. What is the major source of fuel wood for your household?

☐	1. Own planted trees	☐	2. Natural forest	604. ☐
☐	3. Animal dung	☐	4. Crop residue	☐
☐	5. Charcoal	☐	6. Others (specify) _____	☐

700. Household income & credit

701. Have you received credit during the last 12 months?

☐ 1. Yes ☐ 2. No 701. ☐

702. If yes to the above question answer the questions in the next table.

Loan size	Loan purpose (1) ag input (2) livestock (3) new business (4) business expansion (5) consumption (6) other specify	Source of loan? (1) traditional institution (2) local moneylender (3) Friends/relatives/neighbors (4) Micro-Finance institution (5) Cooperative (6) Other specify _____	Month loan taken	Month repaid (if loan repaid in installments, write "N/A" here)	Amount that must be repaid in Birr	Have you repaid in full? 1. Yes 2. No
702a	**702b**	**702c**	**702d**	**702e**	**702f**	**702g**

703. What is your annual income from the following sources? Indicate in Birr.

	1. Sale of agricultural crops		2. Sale of livestock & livestock products	
	3. Sale of honey & wax		4. Petty-trading	
	5. Sale of handicrafts		6. Daily labor	
	7. Sale of forest/agro-forestry products		8. Other (specify)	
	9. Land rent out		10. Total Income	703.

704. How do you allocate your income (rank the first five in order of importance)?

		Rank	
1. Purchase of food	2. Business Expansion		704.
3. Purchase of clothes	4. Purchase of livestock		
5. For social affairs	6. Debt repayment		
7. Purchase of agricultural inputs	8. Medication		
9. Saving	10. Children Schooling		

800. Household Health – A. Health service coverage

801. Are the following health institutions found in your vicinity? How long does it take to go to them and come back? Indicate the number of hours.

Code	Names of health Institutions	Available		If yes, round trip distance from your home in hrs	
		1. Yes	2. No		
801a	Health Post				801a
801b	Government Clinic				801b
801c	Health center				801c
801d	Hospital				801d
801e	Private Clinic				801e
901f	Pharmacy/drug store				801f

802. Whom did you consult last time when you or any member of the family was sick?

	1. Private Clinic		2. Government Clinic

	3. Community Health Worker		4. Traditional healer	
	5. Religious leader		6. No one	802

B. Infectious diseases

803. Is there malaria in the area?

	1. Yes		2. No	803.

Supervisor use only

804. If yes to the above question, how do you get treated when you fall sick to malaria?

	1. Take anti-malaria drug		2. Take bed rest	804.
	3. Use local medicine		4. Didn't fall sick	
			5. Other (specify) _____	

805. What methods do you use to prevent malaria?

	1. Nothing		2. Spray DDT or other chemicals	
			4. Mosquito net	
	3. Drain water logged areas		5. Clear vegetation and clean the environment	805.
	6. Others (specify) _____			

D. Safe Water

Supervisor use only

806. What is the one main source of water for members of your household during the dry season? **(ONE answers ONLY!)**

	1. Piped into dwelling.	**9.** Pond/lake/dam/flood	810.
	2. Piped into yard/plot.	**10**. Rainwater collected from roof	
	3. Public tap.	**11.** Tanker truck.	
	4. Open well in dwelling/yard/plot.	**12.** protected spring	
	5. Open public well.		
	6. Protected well in dwelling/yard/plot.		
	7. Protected public well.		
	8. Unprotected spring/river/stream.		
	99. Don't know / no answer.		

807. During the dry season, how long does it take to go there, get water and come back?

	1. 0 – 30 minutes' walk from the house	
	2. 30 – 60 minutes' walk from the house	
	3. More than 60 minutes' walk from the house	
	4. Water is piped into the house	
	99. Don't know/no answer.	811.

808. How much water has been collected in the past day?

☐ Write the estimated number of liters.

☐ 99. Don't know/no answer. 812 ☐

809. For how many people was this amount of water collected?

☐ Write the number of people.

☐ 99. Don't know/no answer. 813. ☐

810. How much water has been used for gardening or watering animals in the past day?

☐ Write the estimated number of liters.

☐ Nothing

☐ 99. Don't know/no answer. 814. ☐

E. Consumption of essential food items

811. How many times do you have meals per day?

☐ 1. Once a day ☐ 2. Twice a day

☐ 3. Three times a day ☐ 4. More than three times a day 815. ☐

812. How often do you take the following food categories in your diet/meals?

Food category	Daily 1. Yes 2. No	Once in a week 1. Yes 2. No	Once in a Month 1. Yes 2. No	During Holidays 1. Yes 2. No	As & when Available 1. Yes 2. No
Cereals					
Fish and seafood					
Root and tubers					
Pulses/legumes/nuts					
Vegetables					
Milk and milk products					
Fruits					
Oil/fats					
Meat, poultry, offal					
Sugar/honey					
Eggs					
Miscellaneous					

816

Time interview ended. ___ hrs. ___ min.

Total time taken ___ hrs. ___ min.

This is the end of the interview. Thank the respondents for their patience and cooperation.

Singed Declaration

This thesis is my original work, it has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged

Declared by	**Confirmed by**
Abraham Haile	**Terefe Degefa(ph.D)**
_____	_____
Candidate	Advisor